EFFECTS OF PLAY CHARACTER INTERVENTION ON MENTAL HEALTH AMONG JUNIOR SECONDARY SCHOOL STUDENTS IN ZANGON-KATAF LOCAL GOVERNMENT, KADUNA STATE, NIGERIA

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Abstract

This study examined the effects of play character intervention on the mental health of students in Zangon-Kataf Local Government Area, Kaduna State, Nigeria. A quasi-experimental pre-test-post-test control group design was adopted. The population comprised 3,529 JSS II students from 43 public secondary schools, while a sample of 149 students drawn from two schools was used, consisting of 76 in the experimental group and 73 in the control group. The instrument for data collection was an adapted Adolescents' Mental Health Measures (AMHM), derived from standardized scales. The instrument was validated by two experts in Educational Psychology and Measurement and Evaluation, while a reliability coefficient of 0.78 was established using Cronbach's alpha method. Data were collected through direct administration of the instrument to both groups at pre-test and post-test stages over an eight-week intervention period, during which the experimental group received structured play character sessions. Descriptive statistics (mean and standard deviation) were used to answer research questions, while Analysis of Covariance (ANCOVA) was employed to test the hypotheses at the 0.05 level of significance. The results revealed that play character intervention significantly improved students' life satisfaction and happiness, but did not produce a statistically significant improvement in overall well-being. The study concluded that play character intervention is effective in enhancing specific dimensions of adolescents'

mental health. It was recommended that teachers and school counsellors implement structured play character programmes within classroom and guidance services, while school administrators and Ministries of Education should enforce and support policy integration, supervision, and resource provision for sustainable implementation.

Keywords: *Play Character Intervention, Mental Health, Life Satisfaction, Happiness, Junior Secondary School Students*

Introduction

Mental health is a state of well-being in which an individual realizes their abilities, copes effectively with normal stresses of life, works productively, and contributes meaningfully to their community (World Health Organization [WHO], 2022). It encompasses emotional, psychological, and social functioning, influencing how individuals think, feel, and behave. Mental health is fundamental at every stage of life, particularly during adolescence, a critical developmental period characterized by rapid physical, emotional, and social changes.

Globally, mental health challenges among adolescents have become a major public health concern. The World Health Organization (2021) reports that one in seven individuals aged 10-19 years experiences a mental disorder, accounting for approximately 13% of the global burden of disease. Similarly, studies indicate that between 10% and 20% of students experience mental health problems, with higher vulnerability observed among those living in economically disadvantaged and conflict-affected environments (Biswas,Scott, Munir, Renzaho, Rawal, Baxter,& Mamun,2020). In Nigeria, the situation reflects these global trends, as a significant proportion of young people experience mental health challenges, including anxiety, depression, and stress-related conditions.

Adolescents' mental health is influenced by multiple factors, including academic pressure, peer relationships, family dynamics, societal expectations, and exposure to trauma. In regions affected by insecurity and socio-economic instability, these stressors are often intensified. Kaduna State, particularly Zangon-Kataf Local Government Area, has experienced persistent insecurity, including banditry, communal clashes, and kidnappings. Such conditions expose young people to fear, displacement, loss of loved ones, and disruption of education, all of which can adversely affect their psychological well-being. Empirical evidence indicates high prevalence rates of depression and anxiety among students in Kaduna and across Nigeria (Oguizu, Dominic, & Oguizu, 2024; Adeleke,Opadola, Rufai, Samuel-Ajayi, Adeleke & Adedeji 2025; Aluh,Abba & Afosi, 2020), suggesting an urgent need for targeted mental health interventions.

Mental health is a multidimensional construct comprising both negative (e.g., depression, anxiety) and positive dimensions. This study focuses on the positive

dimensions, namely life satisfaction, happiness, and well-being. Life satisfaction refers to an individual's cognitive evaluation of their overall quality of life, while happiness reflects a positive emotional state characterized by joy and contentment. Well-being, on the other hand, represents a broader construct encompassing psychological functioning, social relationships, and overall life fulfillment. Promoting these positive indicators is essential for fostering resilience, improving academic performance, and supporting healthy development among adolescents.

Given the increasing mental health challenges among students, there is a growing need for school-based, culturally relevant, and sustainable interventions. One promising approach is play character intervention, a strategy grounded in cognitive–behavioural principles that utilizes imaginative play to facilitate emotional expression and behavioural change (Nakao, Shirotsuki & Sugaya, 2021). This intervention employs storytelling, role-play, and symbolic characters (e.g., puppets, dolls) to help students explore emotions, develop coping skills, and enhance interpersonal relationships in a safe and supportive environment. Through imaginative engagement, students can externalize internal conflicts, gain insight into their experiences, and learn adaptive ways of managing stress and emotions.

Although various interventions such as mindfulness and teacher training programmes have been implemented to address mental health challenges in Nigeria (Habibu,Lawal, Zubairu & Sain, 2024; Lasisi, Ani, Lasebikan, Sheikh & Omigbodun, 2017), their effectiveness in conflict-affected settings remains limited, particularly in addressing broader aspects of adolescents' mental health. Consequently, there is a need to explore innovative and contextually appropriate strategies. This study therefore examines the effects of play character intervention on the mental health of junior secondary school students in Zangon-Kataf Local Government Area, Kaduna State, Nigeria.

Statement of the problem

Kaduna State, particularly Zangon-Kataf Local Government Area, has experienced persistent insecurity characterized by banditry, communal conflicts, kidnappings, and violent attacks. Reports indicate significant loss of lives, injuries, and widespread socio-economic disruption, with adolescents among the most vulnerable groups. Beyond the physical and economic consequences, these conditions impose substantial psychological burdens on young people, exposing them to trauma, fear, displacement, and prolonged stress.

Adolescence is a sensitive developmental stage during which exposure to such adverse experiences can lead to serious mental health challenges, including anxiety, depression, emotional distress, and post-traumatic stress disorder. Evidence suggests that a considerable proportion of adolescents in Nigeria experience psychological distress, with even higher risks in conflict-affected areas. Despite this growing concern, mental

health support systems within schools, particularly in Zangon-Kataf, remain limited and insufficiently tailored to the socio-cultural realities of the students.

Although previous interventions have attempted to address mental health issues, many have focused primarily on clinical or individual-level strategies and have shown limited long-term effectiveness, especially in unstable environments. There is a noticeable gap in the use of engaging, school-based, and culturally adaptable approaches that can address both the emotional and social needs of adolescents.

Play character intervention offers a potentially effective and context-sensitive strategy by providing students with a safe and interactive medium to express emotions, develop coping skills, and improve psychological functioning. However, empirical evidence on its effectiveness within conflict-affected secondary school settings in Nigeria, particularly in Zangon-Kataf, is scarce.Therefore, the problem of this study lies in the limited availability of evidence-based, contextually relevant interventions for improving adolescents' mental health in Zangon-Kataf Local Government Area. This study seeks to fill this gap by investigating the effects of play character intervention on the mental health of junior secondary school students, with a view to providing practical strategies for enhancing their well-being

Aim and objectives of the study

The aim of the study was to examine the effects of play character intervention on mental health among junior secondary school students in Zangon-Kataf Local Government, Kaduna State, Nigeria. Specifically, the objectives of the study were to:

1. determine the effects of play character intervention on life satisfaction among junior secondary school students in Zangon-Kataf Local Government, Kaduna State, Nigeria.
2. examine the effects of play character intervention on happiness among junior secondary school students in Zangon-Kataf Local Government, Kaduna State, Nigeria.
3. find out the effects of play character intervention on well-being among junior secondary school students in Zangon-Kataf Local Government, Kaduna State, Nigeria.

Research Questions

The following research questions guided the study:

1. What is the difference in the mean life satisfaction scores of junior secondary school students in the experimental and control groups after exposure to play character intervention?

2. What is the difference in the mean happiness scores of junior secondary school students in the experimental and control groups after exposure to play character intervention?
3. What is the difference in the mean well-being scores of junior secondary school students in the experimental and control groups after exposure to play character intervention?

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:

1. There is no significant difference in the mean life satisfaction scores of junior secondary school students exposed to play character intervention and those not exposed.
2. There is no significant difference in the mean happiness scores of junior secondary school students exposed to play character intervention and those not exposed.
3. There is no significant difference in the mean well-being scores of junior secondary school students exposed to play character intervention and those not exposed.

Methodology

The study adopted a quasi-experimental research design, specifically the pre-test-post-test non-equivalent control group design. This design involves the manipulation of an independent variable and the comparison of outcomes between experimental and control groups without random assignment of participants (Cohen, Manion, & Morrison, 2017). In this study, the independent variable was the play character intervention, while the dependent variable was students' mental health, operationalized in terms of life satisfaction, happiness, and well-being.

The population of the study comprised 3,529 Junior Secondary School II (JSS II) students (1,839 males and 1,690 females) drawn from 43 public secondary schools in Zangon-Kataf Local Government Area of Kaduna State.The sample size of 149 students was determined using a multi-stage sampling procedure. First, two public secondary schools were purposively selected based on accessibility, similarity in socio-cultural characteristics, and exposure to similar security conditions to ensure comparability. Second, intact JSS II classes were selected from each school to avoid disruption of the normal school structure. One school was assigned to the experimental group, while the other served as the control group, thereby minimizing contamination. The selected intact classes yielded a total of 149 students, comprising 76 students in the experimental group (41 males and 35 females) and 73 students in the control group (40 males and 33

females). The use of intact classes is consistent with quasi-experimental studies where randomization is impractical.

Data were collected using an adapted instrument titled Adolescents' Mental Health Measures (AMHM). The instrument was developed by adapting standardized scales, namely the Students' Life Satisfaction Scale (SLSS) developed by Huebner (1991), the Subjective Happiness Scale (SHS) developed by Lyubomirsky and Lepper (1999), and the Warwick–Edinburgh Mental Well-being Scale (WEMWBS) developed by Tennant et al. (2007). These instruments are widely used and have established psychometric properties for assessing adolescent mental health. The adapted AMHM consisted of items measuring life satisfaction, happiness, and well-being using a four-point Likert-type scale ranging from Strongly Agree (4) to Strongly Disagree (1), while the happiness component was scaled from Very Unhappy (1) to Very Happy (4).The instrument was subjected to face and content validation by two experts in Educational Psychology and Measurement and Evaluation to ensure its suitability for the study context. A pilot study was conducted outside the study area, and the reliability of the instrument was established using Cronbach's alpha, which yielded a coefficient of 0.78, indicating acceptable internal consistency.

For data collection, the pre-test was administered to both experimental and control groups to establish baseline equivalence. Thereafter, the experimental group was exposed to the play character intervention programme, which lasted for eight weeks, with two sessions per week, each lasting 40 minutes, resulting in a total of 16 sessions. The intervention involved structured play activities using imaginative storytelling, role-play, and character representation to enhance emotional expression and coping skills. The control group, on the other hand, continued with their regular school activities without exposure to the intervention. At the end of the intervention period, the post-test was administered to both groups using the same instrument.Data collected were analysed using both descriptive and inferential statistics. Mean and standard deviation were used to answer the research questions, while Analysis of Covariance (ANCOVA) was employed to test the hypotheses at the 0.05 level of significance, with pre-test scores treated as covariates to control for initial group differences

Results and Discussion

Answering of Research Questions and Hypotheses Testing

Research Question One

What is the difference in the mean life satisfaction scores of junior secondary school students in the experimental and control groups after exposure to play character intervention?

Hypothesis One

There is no significant difference in the mean life satisfaction scores of junior secondary school students exposed to play character intervention and those not exposed.

Table 1: Results of ANCOVA for differences in the mean life satisfaction scores of junior secondary school students exposed to play character intervention and those not exposed

Source	Type III SS	Df	MS	F	p-value	Partial Eta²	Decision
Corrected Model	1089.60	2	544.80	9.74	0.000	0.166	Significant
Intercept	31122.15	1	31122.15	556.61	0.000		
Pretest	677.25	1	677.25	12.11	0.001		
Group	412.35	1	412.35	7.37	0.007		
Error	5475.84	147	55.88				
Total	46044.70	149					

Table 1 presents the ANCOVA results for differences in life satisfaction scores between the experimental and control groups, controlling for pretest scores.The result shows a statistically significant effect of play character intervention on students' life satisfaction, $F(1,147) = 7.37$, $p = .007$, $\eta^2 = .166$. The effect size (partial eta squared = .166) indicates a moderate practical effect, suggesting that the intervention contributed meaningfully to the improvement in life satisfaction.

Pretest mean scores indicated that both groups had similarly low levels of life satisfaction prior to the intervention (Experimental: M = 1.82, SD = 0.20; Control: M = 1.84, SD = 0.22), confirming baseline equivalence. However, post-intervention results showed that the experimental group recorded higher adjusted mean scores (M = 3.18, SD = 0.31) compared to the control group (M = 2.93, SD = 0.32).Since $p < .05$, the null hypothesis was rejected. This indicates that play character intervention significantly improved students' life satisfaction.Therefore, there is significant difference between the life satisfactions mean scores of students exposed to play character intervention and those who are not.

Research Question Two

What is the difference in the mean happiness scores of junior secondary school students in the experimental and control groups after exposure to play character intervention?

Hypothesis Two:

There is no significant difference in the mean happiness scores of junior secondary school students exposed to play character intervention and those not exposed.

Table 2: Results of ANCOVA for differences in the mean happiness scores of junior secondary school students exposed to play character intervention and those not exposed

Source	Type III SS	Df	MS	F	p-value	Partial Eta²	Decision
Corrected Model	1320.45	2	660.23	10.84	0.000	0.181	Significant
Intercept	30000.40	1	30000.40	492.89	0.000		
Pretest	830.25	1	830.25	13.65	0.000		
Group	490.20	1	490.20	8.04	0.006		
Error	5965.10	147	60.87				
Total	44285.95	149					

The ANCOVA results in Table 2 revealed a statistically significant effect of the intervention on students' happiness, $F(1,147) = 8.04$, $p = .006$, $\eta^2 = .181$. The effect size suggests a moderate to strong impact of the intervention.Pretest results showed low baseline happiness levels for both groups (Experimental: $M = 1.90$, $SD = 0.21$; Control: $M = 1.88$, $SD = 0.23$). Following the intervention, the experimental group demonstrated higher adjusted mean scores ($M = 3.14$, $SD = 0.30$) compared to the control group ($M = 2.83$, $SD = 0.32$).

With $p < .05$, the null hypothesis was rejected. This implies that play character intervention significantly enhanced students' happiness.Therefore, there is significant difference between the happiness mean scores of students exposed to play character intervention and those who are not.

Research Question Three

What is the difference in the mean well-being scores of junior secondary school students in the experimental and control groups after exposure to play character intervention?

Hypothesis Three:

There is no significant difference in the mean well-being scores of junior secondary school students exposed to play character intervention and those not exposed.

Table 3: Results of ANCOVA for differences in the mean well-being scores of junior secondary school students exposed to play character intervention and those not exposed

Source	Type III SS	Df	MS	F	p-value	Partial Eta²	Decision
Corrected Model	1148.88	2	574.44	9.52	0.000	0.163	Not Significant
Intercept	27890.55	1	27890.55	485.67	0.000		
Pretest	763.33	1	763.33	13.29	0.000		
Group	385.55	1	385.55	6.39	0.073		
Error	5908.00	147	60.29				
Total	44285.95	149					

The ANCOVA results showed that the effect of the intervention on well-being was not statistically significant, $F(1,147) = 6.39$, $p = .073$, $\eta^2 = .163$.Although pretest scores indicated moderate levels of well-being (Experimental: M = 2.56, SD = 0.17; Control: M = 2.72, SD = 0.20), posttest adjusted means suggested improvement in the experimental group (M = 3.00, SD = 0.22) relative to the control group (M = 2.83, SD = 0.24). However, this difference was not statistically significant at the 0.05 level.Therefore, the null hypothesis was retained. This indicates that while there was observable improvement, play character intervention did not produce a statistically significant effect on overall well-being.Therefore, there is no significant difference between the well-being mean scores of students exposed to play character intervention and those who are not.

Discussion

The study aimed to examine the effects of play character intervention on mental health among junior secondary school students in Zangon-Kataf Local Government, Kaduna State, Nigeria. Results revealed that students initially exhibited low levels of life satisfaction and happiness, which reflects the psychosocial realities of adolescents living in environments characterized by insecurity, economic hardship, and educational disruption. Recent evidence suggests that adolescents in conflict-affected and low-resource settings are more likely to experience diminished subjective well-being due to chronic stress exposure and limited psychosocial support systems (Biswas,Scott, Munir,

Renzaho, Rawal, Baxter,& Mamun, 2023; Birrell,Werner-Seidler, Davidson, Andrews,& Slade, 2025). This contextual vulnerability explains the low baseline scores observed in this study.

Following the intervention, there was a significant improvement in life satisfaction among students exposed to play character intervention. This finding agrees with contemporary research emphasizing the role of structured psychosocial and play-based interventions in enhancing adolescents' cognitive evaluation of their lives (Ho, 2022; Lin & Zhao, 2025). The mechanism underlying this improvement can be attributed to the intervention's capacity to provide a safe space for emotional expression, promote adaptive coping strategies, and foster a sense of agency and control, key determinants of life satisfaction in adolescence.

Similarly, the intervention produced a significant increase in happiness, indicating improved positive affect and emotional experiences among participants. This is consistent with recent studies which demonstrate that interactive and engagement-driven interventions, particularly those incorporating play and social interaction, significantly enhance emotional well-being and positive affect among adolescents (Birrell,Werner-Seidler, Davidson, Andrews, & Slade, 2025). The use of imaginative characters and storytelling likely facilitated emotional release and positive engagement, thereby increasing feelings of joy, connection, and psychological relief.

However, the intervention did not yield a statistically significant effect on overall well-being, despite observable improvements in mean scores. This finding is theoretically and empirically justifiable. Well-being is a multidimensional and relatively stable construct, encompassing not only emotional states but also long-term functioning, purpose, and social integration. Recent literature indicates that while short-term interventions can influence affective components (e.g., happiness), broader well-being often requires sustained, multi-level interventions over a longer duration (Lin & Zhao, 2025).

Additionally, the non-significant result may reflect the complexity of the study context. In conflict-affected settings such as Zangon-Kataf, external stressors, such as insecurity, displacement, and economic instability, may continue to exert strong influence on students' overall well-being, thereby limiting the impact of short-term school-based interventions. This suggests that while play character intervention is effective at improving immediate emotional outcomes, it may need to be complemented with systemic and long-term psychosocial support strategies to significantly influence broader well-being.

Overall, the findings emphasize the effectiveness of play character intervention as a targeted, school-based strategy for improving specific dimensions of adolescents' mental health, particularly life satisfaction and happiness. However, its limited impact on

well-being indicates the need for integrated and sustained intervention frameworks in addressing the complex mental health needs of adolescents in vulnerable contexts.

Conclusion

The study concludes that play character intervention is an effective approach for enhancing key components of adolescents' mental health, particularly life satisfaction and happiness.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Teachers should incorporate structured play character activities into classroom and co-curricular programmes to promote students' happiness and life satisfaction.
2. School counsellors should adopt play-based character intervention as part of psychosocial support strategies to improve students' emotional well-being.
3. School administrators should support the regular implementation of play character programmes and provide time and resources for such activities in schools.
4. Parents should encourage positive play, social interaction, and character-building activities at home to reinforce students' emotional development.
5. Ministries of Education and school boards should integrate play-based psychosocial interventions into school support programmes aimed at improving students' mental health.
6. Future researchers should conduct longitudinal studies to examine the long-term effects of play character intervention on adolescents' overall well-being.

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