

## *Psychological distress among adolescents with hearing impairment: the predictive strength of gender, degree of hearing loss, school type and parents' communication competence*

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*This study investigated the predictive strength of gender (male and female), degree of hearing loss (mild/moderate and severe/profound), school type (school of the deaf, mainstreams with special services and inclusive school with oral instruction) and parents communication competence (oral communication, oral communication with sign language at home) on psychological distress of adolescents with hearing impairment in Nigeria. A sample of 63 distressed adolescents with hearing impairment participated in the study. Zung Self-Rating Depression Scale and Kesler Psychological Distress Scale were used for data collection. Data were analyzed using Pearson's product moment correlation and multiple regressions. Findings revealed that the independent variables jointly accounted for variation in the dependent variable, while severe/profound had the greatest relationship with psychological distress. It is therefore imperative that the adolescents with hearing impairment should be helped to focus on adaptive ways that could help them develop effective interpersonal, cognitive and emotional behaviours.*

**Key words:** *adolescents with hearing impairment, psychological distress, gender and degree of hearing loss, school type and parents' communication competence*

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## *Introduction*

Hearing loss is a chronic condition for which medical or surgical treatment is not commonly available. This condition often brings communication problems that make social and emotional development difficult. Specifically, studies have shown that deaf or adolescents with hearing impairment exhibit more symptoms of psychological distress than normal hearing adolescents (Mosaku, Akinpelu & Ogunniyi, 2015; Mohanraj & Selvaraj, 2013). Psychological distress, compared to diagnostic mental disorder, is a less specific measure of psychopathology that can be used to describe the overall mental health of a population (Korkeilla, 2000). It is the emotional condition that one feels when it is necessary to cope with frustrating, upsetting or harmful situations. Psychological distress is generally measured as non-specific psychological symptoms such as anxiety, depression, insomnia and perceived stress. In this study, psychological distress specifically refers to self-reported depression.

Depression is a mental disorder in which a person suffers long periods of sadness and other negative feelings. Depression according to the World Health Organisation (2012), is regarded as a common mental disorder affecting an individual with significant depressed mood, displeasure decreased energy, feeling of guilt and reduced self-worth, sleep disturbance, loss of appetite and poor concentration. Depressive symptoms are characterized by sadness and dejection, cognitive distortion, inability to concentrate, inability to experience pleasure, irritable mood, anxiety and apprehension, loss of appetite, over-eating, aches and pains, fatigue and sleep disturbance (National Institute of Mental Health, 2014; Rostami, Bahmani, Bakhtayari, & Movallali, 2014). However, depressive disorder for youth and adolescents includes major depressive disorder (MOD), dysthymic disorder, cyclothymic disorder, bipolar disorder (I and II); mood disorder due to a general medical condition, substance induced mood disorder and mood disorder not otherwise specified and depressive disorder not otherwise specified (American Psychiatric Association, 2013). Depression has serious consequences for adolescents. It results in disruption in social and familial functioning and poor school performance (Rostami et al., 2014). Depressive symptoms in adolescents may stem from a wide variety of situations that involve social interactions such as loss of person's ability to interact, rejection and isolation. In some cases, depression can be caused by an associated hearing loss (Adigun, 2017). However, distress symptoms

among hearing impaired individuals are not different from symptoms experienced by hearing individuals. For example, Hsu, Hsu, Wen, Lin, & Tsai (2016) while investigating the psychological distress dimension of the hearing impaired subjects, reported that they were more prone to depression, anxiety, interpersonal sensitivity and hostility than subjects with no hearing problem. It is presented that hearing impairment may discourage hearing impaired individuals from exposing themselves to socially challenging situations and thereby producing isolation that lead to depression, irritability and feeling of inferiority. In another instance, Hindley (2005) and van Gent, Geodhart and Traffers, (2011) found that hearing impaired subjects were found to be more restless, distractible, irritable, hypertensive, aggressive, lack perseverance, shy, crying over minor annoyance, suggestible, lack self-confidence, show temper outburst, and nail biting.

Several factors many predispose hearing impaired adolescents to the development of psychological distress. One consistent factor is degree of hearing impairment. Degree of hearing loss according to American Speech-Language-Hearing Association (2016) are categorised as slight hearing loss, 16-25 dB, mild hearing loss, 26-40 dB, moderate hearing loss, 41-55 dB, moderately severe hearing loss, 56-70 dB, severe hearing loss, 71-90 dB and profound hearing range from 91 dB and above. These various degrees of loss have implications on the life styles of the affected persons in form of health related issues. Researches have reported the prevalence of mental health problems in deaf and hard of hearing youth (van Gent, Goedhart, Hindley, & Treffers, 2007; Van Eldik, Treffers, Veerman, & Verhulst, 2004) For instance, a research carried out by Kim, Kim, Park, Joe, Sim, & Choi (2017) on severe hearing impairment and risk of depression, reported high rate of depression among the severe hearing impaired group than in the control group. Severe/ profound hearing impairment could then increase the risk of distress conditions among adolescents with hearing impairment not minding the race of colour. Adolescents with profound hearing loss are often forced to come to terms with their deafness since not even the most developed technological devices can help their hearing significantly. These deaf individuals are likely to accept their deafness as a condition that they have to live with. They often seek out the company of similar others and learn the different strategies that can help them live a full life regardless of their deafness. On the other hand, these who have lesser hearing loss often try to conceal their deafness. They have some residual hearing that enables them to hear some sounds and voices around them, yet they cannot fully

function as hearing in a world that relies on hearing and speaking. However, repeated experiences of ineffective communication may lead to frustration and diminished self-regard (Tseng, Hu, Liu, Yang, & Shen, 2016).

Another factor is the social hearing impaired adolescents attend. Deaf students can be placed in different educational settings, ranging from special schools to mainstream schools. Research shows that those deaf individuals who attend special schools where all the other students are deaf and sign language is the primary mode communication will tend to have lower distress and peer problems. In these schools, students learn and socialize in environment that enhances the acceptance of hearing impairment instead of treating it as a deficiency. Also, these hearing impaired students do not have to face negative attitudes from hearing students during their everyday lives (Schirmer 2001; Bat-Chava, 2000). It could be reasonably argued that life in full mainstreaming or inclusive settings with oral education is likely to pose some problems such as frustration, bullying, rejection and isolation. However, research shows that attending schools with mostly hearing students, while having the opportunity to interact with other hearing impaired students, is beneficial since it gives hearing impaired students the chance to learn how to function in the learning world (Rostami et al, 2014).

A number of studies revealed that those hearing impaired children who are raised by hearing impaired parents often have advantages and disadvantages over those who are born to hearing parents because they are grown up in an environment where communication depends on visual cues (eye contact, lip-reading and body language). Hearing impaired parents that use sign language while interacting with their children are more likely to understand each other's needs and feelings (Crowe, 2003; Schirmer, 2001). However, parents who are unable to sign tend to raise children with limited opportunity to develop the social skills needed to interact broadly in society (Desselle & Pearlmutter 1997 as cited in Jambor & Elliot, 2005). Consequently, these children often feel more socially isolated in their home and communities than those who have less restricted opportunities to communicate in their parents' environment (McIntosh, 2000; Fellingner, Holzinger, & Pollard, 2012).

Generally speaking, the most consistent and robust finding in the field of psychological distress is that female adolescents and adults experience more severe and prolonged episodes of psychological distress (Moskness, Moljord, Espires, & Byrne, 2010). Prior to adolescence, rate of distress are

fairly equivalent in girls and boys with some evidence suggesting a higher risk among boys (Parttison & Lynd-Stevenson, 2001). The emergence of a gender difference may begin prior to puberty and by early to mid-adolescence, the rate of distress symptoms rises dramatically in girls with females being two to threetimes more likely to experience depression than boys (Cote, Boivin, Liu, Nagin, Zoccolillo, & Tremblay, 2009). However, a study conducted by Mohanraj and Selvaray (2013) shows that male hearing impaired students exhibit symptoms of distress (anxiety and aggression) more than female hearing impaired students.

Several studies have assessed the importance of gender, degree of hearing loss, school type and parents communication competence in the development of psychological distress among hearing impaired adolescents. These studies have not yielded consistent patterns of relation. In some cases, even when a strong association has been reported, such as in the case of the positive relationship between degree of hearing loss and development of psychological distress, the extent and nature of relationship are not uniform across social settings. This study, therefore, investigated the predictive strength of gender, degree of hearing loss, school type and parents' communication competence on the development of psychological distress symptoms among adolescents with hearing impairment in two States of western Nigeria. Based on the literature review, the following research questions were asked.

### *Research Questions*

Research Question 1: To what extent do gender, degree of hearing loss, school type and parents' communication competence (independent variables) predict psychological distress (dependent variable) among hearing impaired adolescents?

Research Question 2: Is there any significant relationship between independent variables and dependent variable?

## *Materials and Methods*

The study employed descriptive survey research design of ex-post facto type in which no variable was manipulated but investigating existing variables and the population for the study comprised all adolescent with hearing impairment in two western states of Nigeria (Oyo state and Lagos states). The samples for this study comprised adolescents with hearing impairment. They were characterized by exhibiting psychological distress symptoms. The degree and onset of hearing losses of the samples were further determined through case history and audiometric examination. The participants were assessed by an Audiologist using Micro 53 brand of Audiometer to validate their level of hearing loss. Specifically, three secondary schools (deaf school, mainstream with special class/services for the deaf and inclusive school with sign language and oral instructions) were purposively selected from two states of Western Nigeria (Oyo and Lagos). In these schools, a total of 63 distressed adolescents with hearing impairment were purposively selected. Kesler Psychological Distress Scale with the index score of  $x/80$  and above was the screening tools used to determine adolescents with psychological distress. The adolescents were in the 13-19 age range ( $\pi = 16.7$ ;  $SD = 5.69$ ). This and other demographic characteristics of the participants are presented in the Table 1. However, students were required to satisfy the following requirements before they could be selected: they should not have other disability such as visual impairment, seizure disorders, impaired intellectual functioning and cerebral palsy; they should not be using hearing aid; they should be secondary school students between 13-19 years; and they should be psychologically distressed.

Table 1. Demographic characteristics of participants

Variable	N	Percentages (%)
<b>Gender</b>		
Male	30	47.62
Female	33	52.38
<b>Class</b>		
Junior Class	25	39.68
Senior Class	38	60.32
<b>School Type</b>		
Special School	18	28.57
Mainstream with special integrated services/class for the deaf	21	33.33
Inclusive school with oral instruction	24	38.10
<b>Degree of Hearing Loss</b>		
Mild/Moderate	39	61.90
Severe/Profound	24	38.10
<b>Onset of hearing loss</b>		
Congenital	22	34.92
Post-linguistic	41	65.08
<b>Parents' Communication Style</b>		
Oral communication at home	33	52.38
Oral communication with sign language	19	30.16
Sign language at home	11	17.46
<b>Parents' Hearing Status</b>		
Hearing impairment	9	14.29
Non-Hearing impairment	54	85.71
<b>Parents' level of education</b>		
<b>Father</b>		
Primary	37	58.73
Secondary	15	23.81
Tertiary	11	17.46
<b>Mother</b>		
Primary	43	68.26
Secondary	13	20.63
Tertiary	07	11.11

### Instruments

Two main instruments were used in this study. These included *Kesler Psychological Distress Scale* – KPDS (Kessler, Barker, Colpe, Epstein, Gfroerer, & Hiripi, 2003) and *Zung Self-Rating Depression Scale* – ZRDS (Zung, 1965). The ZRDS was supported by the demographic information

form for the participants. This action form for the participant's age, gender, class, onset and degree of hearing loss, school type, parents' communication style, parents' hearing status and level of education.

The ZRDS is a 20-item self-completed instrument designed to examine the area of pervasive affect, psychomotor, psychological and ideational phenomena shown to indicate the presence of a depressive state. The scale has been acceptably validated (Zung, 1965) and found both to distinguish depressive illness from other psychiatric diagnoses. The possible range of score 0-80 and according to Zung (1965) and index for the ZSRS can be obtained by dividing the sum of the values (raw scores) obtained on the 20 items by the maximum possible score of 80. For the purpose of this study, this instrument was revalidated through test retest method. This involved administration of the instrument to 15 distressed adolescent with hearing impairment (other than those that were involved in the study) on two occasion of four weeks interval. Cronbach's alpha was then calculated to analyze the internal constituency which generated an alpha value of 0.58 for the sample.

KPDS is a 10-item uni-dimensional scale specifically designed to assess psychological distress in population surveys. The K10 was designed with item response theory model to optimise its precision and sensitivity in the clinical range of distress, and to insure a consistent sensitivity across gender and age groups (Kessler et al., 2003). The scale evaluates how often respondents experienced anxio-depressive symptoms (for instance nervousness, sadness, restlessness, hopelessness, worthlessness). Each item is scaled from 0 (none of the time) to 4 (all of the time) and the local score is used an index of psychological distress. For the purpose of this study, this instrument was revalidated through test retest method. This involved administration of the instrument to 15 distressed adolescent with hearing impairment (other than those that were involved in the study) on two occasion of four weeks interval. Cronbach's lpha was then calculated to analyze the internal constituency which generated an alpha value of 0.65 for the sample. Moreover, the cut-off mark for the study eligibility was calculated as 44.

### Procedure

First, permission was sought from the Ministry of Education from the two States, and the principals of the schools involved in the study. Both the schools and participants were purposively selected. For the schools, they were selected majorly on the basis of their type (special and integration) while participants with hearing impairment were selected on the basis of their performance on ZSRDS. The students were then approached and the purpose of the study was discussed with them. Those who wished to participate in the study were gathered in a separate classroom for the purpose of selection for study eligibility. Those that met the study eligibility were told about the ethical issues related to the study. This was discussed within the context of confidentiality of data, voluntariness, non-maleficent and beneficence to the participants. Thereafter, the researcher and the students fixed a date for the next meeting (a week after). With the assistance of each student's teacher, their parent consent was obtained before the appointed date. On the appointed date, the ZSRDS was administered to the participants. This was preceded by the form for demographic information of the participants. After the test administration, each participant was given refreshment. The demographic information of the participants was analysed using descriptive statistics of frequency count and percentage. The two research questions were analyzed using Pearson's product moment correlation and multiple regression at 0.05 level of significance.

### Results

To determine the predictive strength of gender, degree of hearing loss, school type and parents' communication competence factors on psychological distress among adolescents with hearing impairment in two western states of Nigeria, regression analysis was carried on the data collected. The results were presented in Table 2 and 3.

Table 2. Multiple regression analysis of composite effect of the factors on psychological distress

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error	F-Ratio	p
1	0.697	0.486	0.447	8.632	13.157	0.001

a. Dependent variable: Psychological distress

b. Independent variables (constant): Age (male and female), degree of hearing loss (mild/moderate and severe/profound), school type (deaf school, mainstream with special class and mainstream with oral instruction) and parents' communication competence (oral communication at home, oral communication with sign language and sign language at home).

The result in Table 2 showed that the combination of the independent variables accounted for 44.7% of the total variance in the prediction of psychological distress (Adjusted  $R^2 = 0.447$ ). This points to the explained variances of the independent variables, while the rest unexplained variances of the (55.3%) were variables out of the context of this study. The coefficient of prediction (R) between independent variables was 0.697, which implies that the independent variables jointly predicted the dependent variable. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F=13.157$ ) for relative contribution of the four factors of the independent variables to the dependent variable, the test of significance of regression coefficient is presented in Table 3.

*Table 3. Multiple regression analysis of relative effect of the factors on psychological distress*

Model	Unstandardized		Standardized	t	Sig.
	B	Std. Error	$\beta$		
Constant	7.387	2.441		4.322	0.001
Gender	0.246	0.067	0.133	0.942	0.438
Degree of Hearing loss	0.327	0.058	0.279	4.273	0.001
School Type	0.388	0.071	0.263	3.681	0.001
Parents' Communication Competence	0.193	0.048	0.168	2.876	0.038

The results in Table 3 show the relative contributions of the independent variables to the prediction of dependent variable (psychological distress). The variables contribution in terms of their magnitude is presented as follows: degree of hearing loss ( $\beta = .279$ ;  $t = 4.273$ ;  $p < 0.05$ ) and parents' communication ( $\beta = 0.168$ ;  $p < 0.05$ ). It can be observed from Table 3 that degree of hearing loss, school type, parental communication competency and gender had an effect on psychological distress.

To determine the relationship between the components of gender, degree of hearing loss, school type and parents' communication competence and psychological distress among adolescents with hearing impairment, correlation matrix was calculated on the data collected. The results were presented in Table 4.

Table 4. Correlation matrix showing the relationship between the components of gender, degree of hearing loss, school type and parents' communication competence and psychological distress

Variables	1	2	3	4	5	6	7	8	9	10	11
Psychological Distress	1.000	0.087	0.103	0.363	0.445	0.021	0.238	0.413	0.126	0.087	0.043
	-	0.063	0.077	0.073	0.051	0.002	0.046	0.095	0.001	0.032	0.001
	63	63	63	63	63	63	63	63	63	63	63
	0.087	0.071	0.081	0.271**	0.091	0.103**	0.067	0.139**	0.045	0.110**	0.033
Male	0.063	0.024	0.023	0.000	0.076	0.099	0.051	0.084	0.025	0.093	0.019
	63	63	63	63	63	63	63	63	63	63	63
	0.103**	0.068	0.136**	0.044	0.103**	0.214**	0.017	0.032	0.183**	0.023	0.127**
Female	0.077	0.047	0.001	0.056	0.001	0.095	0.001	0.013	0.091	0.001	0.022
	63	63	63	63	63	63	63	63	63	63	63
Mild/Moderate HL	0.363**	0.056	0.072	0.010	0.512**	0.038	0.017	0.511**	0.081	0.121**	0.167**
	0.073	0.001	0.041	0.001	0.086	0.016	0.001	0.077	0.009	0.080	0.003
	63	63	63	63	63	63	63	63	63	63	63
Severe/Profound HL	0.445**	0.038	0.047	0.079	0.009	0.515**	0.228**	0.117**	0.088	0.037	0.612
	0.051	0.016	0.002	0.063	0.004	0.217	0.108	0.001	0.063	0.008	0.404
	63	63	63	63	63	63	63	63	63	63	63
Special School (Deaf)	0.021	0.007	0.071	0.118**	0.071	0.001	0.117**	0.018	0.048	0.027	0.059
	0.002	0.001	0.032	0.019	0.023	0.001	0.031	0.005	0.021	0.013	0.041
	63	63	63	63	63	63	63	63	63	63	63
Mainstream with Special services	0.238**	0.134**	0.198**	0.413**	0.044	0.110	0.045	0.031	0.017	0.132**	0.018
	0.046	0.026	0.001	0.097	0.030	0.073	0.011	0.012	0.001	0.001	0.001
	63	63	63	63	63	63	63	63	63	63	63
Mainstream with Oral Instruction	0.413**	0.610**	0.079	0.059	0.061	0.039	0.411	0.018	0.113**	0.091	0.173**
	0.095	0.241	0.062	0.036	0.001	0.021	0.067	0.024	0.041	0.066	0.079
	63	63	63	63	63	63	63	63	63	63	63
Oral	0.126**	0.017	0.068	0.072	0.139**	0.071	0.111**	0.014	0.081	0.047	0.149**
Communication at Home	0.001	0.081	0.009	0.016	0.036	0.091	0.089	0.003	0.021	0.001	0.099
	63	63	63	63	63	63	63	63	63	63	63
Oral Communication with Sign Language	0.087	0.079	0.017	0.193**	0.077	0.417	0.071	0.081	0.019	0.318**	0.033
	0.032	0.018	0.009	0.041	0.001	0.097	0.011	0.063	0.003	0.019	0.016
	63	63	63	63	63	63	63	63	63	63	63
Sign Language at Home	0.043	0.017	0.091	0.067	0.039	0.197**	0.021	0.008	0.018	0.812	1.000
	0.001	0.006	0.027	0.048	0.022	0.086	0.004	0.001	0.011	0.071	-
	63	63	63	63	63	63	63	63	63	63	63

\*\* Correlation is significant at 0.05 level of significance

Table 4 shows the significant correlation between the components of gender, degree of hearing loss, school type and parents' communication competence and psychological distress. However, the results reveal that female ( $r = 0.103$ ;  $p < 0.05$ ), mild/moderate hearing loss ( $r = 0.363$ ;  $p <$

0.05), mainstream with severe/profound hearing loss ( $r = 0.445$ ;  $p < 0.05$ ), mainstream with special service ( $r = 0.238$ ;  $p < 0.05$ ), mainstream with oral instruction ( $r = 0.413$ ;  $p < 0.05$ ) and oral communication at home ( $r = 0.126$ ;  $p < 0.05$ ) had positive significant correlation with psychological distress but male ( $r = 0.087$ ;  $p > 0.05$ ), special schools(deaf) ( $r = 0.021$ ;  $p > 0.05$ ), oral communication with sign language ( $r = 0.087$ ;  $p > 0.05$ ) and sign language at home ( $r = 0.043$ ;  $p > 0.05$ ) did not have any significant relationship with psychological distress among adolescents with hearing impairment.

### *Discussion*

The goal of this study is to investigate the predictive strength of gender (male and female), degree of hearing loss (mild/moderate and severe/profound), school type (deaf school, mainstream with special class/services and mainstream with oral communication) and parents' communication competence (oral communication at home, oral communication with sign language and sign language at home) on psychological distress among adolescents with hearing impairment in two states of Nigeria. This was approached by examining the pattern of relationship among the independent variables and the dependent variables, the joint effect of the independent variables on the dependent variable as well as finding out the relative contributions of the independent variables to the dependent variable. The results of the regression analysis showed that gender, degree of hearing impairment, school type and parents' communication competence were significantly predictive of psychological distress among adolescents with hearing impairment. On the extent to which each of the independent variables (gender, degree of hearing loss, school type and parents' communication competence) contributed to the prediction of dependent variable (psychological distress) among adolescents with hearing impairment, degree of hearing loss is most powerful factor that predisposes the population to psychological distress. School type predisposes the population to psychological distress more than parents' communication competence, while gender contributed least significant effect on the development of psychological distress among the population. This finding with did not conform with finding by Theunisen, Rieffe, Kouwenberg, Soede, Briaire and Frijns (2011) who claimed that gender had no significant effect on the development of depressive symptoms. Whereas, other studies

(Bat-Chava, 2000; Tseng, Hu, Liu, Yang, & Shen, 2016) have reported that degree of hearing impairment, school type and parents' communication competence predict development of depressive symptoms among the population. The greatest predictive strength recorded for the components of degree of hearing loss could be that adolescents with hearing impairment regardless of the degree of hearing loss do not have a chance to cover their hearing loss in the hearing world. And an attempt to cover up leads to distress because they constantly have to live with the fear of being disclosed and face the consequences such as rejection and isolation. The components of degree of hearing loss (mild/moderate and severe/profound) significantly related to the development of psychological distress. This result is in consonance with the finding of Tseng et al. (2016). However, it is not in consonance with the finding of Theunissen et al. (2011). The possible explanation for this finding could be that adolescents with hearing impairment regardless of degree of hearing loss often deny their deafness. Instead of focusing on strategies that could help them develop more effective interpersonal, cognitive and emotional behaviours, they try to search for a technique (covering) that can pay a psychological price such as frustration and feeling of deficiency.

Mainstream schools with special services and mainstream school with oral instruction were significantly related to psychological distress, while special school for the deaf did not. This means that attending mainstreams with special services and mainstreams with oral instruction predispose adolescents with hearing impairment to the development of psychological distress, while attending special school for the deaf did not predispose adolescents with hearing impairment to developing distress. This finding did not support the result suggested by Theunissen et al. (2011) who established that attending mainstream schools were related to fewer depressive symptoms than those in the special schools for the deaf. The explanation for this study is that adolescents with hearing impairment attending mainstream schools face the risk of being different than the others, which may facilitate isolation and rejection. Ideally, mainstream schools would assist to function well in both the hearing and deaf environment. However, deaf children are to likely benefit psychologically most from being in residential schools where they are able to fully communicate and share experiences.

Oral communication was significantly related to the development of psychological distress, while oral communication with sign languages and sign language at home did not. This means that poor communication with family and peers is a major predictor of psychological distress. The result

described by Fellingner, Holzinger, Sattal, Lancht and Goldberg (2009) who reported that good communication with family and peers seems to be a major predictor of good mental health. This suggests that being able to communicate with family and hearing peer makes it easier to build social networks, which facilitate attachment and development of identity.

Female adolescents with hearing impairment were found to have a significant relationship with psychological distress, while male did not. This implies that being a female adolescent with hearing impairment was related to the development of psychological distress. This finding strongly opposes the result reported by Mohanraji and Selvaraj (2013) who found the prevalence of moderate level of anxiety among male and female adolescents with hearing impairment.

The possible explanation for the result of this study is that female adolescents with hearing impairment are more exposed to the challenges associated with hearing impairment. The gender difference in stress response could also be due to perceived weakness of female ability to handle stress situations.

### *Conclusion and Recommendations*

This study investigated the predictive strength of gender, onset and degree of hearing loss, school type and parents' communication competence on psychological distress of adolescents with hearing impairment and the result revealed relationships between the components: gender, degree of hearing loss, school type and parents' communication competence and psychological stress among with hearing impairment. This has numerous implications to special educationists, social welfare, counselling psychologists parents and educational administrators. Noticeably, adolescents with hearing impairment, regardless of degrees of hearing loss, suffer psychological distress.

These findings suggest that the adolescents should be helped to focus on more adaptive ways that could help them develop more effective interpersonal, cognitive and emotional behaviours rather than on techniques that can pay a psychological price. Oral communication at home predicts psychological distress. Therefore, parents of hearing impaired adolescents could learn to effectively communicate with their deaf children. This facilitates their

social interaction and thereby reducing their distressed condition. In addition, being female adolescents with hearing impairment could predict the development of psychological distress. Counselling psychologists could assist the female adolescents' ability to handle the stressful situations.

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## PSIHOLOŠKA UZNEMIRENOST KOD ADOLESCENATA SA OŠTEĆENJEM SLUHA: PREDIKTIVNA SNAGA POLA, STEPENA OŠTEĆENJA SLUHA, OBRAZOVANJA I KOMUNIKACIJSKE KOMPETENTNOSTI RODITELJA

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### Apstrakt

U ovoj studiji istraživali smo prediktivnu snagu pola (muški i ženski), stepena oštećenja sluha (blago/umereno i teško/duboko), vrstu škole (škola za gluve, mejnstrim škola sa specijalnim službama i inkluzivna škola sa govornim instrukcijama) i kompetentnosti roditelja u komunikaciji (usmena komunikacija, usmena komunikacija sa znakovnim jezikom kod kuće) na psihološku uznemirenost adolescenta sa oštećenjem sluha u Nigeriji. U istraživanju je učestvovalo 63 uznemirena adolescenta sa oštećenjem sluha. Za prikupljanje podataka korišćena su *Zung Skala samoprocene za depresiju* i *Kesler psihološke skale*. Podaci su analizirani korišćenjem Pirsonovog korelacionog momenta proizvoda i višestruke regresije. Nalazi su otkrili da su nezavisne varijable zajedno činile varijacije u zavisnoj varijabli, kao i da su teška/duboka oštećenja sluha bila u značajnoj vezi sa psihološkim distresom. Stoga je imperativ da se adolescentima sa oštećenjem sluha pomogne da se fokusiraju na adaptivne mehanize koji bi im mogli pomoći da razviju efikasno međuljudsko, kognitivno i emocionalno ponašanje.

**Ključne reči:** adolescenti sa oštećenjem sluha, psihološki stres, pol i stepen gubitka sluha, vrsta škole i kompetentnost roditelja u komunikaciji