Age and Social Support as Moderators of Trauma-Focused CBT Effectiveness among Female Adolescent Sexual Abuse Survivors in Lagos, Nigeria

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DOI: https://doi.org/10.47772/IJRISS.2025.910000791

Received: 02 November 2025; Accepted: 10 November 2025; Published: 24 November 2025

ABSTRACT

Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) is an established intervention for trauma recovery, yet limited research has examined its moderating factors in low-resource and culturally diverse contexts. This study investigated the moderating effects of age and social support on the effectiveness of TF-CBT among traumatised female adolescent sexual abuse survivors residing in shelters in Lagos State, Nigeria. A quasi-experimental pretest–post-test control group design with a 3 × 2 × 3 factorial matrix was employed. Fifty participants, aged 10–17 years, were purposively selected and assigned to TF-CBT and control conditions. The *Adolescent Trauma Symptom Scale for Survivors of Sexual Abuse* (ATSS-SSA; α = .70) and the *Social Support Questionnaire–Short Form* (SSQ6; α = .90) were used for data collection. Data were analysed using ANCOVA at a 0.05 significance level. Results indicated a significant main effect of treatment, $F(2, 46) = 62.48$, $p < .001$, partial $\eta^2 = .731$, demonstrating that TF-CBT substantially reduced trauma symptoms compared to the control group. However, neither age group (10–13 vs. 14–17 years) nor level of social support (low, moderate, high) significantly moderated treatment outcomes (all $p > .05$). These findings suggest that TF-CBT is broadly effective across adolescent developmental stages and social contexts, underscoring its adaptability and potential scalability within Nigerian shelter settings. The study contributes to the limited African evidence base on trauma interventions, offering practical implications for counsellors, NGOs, and policymakers committed to adolescent trauma recovery.

Keywords: trauma-focused cognitive behavioural therapy, age, social support, adolescent trauma, sexual abuse.

INTRODUCTION

Female Adolescents survivors of Sexual Abuse remain one of the most devastating forms of violence against children, leaving deep psychological and emotional scars that often persist into adulthood. Globally, the World Health Organisation (WHO, 2022) estimates that one in five women experiences sexual abuse before the age of 18. The psychological impact of such experiences is far-reaching, including post-traumatic stress disorder (PTSD), depression, anxiety, and social withdrawal. The situation is particularly severe in low- and middle-income countries, where weak mental health systems, limited access to therapy, and cultural taboos surrounding sexuality exacerbate survivors' trauma (UNICEF, 2022). In Nigeria, sexual abuse is widespread and underreported due to stigma, fear of shame, and systemic barriers to justice. The National Population Commission (NPC, 2023) & UNICEF (2024) found that approximately one in four Nigerian girls experiences sexual violence before adulthood, underscoring the urgent need for accessible, evidence-based interventions for survivors. Adolescence represents a vulnerable developmental stage, where exposure to sexual trauma can disrupt identity formation, emotional regulation, and social functioning (Branje et al., 2021). The trauma of sexual abuse during this period may manifest as intrusive memories, hyperarousal, dissociation, and maladaptive coping behaviours such as aggression or self-isolation. For Nigerian adolescents, these effects are compounded by poverty, lack of social support, and cultural silence surrounding sexual abuse. Many survivors, especially those residing in shelters, face chronic stressors including displacement, shame, and uncertainty about the future.

These realities highlight the urgent need for effective therapeutic interventions tailored to their developmental and sociocultural contexts.

Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) is one of the most empirically supported treatments for trauma in children and adolescents. Developed by Cohen et al. (2017), TF-CBT integrates cognitive-behavioural principles with trauma processing techniques to help survivors reframe maladaptive beliefs, reduce PTSD symptoms, and develop coping skills. The therapy typically includes psychoeducation, relaxation training, cognitive restructuring, and trauma narration conducted in a safe, structured environment. Studies in high-income contexts have demonstrated TF-CBT's efficacy in reducing PTSD, depression, and behavioural problems (Fitzgerald et al., 2023). Importantly, emerging evidence suggests its adaptability to African settings. For instance, Kaminer et al. (2023) found that an abbreviated version of TF-CBT significantly reduced PTSD symptoms among South African adolescents, confirming its cultural flexibility and scalability in low-resource environments. Despite this evidence, limited research in Nigeria has examined factors that influence TF-CBT outcomes among adolescent sexual abuse survivors. Two potential moderating variables, age and social support, are particularly relevant. Age determines cognitive maturity, emotional expression, and engagement in therapy. Younger adolescents (10–13 years) may struggle with cognitive restructuring tasks, while older adolescents (14–17 years) can engage more abstractly with their trauma narratives (Steinberg, 2020). Social support, defined as perceived emotional and instrumental assistance from caregivers, peers, or mentors, is a critical buffer against trauma-related distress. High levels of perceived support have been linked to reduced PTSD severity and enhanced recovery (Jakobsen, 2022; Hébert et al., 2014). Conversely, survivors who experience stigma, rejection, or family silence are more likely to develop chronic symptoms.

Given these considerations, this study investigates the moderating effects of age and social support on the effectiveness of TF-CBT among traumatised female adolescent sexual abuse survivors in Lagos, Nigeria. Using data from a quasi-experimental study conducted in shelter settings, the research evaluates whether TF-CBT's impact on trauma reduction varies by developmental stage or level of social support.

Two null hypotheses guided the study:

H_{01}: There is no significant difference in trauma symptoms between traumatised female adolescent sexual abuse survivors exposed to TF-CBT and those in the control group, across age groups.

H_{02}: There is no significant difference in trauma symptoms between traumatised female adolescent sexual abuse survivors exposed to TF-CBT and those in the control group, across levels of social support.

This study advances understanding of culturally responsive trauma interventions in sub-Saharan Africa by examining how age and social support moderate the effectiveness of Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) among female adolescent sexual abuse survivors in Nigeria. The findings highlight developmental and environmental influences on recovery, offering guidance for counsellors and policymakers in designing scalable, evidence-based support systems. In line with Badejo et al. (2011), the study underscores the urgent need to integrate counselling services into national policies to address the widespread impact of adolescent sexual abuse and promote resilience among Nigerian youth.

Conceptual Framework

The conceptual framework for this study illustrates the theoretical relationships between Trauma-Focused Cognitive Behavioural Therapy (TF-CBT), age, social support, and trauma recovery among female adolescent sexual abuse survivors in Lagos, Nigeria. It provides a visual and theoretical guide for understanding how TF-CBT operates to reduce trauma symptoms while recognising that individual and contextual factors such as age and perceived social support can influence therapeutic outcomes.

A. Independent Variable - Trauma-Focused Cognitive Behavioural Therapy (TF-CBT)

TF-CBT serves as the independent variable in this study. It is a structured, evidence-based psychological intervention designed to alleviate trauma-related distress through a combination of cognitive restructuring,

exposure, and coping-skills training (Cohen, Mannarino, & Deblinger, 2017). The therapy aims to help adolescents process traumatic memories, challenge maladaptive beliefs (such as guilt or self-blame), and develop healthier emotional regulation strategies. Within the Nigerian context, TF-CBT was adapted to suit the cultural and emotional needs of adolescents residing in shelters, emphasising psychoeducation, relaxation, and supportive caregiver involvement.

B. Moderating Variables

Age Group

Age is expected to moderate the relationship between TF-CBT and trauma recovery outcomes. Adolescents differ developmentally in their cognitive and emotional capacities, which affects how they engage with therapy. Younger adolescents (10–13 years) may have limited abstract reasoning skills and rely more on behavioural or emotional learning, whereas older adolescents (14–17 years) can better understand cognitive restructuring principles and verbalise complex trauma experiences (Steinberg, 2020). Therefore, the effectiveness of TF-CBT may vary across age groups based on developmental readiness and capacity for reflective processing.

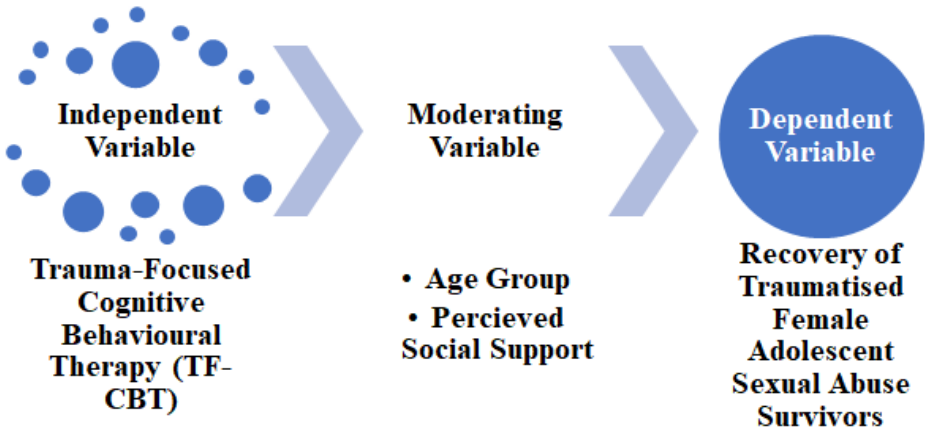
Social Support

Social support is conceptualised as the perceived emotional, informational, and practical assistance provided by family members, peers, and caregivers. It serves as a protective factor that can enhance recovery from trauma by fostering a sense of safety, belonging, and trust (Hébert et al., 2014). Survivors with high social support are more likely to internalise therapeutic gains and sustain emotional stability after TF-CBT. Conversely, low social support, common among adolescents facing stigma or rejection, may hinder recovery and reduce the effectiveness of therapy.

C. Dependent Variable - Recovery of Traumatised Female Adolescent Sexual Abuse Survivors

Recovery is defined as the reduction of trauma symptoms and improvement in psychological well-being, including decreased intrusive thoughts, avoidance, and hyperarousal, as well as enhanced emotional regulation and resilience. These outcomes were measured through changes in trauma symptom scores following participation in the TF-CBT intervention.

Figure 1 A Conceptual Framework showing the Interactions of all Variables



Source: Researcher, 2025

D. Conceptual Linkage

The framework proposes that TF-CBT directly improves trauma recovery among female adolescent survivors by reducing PTSD symptoms and enhancing coping mechanisms. However, the strength of this relationship may depend on moderating factors. Age influences how participants cognitively and emotionally process therapy

content, while social support determines the degree of reinforcement and validation survivors receive outside the therapy environment. Thus, the model suggests that TF-CBT's impact on recovery will be stronger among older adolescents and those with higher levels of social support.

In summary, this conceptual framework positions TF-CBT as a primary driver of trauma recovery, with age and social support shaping the magnitude of its effects. Understanding these relationships provides a foundation for developing culturally sensitive and developmentally appropriate trauma interventions tailored to the needs of adolescent sexual abuse survivors in Nigeria.

METHODOLOGY

Research Design

This study adopted a quasi-experimental pretest–posttest control group design with a 2 × 2 × 3 factorial structure, aimed at evaluating the effectiveness of Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) on the recovery of traumatised female adolescent sexual abuse survivors in Lagos, Nigeria. Participants were categorised by age group (10–13 years and 14–17 years) and perceived level of social support (low, moderate, or high). Random assignment was not feasible due to ethical and practical constraints in shelter environments; instead, participants were purposively allocated to treatment and control groups. This design allowed for the examination of the main effect of treatment (TF-CBT) as well as the moderating roles of age and social support on trauma recovery outcomes.

Table 1 Variables of the Study

Independent Variable	Moderating Variables	Dependent Variable
Trauma-Focused Cognitive Behavioural Therapy (TF-CBT)	Age Group (10–13, 14–17) Social Support (Low, Moderate, High)	Recovery of Traumatised Female Adolescent Sexual Abuse Survivors

Population

The target population comprised female adolescent survivors of sexual abuse residing in government-approved and non-governmental organisation (NGO)-run shelters across Lagos State, Nigeria. Specific numbers of residents were not disclosed to protect participants' confidentiality and ensure compliance with ethical research standards.

Sample and Sampling Technique

The study sample consisted of 50 female adolescent survivors aged 10 to 17 years, selected through purposive sampling from four rehabilitation shelters. Inclusion criteria required participants to be (a) female adolescents aged 10–17, (b) confirmed survivors of sexual abuse under professional care, and (c) willing to participate with caregiver consent. Exclusion criteria included serious cognitive impairment or active psychosis that could hinder participation.

Participants were allocated to either the TF-CBT intervention group (n = 25) or a control group (n = 25) receiving Enhanced Usual Care (EUC). Ethical considerations, participant well-being, and logistical feasibility guided the non-randomised allocation process.

Research Instruments

1. Adolescent Trauma Symptom Scale for Survivors of Sexual Abuse (ATSS-SSA)

The ATSS-SSA was developed and culturally adapted for this study to assess trauma symptoms among adolescent survivors. It was adapted from the Child PTSD Symptom Scale Self-Report (CPSS-V SR) for DSM-5, containing 20 items assessing trauma symptoms and seven functional items. Responses were rated on a 5-

point Likert scale (0–4), with higher scores reflecting greater symptom severity. Total scores ranged from 0 to 80, classified as follows:

Minimal (0–10), Mild (11–20), Moderate (21–40), Severe (41–60), and Very Severe (61–80). A Cronbach's alpha of α = .70 was obtained during pilot testing, indicating acceptable internal consistency.

2. Social Support Questionnaire – Short Form (SSQ6)

The SSQ6 (Sarason et al., 1987) measured participants' perceived level of social support. It comprises six two-part items assessing both the number of available supports (SSQ-N) and satisfaction with support (SSQ-S). Scores were categorised as low (0–2.0), moderate (2.1–4.5), and high (4.6–7.0) perceived support. The adapted version demonstrated excellent reliability (α = .90).

Validity and Reliability of Instruments

- **Face and content validity** were established through expert review by counselling psychologists and trauma specialists to ensure cultural relevance and appropriateness for Nigerian adolescents.
- **Construct validity** was verified by correlating the ATSS-SSA with related trauma symptom measures.
- **Reliability testing** conducted during a pilot study involving 15 female survivors produced internal consistency indices of **α = .70 (ATSS-SSA)** and **α = .90 (SSQ6)**, confirming the instruments' suitability for the main study.

Procedure for Treatment

Ethical approval and permission were obtained from the Lagos State Ministry of Youth and Social Development and participating shelters. Participants and caregivers provided written informed consent after being fully briefed about the study's purpose and procedures. The TF-CBT intervention consisted of eight sessions, each lasting approximately 90 minutes and delivered over six weeks. The sessions followed the adapted Trauma-Focused Cognitive Behavioural Therapy Instructional Package (TF-CBTIP) based on Cohen, Mannarino, and Deblinger (2006).

Key components included:

- **Session 1–2:** Introduction, rapport building, and psychoeducation on trauma.
- **Session 3:** Relaxation and emotional regulation skills.
- **Session 4:** Cognitive coping and restructuring.
- **Session 5:** Trauma narrative development.
- **Session 6:** Cognitive processing and reframing guilt/shame.
- **Session 7:** Enhancing safety and goal setting.
- **Session 8:** Review, consolidation, and closure.

The control group did not receive TF-CBT during the study but completed all assessments and received post-study counselling as an ethical measure. Pre- and post-intervention data were collected using the ATSS-SSA and SSQ6.

Method of Data Analysis

Data were analysed using IBM SPSS Version 30. Descriptive statistics (means, standard deviations, frequencies) summarised demographic data and baseline measures. To evaluate the effectiveness of TF-CBT, a one-way

Analysis of Covariance (ANCOVA) was conducted, comparing posttest trauma scores between the TF-CBT and control groups while controlling for pretest scores. Additional ANCOVA tests examined moderating effects of age group (10–13 vs. 14–17) and social support (low, moderate, high) on recovery outcomes. ANCOVA assumptions—normality, homogeneity of variance, and homogeneity of regression slopes, were tested and met. Statistical significance was set at $p < .05$, and partial eta squared (η^2) was reported as the measure of effect size. Bonferroni post hoc tests were used where appropriate to compare adjusted means across subgroups.

Ethical Considerations

The study adhered strictly to ethical principles of research involving minors and vulnerable populations. Participants were informed of their rights to voluntary participation and withdrawal at any stage without consequences. Confidentiality and anonymity were maintained through coded data identifiers. Continuous psychological support was available throughout the intervention, and any participant showing distress received immediate counselling. Ethical clearance was obtained from the Institutional Review Board of the Lagos State University and the Lagos State Ministry of Youth and Social Development.

RESULT

Hypothesis One

H_{01}: There is no significant difference in trauma symptoms between traumatised female adolescent sexual abuse survivors exposed to TF-CBT and those in the control group, across age groups.

Descriptive statistics in Table 1 show that participants in the TF-CBT group exhibited a marked reduction in trauma symptoms from pretest (M = 53.82, SD = 16.45) to post-test (M = 13.18, SD = 6.24), a mean decrease of 41.64 points. In contrast, the control group showed only a modest reduction (M = 52.56, SD = 12.74 to M = 46.94, SD = 11.55), a mean difference of 5.62 points. The pattern of results was similar across age groups (10–13 years, 14–17 years).

Table 2 Descriptive Statistics of TF-CBT and Control Groups on Trauma Symptoms by Age Group

Group	Age Group (Years)	N	Pre-test Mean	SD	Post-test Mean	SD	Mean Difference
TF-CBT	10–13	7	52.60	15.21	14.12	6.83	38.48
	14–17	10	54.73	17.29	12.45	5.92	42.28
Control	10–13	6	50.78	13.62	46.32	10.95	4.46
	14–17	10	53.92	12.18	47.41	11.96	6.51

A two-way ANCOVA was conducted to assess the effect of treatment type (TF-CBT vs. control) and age group (10–13 vs. 14–17 years) on post-test trauma scores, controlling for pre-test trauma scores.

Table 3 presents the results.

Table 3 Analysis of Covariance (ANCOVA) for the Effect of TF-CBT and Age Group on Trauma Recovery

Source	Type III SS	df	Mean Square	F	Sig.	Partial η^2
Corrected Model	13498.60	4	3374.65	24.85	.000	.776
Intercept	17.12	1	17.12	0.19	.666	.004
Pre-test	1359.05	1	1359.05	15.01	.000	.259
Treatment (TF-CBT vs. Control)	10840.80	1	10840.80	59.86	.000	.736
Age Group (10–13 vs. 14–17)	63.30	1	63.30	0.70	.408	.016
Treatment × Age Group	345.73	1	345.73	1.91	.161	.082
Error	3893.48	43	90.55			

Source	Type III SS	df	Mean Square	F	Sig.	Partial η^2
Total	47946.00	50				

The ANCOVA results revealed a significant main effect of treatment, $F(1, 43) = 59.86$, $p < .001$, partial $\eta^2 = .74$, indicating that participants in the TF-CBT group had significantly lower post-test trauma scores than those in the control group after adjusting for pre-test differences.

Neither the main effect of age group, $F(1, 43) = 0.70$, $p = .408$, nor the interaction between treatment and age group, $F(1, 43) = 1.91$, $p = .161$, was significant. This indicates that the effect of TF-CBT on trauma recovery did not differ significantly between younger (10–13 years) and older (14–17 years) adolescents.

Therefore, H_{01} was rejected for treatment effects but retained regarding the moderating effect of age. TF-CBT significantly improved trauma recovery outcomes across both age groups.

Hypothesis Two

H_{02}: There is no significant difference in trauma symptoms between traumatised female adolescent sexual abuse survivors exposed to TF-CBT and those in the control group, across levels of social support.

Descriptive statistics in Table 3 show that trauma symptoms decreased markedly in the TF-CBT group across all levels of social support, while the control group showed minimal change. Participants with higher perceived social support in the TF-CBT group had the largest reduction in trauma symptoms.

Table 4 Descriptive Statistics of TF-CBT and Control Groups on Trauma Symptoms by Level of Social Support

Group	Social Support Level	N	Pre-test Mean	SD	Post-test Mean	SD	Mean Difference
TF-CBT	Low	4	54.25	14.83	15.75	6.80	38.50
	Moderate	8	52.18	17.26	12.85	5.34	39.33
	High	5	54.90	16.72	11.80	6.47	43.10
Control	Low	4	51.45	12.58	47.90	11.24	3.55
	Moderate	6	52.80	13.19	46.90	12.10	5.90
	High	6	53.44	12.03	46.00	11.72	7.44

A two-way ANCOVA was conducted to determine whether the level of perceived social support (low, moderate, high) moderated the effect of treatment (TF-CBT vs. control) on post-test trauma scores, after controlling for pre-test trauma scores. Table 5 presents the results.

Table 5 Analysis of Covariance (ANCOVA) for the Effect of TF-CBT and Social Support on Trauma Recovery

Source	Type III SS	df	Mean Square	F	Sig.	Partial η^2
Corrected Model	13830.63	6	2305.11	17.26	.000	.795
Intercept	65.98	1	65.98	0.74	.394	.018
Pre-test	1121.13	1	1121.13	12.59	.001	.239
Treatment (TF-CBT vs. Control)	11206.44	1	11206.44	62.93	.000	.759
Social Support	171.30	2	85.65	0.96	.391	.046
Treatment × Social Support	513.86	2	256.93	1.44	.238	.126
Error	3561.45	40	89.04			
Total	47946.00	50				

The ANCOVA results revealed a significant main effect of treatment, $F(1, 40) = 62.93$, $p < .001$, partial $\eta^2 = .76$, indicating that participants who received TF-CBT had significantly lower post-test trauma scores than those in the control group after adjusting for pre-test scores. The main effect of social support was not significant, $F(2, 40) = 0.96$, $p = .391$, partial $\eta^2 = .05$, and the interaction between treatment and social support was also non-significant, $F(2, 40) = 1.44$, $p = .238$, partial $\eta^2 = .13$.

This indicates that TF-CBT effectively reduced trauma symptoms across all levels of social support, and the extent of perceived social support did not significantly influence the effectiveness of the therapy. Therefore, H_{02} is rejected for treatment effects but retained for the moderating effect of social support. TF-CBT significantly improved trauma recovery outcomes for participants regardless of whether they reported low, moderate, or high social support.

DISCUSSION OF FINDINGS

Discussion of Findings for Hypothesis One

The first hypothesis examined whether there is a significant difference in trauma symptoms between traumatised female adolescent sexual abuse survivors exposed to Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) and those in the control group, across age groups. The analysis revealed a significant main effect of treatment, showing that TF-CBT was effective in reducing trauma symptoms compared to the control group. However, the interaction between treatment and age group was not significant, suggesting that both younger (10–13 years) and older (14–17 years) adolescents benefited comparably from the intervention. Thus, the null hypothesis was rejected regarding the main treatment effect but retained concerning the moderating effect of age group. This finding implies that while TF-CBT was a highly effective therapeutic intervention for reducing trauma symptoms, its effectiveness did not differ significantly based on participants' age group. In other words, both early and middle adolescent survivors experienced substantial improvement in trauma recovery after TF-CBT exposure.

These results may appear to contrast with some previous studies suggesting age-based variations in trauma processing and recovery. For example, Akinmoladun et al. (2021) found that younger adolescents (12–14 years) displayed higher levels of anxiety, depression, and withdrawal following sexual abuse compared to older adolescents (15–17 years), who demonstrated greater therapeutic engagement and more adaptive coping strategies. Similarly, Miller et al. (2015) reported that younger adolescents exhibited higher levels of emotional dysregulation and psychological distress than older ones, attributing this to their lower cognitive and emotional maturity. In contrast, Asuquo et al. (2022) highlighted that older adolescents (16–18 years) often access and utilise social support networks more effectively, which aids their recovery. Together, these studies indicate that age can influence coping capacity, emotional regulation, and engagement with therapy.

However, the non-significant moderating role of age group in the present study suggests that TF-CBT may have neutralised developmental disparities between younger and older adolescents by offering structured, stepwise, and developmentally adaptable treatment components. The intervention's design, combining psychoeducation, relaxation training, affect regulation, cognitive restructuring, and exposure to trauma memories, provides both cognitive and emotional scaffolding that is accessible to a wide age range. This is consistent with Cohen et al. (2017), who reported that TF-CBT can be equally effective across developmental stages when sessions are modified to match participants' language, cognitive level, and emotional readiness. The structured nature of TF-CBT, which balances cognitive and behavioural elements, may thus have provided younger participants with the external support they needed, while allowing older adolescents to engage more deeply with the cognitive aspects of therapy.

In developmental terms, early adolescents (10–13 years) are still forming abstract reasoning and metacognitive abilities, whereas older adolescents (14–17 years) possess more advanced emotional insight and capacity for self-reflection (Steinberg, 2020). In many contexts, these developmental differences would lead to varied therapeutic responses. Yet in the present study, the shared therapeutic environment, group cohesion, and supportive facilitation may have created a levelling effect, reducing differences in recovery outcomes across age groups. This interpretation is supported by Nwokeoma et al. (2022), who found that younger adolescents in

Nigerian shelters benefitted when interventions were hands-on and nurturing, while older adolescents responded better to cognitively demanding therapies like MBCT, but both groups improved when therapies were tailored to their developmental needs. Similarly, Kuyken et al. (2016) found that MBCT was more effective for older adolescents who could handle abstract emotional work, whereas younger adolescents required structured emotion-focused interventions, precisely the kind of structure embedded in TF-CBT.

From a neurodevelopmental standpoint, these results are also understandable. Younger adolescents tend to have heightened amygdala reactivity and immature prefrontal regulation, increasing vulnerability to emotional dysregulation after trauma. TF-CBT's gradual exposure and skills training may help regulate these neural responses by strengthening cognitive control mechanisms, as evidenced by neurobiological studies showing CBT's effect on amygdala-prefrontal pathways (Gkintoni et al., 2025). By standardising emotion regulation processes across participants, the intervention may have produced similar recovery outcomes across both age groups. The cultural and contextual environment of Lagos may also explain the absence of age moderation. In many Nigerian communities, discussions around sexual abuse are heavily stigmatised, and survivors, regardless of age, often experience isolation and shame. As Nasvytiene et al. (2012) noted, trauma type, especially sexual abuse, has a profound impact on self-concept, sometimes overriding developmental differences. Thus, within this sociocultural context, the shared experience of stigma and trauma may have homogenised participants' emotional responses, making the effect of age less salient. Both younger and older adolescents might have entered therapy with similar levels of distress and need for structured, emotionally safe interventions.

Overall, the results demonstrate that age group did not significantly moderate the effect of TF-CBT on trauma recovery, implying that TF-CBT's core therapeutic mechanisms, cognitive restructuring, emotional regulation, and gradual exposure, are effective across adolescence. The intervention provided both cognitive and emotional tools adaptable to the developmental level of each participant, thereby diminishing age-related differences in recovery outcomes. In summary, the findings reveal that while developmental maturity can influence coping styles and engagement with therapy, a well-structured intervention like TF-CBT can bridge these developmental gaps. Both younger and older female adolescent survivors of sexual abuse in Lagos State significantly benefitted from TF-CBT, supporting its use as a developmentally flexible and culturally adaptable trauma intervention. These findings highlight the importance of maintaining structure, consistency, and emotional safety within trauma therapy for adolescents, ensuring that both early and middle adolescents can experience meaningful recovery regardless of their developmental stage.

Discussion of Findings for Hypothesis Two

The second hypothesis examined whether social support moderated the effectiveness of Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) in the recovery of traumatised female adolescent sexual abuse survivors in Lagos State, Nigeria. The results revealed a significant main effect of treatment, showing that TF-CBT led to substantial reductions in trauma symptoms compared with the control group. However, the interaction between treatment and social support level (low, moderate, high) was not statistically significant, indicating that the beneficial effects of TF-CBT were consistent across participants regardless of their reported level of social support. Thus, the null hypothesis regarding social support as a moderator was retained.

This finding suggests that although social support is often regarded as a crucial protective factor in trauma recovery, TF-CBT exerted strong therapeutic effects independent of external support systems. In other words, adolescents benefitted similarly from the treatment whether or not they had robust networks of familial, peer, or community support. This outcome underscores the inherent strength of TF-CBT's structured and skills-based components, which provide internal coping resources that may compensate for deficiencies in external support. The non-significant moderating effect of social support in this study contrasts with several prior findings emphasising the importance of supportive relationships in recovery from sexual abuse. For instance, Adeoye & Olajide (2020) found that adolescents with strong family and community support networks reported lower post-traumatic stress symptoms and faster emotional recovery. Likewise, Eze & Okocha (2023) demonstrated that community-based social support programmes significantly improved mental health outcomes for adolescent survivors in Eastern Nigeria. In a similar vein, Bamigboye & Adedoyin (2022) highlighted that family cohesion and parental empathy serve as critical buffers against trauma severity, while Obiora & Umeano (2021) showed that peer support groups helped survivors overcome feelings of isolation and depression by providing safe

relational spaces. Collectively, these studies reaffirm that social support, whether familial, peer, or community-based, plays a protective role in trauma recovery.

However, despite this established importance, the current study's results show that TF-CBT's structured therapeutic mechanisms can offset limitations in social support, especially in low-resource or stigmatising environments. TF-CBT incorporates psychoeducation, emotion regulation, relaxation training, and cognitive restructuring, each of which promotes self-efficacy, resilience, and internalised coping (Cohen et al., 2017). These elements likely provided participants with the emotional regulation and problem-solving skills necessary for recovery, thereby diminishing the impact of external social support variability. This aligns with Fletcher et al. (2021), who found that social support enhances recovery but that therapy-related coping skills remain the strongest predictors of long-term PTSD symptom reduction. Similarly, Guerra et al. (2018) reported that self-efficacy mediated the relationship between family support and symptom severity, implying that effective therapy can strengthen self-efficacy and compensate for weak social support networks.

The Nigerian sociocultural context also offers insight into these findings. In many communities, sexual abuse remains highly stigmatised, and survivors often experience silence, disbelief, or even blame rather than support. This cultural dynamic can make the availability of "support" unreliable or ambivalent. Ikuteyijo et al. (2024) & Ajayi et al. (2023) note that survivors frequently avoid disclosure to family or peers due to fear of social ostracism. In such contexts, the "social support" reported by participants may not always represent emotionally safe or validating relationships. Therefore, its moderating influence on recovery might be weakened or even nullified. Instead, structured psychotherapeutic environments, such as those created in the present study, may act as alternative social systems where adolescents experience empathy, validation, and guidance, functions typically provided by supportive family or community networks. This interpretation is reinforced by Uye et al. (2023), who found that although social support predicted perceptions of child abuse when combined with parental attachment, it did not independently predict outcomes, indicating that support is only protective when paired with secure emotional relationships. Similarly, Jouriles et al. (2023) observed that caregiver emotional support and caregiver–adolescent conflict both influence trauma adjustment, but their effects operate independently, not interactively. Thus, while social support is crucial, its presence alone may not guarantee positive outcomes unless it is emotionally secure and consistent, a condition that may be absent in many survivors' environments.

Another dimension concerns religious and spiritual support, which several Nigerian studies have identified as salient for trauma recovery. Nwafor & Nwankwo (2024) reported that religious engagement and counselling from faith leaders helped reduce anxiety and depression among female survivors of sexual abuse, suggesting that religious support can function as a parallel support system. This resonates with Gower et al. (2020), who found that both caregiver and divine support contributed to resilience among sexually abused adolescents. Nevertheless, in the current study, such religious or spiritual mechanisms were not a formal component of TF-CBT. Therefore, the lack of significant moderation may also reflect that the therapy itself provided sufficient emotional containment and coping resources, rendering external spiritual or social influences less decisive in predicting outcomes.

The pattern observed here also aligns with Koçtürk & Bilge (2017), who found that perceived community and family support were markedly lower among adolescents who had experienced sexual revictimisation, suggesting that many survivors operate in environments where social support is either weak or absent. Consequently, interventions like TF-CBT become essential as stand-alone recovery mechanisms capable of restoring emotional balance even when social resources are scarce or inconsistent. From a theoretical standpoint, these findings support Trauma Recovery Theory (Herman, 1992), which posits that empowerment, safety, and reconnection are central to recovery. In this study, TF-CBT appears to have provided these elements internally, helping adolescents reconstruct safety and control within themselves rather than relying solely on external systems. In other words, TF-CBT internalised the function of social support by equipping survivors with self-soothing, cognitive reframing, and emotional regulation skills that reduce dependency on others for validation and stability.

In conclusion, although social support is widely acknowledged as a critical facilitator of trauma recovery, the present study demonstrates that TF-CBT remains highly effective even in its absence or variability. The therapy's structured and culturally adapted approach may have substituted for inadequate or inconsistent external support

systems, providing participants with the cognitive and emotional tools necessary for recovery. This finding is particularly relevant in the Nigerian context, where stigma and limited mental-health infrastructure constrain the availability of reliable social support. Hence, TF-CBT can serve as both a clinical intervention and a social rehabilitation mechanism, fostering resilience and emotional healing among traumatised female adolescents irrespective of their level of social support. Future research might explore the integration of religious and community-based support structures with TF-CBT to enhance culturally sensitive, multidimensional recovery pathways for adolescent survivors of sexual abuse.

Counselling Implications, Conclusion, and Recommendations

This study examined the moderating effects of age and social support on the effectiveness of Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) among female adolescent survivors of sexual abuse in Lagos, Nigeria. The findings revealed that TF-CBT significantly reduced trauma symptoms compared to the control group, demonstrating strong therapeutic efficacy. However, both age group (10–13 vs. 14–17 years) and social support levels (low, moderate, high) did not significantly moderate the outcomes. This suggests that TF-CBT was equally effective across developmental stages and varying social support conditions.

Counselling Implications

The findings have critical implications for trauma counselling practice and adolescent mental health services. First, the absence of moderating effects indicates that TF-CBT can be applied broadly across age groups, making it a developmentally flexible intervention. Younger adolescents, who often struggle with emotional regulation and comprehension of abstract concepts, benefited comparably to older adolescents, suggesting that the structured, skill-based nature of TF-CBT, emphasising relaxation, emotional regulation, and gradual exposure, effectively meets diverse developmental needs. Counsellors should, however, continue to adjust communication styles and session pacing to suit younger participants' cognitive capacities.

Second, the non-significant moderating role of social support underscores the resilience-building capacity of structured psychotherapy. In contexts like Lagos, where stigma, fear, and family silence frequently limit survivors' access to emotional support, TF-CBT provides an alternative psychosocial framework that replicates healthy support dynamics within the therapy setting. Counsellors should therefore focus on cultivating trust, safety, and empathy to compensate for the absence of strong external support networks. Nonetheless, enhancing family, peer, and community involvement remains vital, as complementary social systems can reinforce therapeutic gains and prevent relapse.

Moreover, this study highlights the need for counsellor training in trauma-informed and culturally adapted CBT techniques. Mental health practitioners, school counsellors, and shelter-based therapists should be equipped with the competencies to address trauma systematically while being sensitive to sociocultural factors such as shame and silence surrounding sexual abuse. The Nigerian counselling profession, through associations like CASSON and related NGOs, should institutionalise periodic training on TF-CBT delivery for work with adolescents.

CONCLUSION

The study concludes that TF-CBT is a highly effective intervention for trauma recovery among female adolescent survivors of sexual abuse in Lagos. Its therapeutic benefits are consistent across different age groups and social support levels, demonstrating that the model's cognitive, emotional, and behavioural components effectively promote recovery regardless of developmental stage or environmental context. These findings affirm TF-CBT as a culturally adaptable, evidence-based approach capable of addressing the psychological consequences of sexual abuse in Nigerian adolescents. While social support and age are recognised as important developmental and contextual factors, their lack of significant moderation suggests that TF-CBT's structured design provides internal compensatory mechanisms for recovery.

RECOMMENDATIONS

Based on these findings, the following recommendations are proposed:

1. Institutional adoption of TF-CBT as a standard trauma counselling model within schools, shelters, and community mental health programmes for adolescents.

2. Integration of trauma-informed care principles into counsellor education and continuous professional development programmes in Nigeria.

3. Strengthening of social support structures through family counselling, peer support groups, and community-based initiatives that complement formal therapy.

4. Policy-level recognition of trauma counselling as a critical component of adolescent mental health services within Lagos State and across Nigeria.

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