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PSYCHOSOCIAL PREDICTORS OF RISK BAHAVIOURS AMONG ADOLESCENTS WITH HEARING IMPAIRMENT IN IBADAN, NIGERIA

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Abstract

This study examined psychosocial risk bahaviours, such as substance use, aggression, and delinquency, in adolescents with hearing impairment. The primary aim was to investigate the influence of self-esteem, peer pressure, and family type on these bahaviours. A cross-sectional survey was conducted with 117 adolescents aged 11 to 17 years from special education schools in urban areas. Data were collected using adapted tools, including the Rosenberg Self-Esteem Scale, the Peer Pressure Inventory, and a custom risky bahaviour checklist, all modified with visual aids and sign language support for accessibility. Results indicated a high prevalence of risk bahaviours, with a majority of participants frequently engaging in unprotected sex, marijuana use, and property damage. The analysis revealed that self-esteem was not a significant predictor of risk bahaviours. However, peer pressure and family type emerged as significant positive predictors. These results highlight the heightened psychosocial vulnerabilities associated with hearing impairment, driven largely by external social and familial factors rather than internal self-worth. The findings suggest that rehabilitation interventions should prioritize peer resistance training and family support systems.

Keywords: Adolescents, Hearing impairment, Self-esteem, Peer pressure, Family type and Psychosocial risk bahaviours

Introduction

Adolescence is a transformative stage characterized by identity exploration, increased independence, and susceptibility to risk bahaviours. For the approximately 1 in 1,000 children born with severe to profound hearing loss (World Health Organization, 2021), these developmental milestones are complicated by unique obstacles. Hearing impairment restricts access to auditory information, often leading to communication challenges, social exclusion, and emotional distress. Research indicates that adolescents with hearing impairment experience elevated levels of loneliness and reduced social competence compared to their hearing peers (Stevenson et al., 2015), highlighting the profound psychosocial impact of their condition. These challenges extend into bahavioural domains. Studies have linked hearing impairment in adolescents to higher rates of internalizing issues, such as anxiety and depression, and externalizing bahaviours, including aggression and rule-breaking (Coll et al., 2009). Factors like limited peer networks, family communication barriers, and societal stigma amplify these risks. Moreover, disparities in access to education and rehabilitation services, often influenced by socioeconomic and cultural contexts, further shape outcomes, making this population particularly vulnerable. While adolescent risk bahaviours have been extensively studied in the general population, with established links to self-esteem, peer influence, and family dynamics (Jessor, 1991), research specific to adolescents with hearing impairment remains limited.

Research suggests that self-esteem (Lawrence & Adebowale, 2023; Okurame et al., 2024), peer influence (Abu & Akerele, 2022; Martínez et al., 2021), and family type (Fakolade & Bamidele, 2017) are key determinants of adolescent bahaviour. However, there is a paucity of research on how these factors interact to predict risk bahaviour among hearing-impaired adolescents in Ibadan, Nigeria. Recent studies within the unique socio-cultural context of the region have demonstrated burgeoning risk bahaviours during adolescence, such as substance abuse (Olley, 2008), risky sexual bahaviour (Olusanya et al., 2014), and antisocial bahaviour (Oyefeso & Zacheaus, 1990). Hearing-impaired adolescents may be particularly vulnerable due to communication challenges that lead to social isolation and lower self-esteem (Okurame et al., 2024). These factors may heighten susceptibility to negative peer influence (Martínez et al., 2021) and risky decision-making. Family dynamics, including structure and parenting styles (Gao et al., 2020; Nnebue et al., 2018), also play a critical role in shaping adolescent resilience and bahaviour. In Nigeria, hearing impairment is a significant public health concern. Understanding these predictors is crucial for developing culturally relevant prevention and intervention programs. This study addresses this gap by focusing on the interplay of psychosocial factors in adolescents with hearing impairment.

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Social Cognitive Theory (SCT) and Social Learning Theory (SLT) provide complementary lenses for understanding risk bahaviours among hearing-impaired adolescents. SCT posits that bahaviour emerges from the dynamic interplay of personal factors, such as self-esteem, environmental influences like peer pressure and family type, and bahavioural outcomes (Bandura, 1986). For hearing-impaired adolescents, low self-esteem due to social exclusion can reduce self-efficacy, potentially increasing susceptibility to risky bahaviours. SLT suggests that these adolescents may imitate risky bahaviours modeled by peers, especially when seeking acceptance due to limited social opportunities (González-Agüero et al., 2011). Attachment Theory complements these perspectives by highlighting the role of early caregiver relationships. Secure attachment promotes higher self-esteem and resilience (Gao et al., 2020; Gunnarsdóttir, 2014). However, communication challenges, such as reduced parent-child interaction, can hinder secure attachment, leading to increased vulnerability to negative peer influences (Quittner et al., 2009). In Nigeria's family systems, the structure of the home, such as monogamous versus polygamous, may impact the quality of these attachments and the supervision available to the adolescent.

Research indicates that hearing-impaired adolescents are at an elevated risk for bahavioural issues. Bakare et al. (2015) found that psychopathology was present in 19% of hearing-impaired adolescents in Nigeria. Similarly, Olusanya et al. (2014) found that among deaf students in Ibadan who were sexually active, there were significantly lower rates of condom use compared to hearing peers. The relationship between self-esteem and risk bahaviour is well-documented in general populations, often finding a negative correlation (Okurame et al., 2024). However, findings in hearing-impaired populations are mixed. While some suggest lower self-esteem contributes to maladjustment, others indicate that global self-esteem may be comparable to hearing peers if support systems are strong (Theunissen et al., 2014). Peer relationships are critical during adolescence. Terlektsi et al. (2020) found that deaf and hard-of-hearing adolescents experience more peer problems, increasing susceptibility to negative peer influence. Family dynamics also shape bahaviour. Quittner et al. (2009) noted that hearing-impaired children often spend less time communicating with parents, leading to bahaviour problems. In the Nigerian context, family type may introduce specific complexities regarding resource allocation and parental attention.

Research Objectives

This study aims to achieve the following:

1. Examine the relationship between self-esteem and psychosocial risk bahaviours among adolescents with hearing impairment.
2. Assess the role of peer pressure in driving risky bahaviours in this group.
3. Explore how family type influences risk bahaviour outcomes.

Hypotheses

Based on the literature, the following hypotheses were tested:

1. Self-esteem will be negatively associated with psychosocial risk bahaviours.
2. Peer pressure will be positively associated with psychosocial risk bahaviours.
3. Family type will influence risk bahaviour levels.

Methodology

The study employed a cross-sectional survey design to assess the prevalence of psychosocial risk bahaviours and their associations with self-esteem, peer pressure, and family type among adolescents with hearing impairment. The participants included 117 adolescents with hearing impairment enrolled in senior secondary schools (SS1 and SS2). Participants were recruited from schools in Ibadan, Nigeria. Inclusion criteria required a diagnosed hearing loss and current enrollment in a special education program. The sample consisted of 67 females (57.3%) and 50 males (42.7%), with ages ranging from 11 to 17 years. The majority of the participants identified as Christian (59.0%, n = 69) and came from monogamous families (78.6%, n = 92). The distribution was nearly even between SS1 (50.4%, n = 59) and SS2 (49.6%, n = 58). A researcher-designed questionnaire was used to collect information on sex, age, religion, class level, and family type (monogamous or polygamous). The family type variable was dummy coded for analysis.

Self-esteem was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965), a 10-item measure designed to assess global self-worth. *Sample Items.* Participants responded to statements such as "On the whole, I am satisfied with myself" and "I feel that I do not have much to be proud of." Items are scored on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Items 2, 5, 6, 8, and 9 are reverse-scored. The total score ranges from 10 to 40, with higher scores indicating higher self-esteem.. The RSES is widely used and has demonstrated high internal consistency in global

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populations, with Cronbach's alpha typically exceeding .85 (Rosenberg, 1965). In the current study, the adapted version for hearing-impaired adolescents demonstrated good internal consistency with a Cronbach's alpha of .83.

Peer pressure was measured using the Peer Pressure Questionnaire-Revised (Santor et al., 2000), a 29-item scale assessing involvement in and susceptibility to peer pressure. *Sample Items.* Items include "I go along with my friends just to keep them happy" and "I do things because my friends want me to." Responses are recorded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total score is calculated by summing the item responses, where higher scores indicate greater susceptibility to peer pressure. The original validation study reported Cronbach's alphas ranging from .82 to .93 for various subscales (Santor et al., 2000). For this study, the instrument was adapted for the hearing-impaired population using simplified language and visual supports. The adapted scale demonstrated strong internal consistency in the current sample, with a Cronbach's alpha of .86.

Checklist Risk bahaviours were evaluated through a custom 9-item questionnaire developed for the context of the study, assessing the frequency of specific risky bahaviours. *Sample Items.* The checklist included items such as "I used marijuana," "I damaged or destroyed public or private property," and "I had sex without using any birth control." Participants rated the frequency of each bahaviour on a 4-point scale ranging from 1 (not at all) to 4 (most of the time). A total sum score was computed, with higher scores indicating greater engagement in psychosocial risk bahaviours. As a custom measure, psychometric properties were established during the pilot phase. Content validity was established through expert review by three professionals in rehabilitation psychology and special education, who confirmed the items were representative of the risk bahaviours relevant to the population. In the current study, the scale demonstrated acceptable internal consistency with a Cronbach's alpha of .79.

Ethical approval was obtained from the relevant institutional review board prior to data collection. Informed consent was secured from the school authorities, participants, and their guardians. To ensure accessibility, surveys were administered in school settings with the assistance of sign language interpreters. Written instructions were also provided. Participants were assured of confidentiality, and no identifying information was collected during the process. Data were analyzed using SPSS version 26. Descriptive statistics, including frequencies and percentages, were used to summarize the demographic characteristics and prevalence of risk bahaviours. Pearson correlation coefficients were calculated to examine the relationships between the study variables. A multiple regression analysis was conducted to determine the predictive influence of self-esteem, peer pressure, and family type on risk bahaviours. Statistical significance was set at $p < .05$.

Results

Socio-Demographic Characteristics

Table 1: Socio-Demographic Characteristics of Respondents (N = 117)

Characteristic	n	%
Sex		
Male	50	42.7
Female	67	57.3
Age (years)		
11-13	7	6.0
14-16	69	59.0
17 and above	41	35.0
Religion		
Christianity	69	59.0
Islam	43	36.8
Traditional	5	4.3
Class		
SS1	59	50.4
SS2	58	49.6
Family Type		
Monogamous	92	78.6
Polygamous	25	21.4

Table 1 presents the socio-demographic profile of the respondents. The data show that the sample was predominantly female (57.3%), with the largest age group falling between 14 and 16 years (59.0%). Christianity was the most reported

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religion (59.0%), and the majority of students were in the SS1 class (50.4%). Regarding family structure, most participants resided in monogamous families (78.6%).

Table 2: Perceived Psychosocial Risk Bahaviours

Behaviour	Not at all n (%)	A little n (%)	Frequently n (%)	Most of the time n (%)	M	SD
I had sex without using any birth control/contraception	3 (2.6)	13 (11.1)	2 (1.7)	99 (84.6)	1.22	0.60
I had sex using birth control/contraception	2 (1.7)	14 (12.0)	12 (10.3)	89 (76.1)	1.38	0.74
I damaged or destroyed public or private property	2 (1.7)	13 (11.1)	8 (6.8)	94 (80.3)	1.30	0.67
I used marijuana	5 (4.3)	9 (7.7)	8 (6.8)	95 (81.2)	1.34	0.79
I stole something reasonable (e.g., laptop, handset)	5 (4.3)	88 (75.2)	6 (5.1)	18 (15.4)	1.38	0.78
I had sex with someone I knew only casually	97 (82.9)	6 (5.1)	11 (9.4)	3 (2.6)	1.32	0.75
I used illegal drugs other than marijuana or cocaine (not including alcohol)	94 (80.3)	15 (12.8)	4 (3.4)	4 (3.4)	1.30	0.70
I consumed at least five glasses of beer or other alcoholic drinks in one...	1 (0.9)	10 (8.5)	11 (9.4)	95 (81.2)	1.30	0.67
I have many sexual partners	3 (2.6)	16 (13.7)	7 (6.0)	91 (77.8)	1.33	0.71

The participants included 117 adolescents with hearing impairment enrolled in senior secondary schools (SS1 and SS2). Participants were recruited from schools in Ibadan, Nigeria. Inclusion criteria required a diagnosed hearing loss and current enrollment in a special education program. The sample consisted of 67 females (57.3%) and 50 males (42.7%), with ages ranging from 11 to 17 years. The majority of the participants identified as Christian (59.0%, n = 69) and came from monogamous families (78.6%, n = 92). The distribution was nearly even between SS1 (50.4%, n = 59) and SS2 (49.6%, n = 58).

Table 3: Zero-Order Correlations Between Variables

Variables	Mean	SD	1	2	3	4
1. Risky Bahaviour	13.07	4.99	—			
2. Self-Esteem	7.10	2.65	.15	—		
3. Peer Pressure	17.91	5.33	.33**	.14	—	
4. Family Type	1.21	0.41	.24**	-.03	.13	—

Table 3 shows the zero-order correlations between the study variables. There was a significant positive correlation between risky bahaviour and peer pressure, $r = .33$, $p < .01$, and between risky bahaviour and family type, $r = .24$, $p < .01$. However, the correlation between self-esteem and risky bahaviour was not statistically significant, $r = .15$, $p > .05$.

Contribution to Risky Bahaviour

Table 4: One-Way ANOVA: Composite Effect on Risky Bahaviour

Model	R	R^2	Adj R^2	SEM	F	p
Regression	.39	.15	.13	4.65	6.85	<.001

A one-way ANOVA, presented in Table 4, tested the composite effect of the independent variables. The model was statistically significant, $F(3, 113) = 6.85$, $p < .001$, with the variables collectively explaining 15% of the variance in risky bahaviour ($R^2 = .15$).

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Table 5: Multiple Regression Analysis: Relative Effects on Risky Bahaviour

Variable	β	t	p
(Constant)		1.92	.057
Self-Esteem	.08	0.93	.356
Peer Pressure	.29	3.29	.001
Family Type	.21	2.36	.020

Table 5 presents the results of the multiple regression analysis examining the relative effects of each predictor. Peer pressure was a significant positive predictor of risky bahaviour (β = .29, p = .001). Family type was also a significant positive predictor (β = .21, p = .020). In contrast, self-esteem was not a significant predictor of risky bahaviour in this sample (β = .08, p = .356).

Discussion of the Findings

This study investigated the predictors of psychosocial risk bahaviours among adolescents with hearing impairment in Ibadan, Nigeria. The findings revealed a high prevalence of risky bahaviours, particularly concerning sexual health and substance use. Consistent with the second hypothesis, peer pressure was a significant positive predictor of risk bahaviours. Family type also emerged as a significant predictor. However, contrary to the first hypothesis, self-esteem did not significantly predict risk bahaviours. The strong positive relationship between peer pressure and risk bahaviours supports existing literature on the influence of social networks during adolescence. For adolescents with hearing impairment, the desire for social acceptance may be particularly acute due to potential social isolation. As suggested by Social Learning Theory, these adolescents may model the bahaviours of their peers to secure inclusion.

The significant beta weight indicates that as susceptibility to peer pressure increases, engagement in risk bahaviours increases correspondingly. This aligns with Terlektsi et al. (2020), who noted that deaf adolescents often have fewer friendship options, making them more vulnerable to negative influences. The finding that family type significantly predicts risk bahaviours suggests that the family structure plays a crucial role in the psychosocial adjustment of hearing-impaired adolescents. In the Nigerian context, polygamous households may face unique stressors, such as economic constraints and diluted parental attention, which could limit the supervision and emotional support available to adolescents. This lack of support may exacerbate communication barriers, pushing adolescents toward external peer groups for validation. This supports the Ecological Systems Theory view that the microsystem of the family directly impacts bahavioural outcomes.

The lack of a significant relationship between self-esteem and risk bahaviours was unexpected. While previous studies (e.g., Okurame et al., 2024) have linked low self-esteem to higher risk in general populations, this did not hold true for the present sample. One explanation is that the global measure of self-esteem used may not capture the specific social-domain deficits relevant to risk-taking in this population. Alternatively, the external pressures of peer influence and family dynamics may be so potent that they override the internal regulatory function of self-esteem. It is also possible that participants reported high self-esteem as a protective mechanism or social desirability bias, despite engaging in high-risk bahaviours.

Recommendations

Based on the finding that peer pressure and family type are significant drivers of risk, the following recommendations are proposed:

1. Interventions must include specific skills training to help hearing-impaired adolescents recognize and negotiate negative peer influences. Rehabilitation programs should focus on assertiveness and refusal skills.
2. Given the impact of family type, counseling services should be tailored to support diverse family structures. Programs should educate all caregivers in the household about the specific needs of hearing-impaired adolescents to ensure communication gaps are bridged and supervision is maintained.
3. The high prevalence of unprotected sex indicates a critical need for sexual health education delivered in accessible formats, such as sign language and visual aids.

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4. Schools should establish mentorship programs where older or more responsible hearing-impaired students model positive bahaviours, leveraging the power of peer influence for positive outcomes.

Conclusion

The interplay of external social factors significantly influences risk bahaviour among hearing-impaired adolescents in Ibadan. While internal factors like self-esteem are often emphasized, this study highlights that for this population, the immediate social environment, specifically peer pressure and family structure, plays a more decisive role. These findings underscore the urgency of developing accessible, culturally relevant support systems that address the external vulnerabilities of hearing-impaired adolescents.

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