

Full Length Research Paper

Management and treatment of symptoms and signs of trauma among the survivors of arson attacks in Kenya: A case of high schools in Nairobi County

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Arson attacks in high schools in Kenya began in 1908. The fate of survivors subdued by symptomatology remains unknown. The study established that symptoms and signs of trauma can be managed and treated. The study adopted a descriptive survey design to execute it. Snowball and respondent-driven sampling techniques were applied. The population consisted of high schools, including students. The study used self-administered questionnaires for data collection which were analysed using descriptive statistics, inferential statistics and statistical package for social sciences. Hypotheses were analyzed by correlation coefficient and stepwise regression technique. The study adopted social support theory because there is a link between social support and individual healing. The outcome of the study identified gaps in safety awareness and preparedness programs in high schools and will assist education administrators to formulate adequate policy. This study forms basis for future researchers, survivors, parents and youths. This research supported and extended studies in social support, health and well-being.

Key words: Safety awareness, preparedness, management of symptomatology and arson attacks.

INTRODUCTION

The treatment of symptoms and signs of trauma relies on a multidimensional approach. Options include guidance and counseling, survivor's education, social support, anxiety management through psychologic and psychopharmacologic interventions, individual characteristics and facilities of the schools. Survivor's

education and social support are important initial interventions to engage the survivors and mitigate the impact of traumatic events.

The consequences of traumatic events are debilitating. Management of symptomatology is a big challenge. This is because in the initial stages there is much concern

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where trauma effects rage progressively in the survivor as time goes by. Consequences of trauma can be long lasting with counseling and its compounding implications.

Mwangi (2016) established that the use of crisis counseling strategies is useful in crisis interventions. In another related study on challenges, teacher-counselors face in implementing guidance and counseling in schools is that schools are not adequately staffed with counselors. Ministry of Education must also be accorded enough funding. This recognition and accessibility are motivating factors (Lapan et al., 2001). On the other hand, McLeod and McLeod (2011) provided a practical guide for counselors and generally helping professionals with counseling skills. These researchers determined objectives of counseling which are; gain understanding into the origin and emotional difficulties leading to increased capacity to take rational control over their feelings and actions, alter bad undesirable behavior and assist students to move towards fulfilling their potential, help students achieve integration of previously conflicting paths of themselves and provide students with skills, awareness, and knowledge that will enable them to confront social challenges. Corey (2016) in his book on theory and practice of counseling and psychotherapy addressed the use of peer counselors as additions to teacher-counselors, who may feel overwhelmed by the student population.

Pharmacological intervention is the use of drug medicines to treat trauma survivors with consequences of trauma. The word has a Greek etymology. Pharmakos means medicine and logos which means study, knowledge and in 1847, pharmacology became an official study. The first professor was Rudolf Buchhelin at the University of Estonian. Antidepressants selective serotonin-reuptake (SSRI), such as Prozac, Zoloft, Paxil, Lexapro, and Celeria are known to be administered in cases of a generalized anxiety disorder (GAD), panic disorder and obsessive-compulsive disorder (OCD), panic disorder, social anxiety disorder, and PTSD. These drugs minimize symptoms and usually take 2 to 6 weeks for SSRI to start the process of reducing the symptoms. The study found, however, that the most effective drugs included Amitriptyline Affixer Lexapro, Paxil, Romero, and Tarantellas. In the treatment with medication, the association recommends that when one medication does not work, there are many others to try (Anxiety and Depression Association of America (ADAA), 2020).

Marshall et al. (2001) provided evidence using the randomized controlled trial. Patients who received a mean daily dosage of 146 mg of sertraline had a 60 percent positive response rate compared with a 38 percent positive response, rate in patients receiving placebo in PTSD application. Another study by Davidson et al. (2000) showed that sertraline was effective in preventing a relapse of PTSD symptoms during a 28-

week maintenance phase following 24 weeks of acute therapy. However, other studies by Davis et al. (2001) indicate that the use of tricyclic antidepressants and monoamine oxidant inhibitors are moderately effective in the treatment of PTSD and are superior to placebo, however, due to side effects profile, the medications are considered second- or third-lines agents.

Individual characteristics of a survivor in significantly reducing, mitigating, or controlling the psychological impact of arson attacks include, escaping the event, relocating to a new location as an alternative. Participation in non-competitive exercises, such as aerobics, jogging, walking, swimming, and riding a bicycle is recommended by physicians as the method of reducing tension and enhancing resilience. Individuals can also undertake relaxation exercises to reduce strain. Among these exercises are meditation, sleep, biofeedback, massage, yoga, tai chi, and music. An appreciation of basic principles of time management, such as planning, do one thing at a time, delegating roles, learning to say no, organizing and protecting, "the part principle" that 20 percent of your time should produce 80 percent of your engagements, thinking of the expected outcome and avoiding distractions (Mcshane, 2019).

Social support, among others, can be expressed as the relief, help, or advice an individual or group of individuals receive from official or unofficial contacts to alleviate suffering. These contacts are referred to as social networks: among them, family support, peer support, and religious support. Studies confirm that a relationship exists that connects social support and individual resilience which leads to mental health wellness and functioning as demonstrated in the following paragraphs (Sippel et al., 2015; APA, 2018). Since Dr. Murray Bowen introduced the family system theory in the late 1960s a lot has been done to revamp it. The latest update on 16th January 2020 reflects on its definition as a homogeneous emotional unit whose members are strongly interconnected. Members, therefore, interact with each other and respond to one another in certain situations. Each member's behavior affects the other expectedly to maintain equilibrium (Devline, 2020).

According to Wortman and Baemen (2011), among the mechanisms that may predict the psychological consequence of trauma in an individual survivor is a spiritual struggle. This is a set of negative cognitions related to understanding or responding to cues in daily living. Wong (2011) agreed with the findings of the study and further posted how mindfulness intervention multidisciplinary failed him to manage pain in terms of intensity, stress, and quality of life with success. He revealed that he had tried several alternative methods to treat his depression, anxiety, and PTSD.

According to Ali et al. (2015), peer-to-peer support

Table 1. Total population of students.

| Name and type of school | Number of students | |
|---|--------------------|--------|
| | Male | Female |
| Boys high school (public boarding) | 225 | |
| Boys boarding (private secondary school) | 275 | |
| Boys high school (public boarding) | 185 | |
| Mixed boys and girls (public girls boarding and boys day) | (168)114 | 54 |
| Total | 853 | |

Source: Researcher, 2019.

encourages others when people provide their knowledge, experience, emotional or physical help to each other. Ali et al. (2015) adds that peer support acts as the service provider who compliments services offered by a professional. In essence, it serves as a link to professional help. Friedman (2012) adds that it is an initiative concerning trained supporters (although it can be provided by peers without formal training) and takes various forms, such as peer mentoring, listening, or counseling in 'order to promote personal development and to create a perspective influence on the emotional psychological health of others; thus, offering a bridge between troubled peers and friends.

Suicide cases and other elements can be avoided (<https://www.befrinders.org> 2020; Ali et al., 2015). The USA National Center for Disease Control stated on the 25th-anniversary celebrations on 21 August 2015 that an individual knowing that someone else is also suffering like him/her is the first step towards wellness. Peer support initiative, to reach out to others and benefit from the experience of those who have been there and it motivates the individual survivor to follow up on their treatment plan (National Center for Disease Control, 2015). Wortman and Baemen (2011) supports the view and states the survivor will understand consequences of psychological trauma do not define who you are. Instead, it should help one to rediscover his/her strength that one may have thought one had lost. In Australia, for example, peer support services when applied together with in-patient amenity helped to reduce hospitalization by 300 bed days in 3 months with substantial cost saving for the patients (Lawn et al., 2008). Meanwhile, in the U.S.A an outpatient peer support service helped to save readmission and hospitalization by 50 percent occupation (Chair Dr. Program in health Promotion, 2006). New Zealand is a success story with peer support services with financial cost savings ranging from f180-£259 per day. Results from persons with mental health conditions and /or addiction have increased self-esteem and self-confidence, a sense of purpose, a great sense of well-being; they have good outcomes where other services

have failed; there is increased resilience and quality of life (Basset et al., 2010).

METHODOLOGY

Research design

This research applied a descriptive survey design to execute it. The survey design helped the researcher to meet the study objectives by collecting, measuring and analyzing data. The design used the description to organize data into patterns that emerge during analysis. This analysis is the form of the structure of the research and availability of diverse information (Orodho, 2013).

Population of the study

The population of interest was the form four students who completed their studies towards the end of 2019 in the high schools that experienced arson attacks, in June and July, 2016 within Nairobi County. They are a total of 853 students. They were four schools: 2 public boys boarding, 1 private boys boarding and 01 mixed boys and girls public with girls boarding while boys as day students. They were among over 130 secondary schools which experienced arson attacks in Kenya in June and July, 2016 (Table 1).

Data collection

Data both primary and secondary were used in the study. Primary data were collected on self-administered questionnaires. A questionnaire will help the respondents to answer questions on safety awareness and preparedness, manifestation of symptomatology, management of symptomatology and psychological adjustment which are the variables of the study. In order to explore more unknown thoughts from respondents, the researcher will employ both structured and unstructured questionnaire. For the success of this operation, the researcher will adopt a field study procedure (Mugenda and Mugenda, 2003). Questionnaires for data collection are preferred in this type of research due to time saving, are easily dispensed to respondents spread across a large area and are easy to handle. This helps the respondents to attempt to answer every question (Spasford, 2006; Phellas, 2011).

Table 2. Bivariate correlation.

| Parameter | | Psychological adjustment | Safety awareness and preparedness | Manifestation of symptomatology | Management of symptomatology |
|-----------------------------------|---------------------|--------------------------|-----------------------------------|---------------------------------|------------------------------|
| Psychological adjustment | Pearson correlation | 1 | | | |
| | Sig. (2-tailed) | | | | |
| | N | 161 | | | |
| Safety awareness and preparedness | Pearson correlation | 0.418 | 1 | | |
| | Sig. (2-tailed) | 0.001 | | | |
| | N | 161 | 161 | | |
| Manifestation of symptomatology | Pearson correlation | 0.558 | 0.136 | 1 | |
| | Sig. (2-tailed) | 0.005 | 0.007 | | |
| | N | 161 | 161 | 161 | |
| Management of symptomatology | Pearson correlation | 0.482** | 0.163 | 0.004 | 1 |
| | Sig. (2-tailed) | 0.000 | 0.076 | 0.964 | |
| | N | 161 | 161 | 161 | 161 |
| | Sig. (2-tailed) | 0.868 | .000 | 0.152 | 0.435 |
| | N | 161 | 161 | 161 | 161 |

Source: Researcher 2021.

Experimental data analysis

Analysis of information gathered began by editing the questionnaire for accuracy, cleaning and coding. The information was entered on the spread sheet and analysed by using Statistical Package for Social Sciences (SPSS). Quantitative data were analysed by applying descriptive statistics, such as frequencies, percentages and measures of central tendency as a technique for closed ended questions. Meanwhile, qualitative data were cleaned and organized into specific codes according to research questions and directives and grouped into various themes from which conclusions were drawn (Asfaw and Ngao, 2004). The researcher applied inference rules to draw out conclusion. For example, the objective was investigated using Pearson product moment correlation(r).

RESULTS

This paper established that there is a positive relationship between safety awareness, preparedness and psychological adjustment of the survivors of arson attacks in high schools in Nairobi County. The paper also established that the relationship between safety awareness, preparedness and manifestation of symptomatology of the survivors of arson attacks in high schools in Nairobi County was positive but weak. The results demonstrated that there was a positive relationship between manifestation of symptomatology and psychological adjustment of the survivor of arson

attacks in high schools in Nairobi County. The findings also showed that the management of symptomatology (physiological, psychological behavioural symptoms and signs) positively affects the relationship between manifestation of symptomatology and psychological adjustment of the survivors of arson attacks in Nairobi County (Table 2). Drugs and alcohol are a huge hardship in high schools. Human behaviours are directly linked to arson. Factors underlying their motivation may arise from drugs and alcohol use, vandalism, spite, revenge, intimidation, civil disorder, hate related crime, gang incitation, radicalisation, anger recidivism and concealment of another crime (Jennings, 2016).

DISCUSSION

NACADA (2004) states that almost 46% of population ranging from 15 to 65 years have tried consumption of alcoholic beverages; they have an addictive tendency. NACADA (2004) found that youths who observe religious ordinances develop willpower to resist acts of criminal nature. These findings also concur with Wortman and Baemen (2011) who indicated that mechanisms that may predict psychological symptoms in an individual are related to his/her spiritual struggle in life. Still, an interesting study on alcoholism has indicated that people

who feed on maize meal may digest the food into alcohol, in an auto brewery syndrome research. It was not identified with a study in Kenya, but with a country whose staple food is mainly carbohydrate meals; in this regard, it would make an interesting study vis a vis students' behaviour. Still, a serious challenge emerges from maternal foetal exposure where it is no longer only women who are not allowed to drink alcohol when expecting babies but their male partners who pass the alcohol syndrome to the unborn babies via their DNA. These children may grow and turn into arsonists (Taylor and Francis, 2017). The findings should inspire several new kinds of research if at all tenable.

Legalising cannabis sativa and marijuana has become the trend in the world. It remains to be seen how those nations will address the inherent consequences of smoking the substances. Also while women are not allowed to drink or smoke during pregnancy, men are legalised to smoke and drink, thereby passing on the dysfunctional attributes through their DNA to foetus in uterus. Yet there is a link between alcohol fetal exposure and fire setting (Taylor and Francis, 2017). Meanwhile Cannabis sativa and marijuana smoking are also known to contribute to dysfunctional behaviour leading to fire setting in school (NACADA, 2004). Other factors such as impulse control disorder pyromania and sexual urges among youths have been cited in various literatures as causes of dysfunctional behaviour, leading to fire setting (Kipng'eno and Kyalo, 2009). These measures largely have no known cure. Jackson et al. (1987) have established that children from 3 years develop interest with fire play and lead to adult arsonist; however no known cause has been established. Therefore, no cure can be prescribed. Other factors such as demographics, poverty, societal breakdown, cultural and tradition values that contribute to fire setting are die-hard in some communities (Wanjala, 2013). These are among factors that will simply not help arson attacks to end soon in Kenya.

Conclusion

This paper has investigated the management and treatment of symptoms and signs of trauma among the survivors of arson attacks in Kenya and determined how this relationship is influenced by manifestation of symptomatology, management of symptomatology and psychological adjustment. Researchers have established that arson attacks are traumatic events which leave survivors to experience manifestation of symptomatology which is debilitating to an individual survivor. It impairs mental health wellness and functioning. These survivors will need psychological adjustment in order to regain their normalcy and function effectively in a world of people. The recommendations offered are based on the findings

and are by no means the only ones. They took into consideration the fact that indeed arson attacks in high schools are traumatic events and cause mental health illness.

Recommendations

1. It is recommended that managers of education in the country must ensure that all high schools are equipped with safety awareness and preparedness apparatus. Unfortunately, many schools do not have important items like firefighting measures. Teachers and students are ill prepared to handle fire in their schools. Where this equipment is available, it is either not serviceable or few people know how it can be employed. In strangeness, however some members in the school are not aware of its existence.
2. In further studies in functional analyses of recidivistic arson, it is recommended for more psychology studies to investigate why a three-year-old child develop interests and becomes fascinated in fires, leading to adult firesetter. More medical related studies on maternal foetal alcohol exposed child need to be done to be able to guide through life from becoming an arsonist. This may be via medical preventive therapy to pregnant women whose partners are alcoholics. Further research on auto brewery syndrome to determine correlation with arson attacks is necessary.
3. In addition, principals, teachers, school counsellors and peer counsellors must be on the lookout for students who exhibit symptoms and signs as a result of trauma with the view to addressing them and managing them at this point. Schools might consider what facilities are available, such as, recreation halls, sports and fields and other extracurricular activities to promote healing. Strict discipline should be observed.
4. The government is responsible for enacting relevant legislation through the ministry of education that can protect the safety of individuals in the schools as it is responsible for the safety of her citizens. The individual in the school is responsible too for his/her own safety and must be made accountable by signing the relevant regulations on entering the institutions in order to comply with them. In some countries, USA, for example has set the month of September every year for her citizens to rehearse security drills in order to stay alert for a disaster. Moreover, mental health directly impacts the development of the nation and must be given due recognition just like cancer day and others, with appropriate budgetary allocation to train enough psychiatrists and other health workers. Mental health should be destigmatized from the cultural belief of witchcraft. Some cultural practices such as touching houses to ethnic cleanse or exorcise evil spirit in displacing population or mob justice by neck lacing

victims, with impunity should be totally banned. Others such as initiation ceremonies of boys into manhood by serving them with alcoholic beverages actually initiate into becoming arsonists.

5. There is need to employ chaplaincy services to enhance religious values, which emphasize non-criminality among communities in which schools are located; they may play an important role in cases of arson attacks and should be involved in school's security arrangement. People who observe religious ordinances have strong will power to reject evil schemes. Indeed, social support (community, church and government and other social networks) enhances healing in trauma exposed individuals. Support may come, for example, in monetary form or in kind.

6. Units like 'Nyumba Kumi Initiative' and 'Harambees' should be encouraged and strengthened to curb the alcohol and drug use menace especially among the youths who undergo initiation to adulthood after primary education. More emphasis should also put into reviving the social halls for parents and youth seminars on drugs and alcohol uses menace in order to strengthen the morals of the society.

7. "Nyumba Kumi Initiative"- A community policing Idea.

8. "Harambee" - Self-help effort.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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