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Narrative Exposure Therapy Intervention and Management of Alterations in Arousal and Reactivity to External Stimuli Symptoms of Traumatic Stress among Young People in Kakuma Division, Turkana County of Kenya.

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ABSTRACT*:*

This study set to examine the effectiveness of Narrative exposure therapy intervention and management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people in Kakuma division, Turkana County. Kakuma refugee camp is currently the home of 196,666 people from 21 different countries who fled from their various countries due to civil war and organized violence. Young people form 20% (39,960) of this population. These young people live with negative memories of their traumatic experience of war and conflict. Their mental health worsens when effective evidence-based trauma-focused interventions are not provided. Against this background, this study sought to assess the young people's traumatic stress with the use of post-traumatic stress disorder checklist for DSM-5 (PCL-5) tool. The study adopted narrative exposure therapy framework and intervention for traumatic stress management. The study used quasi-experimental research design whereby the researcher adopted a non-equivalent groups design. This design involved one treatment group and one control group. The study sampled 104 participants through multistage cluster and proportionate sampling. While the treatment group received narrative exposure therapy intervention, the control group received normal counselling intervention. Descriptive and inferential statistics were used to analyse the data with the aid of statistical programme for social sciences (SPSS) version 23. Independent sample t-test was used to list the statistical significant differences between the means in the pre-test and post-test scores for the groups. The researcher established that Narrative exposure therapy intervention was effective in management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people in Kakuma division, Turkana County of Kenya.

Key Words: Narrative Exposure Therapy Intervention (NET), Kakuma Refugee Camp, Traumatic Stress, Arousal and Reactivity Symptoms.

1. INTRODUCTION

Kakuma refugee camp was establishment in 1992 to accommodate the "lost boys of Sudan" who fled their country following repeated incidences of civil war and organized violence (UNHCR, 2020). According to UNHCR (2016), Silove, Ventevogel and Rees (2017), in 2016 alone, persons displaced from their homeland were a total of 3.2 million. Syria and South Sudan were the leading source countries. Kakuma division is in Turkana District of the Northwestern region of Kenya which is 120 kilometres from Lodwar District Headquarters and 95 kilometres from the Lokichoggio Kenya- South Sudan border (Sanghi, Onder & Vemuru, 2016). Kakuma is equally the largest refugees' camp worldwide with diversity of nationalities (UNHCR, 2015). The diversity of population from different nationalities provided culturally sensitive perspectives to this study. This background informed the researcher interest to carry out an experimental study on the effectiveness of narrative exposure therapy intervention in the management of traumatic stress among young people in Kakuma division.

Trauma as described by Van Rooyen and Nqweni (2012), is any life-threatening experience that amounts to excessive fear and other psychosomatic reactions that impedes an individual functioning systems. Traumatic stress is a resultant effect of traumatic experience which is diagnosed through assessment of symptoms often manifested after experiencing or witnessing a traumatic event (Hull & Corrigan, 2019). Symptoms of traumatic stress are manifested in form of long-lasting psychological distress, from mild anxiety to symptoms that interfere with almost all aspects of individual functioning (Briere & Scott, 2015). This psychological distress affects an individual in four domain symptom clusters, namely; memory intrusion, avoidance of stimuli, changes in thoughts and mood and hyper-arousal/ hyper-vigilance (Dimauro, Carter, Folk & Kashdan, 2014).

Research by Burri and Maercker, (2014) assessing the rates of traumatic stress in some European countries showed the following statistics; Croatia 6.67%, Netherland 3.30%, UK 3%, France 2.32% and Germany 2.31%. Within the US military officials who serve in Iraq and Afghanistan, 11% to 20% is believed to live with symptoms of traumatic stress (Ghaffarzadegan, Ebrahimvandi, & Jalali, 2016). Also, another study among secondary school students

sampled 403 between the ages of 16-19 years in Bagdad. The outcome of the study showed 84% of the respondents living with at least one traumatic event. Further analysis indicated that 61% of the respondents fully endorsed post-traumatic stress symptoms criteria (Al-Hadethe, Hunt, Thomas & Al-Qaysi, 2014).

Furthermore, a research conducted by Sheikh et al. (2014), sampled 258 among internally displaced persons (IDPs). The study investigated psychological distress symptoms and coping in Kaduna, North-western Nigeria. 42.2% among the internally displaced persons (IDPs) had fully diagnosed symptoms of traumatic stress. The most common distress felt by the respondents were destruction of individual property (96.1%), evacuation from home community (96%) and experiencing of victimization and violence (88%). Overall, 58% recorded up to 11-15 traumatic events. The study suggested that some evidence trauma-based interventions could contribute to reducing psychological distress and traumatic reactions felt among the IDPs.

In a similar way, following post-election violence (PEV) of 2007/8 in Kenya, Musau, Munene and Khasakhala (2017) conducted a baseline researched on the types and forms of traumatic events survivors were exposed to. A sample of 139 respondents from purposive sampling revealed among others the following findings from the internally displaced persons (IDPS); 88% forcefully relocated, 67% lost properties, 4% experienced rape and sexual assault, 21.6% lost significant others, 11% witnessed rape, while 9.3% experienced traumatic grief. Based on the findings, the study concluded that trained psychological service personnel could have been provided to handle the aftermath of human conflicts appropriately enough to avert human suffering. Similarly, another study was carried out by Harder, Mutiso, Khasakhala, Buke and Ndetei (2012) on the multiple traumas, post-election violence, and post-traumatic stress among impoverished Kenyan youth in Kenya. The study sampled 552 youth from impoverished informal settlements. The result indicated that 47% of them had more than five traumatic events.

In the same vein, a study assessing post-traumatic stress symptoms together with anxiety and depression among adolescents who have been neglected and abused aged 13-18 in charitable institution for children was conducted by Nyagwencha, Munene, James, Mewes and Barke (2018). Of the 232 sample, anxiety disorder prevalence was 84.1%, depression showed 50.4% PTSD and traumatic stress prevalence was 21.6%. These studies showed that traumatized population remains a vulnerable group and psychological interventions adapted to the need of traumatized population need to be competence-based and sufficiently qualitative to address psychological symptoms.

Narrative Exposure Therapy (NET) is a trauma-focused psychological treatment designed to address symptoms of traumatic stress among populations who have been exposed to multiple traumas and survivors of traumatic events. (Schauer, Neuner & Elbert, 2011). Individuals who have experienced trauma often manifest symptoms of fragmentation of memory, disorientation, dissociation and other symptoms (Herman, 2015). In trying to avoid reactivation of traumatic memories and fear of being back to the traumatic scene, survivors find it difficult to narrate their experience in a coherent and meaningful manner (Neuner, 2012). Sometimes the disconnection in memory presentation distress is not intentional but owing to dissociative amnesia (Gold & Cook, 2017). NET aims at enabling trauma survivors to recall and narrate their traumatization for the purpose of healing and integration. The emphasis on time and place of the event is maintained while at the same time re-experiencing the emotions until habituation is achieved. It was against this background that the researcher sought to assess the effectiveness of narrative exposure therapy intervention in the management of traumatic stress among young people in Kakuma Division.

1.1 Purpose of the Study

The purpose of this study was to establish the effectiveness of Narrative Exposure Therapy Intervention in the management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people in Kakuma division, Turkana County in Kenya.

1.2 Objectives of the Study

To examine the effectiveness of Narrative Exposure Therapy Intervention in Management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people in Kakuma Division.

1.3 Research Hypothesis

H0: There is no statistical significant effectiveness of Narrative Exposure Therapy Intervention in management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people in Kakuma division.

2. LITERATURE

The symptoms of hyper-arousal and reactivity include irritability and anger outbursts with little or no provocation. Traumatized individuals have feelings of being in danger all the time and so they become hyper-vigilant. There is an overly strong startle response, concentration and sleep problems (Dimauro et al., 2014). This over-reactivity is sometimes referred to as hyper-arousal. In this domain of symptoms cluster, the individual is in a constant state of hyper-vigilance as a result of elevated levels of stress hormones like adrenaline and cortisol flooding the body system (Paula & Bonnie, 2004). The results of this are emotional restlessness, anxiety, irritability, or feeling out of control. High levels of adrenaline lead to physiological responses such as elevated heart rate, palpitations and sweating. There is also an increase in feelings of uncontrollable anger or rage and wild mood swings as the nervous system becomes overloaded with stress hormones. Survivors may sway between high levels of agitation and total exhaustion (Sanderson, 2013).

Some studies on certain techniques have recorded reduction in hyper-arousal symptom. A study by Crawford, Talkovsky, Bormann, and Lang (2019) was carried out on 173 veterans. The target was hyper-arousal symptoms through Mantram Repetition Programme (MRP) for traumatic stress. The mean age of the participants in the study was 48.90 with a standard deviation of 14.54. Individual therapy was given to all the participants. The treatment was delivered weekly at 60 minutes per session in eight weeks. There was a reduction in all symptom clusters of traumatic stress. MRP facilitated a significant reduction in hyper-arousal and hyper-vigilance to external stimuli at post-test with Hedge's g = 0.57. Hyper-arousal was g =.52 at follow-up. Numbing was g = 0.47 at post-treatment. The study concluded that hyper-arousal facilitated reductions in the other symptom clusters of traumatic stress.

It has been shown that individuals with hyper-arousal symptoms may present with panic disorder and its sudden terrifying fear that seems unrelated to immediate life events. Due to extreme reactivity, survivors sometimes become violent towards others subsequent to their victimization (Flannery, 2001). Survivors of violence sometimes become perpetrators of violence toward others at subsequent times in their lives in a bit to undo their victimization. Hyper-arousal response may result in an ingrained maladaptive pattern of behavior over time and can lead to antisocial personality disorder in young people (Min, Tracy, & Park, 2014).

Treatment of traumatic stress through mindfulness-based stress reduction therapy such as Matram and meditation have shown reduction in certain symptoms only in a modest way (Polusny et al, 2015). Addressing traumatic stress management in a general sense without directing the intervention to specific area may not yield lasting result and may leave individual still fragmented. Since refugee populations do not have single traumatic event experience but multiple traumas (Buhmann, 2014), therapeutic approaches that joint fragmented memories of individual experience into a coherent narrative may prove more efficacious in dealing with refugees' experience. The beginning of exposure therapy was on the most distressing experience among traumatic events an individual has witnessed (Foa, Hembree & Rothbaum, 2007). On the contrary, narrative exposure therapy looks at the 'Gestalt' life story of an individual to join the pieces of individual experience into a narrative whole.

3. METHODOLOGY

3.1 Research Design

This study used quasi-experimental design in which the researcher adopted a Non-equivalent groups design. This design involved one experimental group and one control group. Nonequivalent group design is suitable for testing the effect of a single independent variable that can be used as a treatment. This design is usually illustrated using a standardized design notation of 'N', O and 'X'. Depicted with 'N' is non-equivalent assignment, 'X' signifies the treatment subjected to the experimental group, and 'O' symbolizes pre-test or post-test results of the dependent variable. (Creswell & Plano Clark, 2018). Respondents were subjected to an initial assessment of the dependent variables through the use of PTSD Checklist for DSM-5 (PCL-5). The treatment group received a pre-test for traumatic stress, narrative exposure intervention and a post-test. The control group received a pre-test and post-test and a normal counselling intervention. This design is suitable for testing the effect of a single independent variable that can be used as a treatment (Leavy, 2017). Table 1 shows Nonequivalent group control group design

Table 1:

Nonequivalent group control group design

Group	Pre-test	Treatment	Post-test
Experimental Group	N	X	O
Control Group	N		O

3.2 Population of the Study

The participants composed of young people drawn from five secondary schools from the five refugee settlements within Kakuma. The researcher used multistage cluster and proportionate sampling techniques to determine population for the study. Form three students were selected from the Five Secondary Schools to participate in the study through the sampling procedures. Form three has a population of 3,143 distributed across the five secondary schools (Windle International Kenya, School Data, 2020). A sample size of 110 respondents was obtained through proportionate sampling.

3.3 Sampling Procedures and Sample Size

Sampling size refers to selected items from the entire group to make up a sample (Kothari, 2004). Those who met the criteria for traumatic stress were selected into the control group and experimental group. While the experimental group received treatment representing the independent variable by being subjected to narrative exposure therapy intervention, the control group was subjected to normal counselling intervention. Both the treatment and control groups underwent post-test assessment to determine statistical significant differences after the experiment. The sample size of the study is shown in Table 2.

Table 2:

Sample Size of the Study

Cluster/ Schools	**Population of students in Form 3**	**Proportion**	**Sample Size**
Cluster A/ Kakuma Refugees' Secondary School (KRSS)	879	0.31	31
Cluster B/ Green Light Refugee Secondary School (GLSS)	670	0.23	23
Cluster C/ Somali Bantu Secondary School (SBSS)	786	0.28	28
Cluster E/ Vision Secondary School (VSS)	713	0.25	25
Cluster E/ Morneau Shappel Secondary School (MSS)	95	0.03	3
Total	**3,143**	**1.10**	**110**

3.4 Data Analysis

Descriptive and inferential statistics were used to analyse the data with the aid of statistical programme for social sciences (SPSS) version 23. Independent sample t-test was used to list the statistical significant differences between the means in the pre-test and post-test scores for the groups.

4. RESULT

This section presents an assessment of the effectiveness of the narrative exposure therapy intervention in management of alterations in arousal and reactivity to external stimuli symptoms. The section has sub-sections on analysis and presentation of baseline and endline data.

4.1 Pre-test Results of Alterations in Arousal and Reactivity to External Stimuli Symptoms

The researcher assessed whether there were differences in levels of alterations in arousal and reactivity to external stimuli symptoms between young people in the treatment group who were exposed to narrative exposure therapy intervention and those in control group who received normal counselling intervention. Table 3 presents the pre-test group statistics.

Table 3:

Pre-test Group Statistics of Alterations in Arousal and Reactivity to External Stimuli Symptoms

	Control/ Treatment	N	Mean	Std. Deviation	Std. Error Mean
Alteration in arousal and reactivity to external stimuli symptoms	Treatment	53	2.19	.810	.111
	Control	51	1.84	.703	.099

The findings revealed the mean alterations in arousal and reactivity to external stimuli symptoms among young people in the narrative exposure therapy intervention group was 2.19 with a standard deviation of 0.703, while the mean among those in the normal counselling group was 1.84 with a standard deviation of 0.703. Therefore, there was a mean difference of 0.346. Table 4 has the results on whether the reported mean difference was statistically significant or not.

Table 4:

Pre-test Independent Samples T-test Scores of Alterations in Arousal and Reactivity to External Stimuli Symptoms

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Alteration in arousal and reactivity to external stimuli symptoms	2.319	102	.022	.346	.050	.641

The independent samples t-test results showed that there was a statistical significant difference in alterations in arousal and reactivity to external stimuli symptoms between young people in the narrative exposure therapy group and those in the normal counselling group before intervention. The mean difference was 0.346 (95% CI = 0.050 to 0.641), t(102) = 2.319, p = .022<0.05.

4.2 Post-test Results of Alterations in Arousal and Reactivity to External Stimuli Symptoms

The researcher assessed whether there were differences in levels of alterations in arousal and reactivity to external stimuli symptoms between young people exposed to the narrative exposure therapy and those exposed to normal counselling after the intervention. Table 5 presents the group statistics.

Table 5:

Post-Test Group Statistics of Alterations in Arousal and Reactivity to External Stimuli Symptoms

	Control/ Treatment	N	Mean	Std. Deviation	Std. Error Mean
Alteration in arousal and reactivity to external stimuli	Treatment	52	1.02	.610	.085
	Control	51	1.75	.627	.088

The results indicated that the mean negative arousal and reactivity to external symptoms among young people in the narrative exposure therapy group was 1.02 with a standard deviation of 0.610, while the mean among those in the normal counselling group was 1.75 with a standard deviation of 0.627. Therefore, there was a mean difference of -0.726. Table 6 presents the results on whether the reported mean difference was statistically significant.

Table 6:

Post-test Independent Samples T-test Scores of Alterations in Arousal and Reactivity to External Stimuli Symptom

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Alteration in arousal and reactivity to external stimuli symptoms	-5.953	102	.000	-.726	-.968	-.484

The independent samples t-test results confirmed that alterations in arousal and reactivity to external stimuli symptoms were higher among young people that were exposed to normal counselling. The mean difference was -0.726 (95% CI = -0.968 to -0.484), t(102) = -5.953, p = < 0.00. The difference in means was higher after the intervention. There was therefore a mean evidence to reject the null hypothesis in favour of the alternative hypothesis and conclude that there is statistical significant effectiveness of narrative exposure therapy intervention in management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people in Kakuma division.

5. DISCUSSION

The findings of this study showed that alterations in arousal and reactivity to external stimuli symptoms were higher among young people that were exposed to normal counselling, compared to those exposed to the narrative exposure therapy intervention. This confirmed the effectiveness of narrative exposure therapy intervention in management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people in Kakuma division.

Studies targeting hyper-arousal symptoms cluster among refugees with traumatic stress disorder by Sandahl, Vindbjerg and Carlsson (2017) were carried out on sleep disturbance treatment. Sleep disturbance as a symptom comes with challenges like trouble falling asleep, staying asleep or restless sleep. In one of the studies 752 refugees meeting the criteria for traumatic stress filled the questionnaire to participate in the study. Those who stated sleep difficulties constituted 99.1%, while 98.7% mentioned recurring and distressing dreams. The study recommended further research on sleep disturbance among refugees affected by traumatic stress.

Individuals who suffer the fourth cluster symptoms of traumatic stress according to DSM-5 are supper alert with startle behaviour and reactivity. They are confronted with hyper-arousal and hyper-vigilance. This leads to lack of concentration, angry outburst or acting aggressively (Weathers et al., 2013). The current study recorded a reduction on this symptom cluster with a mean difference of -0.726 and a p-value of 0.00 (p < 0.01). Consequently, the null hypothesis that stated that there is no statistical significant effectiveness of narrative exposure therapy intervention in management of alterations in arousal and reactivity to external stimuli of traumatic stress among young people in Kakuma division was rejected.

The study findings affirmed the previous study done by Schaal, Elbert and Neuner (2009) among Rwandan orphans with a sustained result of traumatic symptoms reduction. It is also in line with a study done by Im, et al. (2018) in Kenya among Somali refugee youths living in urban settings. The study found out that trauma-informed psycho-education intervention is effective in addressing high mental health and psychosocial needs of refugees in low resource setting. Refugee youths from Somalia (n=141) living in Nairobi received 12 therapy sessions of trauma-focused psycho-education. Pre-tests and post-tests were carried out. The results revealed that the interventions had positive effects on symptoms of traumatic stress. Participants recorded significant level of reduction in stress symptoms and increased level of social support. Individual with moderate symptoms of traumatic stress showed an increased in self-awareness. Through psycho-education, as Frankl (2012) maintained, the way traumatic experience is handled can be a catalyst of growth, transforming past traumatic wounds into wisdom.

The current study equally agreed with other psychological and trauma-based interventions like EMDR among refugee population. According to the study among Syrian refugees by Acarturk et al. (2015), 29 adult refugees with traumatic stress and depression symptoms were randomized into treatment group (n =15) using EMDR and control (n =14). Analysis of covariance results showed treatment group trauma stress and depression symptoms reduction (d =1.78, 95% CI: 0.92-2.64; d =1.14, 95% CI: 0.35-1.92) compared with wait-list control group. The study indicated that EMDR may be effective in traumatic stress and depression symptoms management.

With narrative exposure therapy, clients are able to alter the relationships between the fear stimulus and associative networks through activation of the fear network. In this process, new information is encoded that is incompatible with what is in the fear network whereby for the traumatized individual, the sight of a fear stimulus in a new environment would not mean another traumatic event. This is achieved when clients in a therapeutic relationship keep narrating their story until habituation is attained. In other words, an individual remains in contact with activation until no further anxiety is recorded (Schaurer et al., 2011). With this clients' level of hyper-arousal and hyper-vigilance is significantly reduced.

6. CONCLUSION AND RECOMMENDATION

In conclusion, the study set out to assess the effectiveness of narrative exposure therapy intervention in the management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people in Kakuma division, Turkana County, Kenya. The study findings have proven that narrative exposure therapy intervention is effective in the management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress by causing a significant reduction of symptoms level at post-test among respondents who were subjected to treatment as compared to those who were in the control group. Based on the findings and conclusion of the study, the researcher recommends counselors, psychotherapist and other mental health workers working with traumatized population to explore narrative exposure therapy intervention as an effective intervention in management of alterations in arousal and reactivity to external stimuli symptoms of traumatic stress among young people.

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