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ROLE OF RESILIENCE ON THE PREVALENCE OF TRAUMATIC EVENTS IN KENYA: A CASE OF ARSON ATTACKS IN HIGH SCHOOLS IN NAIROBI COUNTY

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Abstract. This study investigated the role of resilience in the traumatic events of June and July 2016, when more than 130 high schools were set ablaze. Learning was disrupted. The survivors were gripped with trauma symptoms and signs. This impaired their mental health and functioning. They needed psychological adjustment in order to return to normalcy. There were 835 students. Self-revealing questionnaires were adopted to gather information for analysis. The findings showed a link between resilience, adaptation, and functioning. Resilience and Mindful lessons were not taught in schools, and most schools missed out on facilities that would instill resilience among students.

Keywords: *resilience, psychological adjustment, trauma, adaptation*

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Introduction

Globally, arson attacks have been with humankind from antiquity to the present time. Ever since humankind began erecting structures, fire has been part of their history [1]. These attacks are traumatic and leave survivors with psychological trauma, which impairs their mental health-wellness and functioning. In order for the survivors to return to normalcy, they will need psychological adaptation. Fires, too, result in health complications, destruction of property, death, relocation of survivors to other facilities, repairs, replacement of lost items, and reconstruction of new facilities. Burning substances may emit chemicals, and inhaling these chemicals and smoke may become health hazards to survivors [2]. Arson may be defined as a malicious and deliberate criminal act of setting buildings or property on fire to cause damage, harm, loss, death, revenge, profiteering, or concealment of another crime. Meanwhile, accidental fires usually arise in relation to some human agency without any intention or by some natural cause [3].

The USA experienced 12000 arson attacks from 2009 to 2011 [1]. In similar studies in the UK and Wales, one in eight high schools experienced arson attacks from 2007–2009 [4]. Meanwhile, institutional criminal profiling of social arson attacks in high schools in Australia identified that the attacks had doubled [5]. In Asia, India was noted for incidences of arson attacks. Kashmir province was notorious, with more than 4000 students from 47 high schools who survived arson attacks [6]. Africa was not spared either. South Africa, for example, had 20 high schools torched on May 06, 2016, in Limpopo Province, Natal. Similar cases were reported in high schools in Tanzania, Uganda, Nigeria, and Kenya, and in all of the cases, there were several thousands of survivors of arson attacks who required psychological adjustment [2, 7].

The current study seeks to establish the relationship between resilience, psychological adjustment, and functioning after trauma. Resilience enhances adaption and healing [2].

Role of schools in building resilience

The role of schools in building resilience in students is extremely significant [8]. Lippmann and Schmitz, in the study [8], address what schools should do to build resilience so that when a disaster occurs in their school, students would respond to it. They observed that it was puzzling how some youths who had experienced trauma overcame the effects and bounced forward while others did not. They highlighted the importance of schools in recognizing social and emotional well-being and supportive school climate in enhancing positive academic and behavioral outcomes. In addition, they discussed common components of resilience in the youths, such as individual behaviors, attitudes, and competencies, together with family, school, and community support. They developed strategies for building resilience and how to help victims recover from the aftermath of a traumatic event. They concluded their work by recommending that students should have time to connect with each other, have caring adults to assist them, have supportive meetings for debriefing, have flexible programs, and feel safe.

Resilience

Tocino-Smith [9] gave examples of three resilience exercises that could be downloaded and taught in school. These were: fostering resilience in schools, fostering resilience among learners, and teaching resilience in schools. The author cautioned that the science-based exercises were difficult to teach in a class setup. Further, he noted that the exercises were crucial in preparing students for adversity. The topics in resilience should include but are not limited to social competence, optimism, purposeful behavior, problem-solving, effective coping styles, and enhancing positive self-image. The authors summed up the seven C's of resilience: (a) Control for opportunities that provide a sense of control, (b) Competence, that is, to explore how challenges are handled and (c) Coping mechanisms, including confidence building, connectedness (to create a sense of belonging), character (as a bedrock of

success) and contribution (as a sign of growth). Resilience is, therefore, critical in a learning environment since it aids students to come out of adversity with a positive sense of victory for themselves and their future. Children who develop resilience are more able to face disappointment, learn from failure, cope with loss, and adapt to change as life continues. After several psychological studies, the characteristics of resilient people were listed as follows (also known as the eight characteristics of resilient people): they can detect the cause of their problems by applying self-confidence that emerges from within; they understand how to handle their feelings, manage their thoughts, and resist negative challenges. This helps them keep composure, remain focused and alert, and discern any confusion. In addition, they will strive to be realistic and optimistic while hoping for the best and exhibit confidence and competence in themselves. Another important characteristic is that they are empathic; in other words, they put themselves in the “shoes of others,” read their emotions, understand what they are experiencing, and deal with the situation accordingly. These are people who know how to motivate themselves. Their attribute is to understand that some challenges motivate while others serve as chances to embrace change since resilient individuals seek ways to satisfy themselves and others. Finally, resilient people do not ask why me? Rather, they use their energy, ability, intellect, and skills on how to control or ease out of the debilitating condition [9].

Discipline

The rules and regulations the schools must uphold are contained in the safety standards manual for secondary schools in Kenya, published in 2008. To test the efficacy of these rules and regulations, Nyakundi [10] surveyed preparedness and safety standards in secondary schools in Kenya. He wanted to determine their readiness to respond to a disaster. The findings from the survey identified loopholes in disaster preparedness. He recommended measures to be taken, such as the Ministry of Education to carry out regular inspections to ensure full compliance with the safety standards manual procedures, establish school safety sub-committees, introduce Scouting Movements, and train students on safety guidelines that must, however, be strictly adhered to.

The Association for the Development of Education in Africa (ADEA), under the motto “Our common voice, our common success,” published a paper entitled “The Role of Discipline in a Learner and Quality of Life” and began by explaining the term discipline [11]. It is considered the need for steps to manage conduct in a learning institution to safeguard an individual’s life and create a conducive environment for learning. ADEA underscores the fact that learning cannot be concluded without order. The paper discusses the importance of discipline in schools, positive reinforcements of character in students’ growth and education procedure, and the effect of chastising a student based on achievement. The ideal situation, the Association concluded, is the learner doing what is meaningful, virtuous, progressive, and significant. The virtues improve a community and create a better enjoyable society where individuals will be delighted to co-exist [11].

Emergency Preparedness

Safety preparedness is accepted as emergency preparedness. The purpose is to limit the impact of the disaster through knowledge and involvement to save lives. Studies conducted on a national survey in the USA established that many populations were unprepared for emergencies [12]. The researchers recommended studies in measuring personal emergency preparedness and predicting potential risks of lack of preparedness [12]. De Wolf [13] identified five stages in planning to respond to an emergency: pre-event, rescue, inventory, recovery, and post-event.

Psychological Adjustment

Psychological adjustment is also referred to as adaptation. The current study found that trauma can precipitate PTSD and post-traumatic depression. Thus, it needs to identify how psychological adjustment can be addressed. Psychological adjustment is necessary in order to function effectively. Figure 1 shows the stages a survivor of arson attacks goes through in line with the model of response by De Wolf [13].

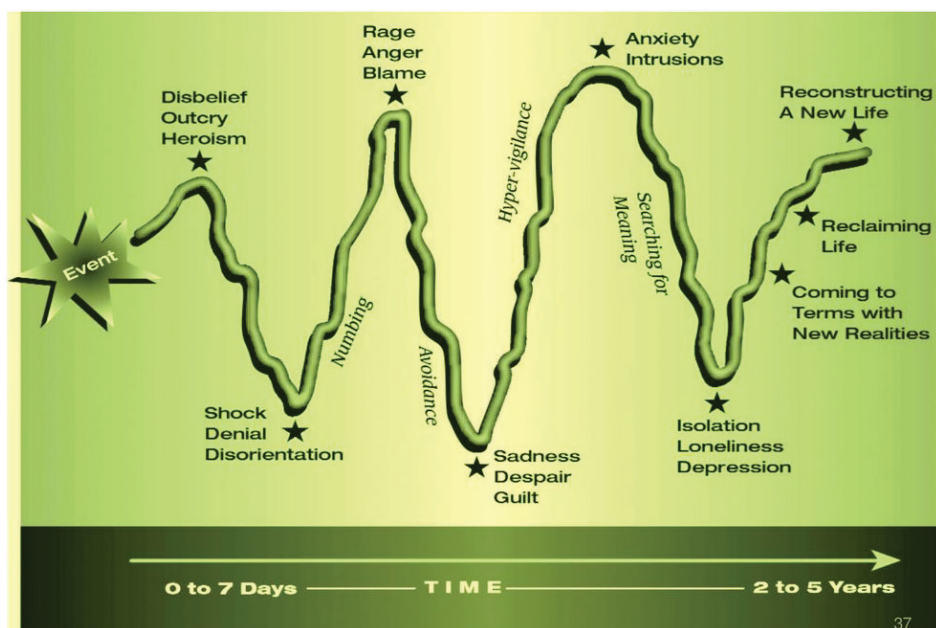


Fig. 1. Model of Responses to Trauma and Bereavement.

Source: Adopted from De Wolf [12]

The demonstration above attempts to graphically depict what goes on in a survivor's life of a traumatic event. The consequences appear wave-like in a multiplicity of complications in any order. Clearly, then an individual survivor needs psychological adjustment in order to return to normalcy De Wolf [13] and Seaton [2].

Research Methodology

This section discusses the research design, population, and sampling matrix.

Research Design

This research applied a descriptive survey design to execute it. The survey design helped the researcher meet the study objectives by collecting, measuring, and analyzing data. The design used the description to organize data into patterns that emerged during analysis. This analysis generates diverse information [14]. The researcher conducted a survey to establish the relationship between resilience, adaptation, and functioning after arson attacks. The study determined that the facilities provided in the schools instill resilience and hence, psychological adjustment. The researcher prepared instruments or tools for collecting, analyzing, and interpreting observed information.

Population of the study

The population of concern was the form four students who completed their studies towards the end of 2019 in the high schools that experienced arson attacks during June and July 2016 in Nairobi County in Kenya. A total of 853 students were studied (Table 2). The sample comprised four schools: two public boys boarding, one private boy boarding, and one mixed boys and girls public with girls boarding while boys were day scholars. They were among over 130 secondary schools that experienced arson attacks in Kenya in June and July 2016. They were the only schools in Nairobi that suffered arson attacks in 2016. Nairobi is the only city in Kenya that was most affected by fires [15, 16].

Table 1

Population Sample

Type of School	Number of Students	
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	
Total	853	

Source: Researcher, 2019.

The schools were drawn from this category, as shown in table 2. With this type of population, the recommended sample size range is 10–30% [17]. Consequently, a sample of 256 was studied. One school with a population of 68 piloted the study, leaving a total of 188. The questionnaires dispatched were 188. However, 161 questionnaires were filled and returned. This gives a total of 85%. Weisberg et al. [18] recommended a response rate of 70%, while Mugenda and Mugenda [17] recommended a response rate of 50% as a sufficient degree for analysis and reporting.

Table 2

Sampling matrix for students

Type of school	Number of students	Sampling, %	Sample size
Public boarding	225	30	68
Private boarding	275	30	81
Public boarding	185	30	56
Mixed boys and girls boarding	168	30	51
Total	853	30	256

Source: Researcher, 2020.

Data Analysis

The data analysis process involved using the statistical package for social sciences (SPSS) version 20.0.01 bit 64 in the Windows 10 OS. The program provided a graphical statistical analysis and data management system, which provided data cleaning, coding, tabulation, and drawing statistical inferences. Within the program, analysis through tabulations was based on computations of percentages, coefficients of correlations, and the application of descriptive statistics [19]. The study also used frequencies and percentages as they easily communicated the research findings to the majority of readers [19]. Frequencies easily show the number of times a response occurred in a given category. Percentages were used to compare sub-groups that differ in proportion and size. Qualitative data from interviews were read carefully, paying particular attention to the respondents' comments, ideas, and concerns. Field notes were edited, coded, and written based on content and themes. The study used an indicative thematic content analysis approach to analyze the qualitative data. This involved analyzing the interview transcripts and identifying the themes from the data collected [20, 21].

Table 3

Role of high schools in building resilience

Description	N	Minimum	Maximum	Mean	Standard deviation
The school has training in fire prevention	161	0.00	0.00	0.8509	1.13033
The school has installed fire protection equipment.	159	0.00	0.00	0.6730	1.22989
The school has a fenced compound	160	0.00	0.00	0.9375	1.38131
The school employs a counselor	161	0.00	0.00	0.5528	0.110057
The school has a chaplaincy	161	0.00	0.00	0.1925	0.58647
The school provides recreational halls	159	0.00	0.00	0.4654	0.84778
The school provides extra-curricula activities	160	0.00	0.00	0.4813	0.82395
The school has clubs for students e.g., scouting	161	0.00	0.00	0.2609	1.33474
Valid N (listwise)	155	0.00	0.00		

Source: Researcher, 2019.

The findings established that most participants indicated that the school rarely had training on fire prevention ($M = 1.8509$; $SD = 1.1303$). Also noted from the respondents was that the majority conceded that the school rarely had installed fire protection equipment. The mean score of 1.6730 and standard deviation of 1.2289 showed consistent participant responses. In addition, most participants indicated that the school rarely had a fenced compound, as shown by a mean score of 1.9375 and a standard deviation of 1.3813, indicating minimal deviations from the mean. Similarly, it was observed that the school rarely employed a counselor ($M = 1.5528$; $SD = 1.1006$).

It was found that the school did not have a chaplaincy, as shown by a mean score of 1.925 and standard deviation of 0.5865, indicating a consistency in participant responses. Most participants indicated the school did not provide recreational halls, with a mean score of 1.4813 and a standard deviation measure of 0.8478. Further, it was found that the school did not provide extracurricular activities, as shown by a mean score of 1.4813 and a standard deviation of 0.82395.

The findings further indicated that the school rarely had clubs for students, as shown by a mean score of 2.2609 and a standard deviation of 1.3347. Also noted from the findings was that most respondents conceded that the school rarely employed a counselor ($M = 1.5528$; $SD = 1.1006$). It was asserted from the findings that the majority of the respondents indicated that the school did not have a chaplaincy. This was seen from the mean calculated (1.925). The standard deviation of .5865 indicated that there was uniformity in the responses from the respondents. The study also established that most respondents indicated that the school did not provide recreational halls. This was indicated by the mean calculated, 1.4813. The standard deviation calculated was 0.8478, showing uniformity in the responses from the respondents. Also noted from the findings was that most respondents conceded that the school did not provide extracurricular activities. This was evidenced by the mean score of 1.4813 and standard deviation of 0.82395. Most respondents recorded that the school rarely had clubs for students, as shown by a mean score of 2.2609 and a standard deviation of 1.3347.

Discussions, Recommendations, and Conclusions

The objective of the study was to establish the role resilience played in mitigating the consequences of trauma among students. This would include facilities that build resilience, such as extracurricular activities, play fields, fenced compounds, recreation facilities, chaplaincy, training programs on resilience, mindfulness, and fire emergency training discipline, among others. This is due to the fear that arson attacks have not stopped since 1908, and the consequences are debilitating [2]. It is established that resilience enhances psychological adjustment [13, 2]. Psychological adjustment enhances healing, thus restoring an individual survivor to normalcy [2].

In related studies, Kipng'eno and Kyalo [22] agree with the views of this study in that they emphasize that schools should be disaster-resistant [15]. The concept of resilient institutions and students is a lifelong concern intended to

promote equitable, quality, and inclusive education for all. Therefore, preparation is necessary to make all United Nations Member States Schools and Students safe by 2031 [23]. Arson attacks are traumatic events that leave survivors with debilitating psychological symptoms and signs that affect their mental health and performance. Since they are young people, their future may be ruined. Their contribution to the development of their country may also be in question, while their families and communities live in fear if fighting school fires is left to chance.

The study also agrees with Shibutse et al. [24] that arson attacks in high schools require all safety measures to work harmoniously to mitigate fires effectively. This is in line with General Systems Theory, which states that all systems of an operation must be working together harmoniously so that an assignment will be successful [25].

Individual students have roles to play. Students' attitude toward accepting discipline as part of their regular safety net is paramount. A breakdown in discipline could breed chaos due to a lack of restraint on acceptable behavior. As human beings, students have inherent cognitive psychological resources in the form of control and evaluation. When used properly, these cognitive resources influence an individual's judgment in situations of uncertainty, promote resilience, psychological adjustment, and, ultimately, healing. Cognitive resources also form the basis for cognitive behavioral therapy [26].

Recommendations

The article suggests that schools should play an important role in combating arson by, for example, introducing resilience and mindfulness education as subjects. Meaningful, quality education cannot take place in an unsafe environment. Student safety must be ensured. Future studies could look at the current wave of legalization of marijuana/cannabis sativa use in countries and examine the consequences for youth to control arson attacks in high schools. Further research is also needed to compare the adjustment of male and female victims mediated by the culture in which men are not allowed to cry because it is considered a sign of weakness. Meanwhile, Israel has coined the word "ISResilience" as a slogan to teach the world "not to bounce back but to bounce forward" after a disaster [27]. Resilience and mindfulness are associated with resilience and ISResilience [28].

Conclusion

This study aims to understand how survivors of an arson attack cope with trauma. Resilience is helpful in overcoming various psychological problems associated with an arson attack. Resilience encourages a person to develop skills to overcome difficulties and thus move forward instead of backward. Resilience also gives one the ability to face challenges, find solutions, and develop better coping strategies. This is critical for success in life.

References

1. U.S Fire Administration (2016) Statistical Reports on the U.S fire problems <https://www.usfa.gov/data/statistics/reports.html>

2. Seaton, C.L. (2009) Psychological Adjustment the Encyclopedia of Positive Psychology 1.111/69781405161251.2009
3. Bourvier, J. (1914) Bourvier's Law Dictionary and causes. Encyclopedia Vernon law book 10 St. Paul Minestone West Putleslung company 1914.
4. Wade, P., Taeman, D., Golden, S. Wilson, R. and Woodley (2007) The impact of school fires. A study of wider economic and social impacts on schools and the local community. The publications unit, national foundation for educational research, slough, Berkune.
5. Kocsis, R.N. and Cooksey (2002) Criminal psychosocial profiling of serial arson crimes.
6. Wini (2016 December 07) 47 schools come under arson attacks in Kashmir, India. The New Indian express p.1
7. Kahwa, R.J. (2016) Fire emergency preparedness a case study for secondary schools in Moshi rural district, Kilimanjaro region, Tanzania. docplyer.net
8. Lippmann, I and Schmitz, H. (2013) What can schools do to build resilience in their students, publication date: 30 October, 2013 Topier Education Child trend@org/publications
9. Tocino-smith, J. (2020) Teaching resilience in schools and fostering resilient learners. Positive psychology.the Netherlands info@positivesychology.com
10. Nyakundi, 2, O (2012) Implementation of safety standards and guidance in public secondary schools Morani District, Kisii County, Kenya. Journal of education and practice. 2014.
11. Association for Development of Education in Africa (ADEA) (2017): Education and training in Africa, Dakar, March 14-17, 2017.
12. Liu, S., Mitrook, M., Brown, J. (2013) Knowledge Involvement and Emergency Preparedness Citizen National Survey University Of South Florida Scholar Commons. Graduate Thesis and Dissertations.
13. De wolf, (2004) Mental health response to mass violence and terrorism https://www.mentalhealth.samhsa.gov/publications/all_pubs/SMAA395/default/173-89
14. Orodho (2013) Essentials of Educational and Social Science Research. Africa Journal of Industrial Psychology 4(i) 64-69
15. Huang, K., Hongoma, T. and Presswood, E. (2009) Thesis population and building factors that impart residential fire rates in large U.S cities, Texas State University.
16. National Crime Research Centre (NCRC) 2016 rapid assessment of arsons in secondary schools in Kenya-July-Aug 2016 copyright 2017. Nairobi, Kenya.
17. Mugenda, O. and Mugenda, A. (2003). Research Methods: Quantitative and Qualitative approaches, African Centre for Technology Studies Acts, Nairobi.
18. Weisberg, H.F, Krosnick, J. and Brown, B. (2006) An introduction to survey , Research Polling and data analysis book 3rd Ed English SAGE London University Library.
19. Yadutta, T., Ngau, P. (2004) Research design, data collection and analysis a training manual for united nations for regional development, Africa office UNCRD textbook series no-12.
20. Connolly, P. (2007) Quantitative data analysis in education .a critical view using spss London Routledge.
21. Gay, R. (1992) Educational research competence for analysis and publication 4th NY Macmillan publishers.
22. Kipng'eno, R.A and Kyalo, Wb (2009) Safety Awareness and Preparedness in secondary schools in Kenya. Educational Research and Review. (8):179-384.

23. United Nations Educational Scientific and Cultural Organization, UNESCO (2020) all UN Member States Schools and Students Safety by 2031.
24. Shibusse, P.M., Chine, S. and Omuterem, S. (2014) Causes of fire disaster in Secondary Schools in Kenya. *Journal of Research on Humanities*. Vol. 4 20. 2014.
25. Von bertalanffy, (1900) Systems theory. [www.mewlink.com/don clerk history \(isd/bertalanffy-html\)](http://www.mewlink.com/don_clerk_history(isd/bertalanffy-html))
26. Cohen, S., and McKay, T.A., (1985) Stress, Social Support and the Buffering Hypothesis. *Psychological Bulletin*. 98:310-357.
27. Dickson, M. and Baun, N.L. (2020) How Israel mastered the art of resilience to thrive against all odds “Bouncing Forward Under Adversity.”
28. Snyder, C.R., Lopez, S.J., Shoney, H. and Rand, K.L. (2002) Hope Therapy Measurements and applications to Schools *Psychology* June 2003, *School Psychology Quarterly*. 18(2):122-139

Abbreviations (Acronyms)

ADEA – Association for the Development of Education in Africa
NCRC – National Crime Research Centre
PTSD – Post Traumatic Stress Disorder
SPSS – Statistical Package for Social Sciences
UNDRRRIE – United Nations Disaster Risk Response in Education
UNESCO – United Nations Educational Scientific and Cultural Organization
UK – United Kingdom
USA – United States of America

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РОЛЬ ПСИХОЛОГИЧЕСКОЙ УСТОЙЧИВОСТИ ПРИ ТРАВМИРУЮЩИХ СОБЫТИЯХ В КЕНИИ: СЛУЧАИ ПОДЖОГОВ СРЕДНИХ ШКОЛ В ОКРУГЕ НАЙРОБИ

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Абстракт. В этом исследовании изучалась роль устойчивости к травмирующим событиям июня и июля 2016 года, когда было подожжено более 130 средних школ. Обучение было сорвано. Выжившие были охвачены симптомами и признаками посттравматического синдрома. Это нанесло ущерб их психическому здоровью и функционированию. Им нужна была психологическая корректировка, чтобы вернуться к нормальной жизни. Было опрошено 835 студентов. Для сбора информации и для анализа разработана специализированная анкета. Результаты показали связь между психологической устойчивостью, адаптацией и функционированием. Уроки психологической устойчивости и осознанности не преподавали в школах, и в большинстве школ не хватало средств, которые могли бы привить учащимся психологическую устойчивость.

Ключевые слова: *психологическая устойчивость, психологическая адаптация, травма, адаптация*

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