African Journal of Social and Behavioural Sciences (AJSBS)
Volume 13, Number 2 (2023) ISSN: 2141-209X

A SYSTEMATIC REVIEW OF THE EFFECT OF PSYCHOSOCIAL INTERVENTIONS ON POST-TRAUMATIC STRESS DISORDER EXPERIENCED BY RAPE SURVIVORS

Lydia Ibrahim[1], Lilian Azaka[2], & Shyngle K. Balogun[3]*

[1,3]Department of Psychology, University of Ibadan, Ibadan, Nigeria.

[2]Department of Psychology, Dennis Osadebay University, Asaba, Nigeria.

*shyngle61@yahoo.com

ABSTRACT: Globally, 30% of women report having been the victim of sexual harassment, assault, or rape at some point in their lives, and 50% of rape victims report experiencing PTSD in addition to other physical and social consequences. There is a need to conduct an in-depth examination of these devastating multidimensional impacts due to their prevalence and the lack of organized data on the effectiveness of existing therapies, particularly those from Africa in order to bring attention to this threat. This study therefore attempts to compile data on the psychological effects of sexual assaults from around the globe as well as the influence of psychosocial therapies on these effects as this will have implications for rape survivors, policymakers, the government, non-governmental organizations and others. A literature review of five databases was searched to identify studies investigating the effectiveness of interventions focused on rape PTSD. Narrative synthesis was used to read across studies and the report was presented based on PRISMA checklist. Six studies met the eligibility criteria. Three studies investigated Eye Movement Desensitization Reprocessing (EMDR); the remaining studies assessed Cognitive Behavioural Therapy (CBT), Cognitive Processing Therapy (CPT) and Modified Lifespan Integration (MLI) respectively. Overall, there was substantial evidence supporting the effectiveness of EMDR, CPT, and MLI in both individual and group settings for reducing rape-related PTSD symptoms. However, there was insufficient and conflicting data supporting the use of early CBT therapies for PTSD due to rape, necessitating further research in this area.

Keywords: Psychosocial, Psychotherapy, Post-Traumatic Stress Disorder, Rape, Survivors, Victims

INTRODUCTION

Globally thirty percent (30%) of women experience sexual harassment, assault or rape in their lifetime and 50 percent (50%) of all rape victims experience Post-Traumatic Stress Disorder (PTSD) (Covers, 2021, García-Moreno, 2013) however only few have the awareness of available psychosocial interventions for rape due to the fact that only ten percent of the victims report being sexually assaulted or harassed for fear of being stigmatized, reprisal attacks from perpetrators, shame, embarrassment or just to avoid blame (Kilpatrick, 2000; Nwabueze & Oduah, 2015). The exact prevalence rate of sexual assault cannot be measured but three African countries are among the top ten countries with the highest prevalence rates (Botswana 92.9, Lesotho 82.6 and South Africa 71.1 incidents per 100,000 people) (WHO, 2018, World Population Review, 2023). In spite of sexual assault being under reported, statistics show that

it is a universal problem (Dufera, Kebira, Gobena, & Assefa, 2021; Dworkin et al., 2021; Persson & Dhingra, 2022).

Globally, there is paucity of organized data on rape due to the fact that most information on sexual assaults are often acquired from hospital records, Non-Governmental Organisations (NGOs), media as well as reports of police crime diaries. However, in recent times there is an upsurge in the number of rape cases in Nigeria due to increasing poverty, terrorism, kidnapping and banditry activities in the country (Awojobi, 2014; Smith & Bennett, 1985). The prevalence rate of rape cases varies from state to state in Nigeria, very high prevalence rates were reported in community based studies across the country ranging from 14% among out of school adolescents in an urban slum in Lagos (Kunnuji & Esiet, 2015), 9% among gynaecological emergencies at Enugu State University Teaching Hospital (Ohayi, et al., 2015). and 69.9% among juvenile female street hawkers from two urban towns in Anambra state (Ikechebelu, et. al 2008). The national Human Right Commission of Nigeria (NHRC) recorded 11,200 cases of rape in the year 2020. This increase led the Nigerian governors to proclaim a state of emergency on rape and gender-based violence in June 2020; however, Amnesty International declared that rape cases still persist in the country in spite of the declaration (Amnesty International News, 17th November, 2021). Furthermore, the National Bureau of Statistics in Nigeria (NBS, 2019) affirmed that 69.3 % cases of rape were recorded in 2017 alone and most of rape cases in Nigeria involved young girls aged between 1-17 years (Ohayi et al., 2015). However, what is known about the rate of rape prevalence in Nigeria are far from the reality because most rape cases are not reported

Sexual assault is an undesirable sexual act that is marked by the penetration of the anus, vagina, or mouth of an un-consenting individual by another person carried out through coercion, use of physical force and or threats or alcohol and or drug -facilitated. It includes attempted rape, rape, sexual assault using a weapon, offensive assault, penetration by objects, forced sexual activity that did not end in penetration, and attempts to force a person into sexual activity (Tracy, Fromson, Long, & Whitman, 2012).

Both genders experience sexual assault but girls and women are more at risk especially children and adolescents (Howe, 2019; Smith, Johns, & Raj, 2022). Those of middle age and the elderly also experience it, in fact no age group or class of people are exempted and this includes people living with disability, sick, unconscious, healthy, dead persons and others (MacKinnon, 2017; Jozkowski & Mosley, 2017)

Psychosocial Effects of Sexual Assault

Sexual assault survivors often experience physical, social and psychological effects that may linger for many years afterward. These effects include but are not limited to the following

Physical effects such as loss of virginity, injury to the genital area, loss of blood and, or life, sterility as a result of injury or from acquired sexually transmitted infections such as syphilis, hepatitis, Human Immuno-deficiency virus (HIV) because most sexual assaults occur without the use of condoms and is usually accompanied by injury especially those performed violently(Abrahams et al., 2021; Jewkes, Sikweyiya, Morrell, & Dunkle, 2011). Some might become pregnant and give birth to babies whose fathers are unknown especially in the case of masked, gang rape or night sexual assault (Boyd, 2011; Stein & Barrett-Connor, 2000; Wadsworth & Records, 2013). Death might occur from the injury or drug overdose in a

situation where much force is used or the victim was drugged before the rape (MacKinnon, 2017)

Social effects: rape survivors experience many social ills which include; loss of dignity, shame, stigma, and social exclusion: in some cultures, raped females are forced to marry the man who raped them thus living with the trauma for life. They may also withdraw from social gatherings and live in constant fear of meeting and interacting with the rapist especially when the perpetrator lives in their community. They may also lose interest in sex and in starting new relationships. They might also perform poorly academically especially when the assault occurs in a learning environment and lots more (Campbell, Ahrens, Sefl, Wasco, & Barnes, 2001; Ward, 1995; Winkler, 1991).

The Psychological effects: there are so numerous that they cannot be over-emphasized. They include; fear, anger, shock, feelings of helplessness immediately after rape. Subsequently, depression, lack of concentration, withdrawal, notable changes in eating and sleeping patterns may set in leading to suicide, suicidal ideation, self–harm, anxiety disorders and phobias such as Post-Traumatic Stress Disorder (PTSD) (Resick, 1993; Santiago, McCall-Perez, Gorcey, & Beigel, 1985). Thirty (30%) to fifty percent (50%) of rape victims often develop PTSD post rape (Covers, 2021). PTSD is associated with sexual dysfunction especially high risk sexual behaviour, alcohol and substance abuse which produce other negative consequences (Jewkeys, 2002) and some may start bedwetting especially children. Some victims especially those who are ashamed may not seek help or care from family, friends, psychologists, police or anybody at all despite the severity of the symptoms they are experiencing (Patterson, Greeson, & Campbell, 2009).

Objective - Due to the crippling and multifaceted effects of the social and psychological effects of rape and the paucity of systematic review of these effects especially from Africa, there is need to do an in-depth review of this effects. Thus, this study aims to collate psychosocial impacts of sexual assaults from around the globe and the effect of psychotherapies on these effects so that attention of policies makers, the government, Non-Governmental Organizations, individual and others will be drawn to this menace. A systematic review has the advantage of compounding large volume of information in a summary for researchers, decision and policy makers overwhelmed with large volumes of data for easier decision making. It also establishes the reliability and validity of scientific findings so that they can be generalised across settings and populations. It has the capacity to minimize bias and increase the accuracy of multiple study conclusions (Jahan, Naveed, Zeshan, & Tahir, 2016; Mulrow, 1994; Pollock & Berge, 2018). Furthermore, this review will suggest psychosocial interventions that are effective for rape survivors that will reduce their traumatic psychosocial experiences.

Psychological Interventions for Sexual Assault

There exist several effective interventions for rape victims to reduce the trauma experiences of survivors. These therapies can be delivered individually or in group. Individual therapies have the advantage of providing victims with treatments tailored to their individual or specific needs and experiences. Conversely, group psychotherapy involves individuals coming together to share their experiences and support one another as a group. It is very effective for individuals with PTSD connected to rape because the group provides a supportive and understanding environment to process individual and group experiences and bonding with others having similar experiences. Group therapy may also include exposure-based components, where

individuals are gradually exposed to their traumatic memories in a safe and controlled environment, to help reduce the emotional impact of the memory over time. These therapies have been found to be effective in different populations of people that are survivors of rape (Brown et al., 2018; Cowan, Ashai, & Gentile, 2020)

The World Health Organization (WHO) and Centre for Disease Control and Prevention (CDC 2004) approved several types of interventions to support or respond to victims of sexual assault and rape. These include supportive therapies, whereby psychological counsellors, support workers, advocates or advisors give support, information and advice to survivors. They may listen to victims and help them talk over their feelings and problems. Counsellors may offer debriefing, which allows emotional processing or ventilation by encouraging recollection, ventilation and reworking of the traumatic event (Rose, Bisson, Churchill, & Wessely, 2001).

Psychosocial interventions are interpersonal or informational activities, techniques, or strategies that target behavioural, biological, emotional, cognitive, interpersonal, social, or environmental factors with the aim of improving health, and mental health functioning and wellbeing (Brown et al, 2022).

An example of psychotherapy for PTSD caused by rape is Cognitive Behavioural therapy (CBT). It is a treatment for PTSD brought on by rape. The goal of the therapy is to assist the traumatized person in recognizing and altering unfavourable thought and behaviour patterns that exacerbate their distress. It is a type of psychotherapy that focuses on the relationship between how an individual thinks, feels, and behaves. CBT can assist rape victims with PTSD lessen their symptoms of anxiety and sadness as they face and reframe their faulty views about themselves and the world. The exposure-based elements of CBT assist a traumatized individual to habituate as they are gradually exposed to the painful memory in a safe and controlled environment, thereby lessening the emotional impact of the trauma (Rothbaum et al., 1992). Numerous studies have shown that CBT is an effective evidence-based therapy for treating PTSD linked to rape. It is advantageous in that it is time-limited, typically lasting 8 to 20 sessions, making it ideal for those who lack resources or time, and the skills learned during treatment are transferable to other spheres of life (Jaycox, Zoellner, & Foa, 2002). One of its drawbacks, though, is its capacity to cause intense emotions and some victims might not feel comfortable discussing their trauma in an organized therapeutic context due to privacy issues. In addition, the person must put in effort and participate. (Roberts, Kitchiner, Kenardy, & Bisson, 2009)

Eye Movement Desensitization and Reprocessing (EMDR) is another form of treatment effective for treating PTSD caused by rape experiences. It involves bilateral stimulation (such as tapping or eye movements) to help people process upsetting memories. The purpose of EMDR therapy is to reduce the emotional effect of the memory and help the patient integrate new, more useful information into their knowledge of the incident. The patient concentrates on the painful memory while receiving bilateral stimulation. This bilateral stimulation is thought to lessen the suffering that goes along with processing traumatic memories in the brain. It has the benefit of being efficient in lowering PTSD symptoms in rape and other trauma survivors. It is a brief therapy that may be given in a variety of contexts, with some survivors showing considerable recovery after just a few sessions. Additionally, it can be modified to precisely meet the demands of the survivor. However For other survivors, it could be a challenging therapy because it forces them to revisit and face their horrific experiences (Covers et al., 2021; Shapiro, 2001)

A third type of therapy for rape victims experiencing PTSD is Cognitive Processing Therapy (CPT). It is an evidence-based therapy for post-traumatic stress disorder (PTSD) that works by changing unhealthy thought patterns for more healthy ones in order to enhance general wellbeing (Becker & Vrijsen, 2017). It aids the traumatized person in processing and reframing their traumatic events. It emphasizes on assisting the victim in comprehending and confronting the unfavourable ideas and opinions about a traumatic experience that can be resulting in psychological suffering. CPT helps rape survivors' deal with their sadness, anxiety, and PTSD symptoms. It is a systematic therapy that is simple to administer in various contexts and works well in both group and individual settings. However, some survivors find therapy challenging since they must revisit and face their horrific events, which could result in treatment dropouts.

Prolonged Exposure (PE) therapy is a fourth treatment option for rape victims. The Department of Veterans Affairs and the Department of defence both view PE as a first-line treatment for PTSD because it has been shown to be successful in lowering symptoms. With the aim of assisting trauma sufferers in processing, managing, and lessening the impact of unpleasant experiences when thinking about the painful incident, it is a sort of cognitive behavioural therapy that employs repeated and protracted recall of traumatic memories. PE is a form of CBT, but it has a particular focus on lowering the suffering brought on by traumatic experiences by allowing patients to gradually confront and process those memories in a safe therapeutic and controlled setting (Bragesjö et al., 2020; Rothbaum et al., 2012). PE is a well-researched, simple, evidence-based therapy that can be administered in a short amount of time and is effective in helping rape and other trauma survivors with their PTSD symptoms. The necessity to relive and face their painful experiences, however, may make it challenging for some survivors. This may result in increased anguish and the need for further support, which might be provided in a therapeutic environment with the help of the therapist to help the individual process the event and be in control of the memory.

METHOD

Eligibility Criteria

The PRISMA checklist was followed for this systematic review and risk of bias was assessed using the COCHRANE Risk of Bias tools. The justification is because they included randomized control trials which is the gold standard for assessing interventions To be included in this systematic review, studies had to meet the following eligibility criteria: they had to be studies on sexual assault of all ages and sexes, and study respondents are experiencing PTSD (PSTD was focused on because 50% of all rape cases experience PSTD). All included studies have to examine the effectiveness of psychotherapy after rape survivals' mental health outcomes, have a randomized controlled design (i.e., included an experimental and a control group with or without random allocation of participants to groups), are peer reviewed and written in English and are available for screening purposes. The eligibility of the studies for inclusion was first assessed by screening abstracts, which led to exclusion of 15 publications. The remaining 15 studies were screened full-text. A total of 6 studies 4RCTs and 2 experimental studies were eventually included in our full analysis based on Author(s), year and country, study design, interventions, pre- intervention compliance, post- intervention compliance, and p-value (see table below).

Table 1: Eligible Studies

	Authors Year and country	Study design	Type of intervention	Population	Pre-intervention measures	Post intervention measures	Risk of bias	P value
1	Allon, Michel, 2015 DR of Congo	Experimental with no control group	EMDR Integrative Group Treatment Protocol (individual and group)	Women who had been sexually assaulted and experiencing PTSD	Mean subjective units of disturbance (SUD) rating of all the women before therapy was 9.0 (SD = 1.2)	The mean SUD rating for all the women at the end of therapy was 4.3 (SD = 3.0)	Moderate	p < 0.0001
2	Bass et al, 2013 DR of Congo	Control trial	cognitive processing therapy (individual and group therapy)	female sexual-violence survivors with high levels of PTSD symptoms	Mean baseline scores for PTSD 2.0	0.8	Moderate	P<0.001
3	Rajan et al, 2022 Stockholm, Sweden	A Randomized Controlled Trial	Modified Lifespan Integration (MLI)	females with PTSD symptoms after one sexual assault during the past 5 years	PTSD scores National Stressful Events Survey (NSESS) was 20.0	14.3	Moderate	p< .001
4	Habigzang et al, 2016, Brazil	Quasi experimental study	cognitive-behavioural group therapy	Girls victims of sexual violence (SV), aged between 9 and 16 years	PTSD scores 72%	28%	Moderate	p< .001
5	Mankuta et al, 2012, DR of Congo	Experimental study without a control group	EMDR	Women rape victims with PTSD	Not stated	Not stated	High	Not stated
6	Covers et al, 2021. Netherland	Randomized control trial	EMDR	victims of rape over 16 years, no gender was stated	Not stated	Not stated	Low	Large effect size noted in both treatment and control group

Information Source and Search Strategy

Through three search methods, we identified eligible studies on the effectiveness of psychotherapy for rape victims from 2012 to 2023. First, the researchers searched the electronic databases of Cochrane, PUBMED, SCOPUS, CINAHL, ProQuest, African Journals Online using the following four types of search terms. 'rape', 'sexual abuse', 'sexual victimization', 'sexual trauma', and 'sexual violence' and their derivatives and other terms such as '(psycho) therapy' and 'treatment 'in our search terms.

The checked whether the search terms yielded all articles included in these previous narrative and systematic reviews which was the case for more than 90% of the studies. Second, the researchers searched the reference lists of the previous narrative and systematic reviews on the effectiveness of treatments for rape victims. Third, the researchers searched the reference lists of the articles that met our inclusion criteria for eligible studies. The researchers applied a very broad strategy with this reference search, including all articles that mentioned any of our search terms in the title terms. The literature search yielded a total of 20 studies for screening based on the eligibility criteria. After removing duplicates and others that did not meet eligibility criteria only 6 articles remained. The other studies were removed because they did not measure PTSD as either a primary or secondary outcome. Fig. 1 depicts the flow chart of the literature search and eligibility screening.

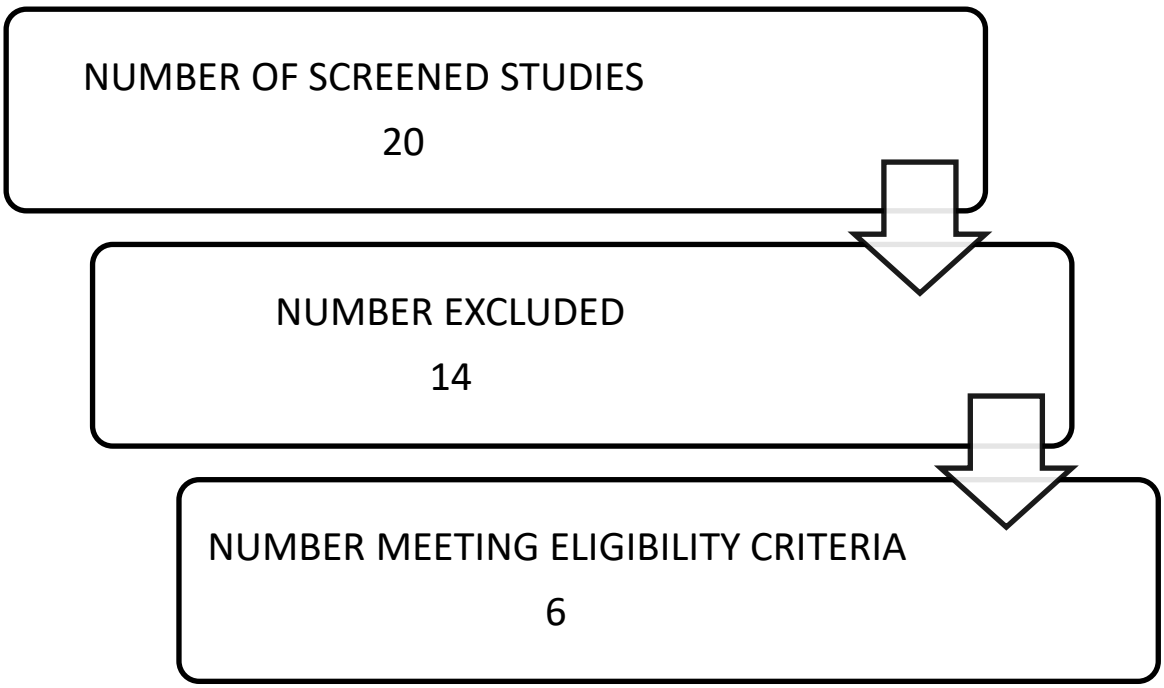

Figure 1 (Eligibility criteria)

Type of Participants

The researchers included other terms considering our focus on psychotherapy was for both male and female (children, adolescents and women) that have experienced sexual trauma.

Type of Intervention

Any type of intervention aimed at treating or preventing posttraumatic stress was eligible, Randomized' and/or 'control group' in our search terms

Types of Outcomes

Studies were eligible for inclusion if they measured the outcome of the intervention in terms of PTSD symptom reduction or meeting the criteria of a PTSD diagnosis. This could be either a primary or secondary outcome measure of the study and could be reported as any statistical parameter.

Scientific Quality - Risk of Bias within studies

The risk of bias for each study was assessed using the Cochrane Risk of Bias tool in seven important parts and given an overall rating (Higgins et al., 2011). The authors considered the internal validity of each study before considering external validity and the precision of the results. Result is presented on table 2 below

Table 2: (Risk of Bias Per Study)

	Authors Year and country	Random sequence generation	Allocation concealment	Blinding of participants	Blinding of outcome assessments	Incomplete data	Selective reporting	Other bias	Overall bias
1	Allon, Michel, 2015 DR of Congo	Unclear	Unclear	unclear	Unclear	unclear	unclear	high	high
2	Bass et al, 2013 DR of Congo	unclear	High	unclear	High	low	Low	low	low
3	Rajan et al, 2022 Stockholm, Sweden	unclear	High	unclear	Unclear	low	Low	high	Moderate
4	Habigzang et al, 2016, Brazil	unclear	Unclear	unclear	Unclear	low	Low	high	high
5	Mankuta et al, 2012, DR of Congo	Unclear	Unclear	unclear	Unclear	high	Low	high	High
6	Covers et al, 2021. Netherland	High	High	unclear	Unclear	low	Low	low	Low

Data Extraction

Data extracted from the studies covered the study design, types of treatment, control group(s), number and timing of outcome assessments (e.g., pre-/ post-test, follow-ups). For information on the sample, the researchers extracted number of participants, percentage of female participants, participants' mean age, and presence of other distinctive characteristics of the

sample in general (such as presence of PTSD symptoms, ethnicity of the sample when non-Western). Although all studies included were experimental studies with control groups and RCTs, the researchers explicitly coded whether randomization was successful (i.e., whether no differences were found in background characteristics between treatment and control group). The researchers also extracted data with regard to the measurement instruments used, specifically information about the informant and the construct it measured. Extracted data about the study findings contained the changes over time for the treatment and control group combined, the outcomes over time per group, and the effect sizes for only PTSD was extracted.

RESULTS

Study selection; the systematic identification of literatures resulted in 6 studies. Reasons for exclusion were documented using a PRISMA flow chart (see Figure 1 above). An overview of studies will be presented followed by effectiveness findings structured by type of intervention.

Study Characteristics

Three studies recruited participants from Democratic Republic of Congo (DRC) (Allon, 2015; Bass et al., 2013; Mankuta, Aziz-Suleyman, Yochai, & Allon, 2012), because DRC has many Congolese female survivors of sexual-violence with high levels of PTSD symptoms after the war. The other studies recruited from Sweden (Rajan et al., 2022), Brazil (Habigzang, de Freitas, Von Hohendorff, & Koller, 2016) and Netherland(Covers et al., 2021). All the study participants were women and girls exposed to sexual violence or rape except for Covers et al, (2021) that did not state the gender of their study participants.

Sample Size and Characteristics

Studies included N = 6 participants, with sample sizes from 725. Almost (92.1%) all the participants were female though a study did not specify the gender of its participants (7.9%). The age range was 7–75 years, mean = 26.9 ± 5.6 years, study participants were made up of 465(64.1%) blacks, 100 (13.7%), Caucasians, 103 (14.2%), Brazilians and others 57 (7.8%). All the participants (90%) had experienced rape, attempted or suspected rape.

Study Design

Two of the studies used experimental designs without control groups (Allon 2015, Makunta et al, 2012), another three were control trials (Bass et al, 2013; Covers et al, 2021; Rajan et al, 2022) and one used a quasi-experimental design (Habigzang et al, 2016)

Interventions

All the studies evaluated four interventions (EMDR, CBT. CPT, MLI) seeking to improve psychological well-being by reducing PTSD associated with the sexual assault through group and individual therapy sessions.

Content

Three of the studies assessed EMDR (Allon 2015; Makunta et al, 2012; Covers et al, 2021). The remaining three studies evaluated CBT(Habigzang et al, 2016), CPT(Bass et al, 2013) and MLI respectively (Rajan et al, 2022).

Delivery

All interventions were provided by psychologists, trained assistants using either group, individual sessions or support. Allon et al, (2015) provided study participants with 2 sessions of EMDR Integrative Group Treatment Protocol (individual and group), Bass et al, (2013) provided one (1) individual and 11group cognitive processing therapy for the respondents, Rajan et al, (2022) gave a session of Modified Lifespan Integration (MLI) therapy for females with PTSD symptoms after one sexual assault during the past 5 years followed by a repeat session after three weeks, Habigzang et al, (2016) did 16 semi structured cognitive-behavioural group therapy for girls victims of sexual violence (SV), aged between 9 and 16 years and the last two authors did EMDR sessions for their participants (Mankuta et al, 2012; Covers et al, 2021)

Controls

Four of the studies had control groups (Covers et al, 2021, Habigzang et al, 2016; Bass et al, 2013; Rajan et al, 2022) while two did not (Allon, 2015; Mankuta et al, 2013).

Outcomes and Measures

The primary psychological outcomes assessed included post-traumatic stress, depression, anxiety, and distress-fear but the focus of this work is on PTSD linked to rape. All studies employed pre- and post-intervention measures, with follow up from 3 weeks to 6 months. All the assessments were performed through questionnaires (Self- assessment reports and interviews)

Rajan et al, (2022) measured PTSD using Impact of Event Scale Revised (IES-R) at two time point using online self-rating questionnaire, Mankuta et al, (2012) used Impact of Event Scale (IES) to measure PTSD without repeat measures, data was collected by self- assessment questionnaire. Allon (2015) also used IES to assess PTSD before and after two weeks by self –assessment rating questionnaire administered orally by an assistant because many of the women had little to no formal education and were not able to read. Bass et al, (2013) evaluated PTSD using self-rating Harvard Trauma Questionnaire (HTQ) at three-time points interval (baseline, treatment and at 6 months). Habigzang et al, (2016) used semi-structure interview based on Children's Diagnostic and Statistical Manual of Mental disorders IV- Text Revision (DSMIV-TR) to assess PTSD, and Covers et al. (2021) measured PTSD among the victims using Clinician Administered PTSD Scale (CAPS) And DSMIV PTSD Checklist

Summary Across Studies

Overall, most of the reviewed studies evaluating psychosocial interventions for PTSD associated with rape were of poor methodological quality. Two of the studies lacked control groups (Allon et al, 2015; Mankuta et al, 2015). Five of the trials used wait-list control groups

or treatment intensities that varied between comparative conditions as control groups. Most of the researchers examined either individual and group therapies or both. The majority of studies did not apply or disclose proper random allocation or blinding methods because in some situations both participants and the therapist could not be kept blind to their own treatment. Small sample sizes, the use of measures with dubious validity, the failure to document treatment fidelity or adherence in intervention or control conditions, and the inadequate description of "treatment as usual" may have all contributed to random error, selection biases, participant attrition, and a lack of a control for spontaneous remission. These shortcomings in the methodology point to the need for more thorough study in this area, including standardized outcome measurement and methods for delivering psychotherapies that would allow for verification and comparison. Notably, the research only covered a short period of time (2013–2022), therefore they may have overlooked earlier investigations.

Effectiveness of Studies Reviewed

All the interventions had significant effects at reducing symptoms of PTSD except for the one carried out by Makunta et al, (2013). The authors did not state the P value of the intervention. However, of the three authors that evaluated the efficacy of EMDR, one (Allon, 2015) reported significant reduction in PTSD symptoms, while Covers et al, (2021) reported a contrary finding stating that EMDR therapy in victims of rape was not effective at reducing PTSD symptoms when compared to watchful waiting likewise

Mankuta et al, (2013) evaluated short-term EMDR intervention and treatment of 23 women diagnosed with severe PTSD after sexual trauma. The treatment took place in primary care clinics for a period of 20 days. Result showed there was a significant reduction in symptoms after the therapy. The intervention program has four components: training the local staff, medical evaluation and treatment of patients, psychological evaluation and treatment of trauma victims. The study's limitation include; a small sample size made up of only Congolese women, exclusion of 26 other women with severe PTSD due to transportation constraints, lack of randomization and control group, there was no follow up. However, the multiple component and short duration of the intervention is commendable in African setting where human and material resources for psychotherapies are scarce

Rajan et al, (2021) tested the efficacy of one session (90 - 140 minutes session) of Modified Lifespan Integration (MLI) on reduction of symptoms of PTSD in 100 Caucasian women with PTSD after one sexual assault in a single-centre, individually randomized waitlist-controlled treatment with a post-treatment follow-up at 3 weeks. Results showed a significant reduction in PTSD symptoms in the treatment group compared to the waitlist. However, the study had issues with poor randomization, lacked validation for study instruments, small sample size and a very short follow up time and had no data on socioeconomic status, gender identity, sexual orientation, religion or culture, which if included in the analysis would have made the study robust

Bass et al, (2013) performed a controlled trial of Psychotherapy for 405 Congolese female survivors of sexual violence experiencing high degrees of depression, anxiety, and Post-Traumatic Stress Disorder (PTSD) in 16 villages using CPT at three time periods namely; baseline, at the end of treatment, and 6 months after treatment ended. The treatment included 1 individual session (1 hour) and 11 sessions with six to eight women per group (2 hours each). Results showed significant reduction in PTSD symptoms in both groups. The research findings

can be generalized for similar settings in Africa due to the large sample size and large coverage and use of group therapy. The study assistants were blinded to the treatment assignment, the randomisations procedure was not clear. However, all instruments were pilot tested and translated to the participants and validated

Habigzang et al, (2016) evaluated the effectiveness of a Cognitive-Behavioural Group Therapy Model for the treatment of 103 Brazilian girls who were victims of sexual violence (SV) aged 7 -16 years applied by different groups of practitioners namely; researchers/ psychologists who developed it (G1) and psychologists from the public social care network trained by the first group (G2). It was a quasi-experimental study. The results showed a significant reduction in the symptoms of depression, anxiety, stress, and PTSD. The comparison between the results obtained by the two groups of practitioners in the application of the model indicated no significant differences in the rates of improvement of the participants. These results indicate the effectiveness of the cognitive-behavioural group therapy model and the possibility of it being used as a care strategy by psychology practitioners working in public services. The study was limited by a lack randomization. Randomized clinical trial is the most appropriate design when the aim is to evaluate a treatment. Moreover, the study instruments were self–developed with a low Chronbach alpa of 0.51 for re-experiencing PTSD symptoms.

Allon, (2015) assisted in developing and evaluating a brief psychotherapeutic approach with capacity to treat sexually assaulted women suffering from posttraumatic stress in Democratic Republic of Congo (DRC) among, 37 women assigned to receive either 2 sessions of individual therapy (n = 8) using eye movement desensitization and reprocessing (EMDR) or 2 sessions of group therapy (n = 29) using the EMDR Integrative Group Treatment Protocol (EMDR-IGTP). Results of the study showed significant improvement in scores on the Subjective Units of Disturbance (SUD) Scale. SUD scores of those receiving individual therapy showed a significantly larger decrease than scores of the group therapy participants. All women completed the Impact of Event Scale (IES) before treatment, with scores well higher than the cut-off for posttraumatic stress disorder. The study is useful for African setting with poor resources but has the limitation of no follow up, lack of randomization of research subjects; no validation of the study instrument even though it was designed in China thus results obtained should be interpreted with caution

Covers et al, (2021) evaluated early psychological therapy through a randomized controlled trial among 57 victims of rape, who were randomly allocated to either two sessions of EMDR therapy or treatment as usual ('watchful waiting') between 14 and 28 days post-rape. Psychological symptoms were assessed at pre-treatment, post-treatment, and 8 and 12 weeks post-rape. Results showed Within-group effect sizes of the EMDR condition (d = 0.89 to 1.57) and control condition (d = 0.79 to 1.54) were large, indicating that both conditions were effective. However, EMDR therapy was not found to be more effective than watchful waiting in reducing post-traumatic stress symptoms, EMDR therapy was found to be more effective than watchful waiting in reducing anxiety and dissociative symptoms in the post-treatment assessment, this effect disappeared over time. The findings of this have low risk of bias because of the randomization however the study population is small

DISCUSSION

Rape is a distressing experience linked with several effects in the victim's physical, health, social and psychological domains. However, most victims are quiet about the event and when

they speak out especially females they are blamed, condemned and not given the necessary treatment to relieve them of their distresses (Patterson, Greeson, & Campbell 2009). This problem is worse in the African continent where human and material resources to cater for the victims of rape are scarce, not free and often expensive where it is available (Alem, 2008). Moreover, there are several evidence- based psychotherapies that are effective for immediate and long term treatment of rape (Bass et al, 2013). This systematic review found that these psychotherapies are effective across different ages compared to nothing or a waitlist, for reducing post-traumatic symptom severity. This finding is in tandem with another review (Lomax et al, 2020). The researchers also reported that psychotherapeutic interventions reduced the severity of PTSD symptoms linked with rape or sexual assault.

Six studies met the inclusion criteria and assessed the effectiveness of different interventions for treating post-traumatic stress disorder in rape victims. Overall, the current evidence base supporting the effectiveness of these psychotherapies are limited and of poor scientific quality with a moderate to high risk of bias, resulting in poor internal and external validity, reflecting common limitations in their design. The lack of robust evidence to support study findings highlights the need for rigorous research in this area.

Four of the studies examined the efficacy of EMDR at reducing the symptoms of PTSD and reported that it was effective and this is in keeping with the study of Regehr et al, (2015) while assessing specific cognitive and behavioural interventions for rape revealed that EMDR had a statistically significant effect on posttraumatic stress disorder and depression symptoms in the treatment group in comparison to the control groups.

Three studies compared the use of group therapy to individual therapy in treating PTSD associated with rape, all the researchers found that both therapies reduced the symptoms of PTSD This finding is linked to a scoping review of group therapy for survivals of sexual assault, the researchers stated that group therapy has a potential as a valuable support service for rape victims (Heard & Walsh, 2023)

Other scholars in this review examined multiple sessions in comparison to single sessions and reported that both sessions were effective at symptom reduction (Allon, 2015; Bass et al, 2013, Rothbaum et al, 2005). The review also found that CPT, CBT and MLI therapies meaningfully affected PTSD distress and this is confirmed by the review (Rajan et al, 2021)

Conclusion and Recommendations

This systematic review found that though rape has significant correlation with physical and psychological distress, there are varieties of intervention that can reduce or treat these distressing effects. EMDR, CBT, CPT and MLI either in individual and group session has been found by this study to be effective at reducing PTSD symptoms associated with rape. However there exist gaps in the evidence base for early psychotherapy for rape survivors in this field. Another finding of this review is that most of the recruited studies lacked methodological rigour and are inadequately powered, there was no clear description of treatment as usual with some study details lacking especially randomisation and blinding details which represents challenges for researchers and clinicians

It is therefore recommended that future works should look into the gaps identified in this study. Furthermore, different governments especially in Africa should train local psychologists in the

use of group psychotherapies as these will reduce cost and take more victims simultaneously. Finally, we recommend that rape crisis and management settings make use of the therapies described in this review as the show some evidence of efficacy

Limitations

Only four psychotherapies were reviewed and only six studies were included in this review. Inclusion of more studies and therapies would have made it more robust. Furthermore, only PTSD linked to rape alone that was reviewed in this work. Inclusion of other effects of rape would have made the study richer. Finally, the review included an overwhelmingly African and female, sexual assault and rape survivors

Further Studies

There is tentative, but weak and inconclusive evidence to support the use of early CBT interventions (Cover et al, 2021) more research is needed in this area. Moreover there is need for further research for male participants and sexual minority victims of rape because the majority of the participants in this review are female

Strengths

This review was reported following the PRISMA guidelines and the risk of bias was comprehensively assessed and reported both individually and across studies.

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