

DEPRESSIVE SYMPTOMATOLOGY AMONG IN-SCHOOL ADOLESCENTS WITH IMPAIRED HEARING

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Abstract

Purpose of the study: This study determined incidences of depressive symptoms and associated causative contextual factors among in-school adolescents with impaired hearing in South West, Nigeria. The study determined symptoms of depression exhibited by in-school adolescents with impaired hearing vis-à-vis some associated intrapersonal causative (age, religion, gender, the onset of hearing loss, satisfaction with the home environment, and family type) variables.

Methodology: Descriptive survey design was adopted for the study. Data were collected from 236 adolescents who are either prelingually (39.1%) and postlingually (60.9%) hearing impaired with the Depressive Symptomatology Questionnaire ($\alpha = .89$). Data collected over a period of 10 weeks were analysed with both descriptive and inferential statistics via SPSS version 23.

Main Findings: 58.8% of the participants scored higher on the depression scale, which is mostly characterized by loss of appetite and fearfulness. There is a significant difference ($F = 7.61$; $p < 0.05$) in the expression of depressive symptoms between gender and across variants in the onset of deafness ($F = 3.59$; $p < 0.05$) and family type ($F = 23.14$; $p < 0.05$). Academic stressor and lack of access to information were found to be the major source of their depression.

Applications of this study: This study is of importance to counselling psychologist and mental health practitioners for the development of strategic therapeutic approach geared towards positive psychosocial development of individuals with impaired hearing

Novelty/Originality of this study: The study confirms the manifestation of moderate to a high level of depressive symptoms among those in-school adolescents with impaired hearing. Academic anxiety/low grade, communication difficulties, and negative societal attitude were the major source of depression for adolescents with impaired hearing in high schools.

Keywords: *Depression, Depressive Symptoms, In-school Adolescents with Impaired Hearing, Family Dynamics, Onset of Hearing Loss, Religion.*

INTRODUCTION

Hearing impairment is a silent disabling condition that prevents an individual from accessing and responding to sound stimulus via the organ of hearing without additional efforts. It is a condition that affects about 10% of the population in Nigeria and America (Zazove et al., 2006), 7.5% in South Africa (Lehohla, 2014). Globally as indicated by the World Health Organization [WHO] (2020), about 466 million people with about 34 million of the estimated number being children are experiencing hearing loss which is in one or both ears. Of the estimated 466 million people with impaired hearing, WHO (2017) as well as Schmucker et al. (2019) stated that about 32 million adults suffer from moderate to severe hearing loss greater than 40 decibels (dB). Based on the population of children and adults with impaired hearing brought forward by WHO (2017, 2020) and Schmucker et al. (2019), it can be deduced that globally among persons with impaired hearing, the proportion of adolescent with such condition maybe large

Irrespective of age (children, adolescents, or adults), persons with impaired hearing represents a minority but heterogeneous population bound by similar cultural and visual language identities who communicated only by sign language, gestures, pantomime, and other means of adapted communication modes but not majorly via auditory-verbal means of communication exchange. Some individual sustains loss in the sense of hearing during conception, during birth or before acquiring speech and language skills (prelingually deaf) while others acquire deafness after the acquisition (postlingually deaf) of speech and language (Rostami et al., 2014). Additionally, variants in degrees (moderate: 40-60dB; severe: 61-90dB and profound: >90dB) of hearing loss further reinforced the dynamic and heterogeneous nature of deafness. Impaired hearing may results into a life-long condition that alters the development of speech, language, cognitive, and social skills of an individual diagnosed with a hearing condition significantly above 30dB. The condition poses a threat to the functional quality of life, positive psychosocial wellbeing, and significantly impacts the educational process and learning outcome (Adigun, 2017). Coupled with challenges of communication difficulties, children and adolescents with impaired hearing have often time encountered additional traumatic experience resulting from emotional, physical and sexual abuse at home or in school (Adigun, 2020; Knutson et al., 2004).

Consequently, the ability to achieve high academic achievement/attainment, secure employment, and establish a meaningful relationship like other adolescents with non-hearing is altered by hearing loss. Thus, this aggravates the potential risk of mental health problems throughout life. Generally, adolescence remains an intriguing time of rapid

physical and emotional changes that spurs adolescents' self-consciousness and physical sensitivity with the social environment ([Adigun, 2020](#); [Steinberg, 2014](#)). While adolescence is characterized by the consciousness of every difference and details, comparison, and confusion for all, adolescents with impaired hearing experiences double jeopardy because they have to contend with difficulties arising from communication difficulties, negative societal attitudes and challenges posed by age grade. According to [Turner et al. \(2007\)](#), adolescents with impaired hearing feel excluded and isolated by the hearing 'world'. Thus, their ability to acquire fundamental social skills is affected with depletion in self-esteem, impaired quality of life, and elevated mental health disorder which include but are not limited to depression.

LITERATURE REVIEW

Depression is a mental health condition characterized by decreased concentration and enjoyment, feeling of guilt, sadness, disability and hopelessness, low mood and loss of interest in activities, insomnia, and anhedonia ([Adigun, 2017](#); [Brewster et al., 2018](#)) this citation is not in the reference list with a greater risk of substance abuse, behavioural problems, and suicide ideation. Please use DSM-5 as the main citation for depression symptoms and not other previous researchers. According to [Hernandez et al. \(2011\)](#), about 8% of the adolescent is depressed while [Beck and Brad \(2009\)](#) stated that the prevalence of depression among adolescent is between 13%-33%. Remarkably, [Leigh and Anthony-Tolbert \(2001\)](#) revealed an elevated rate of depressive symptom adolescents with impaired hearing and or hard of hearing. [Andrews et al. \(1999\)](#) in a report on mental health, revealed depression as the most commonly reported disorder of mental health with higher reported cases of depressive symptoms by individuals with sensory impairment. Among all individuals with sensory impairment, those with whose hearing disability tend to hardly report issues of depressive symptoms due to difficulties of communication. Hence, the variant in quality of life and mental health status among individuals with impaired hearing may be directly proportional to the time of loss in hearing sensitivity.

Studies of [Luey et al. \(1995\)](#) and [Kamil et al. \(2016\)](#) remarked that increased psychological morbidity, frailty, and social isolation among the deaf are age-related. Similarly, the degree of loss in the hearing sensitivity varies among the deaf irrespective of the onset of hearing loss. Hence, the impact or severity of deafness on communication, social integration or relationship, perceived psychological disorders, and level of depressive symptoms among the deaf may differ from one individual to another as indicated in 2002 by [de Graaf and Bijl](#). Based on the aforementioned, it may be assumed that as there is variation in the degrees of deafness, its impacts on the severity of depressive symptoms may seem alike even across gender. Studies about mental health particularly with depression identified differences in the depressive symptoms as exhibited between male and female ([Hernandez et al., 2011](#); [Rostami et al., 2014](#)); The results reported by [Romans, Tyas, Cohen, and Silverstone \(2007\)](#) found that a large percentage of adolescent females in late adolescence are at risk of increased difficulties of stressful life events, pubertal transition and mental health challenges. Depressive symptoms have been observed across gender divides, but the contribution of loss in hearing sensitivity could add to the challenges presented by depression. Although, [Theunissen et al. \(2011\)](#) in their study reported that gender differences is not related to depressive symptoms, but a 2004 study by [Tambs](#) among Dutch deaf reveals that deaf females had more mental health challenges than the males.

As against the finding of [Harada et al. \(2008\)](#) who identified higher depressive symptoms among males than females, [Li et al. \(2015\)](#) in a five-year study found higher depressive rate among women than men affiliated with different religious practices. Women have been found to actively engage in more religious practices than men with the varied implication of religiosity on general mental health ([Stroppa et al., 2018](#)). Until now, studies on religiosity and depressive symptomology have focused on individuals without deafness although reports of those finding have largely been inconsistent. Few studies ([Petts & Jolliff, 2008](#); [Lerman et al., 2018](#)) have averred that women who actively participated in religious activities have access to robust social and emotional support and a potential decrease in depressive symptoms. During adolescence, many individuals with impaired hearing (particularly the postlingually adolescents with impaired hearing) struggle and wrestle with identity crises even within the family structure. Family structures in recent times have changed from the traditional family structure of father, mother, and their children (intact family) due to death of a spouse, divorce or separation ([Chau et al., 2014](#)). As noted by [Brown \(2004\)](#), disruptions in family ties may result in several adverse mental health challenges for children and adolescents. Specifically, [Behere et al. \(2017\)](#) posited that children and adolescents from non-intact families are exposed to an elevated risk of depressive symptoms. Children and adolescents of non-intact families are three times more likely to report depressive symptoms compared to those from intact families ([Avison, 2002](#)). Reports about satisfaction with homes in respect to family dynamics have been inconsistent with how adolescents felt satisfied with their home. For instance, satisfaction with life and home was found to be lowered ([Shek, 2007](#)) among children from separated families than those from intact families. However, other findings of similar studies reported an insignificant relationship between satisfaction with home, family dynamics, and depression ([Zimmerman et al., 1995](#)).

Prior studies have beamed research light on family dynamics and depressive symptoms among adolescents in the developed society, but the gap still exists in studies that examined depression among the adolescents with impaired hearing especially in Africa whose education of her citizens with special needs is under threat. Although advocacy has led to an increment in the enrollment of learners with disabilities in various special educational needs programme, particularly in Nigeria, the appalling state of school environment and lack of adequate infrastructures ([Ejikeme & Ejikeme, 2013](#)), stereotypic nature of the school, and negative attitudinal behaviour ([Adebisi et al., 2014](#)) have being a

source of demotivation and less school satisfaction for adolescents with impaired hearing, thus, may contribute to issues of depression as experienced by in-school adolescents with impaired hearing. Unfortunately, how school environment and deaf learners' degree of school satisfaction influence depressive symptoms remains a mirage, other studies among participants without hearing loss revealed that school satisfaction has a very strong affinity with the mental health of adolescents (Park & Huebner, 2005). Over the years, various studies (Leigh et al., 1989; Turner et al., 2007; Beck & Brad, 2009; Brewster et al., 2018) have determined issues of depression via interpersonal and environmental factors; gap exist with studies that query intrapersonal determinant of depressive symptoms especially among in-school deaf with impaired hearing. Therefore, this study determined symptoms of depression exhibited by in-school adolescents with impaired hearing and its associated intrapersonal causative variables. The attribution theory (Weiner, 1986) informed this study, as it is concerned with the interpretation of life situation in relation to cognitive and affective characteristics. The theory assumed that behavior is observed, determined, and deliberate due to both intrinsic and extrinsic factors.

METHODOLOGY

PARTICIPANTS

This cross-sectional study was carried out between July 15, 2019, to September 13, 2019, among in-school adolescents with impaired hearing in Lagos, Oyo, and Osun states in the South West region of Nigeria. Data collection was done within between the period of end of session academic assessment and the period when learners were aware of their all-year academic performances. Deaf learners within ages 13 and 25 years from high schools for learners with impaired hearing within the capital of the state were purposively selected for the study. Two high schools each from states capitals were randomly selected through a ballot system. As shown on Table 1, 236 adolescents (Male, n = 131; 55.0%; Females, n = 107; 45.0%) who are either prelingually deaf (n = 93; 39.1%) or postlingually deaf (n = 145; 60.9%) were also randomly sampled from both the junior grades (n = 136; 57.1%) and the senior grades (n = 102; 42.9%) section within the selected schools. Learners with impaired hearing born to parents with hearing impairment were excluded from participating in the study. A total of 204 in-school adolescents with impaired hearing representing 85.7% of the sample population were Christians while only 34(14.3%) in-school adolescents with impaired hearing in this study were Muslim. Forty-four representing 18.5% of participants were drawn from inclusive schools, 110(46.2%) from mainstream schools, and 84(35.3%) in-school adolescents with impaired hearing from segregated schools participated in the study. A total of 142(59.7%) identified with the intact family structure, that is, they are living with both parents while 96(40.3%) participants identified with the non-intact family. In other words, 96 participants representing 40.3% were not living with both parents perhaps because of the death of either the father or mother, separation of the parent as a result of unsettled marital discords or divorce. Based on the participants satisfaction with their home environment, 107(45.0%) of the in-school adolescents with impaired hearing who participated in the study were very satisfied with their home conditions while 131(55.0%) were not. Similarly, 56(23.5%) participants were very satisfied with the school environment, 81(34.0%) said they were satisfied while 69(29.0%) said that the school environment is not very satisfying and only 32(13.4%) participants said were not at all satisfied with the school environment.

MEASURES

The research instrument used for the study was tagged "Depressive Symptomatology Questionnaire". The questionnaire was subdivided into sections A, B, and C. Section A, sought demographic information from the participants, Section B was the Depressive symptoms were assessed using the 20-item Center for Epidemiologic Studies Depression (CES-D) Scale (Radloff, 1977). Each item was scored on a standard four-point scale of 1–4points instead of the original 0-3points. Hence, the potential range of the Scale is 0–80. Respondent to the CES-D Scale chooses between four options based on how often they felt depressive symptoms in the past week. Positively worded items in the CES-D Scale were reversed. Total CES-D scores were derived by taking a sum of the items. Based on the scores on the CES-D Scale, depressive symptoms were dichotomized into moderate and severe. The CES-D was revalidated by the author among samples of similar characteristics from Kwara state, Nigeria, and an internal consistency reliability of 0.89 was obtained, Section C of the Depressive Symptomatology Questionnaire, with six items designed in a 'Yes' or 'No' sought for the major source of depressive symptoms among the participants.

Table 1: Demographic characteristics of participants

Variables		Frequency (%)
Age	13-19	166(69.7)
	20-25	72(30.3)
Religion	Christianity	204(85.7)
	Islam	34(14.3)
Gender	Male	131(55.0)
	Female	107 (45.0)
Onset of hearing loss	Prelingual hearing loss	93(39.1)
	Postlingual hearing loss	145(60.9)
Grade level	Junior secondary	136(57.1)
	Senior secondary	102(42.9)

School type	Inclusive school	44(18.5)
	Mainstream school	110(46.2)
	Segregated school	84(35.3)
Family type	Intact family	142(59.7)
	Non-intact family	96(40.3)
Satisfaction with home environment	Yes	107(45.0)
	No	131(55.0)
Satisfaction with school environment	I am Very satisfied	56(23.5)
	I am satisfied	81(34.0)
	It is not very satisfying	69(29.0)
	Not satisfying at all	32(13.4)

PROCEDURE

All participants were duly informed about the nature and purpose of the study. Three Sign Language Interpreters recruited as research assistants gave a full explanation of the need for the study and the role of the participants in the study. All related questions from the participants were adequately answered, and they were assured of full confidentiality. Participants gave their consent to participate in the study through a written informed consent form a day before attending to the research instrument. Participation in the study was completely voluntary. The participants were assembled and attended to the research instrument in the early hours of the day in a classroom with little or no environmental distractions. A suitable and comfortable sitting arrangement was provided for the participants. The questionnaire was answered within an average time of 33 minutes.

DATA ANALYSIS

The simple percentage, mean, and standard deviation were used to determine the frequency of occurrence of depressive symptoms. The symptoms were equally ranked. Statistical significance for categorical and continuous variables was determined using the Student's *t*-test and Chi-Square analysis at 95% confidence interval through IBM SPSS v23.

RESULTS

Table 2 showed the percentage response rate of depressive symptoms as experienced by in-school adolescents with impaired hearing. In the past 7 days before this study, 61.8% of the respondent largely stated that they could not get 'going' ($\bar{x} = 3.57$), 56.3% had poor appetite due to situations that overweight them ($\bar{x} = 3.42$), 52.1% identified with the fact that even with the help of other who have perhaps tried to encourage them, hence, the depressive feeling could not be shaken off ($\bar{x} = 3.37$). In the last one week before the respondent attended to the questionnaire, 140(58.8%) of the respondents felt fearful possibly because the in-school deaf adolescent perceived that people were unfriendly to them ($\bar{x} = 3.27$) and thus 58.8% of the respondents felt depressed ($\bar{x} = 3.26$).

Table 2: Percentage response of depressive symptoms among in-school adolescents with impaired hearing

Scale Items	Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)	Mean ± Std	Rank
I was bothered by things that usually don't bother me.	35 (14.7)	23 (9.7)	101(42.4)	79 (33.2)	2.94 ± 1.01	13 th
I did not feel like eating but my appetite was poor.	2 (0.8)	30(12.6)	72(30.3)	134(56.3)	3.42 ± .74	2 nd
I felt that I could not shake off feelings even with help from my family or friends.	1 (.04)	33(13.9)	80(33.6)	124(52.1)	3.37 ± .73	3 rd
I felt I was just as good as other people.	19(8.0)	86(36.1)	53(22.3)	80(33.6)	2.82 ± .99	15 th
I had trouble keeping my mind on what I was doing.	92(38.7)	57(23.9)	59(24.8)	29(12.2)	2.12 ± 1.07	17 th
I felt depressed.	3(1.3)	71(29.8)	24(10.1)	140(58.8)	3.26 ± .93	6 th
I felt that everything I did was an effort.	37(15.5)	99(41.6)	64(26.9)	38(16.0)	2.43 ± .93	16 th
I felt hopeful about the future	123(51.7)	48(20.2)	30(12.6)	37(15.5)	1.92 ± 1.12	18 th
I thought my life had been a failure.	12(5.0)	29(12.2)	85(35.7)	112(47.1)	3.23 ± .85	8 th
I felt fearful.	34(14.3)	8(3.4)	36(15.1)	160(67.2)	3.35 ± 1.07	4 th
My sleep was restless.	2(.80)	49(20.6)	84(35.3)	103(43.3)	3.21 ± .79	9 th
I was happy.	162 (68.1)	25(10.5)	32(13.4)	19(8.0)	1.61 ± .99	19 th
I talked less than usual	12(5.0)	80(33.6)	68(28.6)	78(32.8)	2.89 ± .92	14 th
I felt lonely	22(9.2)	24(10.1)	80(33.6)	112(47.1)	3.18 ± .95	11 th
People were unfriendly.	13(5.5)	32(13.4)	71(29.8)	122(51.3)	3.27 ± .89	5 th
I enjoyed life.	183(76.9)	44(18.5)	5(2.1)	6(2.5)	1.30 ± .63	20 th
I had crying spells.	21(8.8)	37(15.5)	58(24.4)	122(51.3)	3.18 ± .99	10 th
I felt sad.	24(10.1)	48(20.2)	57(23.9)	109(45.8)	3.05 ± 1.03	12 th
I felt that people dislike me	15(6.3)	44(18.5)	51(21.4)	128(53.8)	3.23 ± .96	7 th
I could not get "going."	3(1.3)	6(2.5)	82(34.5)	147(61.8)	3.57 ± .61	1 st
Weighted Mean = 2.86					2.86	

This study further examined the differences between some contextual factors and the expression of depressive symptoms among in-school adolescents with impaired hearing. Results obtained as shown on table 3 revealed a significant difference ($F = 7.61$; $p < 0.05$) in the expression of depressive symptoms between male and female. Also, a significant difference was found between depressive symptoms and variants in the onset of hearing loss ($F = 3.59$; $p < 0.05$) as well as between participants from intact and non-intact families ($F = 23.14$; $p < 0.05$). However, no statistically significant difference was observed between expression of depressive symptoms among the participants across age ($F = 2.89$; $p > 0.05$); religion ($F = 0.21$; $p > 0.05$) and their satisfaction with their environment ($F = 0.12$; $p > 0.05$) respectively. The aggregate score of the participants on the CES-D Scale was used to dichotomized depressive symptoms expressed by the participants in to moderate ($n = 173$) and severe depressive symptoms ($n = 65$).

Cross tabulated result across the two dichotomized level of depressive symptoms as shown on table 4 showed no observable relationships with age, religion, gender, the onset of deafness, participants satisfaction with the home and school environment but an observable relationship was revealed between levels of depressive symptoms and family type ($\chi^2 = 9.183$; $p < 0.05$). When the participants were asked about the major source of their depressive mood, 161(67.6%) of the participants indicate academic stressor as the major source of their worry followed by lack of access to communication 127(53.4%) and rejection and isolation 121(50.8%) respectively.

Table 3: Independent sample Test of contextual factors on depressive symptoms among in-school adolescents with impaired hearing

Depression		Mean \pm Std	F value	p < .05	Remark
Age	13-19	57.29 \pm 5.17	2.89	.090	Not significant
	20-25	57.59 \pm 3.82			
Religion	Christianity	57.48 \pm 4.91	.214	.644	Not significant
	Islam	56.79 \pm 4.09			
Gender	Male	57.37 \pm 5.45	7.61	.006	Significant
	Female	57.40 \pm 3.87			
Onset of hearing loss	Prelingual	57.47 \pm 3.98	3.59	.052	Significant
	Postlingual	57.33 \pm 5.27			
Satisfaction with home environment	Yes	57.16 \pm 4.89	.117	.733	Not significant
	No	57.56 \pm 4.73			
Family type	Intact parent	59.09 \pm 4.89	23.14	.000	Significant
	Non-intact parent	54.86 \pm 3.35			

Table 4: Correlated contextual variables with dimensions of exhibited depressive symptoms in-school deaf with impaired hearing

Variable		Moderately Depressed Symptom (N = 173)	Severely Depressed Symptom (N = 65)	χ^2		Sig Remark
Age	13-19	124 (74.7%)	42 (25.3%)	1.12	p > .05	Not significant
	20-25	49 (68.1%)	23 (31.9%)			
Religion	Christianity	148 (72.5%)	56 (27.5%)	.014	p > .05	Not significant
	Islam	25 (73.5%)	9 (26.5%)			
Gender	Male	100 (76.3%)	31 (23.7%)	1.95	p > .05	Not significant
	Female	73 (68.2%)	34 (31.8%)			
Onset of hearing loss	Prelingual	66 (71.0%)	27 (29.0%)	.228	p > .05	Not significant
	Postlingual	107 (73.8%)	38 (26.2%)			
Satisfaction with home environment	Yes	79 (73.8%)	28 (26.2%)	.128	p > .05	Not significant
	No	94 (71.8%)	37 (28.2%)			
Satisfaction with home environment	Very satisfying	44 (78.6%)	12 (21.4%)	1.372	p > .05	Not significant
	Satisfying	58 (71.6%)	23 (28.4%)			
	Not very satisfying	49 (71.0%)	20 (29.0%)			
	Not at all	22 (68.8%)	10 (31.3%)			
Family type	Intact parent	93 (65.5%)	49 (34.5%)	9.183	p < .05	Significant
	Non-intact parent	80 (83.3%)	16 (16.7%)			

In order to determine the major cause of depression among the study participants, participants were asked about their major source of worry, anxiety and ultimately depression, finding reported in figure 1 revealed that bullying and physical neglect seems to be a lesser factor that predicts depression among in-school adolescents with impaired hearing.

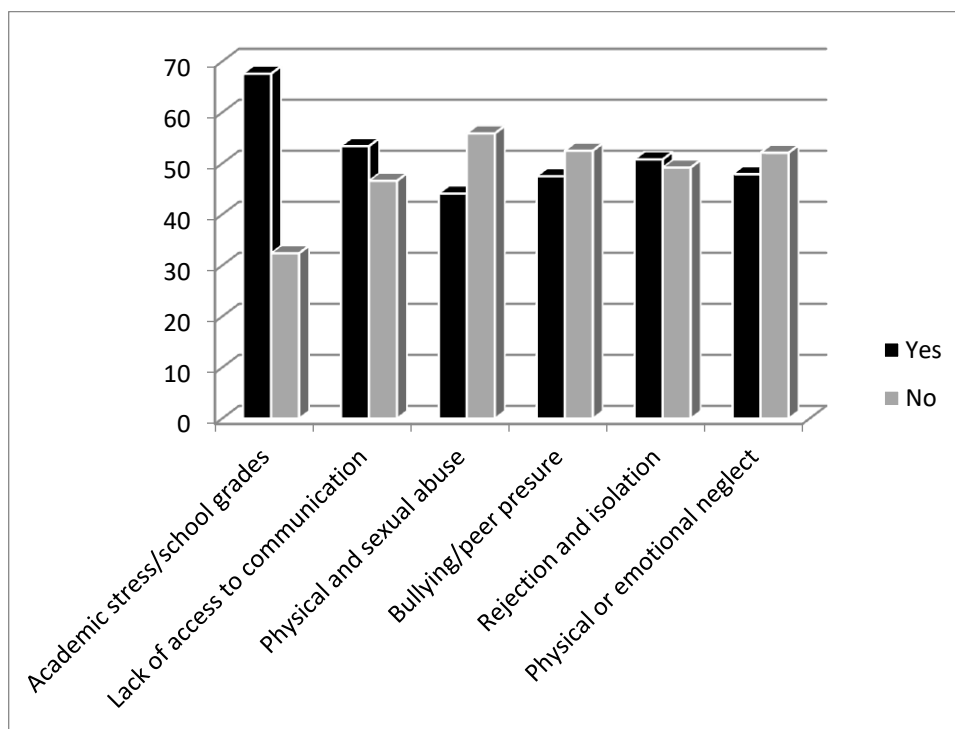


Figure 1: Bar chart showing major source of depression among in-school adolescents with impaired hearing

DISCUSSION

The ability to express and respond to auditory-verbal stimuli is free without any provocation or additional extra effort through an assistive listening device is a challenge faced by individuals with impaired hearing. The person with impaired hearing constantly encounters difficulties in verbal communication ([Adigun, 2020](#)). Thus they experience exclusion from active participation in activities that large requires the use of the sense of hearing. While individuals with impaired hearing contend with associated communication challenges and negative attitude of others towards them, adolescents with impaired hearing have to deal with both with challenges of communication difficulties as well as that associated with the pubertal period ([Rostami et al., 2014](#); [Steinberg, 2014](#)). In particular, this study can report that adolescents with impaired hearing have a mirage of psychosocial distress to wrestle. They are concerned with the social environment, how to cope, and compete in the ‘world of words’ and fearful of what the future holds in for them. Findings in this study revealed that deaf with impaired hearing are not constantly bordered with less appetite for food nor enjoy the robust interpersonal relationship with individuals without hearing loss. This finding is in tandem with previous studies which earlier reported exclusion, isolation ([Leigh & Anthony-Tolbert, 2001](#); [Turner et al., \(2007\)](#)), impaired self-esteem, decreased concentration, feeling of guilt and hopelessness ([Andrews et al., 1999](#); [Brewster et al., 2018](#)), and challenging mental health and suicide ideation ([Theunissen et al., 2011](#)).

This study can confirm that depressive symptoms as expressed among adolescents with impaired hearing is significantly different for boy and girls and even with those with prelingual and postlingual deafness. This finding is perhaps due to the emotional stability and endurance ability of both male and female ([Singh et al., 2013](#); [Khurshid & Khurshid, 2018](#)). [Tarannum and Khatoon \(2009\)](#) noted that the ability to be stable emotionally with less expression of depressive symptom is influenced by gender. Females have a longer emotional threshold than the male, and this might have predicted the observed phenomenon as presented in this study. Further, female participants in this study had a higher mean value than their male counterpart. This, however, implies that female in-school adolescent with impaired hearing has more potential to be skewed towards an elevated expression of depressive symptoms. This finding is in support of [Romans et al. \(2007\)](#); [Hernandez et al. \(2011\)](#); [Li et al. \(2015\)](#); [Hoare et al. \(2016\)](#). Depressive symptoms were found by [Romans et al. \(2007\)](#) to be decreasing among male adolescents than female adolescents. Large percentages of adolescent females in late adolescent are at risk of increased difficulties of stressful life events, pubertal transition, and mental health challenges ([Tambs, 2004](#); [Hoare et al., 2016](#)).

Finding in this study, however, negates that of [Theunissen et al. \(2011\)](#) who reported that gender differences are not related to depressive symptoms. Unlike the study of [Petts and Jolliff \(2008\)](#); [Leurent et al., \(2013\)](#) and [Lerman et al. \(2018\)](#) who had found and reported interactions between religious affiliations and practices to mental health, this current can not found any correlation between religion and depressive symptoms but can be confirmed that a significant

difference exists in the expression of depressive symptoms between prelingual and postlingually deaf in-school adolescents. This study is in conformity with the observation of [Leigh et al. \(1989\)](#); [Andrews et al. \(1999\)](#) and [Leigh and Anthony-Tolbert \(2001\)](#) who at various time specifically observed reported rise in depressive symptoms among deaf youths. The only difference between this study and previous studies is that this study further identified depressive symptoms among two groups (prelingual and postlingual) of deafened adolescents. This study has also brought to the fore the relationship between family dynamic and depressive symptoms among adolescents with impaired hearing. The result showed that deaf with impaired hearing from either the intact family or the non-intact family all experience depressive symptoms in addition to the mental health challenges presented by loss in the sense of hearing. This study, thus provides support for the study of [Gore et al. \(1992\)](#); [Brown \(2004\)](#), and [Yu et al. \(2015\)](#) whose researches have previously associated depression with family dynamics. Other studies, for instance, [Van Peer and Van Den Bergh \(2005\)](#); [Chau et al. \(2014\)](#), and [Behere et al. \(2017\)](#) posit that children and adolescents from non-intact families are exposed to an elevated risk of depressive symptoms. Children and adolescents of non-intact families are three times more likely to report depressive symptoms compared to those from intact families ([Avison, 2002](#); [Yu et al., 2015](#)).

Regarding the various in the family structure and its associated effects, children's and adolescents degree of satisfaction may become a source of depression. Although, findings from this study did not identify any association of participants' degree of satisfaction with either their home or school environment just like what was observed in the study of [Grossman and Rowat \(1995\)](#) and [Zimmerman et al. \(1995\)](#), however, other studies conducted among adolescents without deafness have proved otherwise ([Antaramian et al., 2008](#)). As stated by [Antaramian, Huebner, and Valois \(2008\)](#) mental health status of adolescents is a function of family attributes, support, involvement, and the relationship between the parents and their children. When comparing adolescents from non-intact families to those from intact families, [Jeynes \(2005\)](#) found that higher academic achievement and potential, healthier lifestyle, and fewer delinquencies among adolescents from intact families. On the contrary, adolescents from non-intact families exhibit more aggressive tendencies, lower self-concept, and negative emotions with heightened depressive symptoms. Thus, in-school adolescents from non-intact families may be at risk for a range of psychological distress and negative behavior that could contribute to decreased wellbeing and lower academic difficulties.

CONCLUSION

This study has identified a high prevalence of moderate depressive symptoms among in-school adolescents with impaired hearing. It can be said that adolescents with impaired hearing are faced with multiple challenges that frustrate positive quality of life, psychosocial wellbeing and thus are exposed to depressive symptoms than it can be for their peers without hearing loss. This study also concludes that home dynamics and the parent-child relationship are essential factors that may predict elevated depressive symptoms and exhaustion, which may lead to severe mental health disorders and ultimately, suicide ideation. Academic distress and underachievement, difficulties in communication, and societal attitude towards the deaf was found to be a major determinant of depressive symptoms among adolescents with impaired hearing. This study cannot affirm the occurrence of clinically significant depressive disorder among in-school deaf with impaired hearing, but in order to avoid the occurrence of an extreme impact of depression on deaf adolescents school counselling services should be adequately instituted in the schools. Based on the level of depressive symptoms among in-school deaf with impaired hearing, therapeutic intervention programmes specifically designed for the deaf could assist deaf in school with essential coping strategies that will help in declining the trend of mental health disorder and depression. Parents' should be conscious of their attitude and decision as such can negatively influence mental health stability of deaf with impaired hearing. Given the finding of this study, further studies focusing on therapeutic intervention leading to reduction on the negative effect of depressive symptoms, especially among school-going deaf with impaired hearing is warranted.

LIMITATION AND STUDY FORWARD

This study is not exhaustive as it has only investigated issues of depression among in-school deaf with impaired hearing. It due to logistic and other constraints, the study could not explore the role of parents/home environment on issues of depression among the deaf. Also, this study observed an urgent need for an intervention that will serve as a motivation and equip deaf with the impaired hearing with necessary skills towards being a well-adjusted adult. Therefore, it is expedient for future studies to access the implication of home environmental factors on the level of depression exhibited by deaf with impaired hearing. Further studies should engage in intervention strategies to promote the psychosocial wellbeing of depressed deaf with impaired hearing.

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AUTHORS CONTRIBUTION

Olufemi Timothy Adigun conceptualized the study, analysed the data collected, and completed all sections of the manuscript.

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