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Research Paper

Relationship between Initial Trauma Processing Strategies and Posttraumatic Growth among Survivors of Garissa University Terrorist Attack, Kenya

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ABSTRACT

The study investigated the predictive relationship between initial trauma processing strategies and posttraumatic growth among Garissa University terrorist attack survivors. The study was anchored on the organismic valuing theory after adversity, and adopted the correlation research design. A total sample of 200 participants was selected using simple random sampling technique. Quantitative data were collected using a standardized questionnaire, the21 item Posttraumatic Growth Inventory (PTGI) and Initial Trauma Processing Scale (ITRS). Data were analyzed using univariate analysis, Pearson correlation and multiple regression analysis. The study found positive significant relationship between initial trauma processing strategies and posttraumatic growth among the survivors of Garissa University terrorist attack ($R2=0.121$, $F=6.474$, $P\leq0.05$). The study further found that intrusion response and arousal response strategies were significantly and positively related to all the 6 posttraumatic growth domains: relating to others, personal strength, spiritual change, appreciation of life, new possibilities and overall posttraumatic growth. Cognitive alteration strategy was significant and positively related to 2 the posttraumatic growth domains: appreciation of life and total posttraumatic growth. Avoidance response strategy was not related to any of the posttraumatic growth domains. These findings may be relevant in designing future interventions for trauma survivors that are growth focused as complementary approaches to the existing crisis-focused counseling.

Keywords: *Posttraumatic Growth, initial trauma, Trauma, Terrorism, Posttraumatic Stress Disorder.*

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In the recent past, terrorism has accelerated to become one of the leading causes of trauma across the globe, as a result of the Arab revolution (Brown, 2013). Salim (2013) observed that the revolution led to the collapse of nations, the rise of new and more equipped terror groups, and increase in number of countries targeted by terror groups. Terrorism has been conceptualized differently by various disciplines but Lopez and Pineda (2013) summarized it as behaviour aimed at intimidating, causing fear and hopelessness to a group of people to achieve a political, religious or selfish end. This is an indication that terrorism is more of a psychological strategy than a military one. The conceptualization of terrorism as psychological war was supported by Nasim, Khan and Aziz (2014) who identified a common philosophy of terror as, '*You kill hundreds and influence thousands…*', referring to the traumatic motivation of terrorism. This is evident that the aim of terrorism is not to kill but to psychologically devastate many people through the pursuit of intimidation. This could have the potential to alter the cognitive functioning and self-concept of survivors by creating a more hopeless perception of the world.

Studies across the world show that the numbers of psychological casualties resulting from terrorism are more than the physical ones. For instance Rugiero and Vos (2013) reported that in the sarin gas attack in Tokyo in 1995, 12 people died, 900 received medical treatment and 9000 people presented with psychological complaints ranging from insomnia, grief, anger, rage and hypervigilance. Lopez and Pineda (2011) observed that in Oklahoma City bombing in 1995, there were 168 fatalities but over 8000 individuals sought crisis intervention. The psychological magnitude of terrorism has also been demonstrated by Nasim and Aziz (2014) who carried out a survey on the effects of terrorism in Pakistan and reported 3.9% physical effects, 17.2% social effects and 79.2% mental health effects. These findings point to the need for a paradigm shift in the war on terror, with more focus on psychological interventions rather than increased military spending that continues to be witnessed across the world.

Experiencing of traumatic events shutters the survivor's assumptive world resulting to instability in psychological functioning. To attain homeostasis after traumatic events, the mind activates internal defense mechanisms to buffer against the negative outcomes from such events. The process of buffering against further damage from traumatic events is facilitated by short-term trauma processing strategies that are unconsciously activated immediately after the event. These strategies have been documented by the American Psychiatric Association (2013) as criteria B (intrusive thoughts), C (avoidance), D (cognitive alteration) and E (arousal alteration). Each of these initial trauma processing strategies can be deduced from the symptoms exhibited by survivors which have been clustered into the criteria. According to DSM V (APA, 2013), manifestation of these symptoms is not conceptualized as severe unless it continues for a period of at least one month with specific threshold. The current study conceptualized initial trauma processing strategies in terms of trauma symptoms criteria while severity of trauma was viewed in terms of the duration and threshold of the symptoms. The DSM V (APA, 2013) comprehensively describes 8 criteria reflecting the manner in which trauma manifests namely criterion A, B, C, D, E, F, G and H.

In light of biological basis of trauma, these initial trauma processing strategies constitute the survival brain's response of flight, fight or freeze.

Criterion A: Sources of trauma

The criteria show the conditions under which a person may become traumatized. The DSM V (APA, 2013) indicates that a person may be traumatized if exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, as follows: (The trauma threshold for this criterion is at least one of the conditions)

1. Direct exposure.
2. Witnessing in person.
3. Indirectly, by learning that a close relative or close friend was exposed to trauma. If the event involved actual or threatened death, it must have been violent or accidental.
4. Repeated or extreme indirect exposure to aversive details of the event(s), usually in the course of professional duties.

The current study focuses on survivors of terrorist attack who may have been affected in all the above ways. The study also conceptualizes trauma severity based on the number of symptoms exhibited by the survivor in each of the criteria from B to E.

Criterion B: Intrusion symptoms

The traumatic event is persistently re-experienced in the following way(s): The APA (2013) recommends the threshold for trauma in this criterion to be at least one symptom. Recurrent, involuntary, and intrusive memories.

1. Traumatic nightmares. Note: Children may have frightening dreams without content related to the trauma(s).
2. Dissociative reactions (e.g., flashbacks) which may occur on a continuum from brief episodes to complete loss of consciousness.
3. Intense or prolonged distress after exposure to traumatic reminders.
4. Marked physiologic reactivity after exposure to trauma-related stimuli.

Criterion C: Avoidance symptoms

Persistent effortful avoidance of distressing trauma-related stimuli after the event: The APA (2013) recommends the threshold for trauma in this criterion to be at least one symptom.

1. Trauma-related thoughts or feelings.
2. Trauma-related external reminders (e.g., people, places, conversations, activities, objects, or situations).

Criterion D: negative alterations in cognitions and mood

Negative alterations in cognitions and mood that began or worsened after the traumatic event: The APA (2013) recommends the threshold for trauma in this criterion to be at least one symptom. Inability to recall key features of the traumatic event (usually dissociative amnesia; not due to head injury, alcohol or drugs).

1. Persistent (and often distorted) negative beliefs and expectations about oneself or the world
2. Persistent distorted blame of self or others for causing the traumatic event or for resulting consequences.
3. Persistent negative trauma-related emotions (e.g., fear, horror, anger, guilt or shame).
4. Markedly diminished interest in (pre-traumatic) significant activities.
5. Feeling alienated from others (e.g., detachment or estrangement).
6. Constricted affect: persistent inability to experience positive emotions.

Criterion E: alterations in arousal and reactivity

Trauma-related alterations in arousal and reactivity that began or worsened after the traumatic event: The APA (2013) recommends the threshold for trauma in this criterion to be at least two symptoms.

1. Irritable or aggressive behavior.
2. Self-destructive or reckless behavior.
3. Hypervigilance.
4. Exaggerated startle response.
5. Problems in concentration.
6. Sleep disturbance.

Criterion F: duration

According to the APA (2013) persistence of symptoms (in Criteria B, C, D and E) must continue for more than one month in order for the person to be classified to have PTSD.

Criterion G: functional significance

The symptoms should also cause significant symptom-related distress or functional impairment (e.g., social, occupational) to the survivor.

Criterion H: exclusion

The disturbance should not however be due to medication, substance use, or other illness.
The symptoms in criteria B (intrusion), C (avoidance), D (Negative cognitive alteration) and E (alteration in reactivity) are not just manifestations of trauma but could also imply the initial trauma processing strategies. This study conceptualized these as illusionary and short term coping strategies that the survivors of trauma employ to buffer against further damage from the traumatic event.

Studies have been carried out about the prevalence of posttraumatic symptoms with varying findings. A study conducted on the general population after the September, 11, 2001 terrorist attack in the United States reported that 68% experienced at least one symptom 'moderately'. About 90% of the population experienced at least one symptom 'a little bit'. (Mark, Bradley, Lisa, Rebecca, Grant, Marc, Annie, David, Janina & Sandra (2001). This study targeted those who had trauma exposure through television and used a sample of 768 adults selected by

simple random sampling from telephone directories. Data were collected using the Posttraumatic Stress Disorder Checklist (PCL-5). Analysis was done using univariate analysis, and bivariate analysis (Pearson and Spearman correlation). The study was carried out 3 to 5 days after the attack. Using telephone interview is a good approach but may require more time and funds. It is also not able to capture other details from participants including emotions and nonverbal cues. The current study used a self-developed questionnaire to measure this construct instead of the standardized PCL-5. The aim was to capture the data using a language that was appropriate to the culture of the population used in the current study. The current study also targeted participants who had direct exposure to terror attack rather than those who experienced it through television. The researcher also collected data from the participants directly instead of using telephone interviews in order to enrich the data by capturing nonverbal cues of participants. This enriched the quality of information obtained from the participants.

In a similar study, Digrande, Neria, Brackbill, Pulliam and Galea (2001) analyzed the prevalence of PTSD among individuals with various trauma exposure levels. The study was conducted 6 months-3 years after the attack using a sample of 3271 adults. The inclusion criteria was those who were evacuated from the World Trade Centre, the site of the attack. Computer assisted telephone interviews were used to collect data with a standardized questionnaire, PCL. Recruitment of participants was done from the World Trade Centre health registry, using simple random sampling. Those who had direct exposure to the attacks of September 11 terrorist attack had 1.5% trauma symptom prevalence six months after the attack. The rescue workers had trauma prevalence at 11.1 % eleven months after the attack while the pentagon workers reported trauma prevalence of 14% seven months after the attack. The time since the attack was a major variable that could account for the difference in findings with the preceding study. This study was done up to 3 years after the attack making it similar to the current study save for the large sample used. This could form basis for examining possible replication of similar findings in the Kenyan population. The variations in the prevalence of trauma symptoms could be explained by intervening factors such as time taken before the assessment for the symptoms, proximity of the survivors from the attack area, the level of exposure and interpretation of the magnitude of the attack.

In a general review of published articles on trauma prevalence, Maria, Jesus and Sarah (2016) reported varying posttraumatic symptoms among sections of the general population. The results indicated that 33% - 39% of the survivors, 17%-29% of relatives and friends, 5%- 6% of rescue workers and 4% of the community developed posttraumatic stress disorder symptoms after a terrorist attack. However the study pointed out that the onset of the symptoms varies across different populations. The current study focused on collection of primary data from trauma survivors unlike the analysis of literature used in the study. The use of primary data was more desirable as it gave the researcher the chance to seek clarification of issues from the participants including member checking as a means of ensuring that what the participants reported is what is captured in the findings.

Atwoli, Stein, Koenen and McLaughlin (2015) reported comparative findings of trauma prevalence in selected different cultures. The study was conducted in South Africa using a sample of 4315 adults of different nationalities who had experienced death of a loved one, war trauma, physical violence, sexual violence, and accidents. Analysis was done using univariate analysis and regression analysis. Leading was Northern Ireland with a prevalence of 17.6% followed by Spain 3.3%, South Africa at 2.5%, and Italy 2.5 % prevalence. The variance in prevalence in these countries may have been accounted for by cultural differences. The study is comprehensive, having selected survivors of trauma with experience from diverse events. However, the study did not sample participants from terror related trauma, which was the focus of the current study. The various historical events leading to trauma could also explain the difference in prevalence.

In Kenya, studies on trauma prevalence have been conducted reporting relatively higher rates of post-traumatic symptoms with focus on events such as grief, rape and violence among others. Karsberg and Elklit (2012) reported trauma symptoms prevalence rate of 34.0% in a sample of 477 Kenyan rural youth. The study used population that is similar to that of the current study which gives the researcher the chance to test the possibility of replicating similar findings on the population under study.

A study on 1565 orphaned and separated children in Usain Gishu County reported post traumatic symptoms prevalence of 28. % in street children, 15% among households and 11.1% among children in children homes (Atwoli, Ayuku, Hogan, Koech, Vreeman, Ayaya & Braitstein, 2014). The study capitalized on quantitative methods whereas the current study will use both quantitative and qualitative approaches. The study locale wass the same area where the current study was conducted even though the population is different. The current study will be focusing on young adults and not children.

Another study conducted in Maseno involving 1190 adults with exposure to severe trauma reported, 10.6% trauma symptom prevalence (Jenkins, Otieno, Omollo, Ongeri, Sifuna, Kingora, Kiima & Ogutu, 2015). Even though culture cannot be homogenous, the deviation of trauma prevalence rates reported in Kenya seemed to be lower compared to global studies but with higher mean. The studies also sampled participants that have had trauma experience from varying sources.

A comparative study examining the prevalence of psychopathology in workers responding to the 1998 US embassy bombing in Nairobi and the 1995 Oklahoma bombing revealed a 22% prevalence of PTSD and 27% of depressive symptoms (Zhang, Pffeferbaum, Narayanan, Lee, Thielman & North, 2016). The study reports that Nairobi rescue workers were 4 times more symptomatic than the Oklahoma workers. The reason for high prevalence of trauma among participants from Nairobi has not been explored due to the methodology adopted in the study. The use of mixed methods approach in the current study will enable the researcher clarify some of the patterns that arise from quantitative measures.

The difference in levels of trauma symptoms prevalence within the same population or across different regions was not accounted for. More studies on different populations and different regions will help inform the academic community on whether this pattern can be replicated or it is as a result of chance. The current study focuses on trauma symptom prevalence was timely in contributing to this discussion. Most of the studies reviewed focused on prevalence of trauma experienced from varying sources unlike the current study that will focus on trauma as a result of a terrorist attack event.

The studies on posttraumatic symptom prevalence seemed to focus on the overall PTSD score. There seemed to be little or no attempt by the studies to scrutinize the prevalence of the individual PTSD symptoms. The current study focused on the prevalence of each individual trauma symptom, and the collective prevalence of the symptoms as clustered in the DSM V PTSD criterion. None of the studies done on trauma symptoms had attempted to examine the prevalence in terms of the DSM criteria. This study explored this gap by conceptualizing the criteria as temporary trauma processing strategies and assessing their prevalence. This information may help trauma practitioners in designing interventions that target the most prevalent initial trauma coping strategies and symptoms. The other studies have also used the PCL-5 to a large extent as the research instrument. The current study adopted the researcher's own developed questionnaire in order to capture deeper information that could not be generated by the standardized tool.

METHODS

The study was carried out at Moi University main campus with the target population being the 650 survivors of Garissa University terrorist attack. These survivors were transferred from Garissa University to complete their studies at Moi University away from the initial location of the traumatizing experience. The study adopted the correlation research design. Data were collected using the Posttraumatic Growth Inventory (PTGI), a Likert standardized questionnaire developed by Tedeschi and Calhoun (1996). The inventory measures posttraumatic growth on five domains namely new possibilities, relating with others, personal strength, spiritual change, appreciation of life and overall posttraumatic growth. The tool showed high internal consistency with Cronbach's alpha coefficient of 0.859. Initial trauma processing strategies was measured using researchers own constructed questionnaire, Initial Trauma Response Scale (ITRS). A sample of 200 participants was selected using simple random sampling technique.

RESULTS

The study sought to explore the initial trauma processing strategies employed by the survivors in response to the terror attack. The strategies were computed by clustering the trauma symptoms into the DSM- V categories and finding their mean. The lowest possible mean was 0 while the highest possible mean was 4. A strategy with a mean of 0 would mean that no participant employed the strategy in processing of trauma while a score of 4 would mean the strategy was used by majority of participants in processing trauma. The strategies

include cognitive alteration, avoidance response, arousal response and intrusion response. Within the first month of experiencing trauma these strategies are normal but if they persist for over one month beyond the recommended threshold, the survivor is considered to have developed Posttraumatic Stress Disorder (PTSD), which will require specialized attention. The initial trauma processing strategies reported by the survivors are shown in figure 1.

According to Maercker & Zoellner (2006) Janus two component theory conceptualizes trauma in terms of constructive and illusionary side. The illusionary side is a cognitive and deceptive side perceived as a defense mechanism. It is an avoidance strategy that begins shortly after exposure to the traumatic event and can have disastrous psychological effect in the long run. The illusionary strategy is not necessarily unhealthy as it may act as a temporary buffer against the effects of the traumatic event. The four initial trauma processing strategies explored by the current study are temporary strategies used to buffer against the dangers of trauma.

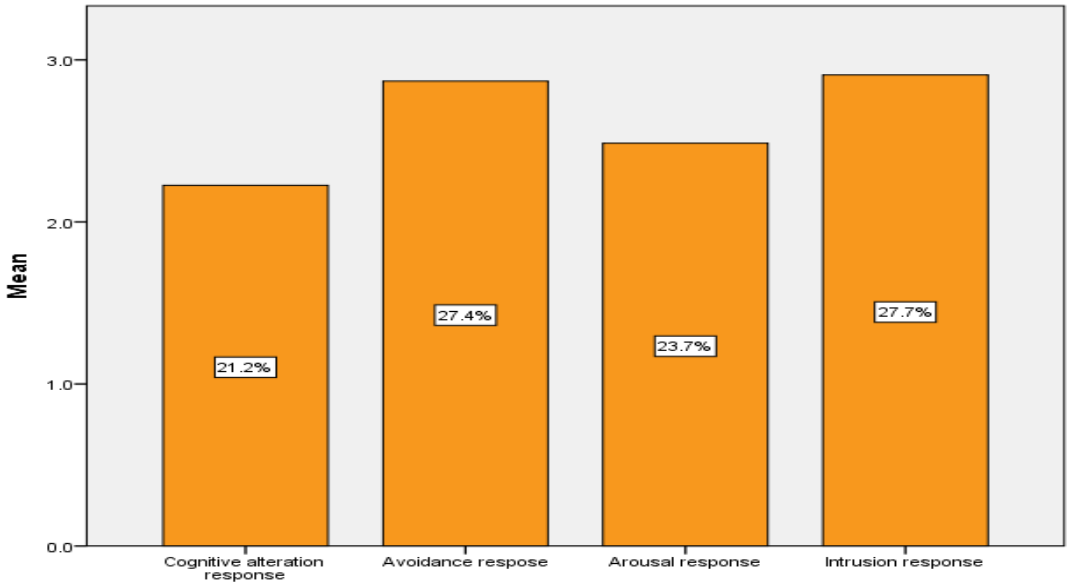


Figure 1: Initial trauma processing strategies

The most prevalent trauma processing strategy employed by the participants was intrusion response with a mean of 2.907 with followed by avoidance response with a mean of 2.869. The least prevalent strategies were cognitive alteration response with a mean of 2.226 followed by arousal response with a mean of 2.485. With the lowest possible mean being 0 and the highest possible one being 4, the findings indicate that all the four initial trauma processing strategies were used by the survivors above average.

The findings are consistent with Nyagaya, Chepchieng, Njonge and Ombura (2014) who reported slightly closer means on avoidance symptoms (mean=2.31), Intrusive symptoms (mean= 2.28) and arousal symptoms (mean= 1.86). The study examined secondary stress among psychotherapists in Nairobi and Nakuru counties of Kenya and used a sample of 302 Psychotherapists drawn from the Kenya Counseling Association. Just like the current study,

findings in this sample reflect higher levels of avoidance and intrusive symptoms. In another study conducted by Gomez and Dana (2008) using a sample of 67 emergency nurses from three general community hospitals, arousal symptoms were reported to have high prevalence (54%) followed by avoidance symptoms (52%) with the least prevalent being intrusion (46%). The study explored the prevalence of secondary traumatic stress among emergency nurses.

Contrary to the current study, the two studies focused on populations that underwent secondary trauma. The studies also concentrated on three initial trauma response strategies avoidance, arousal and intrusion with none investigating cognitive alteration. The current study focused on a population that had been exposed to primary trauma the assessment including cognitive alteration as a response to trauma. The general trend from the studies show that avoidance and intrusion strategies of initial trauma response are more prevalent among traumatized populations of diverse traumatic events. The findings tend to converge despite the differences in the population and locale used in the studies.

Table 1 Pearson Correlation Analysis

	Relating to others	**New possibilities**	**Personal strength**	**Appreciation of life**	**Spiritual change**	**Total posttraumatic growth**
Cognitive alteration response	.072	.122	.057	.238	.034	.144
	.315	.091	.428	.001	.641	.045
Avoidance response	.035	.022	.005	.118	.017	.055
	.627	.761	.949	.102	.810	.444
Arousal response	.190	.218	.158	.325	.050	.262
	.008	.002	.028	.000	.485	.000
Intrusion response	.269	.216	.125	.395	.168	.322
	.000	.003	.082	.000	.019	.000
	194	194	194	194	194	194

Table 1 shows that Intrusion response was significantly and positively correlated with all the 5 scales of posttraumatic growth namely relating to others ($p<0.05$; $r=0.269$), new possibilities ($p<0.05$; $r=0.216$), appreciation of life ($p<0.05$; $r=0.395$), spiritual change ($p<0.05$; $r=0.168$) and total posttraumatic growth ($p<0.05$; $r=0.322$).

Arousal response was significantly and positively correlated with 5 scales of posttraumatic growth namely relating to others ($p<0.05$; $r=0.19$), new possibilities ($p<0.05$; $r=0.218$), personal strength ($p<0.05$; $r=0.1581$), appreciation of life ($p<0.05$; $r=0.325$) and total posttraumatic growth ($p<0.05$; $r= 0.262$).

Cognitive alteration response was not significantly correlated to 4 scales of posttraumatic growth namely relating to others ($p>0.05$; $r=0.072$), new possibilities ($p>0.05$; $r=0.122$),

personal strength (p>0.05; r=0.057) and spiritual change (p>0.05; r=0.034). It was however significantly correlated with appreciation of life (p<0.05; r=0.238) and total posttraumatic growth (p<0.05; r=0.045).

Avoidance response was not significantly correlated with all the 6 posttraumatic growth scales namely relating to others (p> 0.05; r=0.35), new possibilities (p>0.05; r=0.22), appreciation of life (p>0.05; r= 0.118), spiritual change (p> 0.05; r=0.017), personal strength (p>0.05; r=0.005) and total posttraumatic growth (p>0.05; r= 0.055).

Inferential Analysis

The study hypothesized that there would be significant positive relationship between initial trauma processing strategies and posttraumatic growth of Garissa University terrorist attack survivors. The Hypothesis was tested using regression analysis and the results are shown in table 2.

Table 2Initial trauma processing strategies and Posttraumatic growth

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.347[a]	.121	.102	13.1751	.121	6.474	4	189	.000
a. Predictors: (Constant), Intrusion response, Avoidance response, Cognitive alteration response, Arousal response									
b. Dependent Variable: Total posttraumatic growth.									

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4494.891	4	1123.723	6.474	.000[b]
	Residual	32807.047	189	173.582		
	Total	37301.938	193			
a. Dependent Variable: Total posttraumatic growth						
b. Predictors: (Constant), Intrusion response, Avoidance response, Cognitive alteration response, Arousal response						

Multiple regression analysis were conducted to examine the relationship between initial trauma processing strategies and total posttraumatic growth. Table 2 summarizes the regression and ANOVA results. As can be seen, all four predictors produced $R^{2=}0.121$, F=6.474, P≤0.05. This implies that 12.1% of the variation in total posttraumatic growth was explained by: avoidance response, cognitive alteration response, intrusion response and arousal response. This finding implies that there is a general significant relationship between the initial trauma processing strategies and total posttraumatic growth because the p-value is 0.000 which is less than the standard probability ratio of 0.05.

As shown in the regression model, R square and adjusted R is high and therefore this implies that there is high variation that can be explained by the model. Moreover, the regression

model shows F-statistic of 6.474 and probability ratio (sig. F change) of 0.000 is less than the p-value of 0.05. This means that independent variables were significant in explaining the variation in the dependent variable. We therefore reject the null hypothesis and adopt the alternative hypothesis. We conclude that there is significant positive relationship between posttraumatic growth and initial trauma processing strategies among Garissa University terror attack survivors.

DISCUSSION

The findings in the current study were consistent with Dmitry, Mooli and Nira (2013) who found significant correlation between the Intrusion, avoidance and hyperarousal on the total posttraumatic growth score among 65 Israeli fire fighters. In this study intrusion was significantly higher than avoidance and hyperarousal. Appreciation of life and personal strength were on the other hand higher than the other PTG dimensions. A study on the survivors of Sichuan earthquake in China one year later found significant positive predictive correlation between intrusion and hyperarousal and posttraumatic growth (Xu & Liao, 2011).

The findings are replicated by the current study which found significant correlation between arousal and intrusion and posttraumatic growth. This could be as a result of the similar populations under study which comprises of survivors who had experienced primary trauma of high magnitude. The low correlation between avoidance and posttraumatic growth appears to be consistent across the reviewed studies which warrant further research to explore the reasons behind this. For cognitive alteration the reviewed studies have not explored it at all which makes the current study among the maiden studies to examine the construct in relation to posttraumatic growth. Emerging pattern on this construct in the current study may therefore be a base for future trauma scholarly debate.

The findings also agree with Nyagaya, Chepchieng, Njonge and Ombura (2014) who reported slightly closer means on avoidance symptoms (mean=2.31), Intrusive symptoms (mean= 2.28) and arousal symptoms (mean= 1.86). The study examined secondary stress among psychotherapists in Nairobi and Nakuru counties of Kenya and used a sample of 302 Psychotherapists drawn from the Kenya Counseling Association. Just like the current study, findings in this sample reflect higher levels of avoidance and intrusive symptoms. In another study conducted by Gomez and Dana (2008) using a sample of 67 emergency nurses from three general community hospitals, arousal symptoms were reported to have high prevalence (54%) followed by avoidance symptoms (52%) with the least prevalent being intrusion (46%). The study explored the prevalence of secondary traumatic stress among emergency nurses.

The importance of initial trauma processing strategies in trauma recovery has also been emphasized by Maercker and Zoellner (2006) in their two component theory. It conceptualizes trauma in terms of constructive and illusionary side. The illusionary side is a cognitive and deceptive side perceived as a defense mechanism. It is an avoidance strategy

that begins shortly after exposure to the traumatic event and can have disastrous psychological effect in the long run. The illusionary strategy is not necessarily unhealthy as it may act as a temporary buffer against the effects of the traumatic event. The four initial trauma processing strategies explored by the current study are temporary strategies used to buffer against the dangers of trauma.

Contrary to the current study, the two studies focused on populations that underwent secondary trauma. The studies also concentrated on three initial trauma response strategies avoidance, arousal and intrusion with none investigating cognitive alteration. The current study focused on a population that had been exposed to primary trauma the assessment including cognitive alteration as a response to trauma. The general trend from the studies show that avoidance and intrusion strategies of initial trauma response are more prevalent among traumatized populations of diverse traumatic events. The findings tend to converge despite the differences in the population and locale used in the studies.

CONCLUSION

The findings of this study draw trauma practitioners to re-examine the conceptualization of trauma from its onset. The common approach in trauma counseling has been offering critical incident debriefing as a buffer against the trauma symptoms. The findings of this study shows that helping traumatized survivors understand and get in touch with their initial trauma response strategies could be more important in the post trauma functioning. The current approach of eliminating these symptoms immediately one experiences trauma needs to be reviewed. Trauma counselors could harness this knowledge of importance of initial trauma processing strategies in designing more innovative trauma counseling techniques.

REFERENCE

American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders (5thed.)*. Washington, DC: Author.

Atwoli, L., Ayuku, D., Hogan, J., Koech, J., Vreeman, R. C., Agaga, S., &Braitstein, P. (2014). Impact of Domestic Care Environment on Trauma and Postraumatic Stress Disorder among Orphans in Western Kenya. *PLOS ONE, 9 (3): e89937. Doi: 10.1371/journal.pone.0089937.*

Atwoli, L., Stein, D. J., Williams, R. D., Mclaughlin, A. K, Petukhova, M., Kessler, R. C. &Koenen, C. K. (2013). Trauma and Posttraumatic Stress Disorder in South Africa: Analysis of the South African Stress and Health Study. *BMC Psychiatry, 13, 182.*

Brown, J. N. (2013). Tracking the Arab Spring: Egypt's Failed Transition. *Journal of Democracy, 24 (4) 45- 58.*

DiGrande, L., Neria, Y., Brackbill, R. M., Pulliam, P., &Galea, S. (2001). Long term Posttraumatic Stress Symptoms among 3271 Civilian Survivors of September 11, 2001 Terrorist attacks on the World Trade Center. Am J. Epidemol. 173 (3) 271- 81.

Dmitry, L., Mooli, L. &Nira. (2013). Posttraumatic Symptoms and Posttraumatic Growth of Israeli Firefighters at one Month following the Carmel Fire Disasters. *Psychiatry Journal, 2013 (274121) 1-5.*

Gomez, D. E. & Dana, R. N. (2008). Prevalence of Secondary Traumatic Stress among Emergency Nurses. *Journal of Emerging Nursing, 35 (3) 199-204.*

Jenkins, R., Otieno, C., Omollo, R., Ongeri, L., Sifuna, P., Kingora, J., Kiima, D., &Ogutu, B. (2015). Probable Posttraumatic Stress Disorder in Kenya and its Associated Risk Factors: A cross-sectional Household Survey. *Int. J. Environ. Public Health, 12: 13494-13509. Doi: 10.3390/ijerph121013494.*

Karsberg, H. S., &Elklit, A. (2012). Victimization and PTSD in Rural Kenyan Youth Sample. *Clinical Practice &Epidemology in Mental Health, 8: 91-101.*

Lopez, L.W & Pineda, C. (2011). Terrorism: Two Complementary Approaches. *TerapiaPsicologica, 29 (2) 225-231.*

Maercker, A. &Zoellner, T. (2006). Janus Face of Self- Perceived Growth: Toward a Two Component Model of Posttraumatic Growth. *Psychological Inquiry, 15: 41-48.*

Maria, P. G., Jesus, S., & Sarah, G. (2016). A systematic Review of the Literature on Posttraumatic Stress Disorder in Victims of Terrorist Attacks. *Psychological reports, 119 (1) 328-359.*

Mark, A. S., Bradley, D. S., Lisa, H. J., Rebecca, L. C., Grant, N. M., Marc, N. E., Annie, J.

Nasim, S., Khan, M. & Aziz, S. (2014). Impact of Terrorism on Health and Hospital Anxiety Depression Scale Screening in Medical Students in Karanchi, Pakistan. *J Pak Med Assoc, 64 (3) 275-280.*

Nyagaya, L., Chepchieng, M., Njonge, T. &Ombura, J. (2014). Secondary Stress among Psychotherapists: An Empirical Comparative Analysis of Prevalence Rates and Management in Nakuru and Nairobi Counties of Kenya. *Kenya Journal of Educational Planning, Economics and Management, 8 (2) 1-15.*

Ruggiero, A &Vos, M. (2013). Terrorism Communication: Characteristics and Emerging Perspectives in Scientific Literature 2002 – 2011. *Journal of Contingencies and Crisis Management, 21 (3) 153-166.*

Salim, O. K. (2013). The Roots and Causes of the 2011 Arab Uprisings. *Arab studies Quarterly, 35 (2) 184- 206.*

Tedeschi, R. G. & Calhoun, L. G. (1996). *Trauma and Transformations: Growing in the Aftermath of Suffering*. Newbury Park, CA: Sage.

Xu, J. & Liao, Q. (2011). Prevalence and Predictors of Posttraumatic Growth among Adult Survivors one year following 2008 Sichuan Earthquake. *Journal of Affective Disorders, 133 (1-2) 274-280.*

Zhang, G., Narayanan, P., lee, S., Thielman, S., & North, C. (2016). Psychiatric disorders after terrorist bombing among rescue workers and bombing survivors in Nairobi and rescues workers in Oklahoma City. *Annnals of Clinical Psychiatry, 28 22-30.*

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Conflict of Interest

The authors colorfully declare this paper to bear not conflict of interests

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