

## Anxiety and Depression among People living with Hearing Impaired

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### ABSTRACT

Over 5% of the world's population are people with hearing loss and has been estimated that one in every ten people will have disabling hearing loss in 2050 (WHO, 2020); 2.2% of the Indian population had a disability (Census, 2011). The study aimed to examine any significant difference between people living with hearing impaired and normal hearing ability on Depression and Anxiety. Two hundred samples were drawn from the Aimol community of Manipur State with equally matched of samples both severe hearing impaired and normal hearing. Symptoms Check List (Derogatis, 2012) was employed in which only Anxiety and depression subscales were used in this study. The results depicted that higher anxiety and depression among people living with hearing impaired and normal hearing ability, anxiety and depression were positively correlated which suggested that the need of psychological intervention for people living with hearing impaired and normal hearing ability.

**Keywords:** *Hearing, impaired, anxiety, depression, Aimol, community etc.*

Hearing impairment is one of the leading causes of disability globally (Cunningham & Tucci, 2017), millions of people are hard of hearing or deaf all over the globe, and of which more than 432 million are adults (WHO, 2018). It was predictable that hearing impairment will be increasing in the future to come (Vos et al., 2016; Wilson et al., 2017), found a higher prevalence among older adults than younger, also more prevalent among men than women (Goman & Lin, 2016), disparity prevalence in the different regions of the world (WHO, 2018), and one-third of adults aged over 65 reporting hearing loss.

### **Hearing Impairment**

Hearing impairment is the inability to hear as or “hard of hearing” (HOH) or “deaf” whereas a hearing loss is a person who is with hearing thresholds of 25 dB or better in both ears and may be categorized as (i) Hearing loss may be mild (26-40 dB) (ii) moderate (41-60 dB), and (iii) severe (61-80 dB), or profound (over 81 dB) affect one ear or both ears with difficulty in hearing conversational speech or loud sounds (WHO, 2020). The Rights of Person with Disabilities Act, 2016 defined ‘Hearing Impairment’ as ‘Deaf’ and ‘Hard of Hearing’, in which ‘deaf’ means persons having 70 DB hearing loss in speech frequencies in

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both ears; and "hard of hearing" means a person having 60 DB to 70 DB hearing loss in speech frequencies in both ears (Ministry of Law and Justice, 2016). 'Deaf' people are almost having a profound hearing loss, which implies very little or no hearing, and usually using a sign language for communication (WHO, 2020). The communication barriers due to the hard of hearing are more often than hearing children (Knutson, Johnson, & Sullivan, 2004) that increases the risk of mental health problems throughout in their life (Downs & Harrison, 1998; MacMillan et al., 2001), and a posing a substantial burden to disease and negatively impacting the quality of life.

**Depression**—The DSM-5 outlines the criterion of depression included that slowing down of thought and a reduction of physical movement, fatigue or loss of energy nearly every day, feelings of worthlessness or excessive or inappropriate guilt nearly every day, diminished ability to think or concentrate, or indecisiveness, nearly every day, recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide. Researches evinced that hearing loss is clinically relevant to the level of depression (Gopinath et al., 2009) and 22% experience the onset of incident depression symptoms over time(14) that, increases the risk of experiencing depression.

**Anxiety**- An anxiety disorders include disorders that share features of excessive fear, separation anxiety disorder, selective mutism, specific phobia, social anxiety disorder (social phobia), panic disorder, agoraphobia, generalized anxiety disorder, substance/medication-induced anxiety disorder, obsessive-compulsive disorder (included in the obsessive-compulsive and related disorders), and acute stress disorder in DSM-5 (APA, 2013)

A higher prevalence of depression in hearing-impaired than Normal (Konuk et al., 2006). Belli and colleagues (2008) showed that 27% of patients with tinnitus had at least one psychiatric diagnosis with 28% anxiety disorders, 15% somatoform and mood disorders, and 3% personality disorders, versus 5.6% of control subjects; with a lifetime prevalence of depression significantly higher than the general population (Harrop-Griffiths et al., 1987). Cross-sectional studies reported a wide variation in an overlap of depression and anxiety in somatic symptoms ranging from 23% to 66 % ( Shidhaye et al., 2013). Children with deaf or hard of hearing have higher rates of psychosocial problems including emotional disorders (anxiety and depression), behavioural problems (e.g., hyperactivity and conduct problems), and social difficulties compared with their hearing peers (Fellinger, Holzinger, Sattel, & Laucht, 2008).

Aimol is presently inhabited in 03 districts of Manipur in the Northeastern part of India. Over the years, the eminent scholars have claimed that Aimol is in Kuki- Chins-Mizo (Lushei) group. The Aimol community has been reported of having wide ranges of hearing loss in their population which are seen in children as well as adulthood and geriatric as reported by the local people. The present study selects the Aimol community to served as the samples based on personal experience as belongs to this community of Aimol.

### ***Objectives of the Study***

The study aims to have an in-depth study of the people living with hearing impairment by comparing with normal hearing persons and the following objectives were framed for the present study:

- (1) To examine any significant difference between people living with hearing impaired and normal hearing ability on Depression and Anxiety.
- (2) To elucidate any significant relationship between the Depression and Anxiety.

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- (3) To determine the independent effect of 'hearing impairments' on dependent variables (Depression and Anxiety).

### *Hypothesis*

The present study has a set-forth hypothesis based on the objectives of the study, which are:

- (1) It was expected that a significant difference will be observed between people living with hearing impaired and normal hearing ability on Depression and Anxiety Scale.
- (2) It was expected that a significant relationship between the dependent variables (Depression and Anxiety).
- (3) It was expected that significant independent effect of hearing impairment on dependent variables (Depression and Anxiety).

## **METHODOLOGY AND PROCEDURES**

### *Samples*

200 samples drawn from the Aimol community in Manipur State comprises of 100 severe hearing impaired (identified from the list of social welfare department, Government of Manipur) and 100 of normal hearing which was well matched with hearing-impaired on socio-demographic variables following random sampling procedure, and the age range will be 18- 35 years of age.

### *Design*

The designed was correlational design with an aimed to compared the hearing impaired and normal hearing on selected variables to determine the effect of Hearing impairments.

### **Psychological scales:**

- (1) **Symptoms CheckList:** The assessment instruments used were: Symptoms Checklist (Derogatis, 2012;  $\alpha$ : 0.72 y 0.97) that consists of 90 items. It assesses nine symptom dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The present study used only depression and anxiety subscale due to time limitation. The SCL-90 is designed for a broad spectrum of populations, ranging from nonpatient "normal" populations to medical patients or individuals with psychiatric disorders. Like other self-reports, SCL-90 should not be administered to delirious, mentally retarded, or floridly psychotic patients (Derogatis 1983).

### *Procedure*

The researcher procured the selected psychological test, and has to translate in Aimol language with due care of methodological obligation to checked its applicability in the population under study. Hearing-impaired samples selection was done from the list of people living with hearing-impaired maintained by Manipur government Hospital and Registered NGOs to the government of Manipur. The normal samples were identified with well matching to the people living with hearing-impaired on age, sex, ecology, hearing ability and so on to prevent confounding variables. All necessary permission and consent were taken from significant persons (participants, authorities, etc). The conduction of the psychological scales was done in individual condition following the prescribe manual and APA code of research ethics (APA, 2002).

## **RESULTS**

The raw data was checked for any missing and outlier, then workout for psychometric adequacy for the targeted population. The Mean, SD, SEM, Skewness and kurtosis were within the normality. The reliability showed its trustworthiness that  $\alpha = .67$  for depression

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and  $\alpha = .78$  for Anxiety; the homogeneity of variance showed non- significant for both depression (.37 NS) and anxiety (.42 NS).

The t-test showed a significant mean difference between the boys and girls on depression ( $t=.2.92$ ;  $p <.00$ ) that person with hearing-impaired having higher depression ( $M=4.60$ ) than Normal hearing ( $M=3.44$ ), and the same trend found on anxiety ( $t=3.12$ ;  $p <.00$ ) that person with hearing-impaired having higher anxiety ( $M=3.60$ ) than Normal hearing ( $M=2.56$ ). The effect of hearing impairment on depression was significant ( $F=8.54$ ;  $p <.00$ ;  $\eta^2=.22$ ) with 22%, and on anxiety ( $F=7.21$ ;  $p <.00$ ;  $\eta^2=.19$ ) with 19 %. The depression and anxiety have significant positive correlations ( $r=.34$ ;  $p <.00$ ).

**Table Showing Mean, SD, SEM, Normality, Reliability, Homogeneity, t-test, ANOVA, and Correlations**

Stats	Hearing Impaired		Normal Hearing		Total Samples	
	Depression	Anxiety	Depression	Anxiety	Depression	Anxiety
Mean	4.60	3.60	3.44	2.56	4.00	3.06
SD	1.12	1.06	1.09	1.09	1.24	1.18
SEM	0.29	0.27	0.27	0.27	0.22	0.21
Skewness	-0.11	-0.72	0.01	0.69	0.00	0.00
Kurtosis	-1.29	1.38	-1.23	0.24	-0.87	-0.71
Reliability	$\alpha = .67$			$\alpha = .78$		
Homogeneity (Lavene's test)	.37			.42		
t-test	the t-test between HI and NH on Depression =2.92*			the t-test between HI and NH=3.12* on Anxiety		
Hearing impairment effect on Depression and Anxiety (ANOVA)						
	Depression			Anxiety		
IV	F ratio	sig	Eta sg	F ratio	sig	Eta sg
Hearing impairment	8.54	.00	.22	7.21	.00	.19
Correlations (Pearson's) between Depression and anxiety is $r=.34$ *						
*= significant at .01 levels (2 tails)						
**= significant at .05 levels (2 tails)						

The findings of the study depicted that different people with hearing impaired and normal hearing were different on depression and anxiety; the independent effect of hearing impairments on depression and anxiety was revealed, and depression and anxiety were significantly positively correlated. The overall findings support the hypotheses set forth for the study by highlighting the impending effect of hearing impairments on depression and anxiety which could be the eye- opener for the vulnerability of hearing-impaired people to all other psychological problems.

### Limitations

The hearing impairments effect is massive having many consequences which could not cover in this study; more variables with bigger samples will be ideal to confirm this finding.

**Significant of the study:** The study revealed the difference of hearing impairment on depression and anxiety that people with hearing impaired have higher depression than normal hearing which got the support of research findings (Gopinath et al., 2009); and both

are positively related that depression and anxiety always go hand in hand as mentioned by earlier finding (Belli et al., 2008).

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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