Gender Differences in the Levels of Posttraumatic Stress Disorder Resulting from 2007/2008 Post Election Violence among Primary School Pupils in Kibera and Kayole Settlements, Nairobi, Kenya

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Abstract

This study sought to determine whether there were significant gender differences in the levels of posttraumatic stress disorder resulting from the post election violence among primary school children in Kenya. The target population includes all the standard seven pupils in six primary schools in Kibera and Kayole settlements. A proportionate random sample of 164 pupils in each location was selected to participate in the study. Three instruments were used to collect data. These were the Personal Experiences during Post Election Violence questionnaire, Psychological Stability Scale, and Post Traumatic Experience Psychological Scale. Although the study revealed high levels of PTSD among the affected pupils, there were no significant gender differences in the level of PTSD. It was recommended that there should be a provision for enhanced parent-teacher communications and there be available school psychologists and counselors trained in family intervention within the school setting. These are basic requirements for successful intervention and treatment of childhood posttraumatic stress disorder. The establishment of school-based programs from early childhood onward that teach conflict resolution, emotional literacy, and anger management skills is also desirable.

Key Words: Violence, Trauma, Posttraumatic Stress Disorder, Psychological Stability.
Introduction

The 2007 General Election in Kenya was a unique election due to a number of reasons. It was the first time that Kenya had a closely contested election characterized by cut throat competition. Pollsters conducted in the run up to the elections had indicated that the two leading contenders, Mwai Kibaki of Party of National Unity, and Raila Odinga of Orange Democratic Movement, had almost equal percentages. This was also the first election after the removal of Kenya African National Union regime in 2002, which was in power since independence in 1963 (Kenya Elections Report, 2007).

For a long period until then, Kenya had experienced relative peace. However, after the December 2007 General Elections, and the subsequent announcement of the disputed presidential election results, the country was plunged into ethnic conflicts that engulfed the entire nation (Buchere, Nasongo, & Wamocha, 2008). According to these authors, the conflict was characterized by murder, looting, eviction, rape, arson, burning of food stores, destruction of homes, schools, animals and crops, harassment, and other kinds of human rights abuses. In many areas, most survivors ended up in the camps for internally displaced persons.

The United Nations Children’s Fund (2008) estimates that at least 100,000 children were forced to flee their homes due to the wave of violence that swept through Kenya following the disputed elections. The agency said that as many as 75,000 children were then residing in over 100 camps for internally displaced persons while many thousands more children were believed to be living temporarily with other family members. Almost 1300 people had lost their lives and some 255,000 others displaced during the crisis.

In Nairobi’s slums and poor settlements, women and children were particularly targeted for rape on account of their ethnicity, although some men too were similarly sodomized (KNCHR, 2008). A lot of opportunistic rape happened in the camps for internally displaced persons. The report lists the crimes against humanity committed as follows: manslaughter, murder, attempted murder, conspiracy to murder, grievous bodily harm, robbery with violence, illegal oathing, illegal possession of fire arms, and sexual crimes such as rape.

Psychological trauma is the result of extraordinarily stressful events that shatter one’s sense of security, making him/her feel helpless and vulnerable in a dangerous world (Akombo, 2009). According to this author in any communal violence, children are deeply affected. They often flee their homes with nothing but the clothes they are wearing; they lose their childhood friends, schools and familiar routines. They often face poverty and end up homeless. Being in a war zone is also deeply traumatic for children. They see and hear things that will forever scar their minds, and they have little resources to deal with the impact of all the horror on their lives. When traumatic events take place, they challenge their sense of safety and predictability and this may trigger strong physical and emotional reactions in them (UNICEF, 2008).

The post-electoral violence may have resulted into psychological trauma, broken social relationships, destruction of physical infrastructure and property (Akombo, 2009). Post-traumatic stress disorder is an anxiety disorder associated with the reactions that an individual has in response to a traumatic event (Foa & Riggs, 1995). The incident can be one that has directly affected the individual or one that the individual has witnessed. In children, symptoms for the disorder include
flashbacks and dreams associated with the event, feelings of detachment or estrangement from others, and diminished interests in activities that the individual once avidly participated in.

PTSD may be the most severe form of emotional and psychological trauma. It is believed that the violence affected 1.7 million pre-school children, 8 million primary school children, 1.1 million in secondary schools, 100,000 in tertiary institutions, and 112,229 in universities (Kenya News Agency, 2008). According to this report, these figures included all learners who were not able to report to their schools or colleges, those learners who reported but were not being taught because their teachers had been displaced, and those that were not being taught because schools were not opened on time for the first school term. The Ministry of Education (2008) also confirmed that learners had been displaced in the various areas affected by the violence.

As a result of the events, children may have suffered from various forms of traumatic experiences with such disorders as posttraumatic stress disorder, anxiety disorders, and phobias, among others, which may in turn result in behaviors such as withdrawal, isolation, anger, nightmares, revenges, aggression and rebellion. Society is becoming increasingly aware of the psychological impacts of trauma as a result of communal violence. Some more serious consequences of the violence include children who were injured, mutilated, dismembered, killed, forced into military service, sexually abused and exploited, separated from their families, losing opportunities to attend school or find health care, suffering from various forms of trauma and more (Women’s Commission for Refugee Women and Children, 2000).

There were some pupils who became too afraid to go to school because they feared for their lives or they imagined they will encounter violence from their fellow pupils or people of different ethnic groups some of whom happen to be their teachers (Onsongo, 2008). The author continues to argue that the children in the makeshift schools established in the camps were stressed and anxious about their future and this was likely to affect their emotional and psychological stability which is very important for pupils’ survival and future functioning. There is a possibility that children of different gender respond differently to trauma arousing situations. It is against this background that the current study attempted to investigate whether there were significant gender differences in levels of PTSD among primary school pupils in Kibera and Kayole settlements of Nairobi.

**Methodology**

The target population for this study included all the standard 7 pupils in six public day primary schools, three in Kibera and three in Kayole. Purposive and Proportionate stratified sampling procedures were used in selecting the required sample for this study. Purposive sampling was used in this study in selecting six schools out of the 14 and 4 from Kibera and Kayole respectively. This was done so as to ensure that all the two categories of schools were adequately involved in the study. It helped in picking cases that are typical of the population being studied. This was done to ensure that all the two categories were adequately involved in the study. Proportionate stratified sampling was used in selecting the 328 pupils from the six purposively selected schools. This method requires the selection of units at random from each stratum in proportion to the actual size of the group in the total population. This ensured that the sample was proportionately and adequately distributed among the six primary schools according to the population of each school as shown in Table 1.
Table 1: Research Sample by Gender and School

<table>
<thead>
<tr>
<th>Name of School</th>
<th>Number of Standard 7 Pupils</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayany</td>
<td></td>
<td>29</td>
<td>25</td>
<td>54</td>
</tr>
<tr>
<td>Olympic</td>
<td></td>
<td>24</td>
<td>29</td>
<td>53</td>
</tr>
<tr>
<td>Kibera</td>
<td></td>
<td>27</td>
<td>30</td>
<td>57</td>
</tr>
<tr>
<td>Matopeni</td>
<td></td>
<td>37</td>
<td>22</td>
<td>59</td>
</tr>
<tr>
<td>Soweto</td>
<td></td>
<td>34</td>
<td>18</td>
<td>52</td>
</tr>
<tr>
<td>Kiambio</td>
<td></td>
<td>29</td>
<td>24</td>
<td>53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>180</strong></td>
<td><strong>148</strong></td>
<td><strong>328</strong></td>
</tr>
</tbody>
</table>

The background information of the subjects was obtained using a questionnaire with 50 closed questions. The subjects provided information about themselves and how they were affected by traumatic experiences during and after the post election communal violence. Data on PTSD were collected through administration of a structured questionnaire with the selected respondents. The questionnaire used a four-point range Likert scale to assess pupils’ PTSD. The questions were in both English and Swahili languages. This is because children, especially in urban areas, are able to understand the combined languages in a better way than when using either of the languages. The Likert scale was adopted from the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV-TR*; American Psychiatric Association, 2000). The scale sought to measure the pupils’ levels of agreement or disagreement with 50 statements related to their PTSD. This questionnaire was administered to pupils in both locations. The questions asked were designed to evaluate the thoughts, emotions, attitudes, and behavioral traits that comprise the personality of an individual.

The Findings of the Study

In order to assess the traumatic experiences following the 2007/2008 post election violence among primary school children in Kenya, the respondents were subjected to 50 statements depicting several possible traumatic consequences of conflicts. The subjects provided information about themselves and how they were affected by traumatic experiences during and after the post election communal violence. They were requested to pick those that they personally encountered. This gave the total frequency of the traumatic incidences per subject, which were coded in SPSS (Version 16.0 for windows) and subjected to statistical analyses to find the mean, standard deviation, percentages and the significance differences between subjects from violence ridden area and the one without violence using the independent sample t-test at 0.05 level of significance. First, the study sought to establish the mean score of the traumatic experiences in the two locations.

Table 2: Average Number of Traumatic Experiences Reported by Locations

<table>
<thead>
<tr>
<th>Location</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kibera (N=164)</td>
<td>36.05</td>
<td>14.34</td>
</tr>
<tr>
<td>Kayole (N=164)</td>
<td>2.35</td>
<td>1.93</td>
</tr>
</tbody>
</table>

The mean traumatic score in Kibera was higher than in Kayole. This is because Kibera experienced the spate of post election violence as compared to Kayole which did not.
Each location was then analyzed independently on the magnitude and types of traumatic experiences as shown in table 3:

### Table 3: Types of Traumatic Experiences among Pupils in Kibera and Kayole

<table>
<thead>
<tr>
<th>Type of the traumatic experiences Observed</th>
<th>Kibera (N=164)</th>
<th>Kayole (N=164)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement</td>
<td>77</td>
<td>12</td>
</tr>
<tr>
<td>Loss of property</td>
<td>79</td>
<td>5</td>
</tr>
<tr>
<td>Injury</td>
<td>81</td>
<td>8</td>
</tr>
<tr>
<td>Rape</td>
<td>78</td>
<td>3</td>
</tr>
<tr>
<td>Death</td>
<td>69</td>
<td>6</td>
</tr>
</tbody>
</table>

The major types of traumatic experiences in Kibera were injuries and loss of property. Others were rape, displacement and death. In Kayole a few children were affected by the traumatic experiences. Probably displacement in Kayole was high because people from Kibera and other affected areas fled there. Also, since the pupils had travelled to their rural homes they were affected by the traumatic experiences to some extent.

### Gender Differences in the Levels of PTSD among the Affected Children

The researchers set to find out whether there would be statistically significant gender differences in the levels of posttraumatic stress disorder among the affected pupils. The collected data was analyzed using independent samples t-test. Both the Post Traumatic Experience Psychological Scale and the Psychological Stability Scale were used in determining gender differences in levels of posttraumatic stress disorder. The response scores for post traumatic experience psychological scale were then subjected to statistical analysis as shown table 4.

The independent sample t-test was used to determine if the posttraumatic stress disorder index scores between two unrelated samples (boys and girls) differed significantly or not. It was performed to find whether there were significant differences in the means of Psychological Stability Scale and Post Traumatic Experience Psychological Scale between boys and girls. For it to be used, the grouping variable: gender of the students (boys and girls) was a nominal variable, while the test variable, that is, posttraumatic stress disorder index scores was an interval variable measured in the actual scores. Tables 4 and 5 summarize the output of the t-test.

### Table 4: Gender Characteristics of PTSD in Kibera

<table>
<thead>
<tr>
<th>Scale</th>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Stability Scale</td>
<td>Boys</td>
<td>80</td>
<td>75.19</td>
<td>7.66</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>84</td>
<td>75.69</td>
<td>6.42</td>
</tr>
<tr>
<td>Post traumatic Experience Psychological Scale</td>
<td>Boys</td>
<td>80</td>
<td>77.91</td>
<td>11.08</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>84</td>
<td>78.54</td>
<td>10.20</td>
</tr>
</tbody>
</table>

Table 4 indicates that the respondents varied in the levels of Posttraumatic Stress Disorder. The Psychological Stability Scale indicated that girls had a higher mean score (75.7) compared to that of
boys (75.2). Also, the Post Traumatic Experience Psychological Scale showed that girls had a higher mean score of PTSD (78.5) compared to that of boys (77.9). Even though, the means as shown in the t-test statistics above differ for both boys and girls in both scales, a t-test was performed and the findings are summarized in Table 5.

### Table 5: Gender Differences in PTSD among the Respondents

<table>
<thead>
<tr>
<th>Scale</th>
<th>t-value</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Stability Scale</td>
<td>Equal variances</td>
<td>.457</td>
<td>162</td>
</tr>
<tr>
<td>Post traumatic Experience Psychological Scale</td>
<td>Equal variances</td>
<td>.379</td>
<td>162</td>
</tr>
</tbody>
</table>

Not significant at p<0.05

Since p values in all cases are more than 0.05 significance level, it was concluded that there was no significant gender difference in the level of posttraumatic stress disorder following the post-election violence in Kenya. Therefore it was concluded that there would be no statistically significant gender differences in the levels of posttraumatic stress disorder among the affected pupils. This implied that they were both affected the same way by the PTSD as related to post election violence.

### Discussions

The Post Traumatic Experience Psychological Scale showed that girls had a slightly higher mean score of PTSD compared to that of boys meaning that very few girls experienced higher levels of PTSD than boys. This could be attributed to the fact that since the girls did not face the trauma so directly it took them time to process it as the reality sunk. This is consistent with the findings of Resick and Calhoun (2001) who established that women are more likely than men to develop posttraumatic stress disorder which may be because the type of traumas women frequently suffer from, such as sexual abuse, are interpersonal traumas that are stigmatized, whereas men are likely to suffer traumas that do not carry as much stigma, such as exposure to war.

The t-test performed indicated no significant differences in the means of PTSD between boys and girls. This is inconsistent with the findings of a study done by Bruce (2002) who found that there was a gender difference in adaptive response to acute event (females dissociate more than males) that may relate to this observed difference in development and expression of trauma-related symptoms. Rates were higher among girls than among boys. Also, a study done by Qouta El Sarraj and Punamaki (2003) on prevalence of posttraumatic stress disorder among Palestinian children in Gaza strip found that girls had higher levels (57.9%) compared to boys (42.1%).

The Psychological Stability Scale also indicated that girls had a slightly higher mean score compared to that of boys. This could be attributed to the fact that girls since they did not face the trauma so directly it took them time to process it as the reality sunk. The t-test performed also
indicated no significant differences in the mean scores between boys and girls. This finding is striking given that it contrasts with the widely accepted view that girls are more vulnerable to the negative impact of trauma exposure than boys. Women have been found to cope with stress better than men and therefore there is a possibility that the girls had quickly adjusted to the situation by the time this research was being conducted.

**Recommendations**

Studying the effects of disastrous events on groups of exposed individuals provides an opportunity to facilitate case detection and treatment. Identification of individuals who are at risk for PTSD following violence is very useful for organizations and individuals wishing to prevent the enormous human and economic cost of this problem and would enable them to focus limited resources toward providing early treatment and morbidity prevention. Effective treatments have now been developed to help people with PTSD. Research is also helping more psychologists better understand the PTSD and how it affects both the children and adults.

Providing services and treatment programs for children who have experienced trauma is a necessary first step. Children who have experienced trauma should be referred to practitioners or agencies that provide evidence-based, trauma-informed treatment. Those with trauma-related or other mental health needs should be preferentially diverted to mental health treatment in a community setting, if necessary. The therapy with the highest rating for adolescent trauma victims is trauma-focused cognitive behavioral therapy, which has been used successfully in the treatment of PTSD and other trauma-related psychological disorders (Putman, 1996).

All children require post-violence services appropriate to their age, gender, the scope and nature of the disaster, and their immediate circumstances. Focused intervention should be directed towards the children in the immediate aftermath. Crisis intervention workers may be recruited from a range of professionals and volunteers. Early intervention should help to enable survivors to understand events and their own reactions, to share their experiences with others, and to provide education about the normalization of typical posttraumatic reactions. The aim should be that sufferers do not become further isolated from those around them.

Disaster workers, involved in rescue and relief measures, need to be trained well in advance in the concepts of emotional first aid, basic communication skills in dealing with traumatized children and the importance of talking to children about the trauma. They need to be sensitized about prevention of abuse and neglect of children in such situations. Mental health support should be blended with other disaster relief work rather than done separately. It is most helpful to train and support health workers from the affected communities about the postdisaster mental health aspects (Austin & Godleski, 1999).

Cultural competence is an important issue for counselling in post-war situations, which can be easily met by local volunteers than the external mental health professionals. Local volunteers, medical personnel in the primary level of health care and teachers may be trained in handling the psychological impact of the young victims of violence. The role of mental health professionals is to train the disaster workers, support them in dealing with the mental health issues of the children and help the workers whose own responses may complicate the recovery, (Pfefferbaum, 1998) besides managing the referred children with complex psychological manifestations. It is important that the mental health problems of the children are recognized as early as possible and supportive measures
are put in place at home, school and in society. The family context is central to understanding and meeting the needs of traumatized children. Close mother-child, family and relative relationships are important in the healing process (Pfefferbaum, 1998) and in the immediate aftermath children should be close to their families. Relatives and foster families adopting orphaned children can be extremely helpful. School-based mental health programs can provide accessible services to children affected by disaster, reduce trauma-related psychopathology, and emphasize normalization (Pfefferbaum, Call, & Sconzo, 1999).

Sometimes children may need to be removed from a stressful environment in order to provide them with a comfortable and supportive set up for faster coping and recovery. Recovery of the children from the traumatic experience is also dependent on broad social and economic recovery of the community or country. There is a need to incorporate public mental health approaches, including systematic screening and trauma-focused interventions, within a comprehensive disaster recovery program (Austin, & Godleski, 1999).

Post-violence counselling should be made available for extended periods, with shifting emphasis to meet the changing needs of high-risk groups (Hoare, 1993). According to this author, supportive interventions include fostering a sense of safety and efficacy, connecting patients with communities and services, and helping parents talk about the trauma with their children. A community-based approach with trained grass-root health care workers can provide effective psychosocial support and rehabilitation services.

Play can be used both as a medium of assessment and therapy for children. A play interview is essential when examining a child less than seven years old but should be utilized for all children (Donnelly, 2003). Through play children can express verbally and non-verbally difficult painful emotions, their wishes and fears, concerns, fantasies, reenactments and traumatic experiences. Many phenomena are observed during play which cannot be elicited verbally.

The manner in which the child plays is as significant as the content of the play. During the play, active attempts should be made to elicit accompanying thought process. This process can involve drawing figures, drawing a person, making up a story, drawing family, "if you could change one thing what would it be", and checking three wishes, among others (Donnelly, 2003). Donnelly further points out that children can be supported emotionally through the engagement processes, explained about difficult situations, bereavement and suggested coping methods through the play content. Interaction with an empathic, objective, neither judgmental nor over-indulgent therapist enables the child to reintegrate, reorganize and proceed with recovery. Potentially the child may internalize and identify with those qualities in the therapist.

Music greatly reduces stress among victims of trauma (Harris, 2007). The significance of music as a healing agent permeates across the cultural spectrum. People of different cultures incorporate music in transforming those unhealthy individuals into healthy ones. Kenyan musicians embraced the therapeutic qualities inherent in the cultural music of the Kenyan people to help the violence victims who developed PTSD following the disputed elections. This is a clear indication that musicians are still an invaluable therapeutic resource albeit their lack of professional training. Throughout the world, traditional and modern non-western music healers, trained music therapists, have used music to heal people - especially during political turmoil and bloodshed that erupted in many parts of the world, leading to death and destruction. The mental health of war victims has long been considered
one of the classic themes of trans-cultural psychiatry (Hart et. al., 2008). The importance of music as a healer has been connected to the encounter between cultures and to the meaning, diagnosis, and interpretation of trauma among cultures. For example, in the Kenyan tribe of the Taita, trauma of any kind, whether war related or otherwise, would be viewed as being caused by a malevolent spirit, thereby requiring certain kinds of music to appease the gods (Akombo, 2006).

References


