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## Comparing the effect of social media-based drama, music and art therapies on reduction in post-traumatic symptoms among Nigerian refugees of Russia's invasion of Ukraine

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### ABSTRACT

**Purpose:** The objective of this study was to ascertain the effectiveness of social media-based music, art and drama therapies in treating PTSD symptoms among Nigerian evacuees from the Russia-Ukraine war.

**Design and methods:** This study was a quasi-experiment involving a sample of 330 participants that were randomly assigned to control and treatment groups. The treatment group was further classified into three groups according to the different contents of the therapies they received.

**Results:** The study result showed that social media-based therapies effectively reduced PTSD symptoms for participants in the treatment group, unlike those who did not receive the intervention. Comparatively, drama therapy was more effective than art and music therapies. The reason drama therapy was more effective could be because it engaged the minds and body of the participants more than the other therapies.

**Conclusion:** Although art, music and drama therapies are effective treatment options for reducing symptoms of PTSD among victims of war, drama therapy is the most effective among them all.

**Practical implications:** The result of this study has practical implications for health promotion from the perspective of nursing services by showing that social media-based therapies could serve as viable and cost-effective alternatives to face-to-face group therapy.

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### Introduction

Following the war between Russia and Ukraine that broke out on 24 February 2022, the Nigerian government evacuated many Nigerians who were stranded in Ukraine back to the country. Each evacuated Nigerian was given a \$100 stipend as local fare to enable them to move to reunite with their families. However, during media interviews,

many of the evacuees indicated that they required therapies that would enable them to heal mentally from the trauma they went through due to the war. One evacuee notes: "Everyone who has gone through this experience needs therapy (Odeniyi & Angbulu, para 7, Odeniyi & Angbulu, 2022)." Despite their open request for a therapeutic intervention to enable them to recover from the effect of the war, the federal government of Nigeria did not make plans for them to undergo any form of therapy. Instead, they were given transport fares and asked to go.

It is noteworthy to acknowledge that a large number of returnees and the accompanying financial implications of housing them in one location might pose severe limitations for any face-to-face therapy that will be required to heal them mentally. Researchers (Leira et al., 2018; Spooner et al., 2019) acknowledge that distance poses a serious limitation in delivering valuable healthcare services to people who need

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them. Another possible limitation against accessing therapeutic intervention is finance. Not everyone who needs therapy has the financial ability to pay for it. Researchers (Bright et al., 2018; Jørgensen & Kefalas, 2017) agree that finance is one of the limitations to accessing therapy among people, especially those from low-income countries like Nigeria. The situation could be worse for people displaced by war, as was the case for evacuees of the Russia-Ukraine war. Evidence in the literature (Kienzler & Sapkota, 2020; Saing & Kazianga, 2019) indicates that victims of conflicts are typically in severe financial distress that limits their abilities to cater for their well-being.

Social media platforms offer valuable options for delivering interventions and ensuring that the barrier distance poses is taken care of. Through social media platforms, cost-effective therapies can be delivered to those in need. For example, Okpara, Anibueze, Ugwu, Ugwuanyi, & Gever, 2022 affirm that social media platforms are helpful venues for offering interventions to those in need. According to An et al. (2017), social media-based intervention can be as effective as an intervention in a face-to-face setting. In a systematic review, Luo et al. (2020) reported that interventions delivered through social media were effective and capable of changing behaviour. Chau et al. (2018) equally reported that interventions, especially when the population is primarily young people, can be effectively offered using social media channels. This means that therapies can be effectively rendered to evacuees through social media platforms to heal them mentally.

A study of the effectiveness of social media-based interventions as a treatment option for reducing post-traumatic stress disorder (PTSD) symptoms of evacuees of the Russia-Ukraine war is essential for four fundamental reasons. First, information is needed on the most cost-effective way of treating people who have been exposed to potentially traumatic events, especially from the perspective of less developed countries like Nigeria; this study offers such evidence-based information. In the second place, many Nigerians who were evacuated from Europe due to the war between Russia and Ukraine have indicated their need for a therapy that will assist them in healing faster from the war experience; this study serves as a blueprint on how to heal such Nigerians effectively. Thirdly, there is less evidence from the perspective of developing countries measuring the effectiveness of social media-based therapies for reducing PTSD symptoms among those exposed to potentially traumatic events. This is despite the fact that there is increasing access and use of social media, and disaster instances are on the increase, thus, increasing the chances of people being exposed to potentially traumatic events. Finally, there is scanty evidence in the literature comparing the effectiveness of music, art and drama therapies. Therefore, the objective of this study was to examine the effectiveness of social media-based art, drama and music therapies in reducing post-traumatic stress disorder among Nigerian evacuees from the Russia Ukraine war.

### Music, art and drama therapies and their usefulness

Music is an essential communication tool used to pass a message from a person known as a musician to others. Music evokes emotions and propels people to think in specific ways with the possibility of influencing their behaviour. According to Nnanyelugo et al. (2019), music as a communication channel can go above the limitations of language and pass meaning to a wide range of people. Stegemann et al. (2019) surveyed literature and revealed that music has a substantial impact on intellectual engagement, mental development and behaviour modification. Poulin (2018) argues that music plays a vital role in society through education and information. One of the critical roles of music, as reflected from the aggregate of views above, is its therapeutic effect. That is its ability to heal a wounded mind through music therapy.

Music therapy uses musical intervention to treat mental health challenges and assist individuals in functioning better as active members of society. Aalbers et al. (2017) define music therapy as a methodical intervention strategy. In this case, the therapist assists the client in

enhancing health, applying music experiences and the links that develop via them as dynamic forces of alteration. Nnanyelugo et al. (2019) note that through the instrumental of directed music experiences offered by certified music therapists, music therapy can be contrasted to interventions “categorised as ‘music medicine’ used to treat the mind. Stegemann et al. (2019) note that music therapy is regarded as a helpful way of treating mental injury among people facing mental disorders of different levels. Researchers (Geipel et al., 2018; Kern & Tague, 2017; O’Toole et al., 2017) agree that there is increasing interest in music therapy due partly to the fact that public health care has been recognised as crucial in assisting people to recover from mental injury and perform optimally. Typically, four primary methods are used in music therapy. They are listening, improvising, composing and recreating. Beck et al. (2018) examined adult-participants while LaGasse et al. (2019) examined children-participants and the outcome showed that music therapy is a useful health intervention approach.

On the other hand, art therapy is the use of art-making to achieve therapeutic result. Art therapy is the use of art as a clinical procedure to treat people with psychological disorders. According to Eaton et al. (2007), art therapy makes use of creative communication strategies in providing individuals with a useful avenue to communicate their thoughts and recover from emotional trauma in the process. Art therapy engages peoples’ minds and assists them in healing mentally, thus, assisting them in moving on with their lives after an unfortunate incident. Anikpe et al. (2022) conducted a study involving children and reported that art therapy is an important health promotion tool for treating symptoms of PTSD. Beebe et al. (2010) in a study also found that art therapy is a useful intervention for treating mental health challenge among children. Empirical evidence (Freilich & Shechtman, 2010; Penelope, 2007) showed that art therapy is a useful strategy for addressing mental health issues among children.

Drama therapy is a mental treatment approach that makes use of dramatic techniques for the purpose of treating mental health challenges. Drama therapy encourages people to act out stories to achieve mental healing and personal growth. Some of the techniques of drama therapy include storytelling, play-acting, games, improvisation, role-playing, creative writing exercise as well as guided visualization (Johnson, 2020). Cheung et al. (2020) conducted a study, involving adults, to determine the effect of drama therapy as a treatment option for patients with mental health challenges like major depression, bipolar disorder and schizophrenia. The participants in the study were involved in a 9-week drama therapy programme. And the result showed that the intervention was useful in reducing symptoms of mental health among the sample evaluated. Lin et al. (2021) conducted a study to ascertain the impact of drama therapy in the quality of life of patients with dementia. The study involved 42 adults participants that were assigned to control and treatment groups. The researchers found that after 8 weeks of the intervention, participants in the experimental group reported a significant improvement in quality of life. The researchers then concluded that drama therapy is an efficient mental health treatment strategy. Although the individually studies have investigated the impact of music therapy, art therapy and drama therapy, limited studies have combined all three to determine which is more effective. The current study filled this gap.

### Overview of Social media and PTSD

Social media refer to Internet-mediated platforms for creating and sharing information among people. Social media platforms allow all the parties involved in the communication to generate and share their content. Within this context, it can be said that social media platforms allow parties to take part in communication to serve as senders and receivers simultaneously. For example, Ekwueme and Rosemary Ebieri (2019), in commenting on the power of social media, note that these platforms have substantially changed the communication landscape in a manner that cannot be easily ignored. The researchers note further

that social media platforms have collapsed the barriers of time and distance. For example, [Odeniyi and Angbulu \(2022\)](#) note that social media platforms have offered a virtual venue for different events. Examples of social media platforms include Facebook, WhatsApp, Twitter, TikTok, and YouTube.

Social media has offered a venue for treating people's post-traumatic stress disorder (PTSD) symptoms. The increasing instances of disaster, violent conflict and other unpleasant events have made people vulnerable to exposure to different potentially traumatic events. For example, the [World Health Organization, n.d](#) says that PTSD is one of the most severe and common anxieties among people globally. [Hoppen et al. \(2021\)](#) carried out a study to determine the prevalence of PTSD among adults that had survived a war between 1989 and 2019, and their result showed a prevalence of 26.51% for PTSD. Further results showed that of the 26.51%, 55% had significant depression. The study of Hoppen et al. implies that survivors of war need help to live better. An event can trigger PTSD if it can inject horror, a threat to safety, the ability to inflict injury, fear or feeling of helplessness ([Zhong et al., 2020](#)).

PTSD has a severe negative impact on the individuals involved. For example, it will be difficult for people suffering from PTSD symptoms to concentrate at work and freely interact with other people. [Mills et al. \(2018\)](#) carried out a study and reported that people who have PTSD find it more challenging to recover from substance abuse than those without PTSD problems. [Hassan et al. \(2017\)](#) carried out a study and reported that PTSD negatively impacts the use of painkillers among people who are experiencing it. In a study, [Rosenberg et al. \(2018\)](#) reported that social media platforms offer an efficient venue to render emotional support to victims of war. [Waheed et al. \(2019\)](#) did a study to determine the impact of PTSD symptoms on job satisfaction. The researchers utilised a descriptive survey and examined 126 adults participants with a questionnaire as the instrument for data collection. Their result revealed that PTSD symptoms significantly and negatively impact job satisfaction among the sample examined. In a study, [Rodney et al. \(2021\)](#) also reported that PTSD symptoms limit the abilities of adults to perform their roles at their places of work, making it essential to treat people who have symptoms of PTSD. [Barrera et al. \(2013\)](#) conducted a study and reported that PTSD has a significant negative impact on children's development. [Lünnemann et al. \(2019\)](#) also reported that PTSD has a long term negative effect on children. Overall, social media platforms offer virtual venues for treating symptoms of PTSD among victims of war.

## Theoretical framework

This study used the technological determinism theory which was propounded in 1964 by Marshall McLuhan to serve as a framework for understanding the impact of new technologies in societies. According to the theory, the level of technological advancement plays a significant role in influencing the events that take place in society. The basic argument of the theory is that when new technologies are introduced into a social system, they play an essential role in influencing the overall social system ([Jan, Shujaat, Sadaf, Owais, & Abdul, 2021](#)). The technological determinism theory argues that when new technologies are introduced into a social system that, in turn, controls societal behaviour. In this study, the new technology is social media platforms that have changed the way communication takes place significantly. According to [Gold et al. \(2011\)](#), recent technologies have provided new opportunities. For health promotion approaches. Before the advent of social media platforms, interventions were mainly delivered through face-to-face strategies but with the introduction of social media platforms, there are more opportunities to deliver intervention through mediated platforms and achieve the same results. Therefore, it is hypothesised:

**H1:** Social media-based music, art and drama therapies will effectively treat PTSD symptoms among Nigerians who have experienced the Russia-Ukraine war.

## Methodology

### Design

This study was a quasi-experiment with the use of a one-way analysis of variance with the repeated measure. The one-way analysis of variance was used to determine the impact of social media-based selected therapies on PTSD symptoms.

### Population

The population of this study comprises all the Nigerian evacuees from Europe as a result of the war between Russia and Ukraine. A total of 1075 Nigerians have been successfully evacuated from Europe ([Odeniyi & Angbulu, 2022](#); [Agency Report, 2022](#)). This population was regarded as appropriate for the study because they have been exposed to the war between Russia and Ukraine.

### Sample size/sampling technique

The sample size of this study was made up of 362 respondents who were selected after a priori power analysis had been conducted using the G\*power programme. We set the parameters thus: effect size 0.19; power  $(1 - \beta)$  at 0.95 and  $\alpha = 0.05$ . The test family was set as F-tests, while the statistical family was set as ANCOVA repeated measures between factors. This showed that a sample size of 362 was needed to detect statistical differences at a 0.05 level of confidence.

The researchers used respondent-driven sampling (RDS) chain referrals as a sampling technique in this study. RDS usually begins by identifying earlier potential participants who then recommend others. We recruited the earlier participants through Facebook announcements. The announcements first yielded 50 seeds that recommended other Nigerians that were evacuated from Europe due to the war in Ukraine. During the process of recruitment, only 330 participants were successfully recruited. This shows that there was 91% success in recruitment. The participants were randomly assigned to control and treatment groups comprising 165 participants each. The 165 treatment group participants were further assigned to three different interventions, made up 55 participants each.

### Instrument for data collection

The researchers used the International Trauma Questionnaire (ITQ) as the instrument for data collection. The instrument was developed by [Cloitre et al. \(2018\)](#) to serve as a self-measure of PTSD with close consideration of the driving principles of the ICD-11, as put forward by the World Health Organization (WHO). The scale has 12 items aimed at measuring PTSD symptoms. Cloitre et al. reported reliability of 0.79, showing that it is a reliable measure of PTSD. The researchers also conducted a pilot study in Nigeria involving 40 participants and showed a Cronbach alpha value of 0.73, indicating that it can be used in a Nigerian setting.

### The intervention

The interventions in this study were three- social media-based music therapy, art therapy and drama therapy. Three different WhatsApp groups were created for the study. Each group was made up of 55 participants based on the type of therapy they were exposed to. This means that the 165 participants in the treatment group were assigned to three different interventions. It was decided that participants would be exposed to different therapies to provide specific information on the type of therapy that was most effective. The length of each of the intervention session was one hour 30 min. The reason for the lengthy intervention was to ensure that the participants received adequate treatment that will lead to recovery from mental health challenge. Below are the therapies:

**Table 1**  
Details of the three interventions.

Sessions	Music therapy	Art therapy	Drama Therapy
Session 1	The strategy in this session was listening to recorded music. The participants listened to selected music. The music tracks were selected and delivered by the therapist.	Participants engaged in visual illustrations making that best captured their mood.	Games strategy were used to welcome the participants.
Session 2	In this session, the participants were given the opportunity to select from the list of music for listening. Unlike in the first session, the participants were involved in deciding which track to listen to.	Participants discussed the visual art of other participants.	Participants provided a narration of their experiences of the war in Ukraine. The storytelling technique was used here.
Session 3	In this session, the participants were requested to bring their tracks and listen to them during the intervention.	Participants were presented with different artworks and were asked to ascribe meaning to it.	The participants were encouraged to set goals for themselves regarding their recovery from the trauma of the war. The creative writing exercise strategy was used.
Session 4	Here, the participants engaged in improvisation of music that best conveyed their mood.	The participants made illustrations that conveyed happiness.	The participants were told to write creative stories that highlighted the need to avoid overthinking after a traumatic event.
Session 5	During this session, the participants were requested to engage in improvisation to calm down someone who had experienced a loss.	The participants made illustrations with captions aimed at comforting someone who has experienced a traumatic event.	Participants engaged in guided visualization.
Session 6	The participants wrote songs to give hope to someone who is experiencing a challenging time.	The participants discussed the illustrations made by other participants.	Participants engaged in guided visualization.
Session 7	The participants engage in the analysis of the songs written by other participants.	The participants engaged in painting and sculpture targeted at promoting emotional stability.	The participants were told to write creative stories that highlighted the need to avoid overthinking after a traumatic event.

### Music therapy

The researchers designed and implemented the music intervention based on the on the guideline of Robb et al. (2010). This particular intervention involved exposing the evacuees to music that sought to ignite their emotions. The tracks were a combination of audio and visual elements. Altogether, the participants listened to and watched selected music for one hour in seven sessions. Care was taken to ensure an effective combination of all the live music elements. The therapist also ensured that the selected musical tracks were as familiar as possible to assist the respondents in relaxing and forgetting their war experiences. See Table 1 for details on the sessions.

### Art therapy

This intervention required the participants to engage in art-making as a strategy to reduce the mental health impact of the war. The intervention started with an introduction and the participants were told that they were going to be engaging in art-making. The intervention was delivered by a certified art therapist. Each session lasted for one hour and was delivered through WhatsApp. A group WhatsApp was created for this study, and the participants who signed for the study were added as group members. Table 1 provides details regarding the sessions of the therapy.

### Drama therapy

The participants in this study received a drama therapy intervention. The researchers combined four drama therapy strategies, namely storytelling, games, creative writing exercise and guided visualization. See Table 1 for more on the sessions.

### Data collection/analysis

The researchers collected data for this study two times. The first was before the intervention, and the second was after the intervention. In the analyses of data for the study, a one-way analysis of covariance with repeated measures was used to explore the impact of social media-based music, art and drama therapies on PTSD symptoms among evacuees.

### Ethical approval

This study was approved by Ianna Research Academy. The argument that was put forward to get the ethical approval was that empirical evidence was needed to understand ways of reducing PTSD symptoms among victims of conflict.

### Results

A total of 330 copies of the instrument were filled and returned. This signifies a success rate of 91% from the 362 desired sample size. The sample was 76% male and 33% female for the treatment group. It was 61% male and 39% female for the control group. The respondents were predominantly youth between 25 and 32 years for both the control and treatment groups. The result of the study is presented below:

The result from Table 2 sought to determine the impact of social media-based therapies on the reduction in PTSD symptoms among evacuees from the Russia-Ukraine war. The independent variable was the treatment condition; the dependent variable was the scores on PTSD symptoms, while the covariate was pre-intervention scores. The result of the study showed a significant main effect of the treatment condition on reduction in PTSD symptoms after controlling for pre-intervention scores  $F(1,327) = 147.826, p = 0.01$ . The degree of the relationship was explored using eta squared, and this revealed  $\eta^2 = 0.311$ , an indication of moderate effect. There was no strong relationship between pre-intervention and post-intervention scores on PTSD symptoms,  $F(1,329) = 0.912, P = 0.340, \eta^2 = 0.003$ . The result of the pairwise comparison showed that the mean difference between the treatment and the control group was 13.3, with a standard deviation of 1.102. The mean difference was adjusted using Bonferroni, which achieved statistical significance,  $p = 0.001$ . We further explored which social media-based therapy was most effective, and the result is presented in Table 3.

In Table 3, a one-way analysis of variance was conducted to compare participants' mean scores in three different groups of therapies. There was a significant statistical difference in PTSD scores among the three groups,  $F(2,164) = 37.2272, p = 0.001$ . The effect size using eta squared was 0.315. The post hoc comparisons utilising the Tukey HSD test revealed that mean scores for drama ( $M = 11.8; SD = 1.9$ ) significantly differed from art therapy ( $M = 14.4; SD = 1.9$ ) and music therapy ( $M = 17.9; SD = 5.8$ ) at 0.05 level of significance. Therefore, drama therapy was more effective in reducing PTSD symptoms among evacuees of the Russia-Ukraine war than art therapy and music therapy.

### Discussion of findings

The objective of this study was to ascertain the effectiveness of social media-based music, art and drama therapies in treating post-traumatic stress disorder symptoms among Nigerian refugees of the Russia-Ukraine war. The study was conducted involving a sample of 330

**Table 2**  
ANCOVA analyses of mean scores on PTSD among evacuees of the Russia-Ukraine war.

S/N	Time	Mean	SD	Grand mean	p-value
1	Control	28.2	0.77		
2	Treatment	14.8	0.77	21.506 (0.549)*	0.01

\* Standard error.

participants randomly assigned to the control and treatment groups. The treatment group was further divided into three groups according to the different types of therapies used.

The result of the study showed that at Time 1 (pre-intervention), the participants reported a high mean score in their PTSD symptoms. The implication is that Nigerian evacuees from Europe due to the war between Russia and Ukraine are currently going through severe trauma due to their experiences with the war. This result has confirmed the evidence in the literature (Hoppen et al., 2021; Zhong et al., 2020), pointing to the fact that exposure to horrific events results in a corresponding development of mental disorders. The result has also extended previous studies (Mills et al., 2018; Rodney et al., 2021) that examined issues related to the development of mental disorders without focusing on people from less developed countries who come in close contact with war as a result of their migration to developed countries. This addition is important because Africans, in general, and Nigerians, particularly, have a high desire to migrate to advanced countries to seek a better life. However, when these migrants face challenges in such countries, they rush home and are usually left to their fate. Literature (Mills et al., 2018; Rosenberg et al., 2018) shows that PTSD symptoms have a serious adverse effect on the individual involved. Nevertheless, when evacuees from the Russia-Ukraine war reached Nigeria, there was no plan to assist them in recovering mentally.

The study result showed that after the intervention, participants reported a significant drop in their PTSD symptoms. The implication is that social media-based therapies were effective treatment options for evacuees of the Russia-Ukraine war. This result has extended previous studies (Kern & Tague, 2017; LaGasse et al., 2019) that have examined the usefulness of music therapy, at therapy (Beebe et al., 2010; Freilich & Shechtman, 2010; Penelope, 2007) and drama therapy (Cheung et al., 2020; Lin et al., 2021) as treatment options for people facing mental health challenges by showing that social media platforms could serve as valuable venues for delivering mind-healing interventions. The current study, unlike the previous ones cited above, combined three therapies and attempted to point out which therapy is more effective. Additionally, this study has extended studies (Ekwueme & Rosemary Ebiere, 2019; Odeniyi & Angbulu, 2022) that have examined the contributing role of social media in changing the communication landscape and shaping behaviour. By examining how intervention delivered through social media could be effective as a mind treatment option, this study has shown that time and distance can no longer serve as barriers in delivering music and other therapies. Another important aspect of the result that has extended previous studies (LaGasse et al., 2019; Stegemann et al., 2019) is that it has shown that drama is more effective than art and music therapies. The reason drama therapy was more effective could be because it engaged the minds of the participants more than the other therapies. These results have implications for technological determinism theory by sowing that social media could serve

**Table 3**  
ANOVA results on the effect of three types of therapies on the reduction in PTSD symptoms.

S/N	Type of therapy	Mean	SD	p-value
1	Drama	11.8	1.9	
2	Art therapy	14.4	1.9	
3	Music therapy	17.9	5.8	
4	Total	14.8	4.4	0.01

Note: Lower mean scores indicate greater effectiveness.

as platforms for offering interventions. Our result has shown that therapies can improve mood and assist people suffering from trauma recovery and becoming better citizens of themselves and society.

### Practical implication

The result of this study has practical implications for health promotion from the perspective of nursing services by showing that social media-based therapies could serve as viable and cost-effective alternative to face-to-face group therapy. For example, therapies delivered through social media can be used to treat people who are suffering from different mental health challenges. With this result, therefore, health experts will be guided appropriately. This study will also guide public health experts in making decisions on the type of therapy that will best assist in healing wounded minds. Individuals and groups who are interested in rendering nursing services to patients could explore the potential of social media to deliver their services.

### Limitations

Although this study has provided empirical evidence regarding the effectiveness of social media-based therapies, the study has some limitations. The first limitation is the lack of a follow-up assessment to determine if the participants still maintain a decrease in their mean scores on PTSD. Another limitation is that the researchers did not determine if gender played a role in the effectiveness of the intervention. Despite these limitations, this study has offered useful empirical evidence regarding the effectiveness of social media-based therapies for treating PTSD symptoms among citizens of a less developed country that experienced war in a more developed region. This information will shape future research on the use of therapies for treating PTSD and other mental disorders.

### Conclusion

Based on the result of this study, it is concluded that social media-based therapies are effective strategy for treating PTSD symptoms among people who have had experience with war. The researchers also conclude that drama is more effective in healing the mind than art and music therapies. This study also concludes that it is not enough to evacuate victims of war; steps must be taken to ensure that they are mentally healed. For example, giving evacuees transport money and a mobile subscriber identification module card is not enough; instead, evacuees require mental healing to continue with their lives.

### Credit statement

Dr Gever drafted and prepared the full paper.

Timothy Onosahwo Iyendo: He coordinated and handled the art therapy part of the study as well as part of literature review.

Udoka O. Obiugo-Muoh: She is an experts in psychology so she coordinated all the therapies and also wrote part of methodology.

Joshua Kayode Okunade: Coordinated the data collection, theoretical framework and part of the methodology.

Ngozi Agujiobi-Odoh: She is an expert in art therapy. She handled the art therapy aspect of the study and part of the methodology.

Ngozi Udengwu: She is an expert in drama. She handled the drama therapy aspect of the study and part of the methodology.

Felix Olajide TALABI: He wrote part of the initial part of the draft and part of the methodology.

Peter N. Nwokolo: He contributed to the literature review, and the designing and implementation of the social media aspect of the study.

## Data availability statement

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

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## Informed consent

Participants granted their consent to publish the study on the understanding that their identities will not be revealed.

## Declaration of Competing Interest

The authors declare no conflict of interest.

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