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SOCIAL INTERACTION AND SELF-CONCEPT AS CORRELATES OF SOCIAL ADJUSTMENT AMONG ADOLESCENTS WITH VISUAL IMPAIRMENT

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Abstract

Social inclusion during adolescence is essential for healthy psychosocial development, yet adolescents with visual impairment often encounter barriers that limit interpersonal relationships and successful social adjustment. This study investigated social interaction and self-concept as correlates of social adjustment among adolescents with visual impairment in Ibadan Metropolis, Nigeria. A descriptive survey research design was adopted. Seventy-five adolescents with visual impairment, comprising both totally blind and low-vision students, were purposively selected from special and inclusive educational settings. Data were collected using a structured questionnaire measuring social interaction, self-concept, and social adjustment. Descriptive statistics, Pearson Product-Moment Correlation, multiple regression analysis, and independent-samples t-test were used for data analysis at the .05 level of significance. The findings revealed a significant positive relationship between social interaction and social adjustment ($r = .541$, $p < .001$), whereas self-concept was not significantly related to social adjustment ($r = .131$, $p = .263$). Social interaction significantly predicted social adjustment ($\beta = .545$, $p < .001$), while self-concept did not make a significant unique contribution. The variables jointly explained 29.3% of the variance in social adjustment. Female adolescents demonstrated significantly higher social adjustment than males. The

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study concludes that meaningful social interaction is central to promoting social adjustment among adolescents with visual impairment.

Keywords: adolescents with visual impairment, social interaction, self-concept, social adjustment

INTRODUCTION

Adolescence is a developmental period in which young people experience substantial changes in identity, self-perception, interpersonal relationships, emotional regulation, and participation in social environments. During this period, relationships with peers become important, while young people simultaneously develop more differentiated and stable perceptions of themselves. Contemporary research on adolescent development indicates that identity formation and social relationships are closely intertwined, with supportive peer relationships contributing to social-emotional development and psychological well-being (Branje et al., 2021; Mitic et al., 2021). Consequently, the quality of adolescents' social experiences and the way they perceive themselves can have important implications for their ability to function effectively within family, school, peer, and community contexts.

These developmental processes may be complex for adolescents with visual impairment. Visual impairment is not only a sensory condition but also a functional and social phenomenon that can influence how young people access information, participate in social activities, establish relationships, and experience their environments. Abodunrin and Abodunrin (2020) reported that visual impairment is a condition characterized by a deficiency in the organ of sight, which hinders an individual's ability to perform functions that require vision. Persons with visual impairment are individuals with reduced or complete loss of sight that limits their participation in social interaction, mobility, and daily activities (Adio et al., 2025). The consequences of vision impairment extend beyond visual functioning to participation, education, psychosocial development, and quality of life. A recent scoping review of 69 studies found that children and adolescents with visual impairment experience significant reductions in functioning, participation, and quality of life, although the extent of these effects varies according to factors such as age and severity of impairment (Lanza et al., 2024). Similarly, a systematic review of children's quality of life concluded that vision impairment and ocular morbidity can substantially affect children's well-being, reinforcing the importance of considering the psychosocial consequences of visual impairment alongside its clinical dimensions (Li et al., 2024).

One of the most important domains potentially affected by visual impairment during adolescence is social interaction. Social interactions are the reciprocal processes through which individuals communicate, respond to one another, establish relationships, and participate in shared social activities. For adolescents, opportunities to interact with peers are important because peer relationships provide opportunities for social learning, emotional support, identity development, and the acquisition of interpersonal competencies. A systematic review and meta-analysis involving 364 studies demonstrated the central importance of supportive peer relationships during early adolescence and identified identity and social-emotional competencies as important factors in the development of such relationships (Mitic et al., 2021). However, adolescents with visual impairment may encounter barriers to these interactions because many social cues, facial expressions, gestures, and environmental information are conveyed visually. A recent systematic review of interventions for children and adolescents with visual impairment reported that social skills are necessary because limitations in social skills can affect social participation and quality of life; peer relationships constituted the most frequently examined intervention area across the studies reviewed (Caron et al., 2023).

Social participation among adolescents with visual impairment cannot be understood solely in terms of the presence or absence of vision. Rather, the social environment in which the adolescent lives and learns is critical. Gariba and Awini (2023) found limited positive interaction between students with visual impairments and their sighted peers, with participants reporting unfriendly and discriminatory behaviours and limited participation in co-curricular activities. More recently, Manitsa et al. (2024) found that adolescents with vision impairment experienced lower levels of social inclusion and school belonging than their sighted peers, while school belonging was associated with aspects of self-esteem

and close social relationships were associated with academic inclusion. Importantly, however, the study did not find uniform differences in self-esteem or close relationships between adolescents with and without visual impairment, suggesting that visual impairment does not inevitably result in poor psychosocial outcomes. Instead, the social context surrounding the adolescent may be an important determinant of developmental outcomes.

The importance of social relationships is also evident in longitudinal research involving adolescents with visual impairment. Yuan et al. (2023), using cross-lagged data, examined the relationships among perceived social support, self-esteem, and social integration among adolescents with visual impairment. Their findings indicated reciprocal relationships among these psychosocial variables, with social support associated with self-esteem and social integration. Related longitudinal evidence indicates that social integration can positively predict self-esteem, while self-esteem can subsequently influence adaptive coping among students with visual impairment. These findings suggest that social experiences and perceptions of the self may operate dynamically rather than as isolated characteristics.

Self-concept is another important psychological construct in understanding the adjustment of adolescents with visual impairment. Self-concept refers broadly to an individual's perceptions, beliefs, and evaluations concerning who they are and how they understand themselves across different domains of life. Adolescence is important for self-concept development because young people evaluate themselves in relation to peers, social expectations, academic experiences, and emerging identities. Longitudinal neuroimaging research has demonstrated that self-concept continues to develop during adolescence and involves both domain-specific perceptions and the incorporation of perceived evaluations from others (van der Cruijsen et al., 2023). Consequently, the social environments available to adolescents may influence not only how they relate to others but also how they understand and evaluate themselves.

For adolescents with visual impairment, the development of self-concept may be shaped by both personal experiences and social responses to disability. Importantly, contemporary evidence challenges the assumption that visual impairment necessarily produces a uniformly negative self-concept. Manitsa et al. (2020) highlighted the importance of social inclusion in understanding self-concept among adolescents with visual impairments, while Manitsa et al. (2024) found that adolescents with vision impairment and their sighted peers did not consistently differ in self-esteem or close social relationships despite differences in perceived social inclusion. Similarly, a recent study conducted among secondary-school students with visual impairment in Ogbomoso, Oyo State, Nigeria, reported generally good self-concept and self-esteem among participants, although a high level of psychological distress was also observed (Olabisi et al., 2024). These findings suggest that positive self-perceptions may coexist with psychosocial challenges and that self-concept should therefore be examined in relation to other dimensions of social functioning rather than treated as an isolated psychological characteristic.

Social adjustment refers to the extent to which an individual is able to establish and maintain satisfactory relationships, respond appropriately to social expectations, participate in social environments, and cope effectively with interpersonal demands. Social adjustment is important because school and peer environments become highly influential in shaping social identity and everyday. Oni and Soji-Oni (2022) reported the significant relationships between peer acceptance, social anxiety, and social adjustment, highlighting the importance of interpersonal experiences in adolescents' capacity to function effectively within their social environments

For adolescents with visual impairment, social adjustment may be affected by the interaction between individual characteristics and environmental conditions. Limited access to social activities, negative peer attitudes, inadequate social support, mobility restrictions, communication barriers, and exclusion from school activities can constrain opportunities for meaningful participation. Conversely, supportive relationships, assistive technology, family support, inclusive educational environments, and opportunities for independent participation may facilitate adjustment. Evidence from Nigeria supports

this contextual perspective. Komolafe and Isioma (2019), found that assistive technology use and self-esteem significantly contributed to the social adjustment of students with visual impairment in Lagos State. Similarly, Abodunrin and Emmanuel (2023) reported significant relationships between social support, social media use, and social adjustment among adolescents with visual impairment in Ibadan, Oyo State. Recent Nigerian research has also identified family life and peer influence as significant factors associated with social adjustment among adolescents with visual impairment (Abodunrin & Edim, 2024).

These findings are consistent with a broader social understanding of disability, in which the experiences of persons with disabilities are shaped not only by impairment but also by environmental attitudes, social relationships, accessibility, and opportunities for participation. Thus, an adolescent's visual impairment does not necessarily determine whether the adolescent will experience successful or unsuccessful social adjustment. Rather, adjustment may emerge from the interaction between the adolescent's personal characteristics and the social environments in which development takes place. This perspective is relevant to the present study because social interaction and self-concept represent potentially important individual-social factors through which adolescents with visual impairment may experience and negotiate their social environments.

The relationship between social interaction, self-concept, and social adjustment can therefore be conceptualised as mutually connected. Frequent and meaningful social interaction may provide adolescents with opportunities for acceptance, feedback, friendship, emotional support, and participation, which can contribute to more positive perceptions of the self. In turn, a positive self-concept may enhance confidence in social situations and facilitate more effective interpersonal engagement. Conversely, social exclusion, negative peer experiences, or persistent difficulties in social participation may undermine self-perceptions and make social adjustment more difficult. Evidence from the broader adolescent literature supports the importance of supportive peer relationships for social-emotional development, while research specifically involving adolescents with visual impairment demonstrates connections among social support, social integration, self-esteem, and adaptive functioning (Mitic et al., 2021; Yuan et al., 2023).

The relevance of these relationships is heightened by evidence that poor social connectedness can have serious consequences for young people's psychological well-being. A systematic review of interventions addressing loneliness and social isolation among young people found that loneliness is associated with adverse health outcomes and that socially isolated young people represent an important population for intervention and prevention efforts (Osborn et al., 2021). Among people with visual impairment, the potential psychosocial consequences are concerning. A large systematic review and meta-analysis published in *JAMA Network Open* found that visual impairment was associated with elevated suicide risk, with the association pronounced among adolescents with visual impairment (Kim et al., 2024). Although social adjustment is not synonymous with mental health, this evidence reinforces the importance of investigating the psychosocial experiences of adolescents with visual impairment and identifying modifiable factors that may support their successful participation and development.

Despite the growing international literature, important gaps remain. First, much of the contemporary literature on visual impairment and psychosocial development has focused on quality of life, school inclusion, social support, self-esteem, or social skills as separate outcomes. Fewer studies have simultaneously examined social interaction and self-concept as correlates of social adjustment among adolescents with visual impairment. Second, much of the recent evidence originates from Europe, Asia, and other contexts whose educational structures, disability policies, cultural expectations, and peer environments may differ considerably from those in Nigeria. Third, although emerging Nigerian studies have examined social adjustment in relation to social media, social support, family life, peer influence, assistive technology, and self-esteem, there remains limited empirical evidence specifically examining the combined and relative contributions of social interaction and self-concept to social adjustment among adolescents with visual impairment.

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The need for context-specific evidence is important in Ibadan Metropolis. Although a recent study has examined social media and social support in relation to social adjustment among adolescents with visual impairment in Ibadan, the psychosocial contribution of social interaction and self-concept has not been adequately established within the same population. Investigating these variables within the Ibadan context can therefore extend existing Nigerian scholarship by moving beyond identifying general social-support factors toward examining how adolescents' interpersonal experiences and perceptions of themselves are associated with their capacity to adjust socially.

The present study examines social interaction and self-concept as correlates of social adjustment among adolescents with visual impairment in Ibadan Metropolis. Specifically, the study seeks to determine the relationship between social interaction and social adjustment; examine the relationship between self-concept and social adjustment; determine the joint contribution of social interaction and self-concept to social adjustment; and establish the relative contribution of each independent variable to the social adjustment of adolescents with visual impairment.

The research questions for the study are stated below.
Research Question 1: Is there a statistically significant relationship between social interaction, self-perception, and social adjustment?

Research Question 2: What is the relative contribution of social interaction and self-concept to social adjustment among adolescents with visual impairment in Ibadan Metropolis?

METHOD

Model of the Research
The study adopted a survey research design to examine the relationships among social interaction, self-concept, and social adjustment of adolescents with visual impairment in Ibadan Metropolis.

Population and Sample
The study comprised 75 adolescents with visual impairment, including both totally blind and low-vision participants, with male and female adolescents represented. Participants were selected using purposive sampling based on the relevance of their characteristics to the objectives of the study.

Data Collection Tool
The structured questionnaire was developed by the researchers, taking suggestions from field experts and practicing teachers. Data were collected using a structured questionnaire divided into four sections. Section A elicited respondents' demographic information, including relevant personal characteristics. Section B contained items measuring social interaction, with emphasis on respondents' experiences and participation in interpersonal relationships. Section C assessed self-concept, focusing on how respondents perceived and evaluated themselves. Section D measured social adjustment, respondents' ability to relate with others and function within their social environments. The questionnaire was administered to the selected participants, and completed responses were retrieved for analysis.

Analysis of Data
The data were analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequency counts, percentages, means, and standard deviations, were used to summarise the demographic characteristics and major study variables. Pearson Product-Moment Correlation was employed to determine the relationships between social interaction, self-concept, and social adjustment. Multiple regression analysis was used to examine the joint and relative contributions of social interaction and self-concept to social adjustment. An independent-samples t-test was also conducted to determine whether social adjustment differed significantly between male and female respondents. Statistical significance was assessed at the .05 level.

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RESULTS

Research Question 1

The first research question of the study is stated as follows: "Is there a statistically significant relationship between social interaction, self-perception, and social adjustment?" The results of the Pearson Product-Moment Correlation analysis, applied to the data to determine whether there are statistically significant relationships among the variables—social interaction, self-perception, and social adjustment—are presented in Table 1.

Table 1. Correlation matrix for social interaction, self-concept and social adjustment

Variables	Social Interaction	Self-Concept	Social Adjustment
Social Interaction	1	.270*	.541**
Self-Concept	.270*	1	.131
Social Adjustment	.541**	.131	1
N	75	75	75

Note. $p < .05$, $p < .01$ (2-tailed).

Table 1 shows the relationships among social interaction, self-concept, and social adjustment among adolescents with visual impairment in Ibadan Metropolis. The result revealed a moderate positive and statistically significant relationship between social interaction and social adjustment ($r = .541$, $p < .001$). This indicates that adolescents who reported better social interaction also tended to report higher levels of social adjustment. The result also showed a weak positive but non-significant relationship between self-concept and social adjustment ($r = .131$, $p = .263$). Although the direction of the relationship was positive, the association was not statistically significant. Furthermore, social interaction was significantly and positively related to self-concept ($r = .270$, $p = .019$). Overall, the findings indicate that social interaction was significantly associated with social adjustment, whereas self-concept was not significantly associated with social adjustment among adolescents with visual impairment in Ibadan Metropolis.

Research Question 2

The second research question of the study is stated as: "What is the relative contribution of social interaction and self-concept to social adjustment among adolescents with visual impairment in Ibadan Metropolis?"

Contribution of Social Interaction to Social Adjustment

The analysis results for "Model Summary of Regression Analysis of Social Interaction Predicting Social Adjustment" are presented in Table 2.

Table 2. Model summary of regression analysis of social interaction predicting social adjustment

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.541	.293	.283	.6266

Predictor: Social Interaction; Dependent variable: Social Adjustment.

Table 2 shows that social interaction was positively associated with social adjustment and explained 29.3% of the variance in social adjustment ($R^2 = .293$). The adjusted R^2 of .283 indicates that the model accounted for approximately 28.3% of the variance after adjustment for sample size.

The analysis results for the "ANOVA for Regression Model of Social Interaction and Social Adjustment" are presented in Table 3.

Table 3. ANOVA for regression model of social interaction and social adjustment

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.857	1	11.857	30.196	<.001
Residual	28.666	73	.393		
Total	40.523	74			

Dependent variable: Social Adjustment.

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As shown in Table 3, the regression model was statistically significant, $F_{(1, 73)} = 30.196$, $p < .001$. Thus, social interaction significantly predicted social adjustment among adolescents with visual impairment.

The analysis results regarding "Regression Coefficients for Social Interaction Predicting Social Adjustment" are presented in Table 4.

Table 4. Regression coefficients for social interaction predicting social adjustment

Predictor	B	SE	β	t	Sig.
Constant	1.115	.391		2.847	.006
Social Interaction	.633	.115	.541	5.495	<.001

Dependent variable: Social Adjustment.

Table 4 indicates that social interaction made a significant positive contribution to social adjustment (β = .541, $t = 5.495$, $p < .001$). The unstandardized coefficient indicates that a one-unit increase in social interaction was associated with an estimated .633-unit increase in social adjustment. The regression equation can therefore be expressed as Social Adjustment = 1.115 + .633 (Social Interaction).

Contribution of Self-Concept to Social Adjustment

The analysis results regarding the "Model Summary of Regression Analysis of Self-Concept Predicting Social Adjustment" are presented in Table 5.

Table 5. Model summary of regression analysis of self-concept predicting social adjustment

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.131	.017	.004	.7386

Predictor: Self-Concept; Dependent variable: Social Adjustment.

Table 5 indicates that self-concept explained only 1.7% of the variance in social adjustment (R^2 = .017), with an adjusted R^2 of .004.

The analysis results of "ANOVA for Regression Model of Self-Concept and Social Adjustment" are presented in Table 6.

Table 6. ANOVA for regression model of self-concept and social adjustment

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.695	1	.695	1.274	.263
Residual	39.828	73	.546		
Total	40.523	74			

Dependent variable: Social Adjustment.

The regression model was not statistically significant, $F_{(1, 73)} = 1.274$, $p = .263$. Therefore, self-concept did not significantly predict social adjustment in this sample.

The analysis results regarding "Regression Coefficients for Self-Concept Predicting Social Adjustment" are presented in Table 7.

Table 7. Regression coefficients for self-concept predicting social adjustment

Predictor	B	SE	β	t	Sig.
Constant	2.548	.610		4.180	<.001
Self-Concept	.141	.125	.131	1.129	.263

Dependent variable: Social Adjustment.

Table 7 further shows that self-concept had a positive but non-significant contribution to social adjustment (β = .131, $t = 1.129$, $p = .263$). Thus, while higher self-concept was associated with slightly higher social adjustment, the contribution was not statistically significant.

The regression results show a clear difference in the contributions of the two variables. Social interaction significantly predicted social adjustment, explaining 29.3% of its variance (β = .541,

$p < .001$). In contrast, self-concept explained only 1.7% of the variance and did not significantly predict social adjustment (β = .131, p = .263). Therefore, among the two variables examined individually, social interaction demonstrated a substantially stronger contribution to social adjustment among adolescents with visual impairment in Ibadan Metropolis. However, these analyses represent separate regression models. If your research question specifically asks for the relative contribution of both variables simultaneously, you should also run a multiple regression analysis with social interaction and self-concept entered together. That analysis would provide the combined R^2 and the unique beta contribution of each predictor and would be the stronger analysis for a Scopus-level paper.

Joint Contribution of Social Interaction and Self-Concept to Social Adjustment

Regression analysis was conducted to determine the joint contribution of social interaction and self-concept to social adjustment among adolescents with visual impairment in Ibadan Metropolis.

The analysis results concerning the "Model Summary of Multiple Linear Regression Analysis of Social Interaction and Self-Concept Predicting Social Adjustment" are presented in Table 8.

Table 8. Model summary of multiple linear regression analysis of social interaction and self-concept predicting social adjustment

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
1	.541	.293	.273	.6309	.293	14.909	2	72	<.001

Predictors: Social Interaction and Self-Concept; Dependent variable: Social Adjustment.

Table 8 indicates that social interaction and self-concept jointly produced a multiple correlation of R = .541 and explained 29.3% of the variance in social adjustment (R^2 = .293). After adjustment or the number of predictors and sample size, the model accounted for 27.3% of the variance (adjusted R^2 = .273).

The analysis results for the "ANOVA for Multiple Linear Regression Model" are presented in Table 9.

Table 9. ANOVA for multiple linear regression model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.867	2	5.934	14.909	<.001
Residual	28.656	72	.398		
Total	40.523	74			

Dependent variable: Social Adjustment.
Predictors: Social Interaction and Self-Concept.

As shown in Table 9, the overall regression model was statistically significant, $F_{(2, 72)}$ = 14.909, $p < .001$. This indicates that social interaction and self-concept, when considered together, significantly predicted social adjustment among the respondents.

The analysis results regarding "Regression Coefficients for Social Interaction and Self-Concept Predicting Social Adjustment" are presented in Table 10.

Table 10. Regression coefficients for social interaction and self-concept predicting social adjustment

Predictor	B	Std. Error	β	t	Sig.
Constant	1.182	.581	—	2.035	.046
Self-Concept	−.017	.111	−.016	−.157	.875
Social Interaction	.639	.121	.545	5.298	<.001

Dependent variable: Social Adjustment.

Table 10 shows that social interaction made a significant positive unique contribution to social adjustment (β = .545, t = 5.298, $p < .001$). In contrast, self-concept did not make a significant unique contribution (β = −.016, t = −.157, p = .875). Thus, although the two variables jointly produced a significant regression model, social interaction was the principal predictor of social adjustment,

whereas self-concept did not significantly contribute to the prediction when social interaction was controlled for.

The regression equation can be expressed as:
Social Adjustment = 1.182 + .639 (Social Interaction) − .017 (Self-Concept).

Gender Difference in Social Adjustment
The analysis results regarding the "Independent-Samples t-Test of Difference in Social Adjustment by Gender" are presented in Table 11.

Table 11. Independent-Samples *t*-test of difference in social adjustment by gender

Gender	Mean	SD	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI Lower	95% CI Upper
Male	2.891	.7522	−4.715	68.285	<.001*	−.7034	.1492	−1.0010	−.4057
Female	3.595	.5282							

*p < .05

An independent-samples *t*-test was conducted to determine whether social adjustment differed by gender among adolescents with visual impairment. As presented in Table 12, female respondents recorded a higher mean social adjustment score (M = 3.595, SD = .5282) than male respondents (M = 2.891, SD = .7522). The difference was statistically significant, $t_{(68.285)} = -4.715$, $p < .001$. The null hypothesis of no significant gender difference was therefore rejected. The finding indicates that female adolescents with visual impairment reported significantly higher levels of social adjustment than their male counterparts.

DISCUSSION, CONCLUSION, and RECOMMENDATIONS

The study examined social interaction and self-concept as correlates of social adjustment among adolescents with visual impairment in Ibadan metropolis. The findings showed that social interaction was significantly and positively related to social adjustment ($r = .541$, $p < .001$) and was a significant predictor of social adjustment ($\beta = .545$, $p < .001$). In contrast, self-concept was not significantly related to social adjustment ($r = .131$, $p = .263$) and did not make a significant unique contribution to its prediction ($\beta = -.016$, $p = .875$). When both variables were entered into the regression model, they jointly explained 29.3% of the variance in social adjustment, although the explanatory contribution was largely attributable to social interaction. Female adolescents also demonstrated significantly higher social adjustment than males, $t_{(68.285)} = -4.715$, $p < .001$.

The significant relationship between social interaction and social adjustment is consistent with previous evidence that interpersonal relationships are important to the psychosocial functioning of adolescents with visual impairment. Abodunrin and Emmanuel (2023) found that social support significantly contributed to social adjustment among adolescents with visual impairment in Oyo State, Abodunrin, Abilu et al. (2025) reported that Family support and social integration significantly predict academic adjustment among students with visual impairment in Nigeria, while Abodunrin and Edim (2024) reported significant relationships between family life, peer influence and social adjustment among adolescents with visual impairment in Kwara State. Although these studies examined related rather than identical constructs, their findings support the present evidence that meaningful interpersonal relationships are important for adjustment. Kef (2002) similarly reported the importance of peer support in the psychosocial adjustment of adolescents with visual impairment. From an ecological perspective, this finding is consistent with Bronfenbrenner's Ecological Systems Theory, which emphasises the role of immediate social environments, relationships with peers, family and teachers, in adolescent development. Social interaction therefore provides an important context through which adolescents with visual impairment participate, develop relationships and negotiate social experiences.

The finding that self-concept was not significantly associated with social adjustment differs from some previous Nigerian evidence. Abodunrin and Komolafe reported that self-concept significantly predicted psychological adjustment among adolescents with visual impairment in South-West Nigeria. However, the difference may reflect the distinction between psychological adjustment and social adjustment. Self-concept may be more closely related to broader emotional and psychological functioning, whereas social adjustment depends more directly on opportunities for interpersonal participation. Yuan et al. (2023) also found reciprocal relationships between self-esteem, social support and social integration among adolescents with visual impairment, suggesting that self-evaluations and social relationships may operate in complex ways rather than as simple independent predictors. Thus, the non-significant finding in the present study does not imply that self-concept is unimportant; rather, it suggests that self-concept alone may be insufficient to explain variation in social adjustment.

The joint regression further demonstrated that social interaction and self-concept significantly explained 29.3% of the variance in social adjustment, but social interaction was the only significant unique predictor. This result is consistent with Bandura's Social Learning Theory, which proposes that social behaviours are acquired and strengthened through observation, modelling, interaction and feedback. Adolescents who have greater opportunities to interact with peers and significant others may therefore have more opportunities to practise communication, cooperation and other behaviours necessary for successful social adjustment (Bandura, 1986). The finding also supports the ecological interpretation that adjustment is shaped not only by individual characteristics but also by the social environments in which adolescents participate.

Finally, the significant gender difference, with female adolescents demonstrating higher social adjustment than males, differs from some earlier studies that have reported greater psychosocial difficulties among girls with visual impairment (Huurre et al., 1999; Pinquart & Pfeiffer, 2012). This inconsistency suggests that gender differences in social adjustment may be context-dependent and influenced by family, school, cultural and peer environments. Overall, the findings indicate that social interaction is more strongly associated with social adjustment than self-concept in this sample, highlighting the importance of creating meaningful opportunities for adolescents with visual impairment to participate in peer, school and community activities.

Conclusion

The study concludes that social interaction is an important correlate and predictor of social adjustment among adolescents with visual impairment in Ibadan metropolis. Adolescents who reported higher levels of social interaction also demonstrated better social adjustment. In contrast, self-concept was not significantly related to or predictive of social adjustment, either independently or after controlling for social interaction. The joint model was significant, largely due to social interaction. A significant gender difference was also observed, with female adolescents demonstrating higher social adjustment than males. Overall, the findings highlight the importance of meaningful interpersonal interaction in promoting social adjustment among adolescents with visual impairment.

Recommendations

Based on the finding that social interaction significantly predicted social adjustment, schools and special education practitioners should create more opportunities for adolescents with visual impairment to interact meaningfully with their peers. This can be promoted through cooperative learning, peer-support activities, group projects, inclusive extracurricular programmes and other structured activities that encourage communication and participation. Teachers and school counsellors should also identify adolescents who experience limited peer interaction and provide appropriate opportunities for social engagement.

The significant gender difference in social adjustment, with female adolescents reporting higher levels of social adjustment than males, suggests the need for particular attention to the social participation of male adolescents with visual impairment. Schools, families and counsellors should therefore

encourage male adolescents to participate more actively in peer activities, group programmes and social events. Such opportunities may help reduce social isolation and strengthen their engagement with peers and the wider school community.

Although self-concept was not a significant predictor of social adjustment in the present study, it should not be disregarded in the broader psychosocial development of adolescents with visual impairment. Parents, teachers and counsellors should continue to provide supportive environments that promote positive personal development while giving greater emphasis to meaningful social interaction. Future researchers should also examine other factors that may explain the remaining variance in social adjustment, including family support, peer acceptance, school climate, social competence and accessibility of social activities.

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Ethics and Conflict of Interest
The authors declare that ethical guidelines were followed throughout the research process. We make clear that the views and findings expressed in the study are solely those of the authors. The authors also declare that there is no conflict of interest regarding this study.

Author Contribution
All authors contributed equally to the research. All authors read and approved of the final manuscript.

Data Availability
The data that support the findings of this study are available on request from the corresponding author.

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