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ASSOCIATION BETWEEN COUNSELLING STRATEGIES AND SOCIAL AND EMOTIONAL ADJUSTMENT OF LEARNERS WITH HEARING IMPAIRMENT IN INCLUSIVE CLASSROOMS IN SELECTED STATES OF NORTH-CENTRAL NIGERIA

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Abstract

In many inclusive school settings, learners with hearing impairment often struggle with severe communication barriers, feelings of social isolation, low self-confidence, and difficulties building meaningful peer relationships. Such challenges compromise both their emotional well-being and academic integration. This study investigated the relationship between targeted counselling strategies and the social and emotional adjustment of learners with hearing impairment (LWHI) in inclusive classrooms across Plateau and Nasarawa States, North-Central Nigeria. A convergent parallel mixed-methods design was adopted. A sample of N = 118 participants comprising 80 learners with hearing impairment (selected via purposive sampling), 30 inclusive classroom teachers, and 8 school counsellors (selected via purposive sampling across selected primary and secondary schools) participated in the study. Quantitative data were collected using the adapted Social and Emotional Adjustment Scale (SEAS) (Cronbach's α = 0.84), while qualitative data were gathered via semi-structured interviews conducted with Nigerian Sign Language (NSL) interpreters and structured classroom observations (inter-rater agreement κ = 0.78). Quantitative data were analysed using descriptive statistics, independent samples t-tests, and ANOVA, while qualitative data underwent thematic analysis. Major findings revealed that learners exposed to targeted counselling interventions demonstrated significantly higher social adjustment ($t(116) = 6.82$, $p < .001$, Cohen's $d = 1.48$) and emotional adjustment ($t(116) = 7.15$, $p < .001$, Cohen's $d = 1.55$) compared to non-exposed peers. Counselling strategies such as individual Cognitive Behavioural Therapy (CBT)-based sessions, peer-mediated group sessions, and social skills training were associated with higher communication confidence and peer acceptance. Gender and school type were associated with significant differences in adjustment, with female learners and those in private school settings showing higher adjustment indices. The study underscores the importance of sign language proficiency among school counsellors and close multi-stakeholder collaboration. It recommends mandatory sign language training for counsellors, establishment of peer sign language clubs, and visual resource enrichment in inclusive schools.

Keywords: counselling strategies, hearing impairment, social adjustment, emotional adjustment, inclusive education, North-Central Nigeria

1. Introduction

The global evolution of educational philosophy has shifted decisively toward inclusive practices, ensuring that learners with disabilities are no longer segregated but integrated into mainstream academic environments. For learners with hearing impairment (LWHI), this transition presents a complex paradox. Although they gain physical access to general curricula alongside hearing peers, they frequently remain psychologically and socially sidelined due to pervasive communication

barriers. Abubakar (2024) emphasises that inclusion is a multidimensional construct that fails if it merely addresses physical placement without providing necessary 'psycho-emotional scaffolding'. The ultimate success of learners with hearing impairment depends not merely on intellectual capability, but on the synergy between targeted counselling interventions and the learner's ability to navigate the social landscape of the school.

Grounded in Rogers' (1951) person-centred framework and professional standards, a counselling strategy is defined as a structured, goal-directed therapeutic process wherein a professional counsellor utilises evidence-based interpersonal techniques to empower individuals to achieve optimal mental health, emotional stability, and developmental goals. In special needs education, counselling transcends routine academic guidance. Bello (2025) describes it as a specialised therapeutic intervention designed to dismantle internal psychosocial barriers—such as internalised stigma, social anxiety, and low self-esteem that stem from living with a sensory disability. For LWHI, effective counselling must be linguistically accessible and culturally responsive.

Social and emotional adjustment refers to the learner's capacity to achieve psychological equilibrium and social competence within their environment. Social adjustment involves forming meaningful peer relationships, engaging in collaborative learning, and adhering to school social norms. Emotional adjustment pertains to internal emotion management and self-concept stability. LWHI are individuals whose sense of hearing is non-functional for ordinary communication, ranging from hard-of-hearing to profound deafness. Samuel (2024) emphasises viewing these learners through a sociolinguistic lens rather than a purely medical deficit framework. In inclusive classrooms, LWHI face a 'double burden': mastering academic content while decoding an auditory-dominant social environment that rarely accommodates visual-gestural communication.

The psycho-social landscape for LWHI in inclusive settings is fraught with complexities. Bello (2025) and Omede and Samuel (2025) observe that these challenges are not inherent to deafness itself, but are socially constructed by unsupportive communication environments. A major hurdle is linguistic isolation, where the learner becomes a 'silent spectator'. During unstructured times (recess or group tasks), rapid multidirectional conversation makes participation nearly impossible for LWHI. Over time, chronic exclusion fosters an 'invisible child' dynamic, severely eroding self-worth. Furthermore, as demonstrated empirically by Smith and Johnson (2023) and Tanimu and Bitrus (2024) in Nigerian educational contexts, LWHI frequently experience 'listening fatigue', the acute cognitive and emotional exhaustion resulting from constant speech-reading and auditory decoding which often manifests as social withdrawal or behavioural frustration. Micro-exclusions (such as being left out of informal conversations or spoken about in the third person) reinforce the deficit model of disability, creating secondary emotional trauma (Garba, 2025).

1.1. Statement of the Problem

Despite ongoing implementation of inclusive education policies in Nigeria, learners with hearing impairment in mainstream schools continue to face severe social and emotional alienation. While physically present in classrooms, the persistent communication wall isolates them from hearing peers, resulting in severe loneliness, low self-esteem, and elevated classroom anxiety. Furthermore, most inclusive schools lack structured, specialised psychological support systems tailored for deaf and hard-of-hearing learners. Crucially, while existing research in Nigeria has evaluated general infrastructure and policy frameworks (e.g., UBEC, 2023; Federal Ministry of Education, 2026), there is a distinct empirical gap regarding the systematic evaluation of specific, linguistically accessible counselling strategies (e.g., CBT-based individual counselling, peer-mediated intervention, social skills training) and their measurable association with social and emotional adjustment within North-Central Nigeria (Plateau and Nasarawa States). It is this critical empirical gap that the current study addresses.

1.2. Objectives of the Study

The main objective of this study was to investigate the relationship between counselling strategies and the social and emotional adjustment of learners with hearing impairment in inclusive classrooms in Plateau and Nasarawa States, Nigeria. Specifically, the study sought to:

- Determine the difference in social adjustment between learners with hearing impairment exposed to counselling strategies and those not exposed.
- Examine the difference in emotional adjustment between learners with hearing impairment exposed to counselling strategies and those not exposed.
- Compare the social and emotional adjustment outcomes of learners with hearing impairment exposed to counselling strategies and those not exposed.

- Examine the influence of selected demographic variables (gender, age, and school type) on adjustment outcomes.

1.3. Research Questions

- What is the difference in social adjustment between learners with hearing impairment exposed to counselling strategies and those not exposed?
- What is the difference in emotional adjustment between learners with hearing impairment exposed to counselling strategies and those not exposed?
- Is there a significant difference in the social and emotional adjustment of learners with hearing impairment exposed to counselling strategies and those not exposed?
- Are there significant differences in learners' adjustment according to gender, age, and school type?

1.4. Hypotheses

- HO1: There is no significant difference in social adjustment between learners with hearing impairment exposed to counselling strategies and those not exposed.
- HO2: There is no significant difference in emotional adjustment between learners with hearing impairment exposed to counselling strategies and those not exposed.
- HO3: There is no significant difference in the social and emotional adjustment of learners with hearing impairment exposed to counselling strategies and those not exposed.
- HO4: There are no significant differences in the social and emotional adjustment of learners according to gender, age, and school type.

2. Literature Review

2.1. Theoretical Framework

This study is theoretically grounded in Bandura's (1977) Social Learning Theory and Zimmerman's (2021) Resilience Theory.

1. Albert Bandura's Social Learning Theory (1977): Bandura posits that human behaviour is learned observationally through modelling, imitation, and vicarious reinforcement. In a typical classroom, social competence develops as children observe and model peer interactions. For LWHI, however, the absence of a shared communication medium disrupts natural observational learning and incidental social feedback. Counselling strategies (such as structured Social Skills Training and Peer-Mediated Interventions) operationalise Bandura's theory by creating structured, visually accessible modelling environments. Through guided role-play, sign-supported group interactions, and peer feedback, LWHI observe adaptive social behaviours, rehearse communication scripts, and build self-efficacy in a safe environment.

2. Zimmerman's Resilience Theory (2021): Zimmerman's framework conceptualises psychological development as a dynamic interaction between risk factors (environmental stressors, disability stigma, communication barriers) and protective factors (individual assets and contextual resources). LWHI in mainstream classrooms are exposed to severe risk factors, including listening fatigue, micro-exclusions, and social anxiety. Counselling strategies function as crucial environmental and individual protective factors. Individual CBT-based counselling strengthens internal assets (self-concept, emotional regulation), while peer clubs and trained sign-literate counsellors enhance environmental support. Together, these protective factors buffer against adversity and promote positive social and emotional adjustment.

3. Methodology

3.1. Research Design

This study adopted a Convergent Parallel Mixed-Methods Research Design. Quantitative data (survey measurements of adjustment) and qualitative data (lived experiences from interviews and observations) were collected concurrently within the same timeframe, analysed independently, and subsequently merged during the interpretation phase using a joint thematic and statistical integration matrix. This design ensures robust data triangulation, balancing statistical generalisability with deep qualitative nuance (Abubakar, 2024).

3.2. Study Area and Population

The study area comprised selected inclusive primary and secondary schools across Plateau and Nasarawa States in North-Central Nigeria. The target population consisted of 170 individuals across 12 selected inclusive schools, comprising 120 learners with hearing impairment (LWHI), 40 inclusive classroom teachers, and 10 school counsellors.

3.3. Sample and Sampling Techniques

A total sample size of N = 118 participants was selected from the study population using a combination of purposive and simple random sampling techniques:

• Learners with Hearing Impairment (n = 80): Selected using purposive sampling to ensure participants possessed documented hearing loss (moderate to profound) and had spent at least one academic year in inclusive classrooms (80 out of 120 LWHI).

• Inclusive Teachers (n = 30): Selected using simple random sampling (balloting) from general education classrooms housing LWHI.

• School Counsellors (n = 8): Selected using purposive sampling based on their direct involvement in student guidance services across the sampled schools.

3.4. Instrumentation and Validation

1. Social and Emotional Adjustment Scale (SEAS): A 20-item, 4-point Likert questionnaire (1 = Strongly Disagree to 4 = Strongly Agree) modified specifically for LWHI with simplified English and visual icon support. Content and face validity were established by a panel of three experts in Special Needs Education and Educational Measurement from the Federal University of Education, Pankshin. Pilot testing was conducted on N = 20 LWHI in a non-sampled school in Bauchi State, yielding a high internal consistency reliability coefficient (Cronbach's $\alpha = 0.84$).

2. Semi-Structured Interview Guide: Used for in-depth qualitative data collection with LWHI, teachers, and counsellors. To guarantee linguistic fidelity, interviews with LWHI were facilitated by two certified Nigerian Sign Language (NSL) interpreters. The interpreters underwent a pre-interview orientation on ethical protocol and research objectives. Back-translation techniques were employed to verify translation accuracy.

3. Structured Classroom Observation Checklist: Used to capture objective social behaviours (frequency of communication initiation, spatial classroom positioning, non- verbal distress indicators) across 24 structured classroom sessions and 12 unstructured recess periods. Inter-rater reliability between two independent observers was established using Cohen's kappa ($\varkappa = 0.78$).

3.5. Qualitative Procedures and Ethical Safeguards

Interviews were conducted individually in quiet, private spaces within schools, lasting 25–30 minutes per session. Video recordings were made with signed assent from learners and written informed consent from school principals and parents/guardians. Transcripts were anonymized using pseudonyms. Qualitative data were processed following Braun and Clarke's six-phase thematic analysis framework (data familiarization, initial coding, theme search, theme review, theme definition, and report generation).

4. Results and Discussion

Results are presented by integrating quantitative statistical outputs with qualitative thematic narratives according to research questions and hypotheses.

Research Question 1 & Hypothesis 1: Social Adjustment Differences by Counselling Exposure

Table 1: Descriptive Statistics and Independent t-test for Social Adjustment

Group	N	Mean	SD	t-value	p-value	Decision
Exposed to Counselling	80	3.45	0.52	6.82	< .001	Reject HO1
Not Exposed to Counselling	38	2.61	0.60			

Statistical Interpretation (HO1): An independent samples t-test was conducted to compare social adjustment scores between LWHI exposed to targeted counselling strategies and those not exposed. As shown in Table 1, the exposed group achieved a significantly higher mean social adjustment score ($M = 3.45$, $SD = 0.52$) than the non-exposed group ($M = 2.61$, $SD = 0.60$); $t(116) = 6.82$, $p < .001$, Cohen's $d = 1.48$ (indicating a large effect size). Consequently, HO1 is rejected.

Qualitative Integration: Qualitative interview responses strongly converged with the statistical results. Teachers reported that LWHI participating in counselling displayed increased classroom participation. One teacher remarked: 'These students now engage more with their classmates and are less withdrawn during group activities.' Furthermore, standardized observation checklist data revealed that LWHI who underwent Social Skills Training were 40% more likely to initiate non-verbal or sign-supported interactions with hearing peers during recess compared to baseline measures.

Research Question 2 & Hypothesis 2: Emotional Adjustment Differences by Counselling Exposure

Table 2: Descriptive Statistics and Independent t-test for Emotional Adjustment

Group	N	Mean	SD	t-value	p-value	Decision
Exposed to Counselling	80	3.62	0.48	7.15	< .001	Reject HO2
Not Exposed to Counselling	38	2.70	0.55			

Statistical Interpretation (HO2): Results in Table 2 indicate that LWHI exposed to counselling strategies exhibited significantly higher emotional adjustment scores ($M = 3.62$, $SD = 0.48$) than their non-exposed peers ($M = 2.70$, $SD = 0.55$); $t(116) = 7.15$, $p < .001$, Cohen's $d = 1.55$ (large effect size). Thus, HO2 is rejected.

Qualitative Integration: School counsellors reported noticeable improvements in emotional self-regulation among counselled learners. One counsellor noted: 'Students are now able to express frustration appropriately through sign or writing rather than withdrawing or acting out.' In interviews, LWHI described the counsellor's office as a 'deaf-friendly sanctuary,' with one student stating through an interpreter: 'In the classroom, I am invisible, but in the counsellor's office, I have a name and a voice.'

Research Question 3 & Hypothesis 3: Overall Group Differences

Table 3: Summary of Mean Differences Between Groups

Variable	Exposed Mean	Not Exposed Mean	Mean Diff.	t-value	p-value
Social Adjustment	3.45	2.61	0.84	6.82	< .001
Emotional Adjustment	3.62	2.70	0.92	7.15	< .001

Statistical Interpretation (HO3): The statistical outputs in Table 3 confirm statistically significant differences in both social and emotional adjustment between LWHI receiving counselling interventions and those without ($p < .001$ across both

dimensions). HO3 is therefore rejected. The non-exposed group exhibited continuous signs of social isolation and classroom anxiety.

Research Question 4 & Hypothesis 4: Effects of Gender, Age, and School Type on Adjustment

Table 4: ANOVA Summary for Gender, Age, and School Type on Overall Adjustment

Source of Variation	Type III Sum of Squares	Df	Mean Square	F-value	p-value
Gender	2.145	1	2.145	4.21	.043*
Age	0.812	1	0.812	1.59	.210 (NS)
School Type (Public/Private)	2.598	1	2.598	5.10	.027*
Gender * School Type	1.950	1	1.950	3.83	.053
Error	58.082	113	0.514		

Statistical Interpretation (HO4): An Analysis of Variance (ANOVA) was conducted to evaluate the main effects of gender, age, and school type on overall adjustment outcomes (Table 4). Gender exhibited a statistically significant main effect ($F(1, 113) = 4.21$, $p = .043$), with female LWHI scoring higher on overall adjustment ($M = 3.55$, $SD = 0.47$) than male peers ($M = 3.30$, $SD = 0.50$). School type also showed a significant main effect ($F(1, 113) = 5.10$, $p = .027$), with private inclusive schools yielding higher adjustment scores ($M = 3.60$, $SD = 0.45$) than public schools ($M = 3.20$, $SD = 0.53$). Age did not exert a statistically significant main effect ($F(1, 113) = 1.59$, $p = .210$). Therefore, HO4 is partially rejected with respect to gender and school type.

Qualitative Integration: Qualitative interviews revealed that private schools in the study area possessed better visual counselling resource rooms and smaller teacher-student ratios. Regarding gender, female LWHI demonstrated higher openness to peer-mediated support groups.

Qualitative Theme: *Sign Language Literacy as a Critical Bottleneck*

A key finding from the discussion with counsellors was that most felt professionally inadequate due to their limited proficiency in Nigerian Sign Language (NSL). This creates a severe communication barrier that hampers the delivery of deep emotional therapy. While peer-mediated strategies offer substantial peer support, they cannot replace professional, sign-literate counsellors capable of handling complex psycho-emotional distress.

5. Conclusion

The transition toward inclusive education in Nigeria represents a significant milestone in educational equity; however, physical inclusion is merely the first step. For learners with hearing impairment, authentic inclusion is defined by their level of social and emotional adjustment. This research demonstrates that counselling is not a peripheral luxury but the essential 'psychological glue' that makes inclusive classrooms functional. Structured strategies—including CBT-based individual counselling, social skills training, and peer-mediated support—were associated with higher levels of social interaction, emotional regulation, and self-efficacy among LWHI. Crucially, the efficacy of these interventions is fundamentally contingent upon sign language accessibility.

6. Recommendations

- Mandatory Sign Language Training: State Ministries of Education in Plateau and Nasarawa States should organise mandatory, continuous professional development in Nigerian Sign Language (NSL) for all practising school counsellors.
- Establishment of Peer Sign Language Clubs: Inclusive schools should establish 'Sign Language Clubs' and peer-mentorship programmes to bridge communication divides and cultivate empathy among hearing students.

- Visual Resource Enrichment: School administrators should equip guidance unit offices with visual-based counselling tools, assistive communication technologies, and quiet spaces to reduce sensory and listening fatigue.

Targeted Support for Public Schools: Educational policymakers should increase funding and special education support resources for public inclusive schools to eliminate the performance gap observed between public and private settings

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Conflict of Interest

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