that living in informal settlements was likely to lead to individuals developing negative personality characteristics, skill de f cits and problems with motivation. With traumatic events being common in informal settlements, adolescents living in such environments are likely to develop not only skill de f cits but also various mental illnesses such as PTSD resulting from exposure to traumatic events. According to some studies, 75% of individuals who survive traumatic events do not develop posttraumatic stress disorder while 25% develop PTSD and other co-morbid disorders Statistically, a lifetime prevalence of PTSD was found by WHO to be 2.3% and 2.1% in upper middle-income and in the lower middle-income countries respectively. This con f rms that there are individuals who still have to grapple with the side e f ects of PTSD. Studies have additionally con f rmed that any traumatic exposure is likely to generate stress reactions in most individuals except that those who go on to develop PTSD often experience clinically signi f cant disturbances in their daily functioning such as academic and interpersonal interactions. This infers that reaction to traumatic stressors can either be psychopathological (uncommon) or non-psychopathological (Bowler RM, 2017).

According to Blaustein trauma in childhood is among some of the most signi f cant and relevant psychosocial factors a f ecting children's education in the society today. This is supported by who asserted that students who are traumatized operate on a survival mode that a f ects their ability to socialize, learn, and develop other skill sets necessary for the negotiation of normal life challenges. In addition to this, asserted that Adverse Childhood Experiences (ACES) often result to lower academic achievement, higher rates of suspension, expulsion and drop-outs. As adults, these individuals are likely to have increased risks of general and mental health challenges such as diabetes, heart disease, obesity, liver disease, irresponsible substance use and abuse, depression and eventually suicide. Additionally, exposure to trauma has also been proven to cause prolonged changes in the structure of the brain such as a reduction in the overall size and underdevelopment of the cortex (Brewin CR, 2000). It also a f ects the brain function that leads to changes in behavior making an individual irritable, excitable and impulsive. Educationally, in addition to the evidence from the above studies, trauma was found to result to a decline in most areas of academic performance lower GPA decreased IQ and increased drop out rates . Additional behavioral consequences of traumatic stress according to and include attachment di f culties, skipping school, running away from home, involvement with the juvenile justice system, involvement with child welfare system, substance abuse, self-injury, suicidality and victim of sexual exploitation. The impact of trauma can also be viewed from a cognitive, behavioral, social or personal and mental perspectives. According to a study that was carried out in Chicago, by McCoy, Raver, and Sharkey an assessment of students' cognitive perfomance scores showed a statistically signi f cant decline when measured the week following a homicide that occurred in their block even when they had no connection to the victim. This could be supported by the fact that from a cognitive perspective, an individual exposed to trauma is often a f ected in their academic work because their memory, organization, concentration and comprehension are a f ected. Also a f ected is their ability to produce work, engagement in learning, and attending to classroom tasks and instruction. The language and grasping of cause-and-e f ect relationships are also impacted negatively (Cortina MA, 2012).

Behaviorally, these individuals struggle with self-regulation, attention, and emotions, leading to them acting out or withdrawing, feeling depressed and anxious. Socially and personally, an individual who has PTSD has lost trust and may have a challenge developing language and communication skills . They may also have di f culty processing social skills and may not be able to establish a coherent sense of self . Addtionally, the mental health consequences of trauma include disorders of infancy and adolescence, anxiety disorders, mood disorders, adjustment disorders, substance use disorders, sleep disorders, and dissociative disorders . All these e f ects of traumatic stress originate from what it does to the brain. There is plenty of literature that con f rms that the brain function and structure of the children and adolescents is adversely a f ected by the traumatic stress (Elklit A, 2014).

Biologically, according to the National Scienti f c Council on the Developing Child traumatic stress a f ects the neural circuits, especially of the young children and adolescents whose brains are still developing. They hypothesize that sustained activation of the neurobiological mechanisms (the hypothalamus-pituitary-adrenocortical axis, commonly known as the HPA axis) responsible for the stress response can damage the hippocampus. The stress response involves sustained levels of cortisol or Corticotropin-Releasing Hormone (CRH), whereas the hippocampus is the part of brain structure responsible for memory and learning. During a stress reaction, the body responds by activating hormones and neurochemical systems that include adrenaline and cortisol. Adrenaline is the hormone responsible mobilizing energy stores and altering blood f ow to make the body ready to f ght, f ee or freeze during a stress reaction. Cortisol on the other hand aids in mobilizing energy stores too besides enhancing certain types of memories and activating the immune responses. These hormones need to be regulated to go back to normal levels once the stressor is removed. For this reason, continued elevated levels leads to damage to brain structure and functions which a f ects the behavior and functions of individuals continuously exposed to traumatic events (Foa EB, 2005).

In children, there are three areas of the brain that are adversely a f ected by early adversity These include the PreFrontal Cortex (PFC) which is the thinking centre and is under activated, Anterior Cingulate Cortex (ACC) which is the

eotin regulation centre and is also under activated. Finally, the third part of the brain that is a f ected is the amygdala which is the fear centre and is overactivated in these children and adolescents. Considering the adverse e f ects that trauma imparts on those a f ected, and with the severity of the e f ects

what is underneath the PTSD symptoms. The specific PTSD symptoms targeted by this intervention are the re-experiencing in the form of nightmares and recurrent thoughts, avoiding the cues, feelings thoughts, and even situations that may remind the individual of the traumatic event. Other symptoms of PTSD addressed by CBITS are arousal that presents in the form of irritability, difficulty in sleeping, hyper vigilance, and poor concentration. Jaycox added that these symptoms may result to problems with everyday functioning, adding that PTSD is also often co-morbid with depression, substance abuse and behavioral problems (Nielsen MB, 2015).

According to the theoretical rationale of CBITS was that exposure to traumatic events in itself had several negative effects such as depression, poor performance in school, decreased IQ, reduced grade point average, and reading ability, behavioral and problems in development, even in cases where the adolescents have not developed PTSD. This intervention therefore seeks to reduce symptoms of PTSD through cognitive restructuring, acquisition of skills, and social learning. This is postulated to result to improved psychosocial functioning and school attendance. The adolescents are also expected to achieve posttraumatic growth exhibited through the five domains in their lives (Olf M, 2017).

Cognitive behavioral intervention for trauma in schools is structured in three parts that has 10 group sessions for the adolescents, 1-3 individual sessions for those with severe PTSD, 2 optional sessions of parent education programs and 1 session of teacher education program as outlined in table 2.1. Each session is required to last for 45 to 60 minutes. In this study however, the individual sessions will not be offered to ensure that there is no bias due to some participants getting more individualized attention. Further, CBITS has been noted to have some advantages over other interventions according to that include the fact that it is well structured and therefore allows the therapist to set agenda for the session. The structure includes activities, new skills and opportunity to practice the old ones, and activities assignment. Some of the skills that are learned from CBITS include relaxation skills, cognitive restructuring by combating negative thoughts, addressing fears, developing a trauma narrative, social problem solving, and reducing avoidant coping strategies (Ossa FC, 2019).

Secondly, the therapist is required to collaborate with the client and to act as a ‘coach’ to assist the client in developing new skills through didactic representation, so they learn to practice them effectively. The adolescents were also given age-appropriate examples and introduced to games that help solidify the concepts learned. The third advantage that this intervention has over other interventions is that it emphasizes on new techniques during sessions and even between sessions to help consolidate skills learned in the group. This intervention also incorporates both group and individual sessions, in addition to parents and teachers sessions. Finally, this intervention is short and therefore

of violence that led them to having symptoms of PTSD of clinical levels. One study by revealed an improvement in school attendance and academic performance by the end of the school year among the adolescents.

As an intervention, CBITS was noted to produce moderate

boys (51.6%) and 338 girls (48.4%). Out of a sample size of 212 achieved through simple random sampling from those who had 31 and above on the PTSD scale and were administered a Socio-demographic questionnaire, only 194 completed the study and their data applied in the analysis.

PROCEDURE AND METHODS: In the first school, the respondents were put in classrooms by streams with 9 groups having 40 respondents and one group had 30 respondents. Five research assistants who had been taken through prior training were each assigned two groups to administer questionnaires one after the other. The research assistants distributed the assent forms and explained to the respondents who then signed the forms if they were willing to take part in the study. The CPSS-SR-5 questionnaires and the SDQ were then distributed to the participants. The questions were each read out loud to the respondents who were then given time to answer each question. This method was adopted to ensure that the participants understood each question, asked for clarification, had enough time to answer the questions and to ensure there were no missing values.

SOCIO-DEMOGRAPHIC INFORMATION: The socio-demographic variables that were queried by the use of the SDQ included the age, gender, grade, religion, and school attendance. The participants were also asked what their primary language of communication was and the number of friends they had in school and at home. With regard to the family set up, the questionnaire asked whether both biological parents were living together, or they were living with a step parent. It also enquired if the parents were separated, divorced or whether they were living with a single parent or a guardian. To gather information on exposure to violence, the participants were asked if they had witnessed violence at home, at school or any other place. Further they were asked if they had personally experienced physical violence and if so, how frequently they had experienced the violence.

PTSD: The CPSS-SR-5 was applied to screen, diagnose and assess the presence and severity of PTSD among the participants. The 20 PTSD symptom items on the questionnaire were rated on a 5-point scale measuring frequency and severity with '0' indicating 'not at all' to '4' indicating '6 or more times a week'. In addition to this, there are 7 functioning items rated on 'yes' or 'no'. To calculate the total score of symptom severity, the 20 symptom items are used with scores of 0 to 10 indicating minimal PTSD, 11 to 20, mild PTSD, 21 to 40, moderate PTSD, 41 to 60, severe PTSD and 61 to 80 indicating very severe PTSD. The study included participants with scores of 31 to 60 at baseline indicating moderate to severe PTSD.

The CPSS-SR-5 was found to have a very good internal consistency for total symptom severity (Cronbach's alpha = .924) and a good test-retest reliability (r = .800) . Further, the CPSS-SR-5 demonstrated a convergent validity with CPSS-I-5 (r = .904), and discriminant validity with the Multidimensional Anxiety Scale (MASC) for Children and Child Depression Inventory (CDI).To identify probable PTSD diagnosis among children who had been assessed, a cut of score of 31 was recommended to be used. According to the past studies, the CPSS-SR-5 was therefore found to be a reliable and valid self-report instrument for diagnosing and assessing the severity of PTSD for children and those adolescents between the ages of 8 to 18, as per the symptoms outlined in the fifth edition of the DSM.

DATA ANALYSIS: To evaluate the effectiveness of CBITS, a paired-samples t-test was used to find out whether there was a statistically significant change in the mean scores for PTSD between the baseline, midline, and end line stages of the study. Three paired samples were created. The first pair compared midline PTSD scores against baseline PTSD scores, the second pair compared the PTSD scores at end-line against those at baseline, and pair 3 compared the end line and midline PTSD scores. The data was split into experimental and control groups to establish whether the treatment that was offered to the experimental group was effective.

RESULTS: This study had 698 respondents aged between 10-14 years where 48.4% were female, while 51.6% were male. Out of these, 212 were selected for the study through sampling with only 194 completing the study. With regard to their ages as shown in Table 1 below, 10.2% of them were aged 10 years, 18.6% were 11 years old, whereas 12 and 13 years olds were 28.2% each with 14 year olds being 14.8% of the screened respondents. The respondents in the study were attending the primary schools in classes 5 to 7, with t studies6tTe

signi f cant change in the mean scores for PTSD between the base line, midline and end line stages of the study by creating three paired samples. The f rst pair compared midline PTSD scores against baseline PTSD scores, while the second pair compared the PTSD scores at end line against those at baseline, with pair 3 comparing the end line and midline PTSD scores. The data was split into experimental and control groups to reveal whether the treatment that was o f ered to the experimental group was e f ective as indicated in the table that follows (Table 3).

From the results in Table 3, there was a statistically signi f cant reduction of -8.263 in the mean PTSD scores between the baseline and midline stages in the experimental group, with t(94) = -6.091, p =0.000. Similarly, there was a statistically signi f cant reduction of -9.821 in the mean PTSD scores between baseline and end line stages in the experimental group of participants, with t(94) = -6.935, p =0.000. For the third pair, the was a reduction of -1.558 in the mean score for PTSD between midline and end line stages in the experimental group, however this change was not statistically signi f cant, t(94) = - 1.24, p =0.218. The results of pair 1 and pair 2 are indicative of the fact that treating the respondents with CBITS led to a statistically signi f cant reduction in PTSD symptoms between baseline and midline stages.

Additionally, treating the respondents with CBITS also led to a statistically signi f cant reduction of PTSD between

further evaluate the effectiveness of CBITS and to determine the effect size of the intervention, an independent sample t-test was run as indicated in the table that ensues (Table 4).

As indicated in Table 4, a Cohen's d of 0.09 at the baseline stage shows that the effect size was small. For the midline and end line stages, Cohen's d was 0.8 and 0.8 respectively showing that in each case the effect size was large, an indication that the intervention was effective in treating PTSD among the adolescents.

DISCUSSION

The study set to determine the effectiveness of CBITS in treatment of PTSD. A statistically significant reduction in the mean PTSD scores between the baseline and midline

In addition to this, an adaptation of CBITS in American Indian communities in southwest exhibited reduced symptoms of depression and PTSD among the students. Congruent to these f ndings were the results of a study carried

Jenkins, R., Othieno, C., Omollo, R (2015). Probable Post Traumatic Stress Disorder in Kenya and Its Associated Risk