

Level Of Stress And Coping Strategies Employed By Students Of Hearing Impairment With And Without Hearing Aids

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ABSTRACT

Background

Stress is a leading factor as students with hearing impairment faces communication difficulties in their educational institutions. Many knows and opt for management strategies and many have no idea how to manage it , which effects their academic performance.

Objective

To investigate level of stress and find out coping strategies among hearing aid users and non-hearing aid users.

Method

A cross sectional study with 194 higher education students with hearing impairment were recruited in the study by using purposive sampling technique. The data was collected from university of management and technology, Innayat¹ foundation academy for the Deaf, Hamza foundation academy for the Deaf and National degree college, Lahore. The study was completed in the time duration between November 2022 to April 2023. The inclusion criteria was university and college going students with hearing impairment either using hearing aid or not and within age range of 15-30 years. Standardized tools used in this study were Perceived Stress Scale and Brief Cope.

Results

Among total 194 participants, 32% were FA and 28% were BA. 28% were moderately severe and 33% were severe. in which 36% were hearing aid users and 64% non-hearing aid users. 64% were in public institutes and 66% were in private institutes. The correlation

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between SS10 (Stress Scale) and BF28 (Brief Cope) and results are significant between SS10 and BF28 (SS10=.372 and BF28=.000)

Conclusion

It is concluded that there is positive correlation between stress scale and brief coping strategies. Stress has the negative impact on their academic performance.

Keywords: *Stress scale, Brief cope, Higher education, Hearing aid users, non-hearing aid users, Coping strategies.*

INTRODUCTION

Stress was defined by Hans Selye, M.D, who was famous for his study regarding the stress-generating phenomenon. Selye defined "Stress as a non-specific response of the body to a demand". Stress is related to the physical, physiological, and mental health of people and the body's response to the change. Selye further differentiates stress into unpleasant stress (Distress) and pleasant stress (Eustress). Our body reacts abnormally and taking our lives at high risk of psychological, emotional, and mental damage. [1]

Distress is more common. Students have the stress of studies, adults have the stress of job or relationship, parents have the stress of family issues, and every single person of any age is facing his kind of stress. A person's way of dealing with stress will choose whether the stress is positive or negative. If that person gets anxious and distressed he will face negative stress but if the same person gets excited and focused over a specific situation he will face positive stress.[2]

According to the effects of hearing loss on these people are not pretty well. Behavioral limitations are observed in them and social limitations have been seen. Many negative emotional effects can easily be observed among people with hearing loss. Their social circle is constricted and getting smaller. In a relationship between CP (communicating people) and PHL (people with hearing loss), the former has influential effects on people with hearing impairments. They can relieve their stress and bring positivity to them.[3]

Everyday stressors involved in the adolescence with hearing loss include language problems, trouble speaking, and learning complexities.[4]

We can reduce the mental stress and disturbance in hearing-impaired persons by initiating psychological training programs.[5] Students with unilateral hearing loss are considered to have much more academic difficulties and lower grades comparatively. Trouble in learning and understanding academic tasks. Thus deficit in their academic studies.[6] Research by Joseph S. Baschnagel on drinking to Students who are deaf in college might turn to alcohol as a way to cope. The sort of stress that occurred due to hearing impairments in college students leads them toward a bad state of mental trauma or physical health. Hearing impaired students could not focus on their academic skills and due to a lack of confidence. Some of them use poor ways of dealing with the stress. Like drinking alcohol and hiding behind the doors.

This study compared deaf students coping strategies with normal individuals and the use of drinking to cope with stress. Participants include 475 undergraduate students out of which 222 were females. It was held at the University of Western New York. The average age was 20 years. The levels of these two groups' problematic drinking practices were similar in the findings. However, there were differences in the levels of ways to cope and the reasons people drank to deal.

Students who are hard of hearing were seen to cope more emotionally as well as task-oriented. Students with hearing impairment showed higher drinking conduct when coping with motivations. The important area of focus for hearing-impaired students involved interventions and coping skills.[7] While taking review of people with hearing loss or using hearing aids from various types of research we came to know the effects of

hearing loss, the level of stress, and the aspects of that stress between the people with hearing loss and normal people which has been discussed in this research article.[3] People can experience stress for a long time and become more vulnerable to developing major physical and mental problems if they don't use good ways to cope with stress to deal with the stressful situation.[8]

A quantitative study using a cross-sectional design researched by Ganesan in 2018 is utilized. The method was a quantitative study. Data were collected using a survey that is self-administered. There is a perceived stress scale used to demonstrate the level of stress. Coping Scale used to measure the coping strategic progress.

The results showed that there was a negative correlation between levels of stress and coping mechanisms. Some stressors were good to encourage the students towards growth. It is recommended that the students participate in co-curricular activities and other relaxing therapies to reduce stress.[9]

Research done by Abu Sha'ban in 2016 told that early recognition of using correct language in family members to create a level of communication in each other could alleviate the emotional and behavioral changes in hearing-impaired children. They have variable psychological, emotional, and behavioral levels.[10]

Another study about coping stress and stress strategies was performed voluntary. Study was non experimental and quantitative. Students who were selected for this survey were both male and female colleges going students. The college was located in Northern Indiana. Total participants were 120 in number. Study was to identify the perception and brief coping strategies among students for their stressors.[11] Impact of Hearing Aids Usage Skills on People with Severe to Profound Hearing loss. Total individuals were 60 between age of 40 to 60 years. In the Hearing aid using persons, socialization occurred faster in females. Students' mean social scores were higher than their average emotional scores. Social rehab is necessary for those with severe to mild hearing loss. was earlier.[12] Stressors and stress and coping mechanisms among college students of eleventh grade in Los Angeles. Some students reported low level of stress and some reported high stress levels. [13] A study by Jambor E in 2015 on self-esteem and brief coping strategies among deaf learners described the deaf or hearing-impaired children and their self-esteem Data was collected among the hearing-impaired students of California State University, Northridge. Results generated described hearing-impaired students as having higher self-esteem could be helpful for them functioning in the deaf community. [14]

MATERIALS AND METHOD

Study design was used comparative cross sectional survey by employing Purposive sampling technique. Data was collected from University of Management and Technology, National degree college, Hamza foundation and Innayat foundation academy for the deaf. Study was completed in 6 months, Nov 2022 to April 2023 after the approval of synopsis. A total sample size of 194 adults selected hearing aid and non-hearing aid users among different public/private special education colleges/ universities from age 15 to 30 by using online sample size calculator. [15]

The inclusion criteria was Hearing impaired students of higher education with hearing and non hearing aid user, with age range of 15-30 years. Those Hearing impaired students who had any comorbid condition or Psychological illness were excluded from the study. Assessment done by using standardized tool Perceived Stress Scale and Brief Cope. Data was collected after taking permission from the research ethical committee (REC) of the Riphah international university Lahore. Once the approvals were granted, informed consent was taken from public and private colleges /universities after visiting their workplaces. Data was collected by visiting colleges and universities of special education in Lahore. Researcher made a list of all hearing aid and non-hearing aid users and interpret the questionnaire in sign language. The questionnaire was distributed amongst the students who then filled it out. SPSS Version 26.0 (Statistical Package for the Social Sciences) was used to analyze the data.

Results

The results obtained from data analysis of questionnaire answered by respondents. SPSS has been used to analyze data. Table 4. 1 showed total 194 participants were included in study. 71(37%) were 15-20 age range, 105 (54%) were 21-25 age range, 18(9%) were 26-30 age range. The qualification of participant 63 (32%) were F.A, 54(28%) were B.A, 41 (21%) were B.S. Majority 65(34%) were study in Public institutes and 129(66%) were private institutes. In which 17(9%) were mild, 37(19%) were moderate and 22(11%) were profound participants. While 70(36%) were hearing aid users and 123(64%) were non hearing aid users.

Table: 1 Demographics of the Participants

	Frequency	Percent
Age		
15-20	71	37
21-25	105	54
26-30	18	9
Total	194	100
Qualification		
FA	63	32
BA	54	28
BS	41	21
BFA	36	19
Total	194	100
Institution		
Public	65	34
Private	129	66
Total	194	100
Hearing Impairment		
Mild	17	9
Moderate	37	19
Moderately Severe	54	28
Severe	64	33
Profound	22	11
Total	194	100
Hearing Aid		
Yes	70	36
No	123	64
Total	194	100

Table:2 Summarized table of Stress Scale

Statement	Never	Almost Never	Sometimes	Fairly Often	Very Often
In the last month, how often have you been upset because of something that happened unexpectedly?	29	36	72	21	36
In the last month, how often have you felt that you were unable to control the important things in your life?	31	33	68	29	33
In the last month, how often have you felt nervous and stresses?	24	51	56	29	34

In the last month, how often have you felt confident about your ability to handle your personal problems?	29	36	52	34	43
In the last month, how often have you felt that things were going your way?	20	37	57	44	36
In the last month, how often have you found that you could not cope with all the things that you had to do?	36	33	73	20	32
In the last month, how often have you been able to control irritations in your life?	21	46	63	36	28
In the last month, how often have you that you were on top of things?	23	41	47	55	28
In the last month, how often have you been angered because of things that happened that were outside of your control?	30	58	48	29	29
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	32	42	54	31	35
Total	27.50%	41.3%	59%	32%	33.4%

Table: 3 Summarized table of Brief Cope

Statement	Doing at all	Doing little bit	Doing Medium	Doing a lot
I've been turning to work or other activities to take my mind off things.	56	32	50	56
I've been concentrating my efforts on doing something about the situation I'm in.	17	88	50	39
I've been saying to myself "this isn't real"	31	56	63	44
I've been using alcohol or other drugs to make myself feel better.	106	31	21	36
I've been getting emotional support from others.	28	58	49	59
I've been giving up trying to deal with it.	27	55	62	50
I've been taking action to try to make the situation better.	20	44	70	60
I've been refusing to believe that it has happened.	52	68	46	28
I've been saying things to let my unpleasant feelings escape.	39	43	52	60
I've been getting help and advice from other people.	44	47	29	74
I've been using alcohol or other drugs to help me get through it.	117	35	30	12
I've been trying to see it in a different light, to make it seem more positive.	29	56	71	38
I've been criticizing myself.	51	69	45	29
I've been trying to come up with a strategy about what to do.	28	56	62	48

I've been getting comfort and understanding from someone.	26	59	53	56
I've been giving up the attempt to cope.	32	51	52	59
I've been looking for something good in what is happening.	30	49	57	58
I've been making jokes about it.	28	66	49	51
I've been doing something to think about it less, such as going to movies, watching T.V, reading, daydreaming, sleeping or shopping.	14	53	70	57
I've been accepting the reality of the fact that it has happened.	25	74	41	54
I've been expressing my negative feelings.	38	72	49	35
I've been trying to find comfort in my religion or spiritual beliefs.	22	39	47	86
I've been trying to get advice or help from other people about what to do.	19	65	49	61
I've been learning to live with it.	27	50	58	59
I've been taking hard about what steps to take.	22	72	65	35
I've been blaming myself for things that happened.	35	66	36	57
I've been praying or meditating.	26	57	32	79
I've been making fun of the situation.	41	41	42	70

Table 4.4: Correlation between Stress Scale and Brief Cope

		Stress Scale	Brief Cope
Stress Scale	Pearson Correlation	1	.372**
	Sig. (2-tailed)		.000
	N	194	194
Brief Cope	Pearson Correlation	.372**	1
	Sig. (2-tailed)	.000	
		194	194

** . Correlation is significant at the 0.01 level (2-tailed).

Table shows Positive correlation between SS and BC and results are significant between SS and BC (SS=.372 and BC=.000)

Discussion

The purpose of the current study was to contrast hearing aid users and non-users in terms of levels of stress and ways of coping. The study's results motivated further research into a variety of stress-related problems and ways to cope used by hearing aid and non-hearing aid users in higher education. 36% of respondents used hearing aids, in contrast to 64% who did not. Recent cross sectional study with 194 participants use stress scale and brief cope for assessing stress level among hearing aid and non-hearing aid users. In the present

study questionnaire applied for data collection to analyze the level of stress and coping strategies. The age range was 15 minimum and 30 maximum. Mostly 32% participant's qualification is FA and only 19% participants are doing BFA. 33% participants are with severe hearing loss and 9% are with mild hearing loss. Correlation of SS10 and BF28 for measuring relationship between stress scale and brief cope effect on hearing and non-hearing aid users is significantly 0.01 level.

Another study was conducted in Jordan and they also found out the correlation but their objective was the social problems faced by the deaf students. The overall mean of the result is 3.07, and on the statement of fear of violence from the others the highest mean was 3.58. The results were similar to our results from statement of stress scale. In our results the maximum population felt fear and nervousness sometimes from others. The highest number were 56 out of 194 [16]. The study sample selected from schools in the Hashemite Kingdom of Jordan's Salt province. 150 students with hearing impairments between the ages of 6 and 17 from deaf schools were correlated with social problems. Showed approximately less mean of students facing fear of public places and avoiding social places. And in our results when questions were asked from people of hearing impairments about how they feel about taking help or advice from others. In the answer they were comfortable of getting help or advice from other people and showed more mean in results. Broadly the comparison appeared resemblance in both results [2]. Another study of deaf and hard hearing students showing use of alcohol to cope with emotional stressors give similar results. Comparing both results very few hearing impaired students use alcohol to cope with emotional stress. And in our data calculations 117 participants out of 194 never use alcohol to cope with their stressors. In our country alcohol is not available easily for every person that's why there are less users comparatively advance countries.

In Zagazig City, two public primary schools hosted the study. The inclusion criteria for the study were met by 60 randomly chosen students, grouped into two groups of 30 hearing impaired and 30 normal students. In accordance with the outcomes of an interview questionnaire, hearing impaired students scored better than typical learners in the self-assertion and empathy groups, whereas average students did better than hearing impaired students in the cooperation, social interactions, and communicative areas.[17]

In our study 194 participants were included. In which 70 (36%) were total of 123 individuals (64%) did not use hearing aids and 123 did. Speaking a little to get my bad feelings out and mostly asking for help and advice from others.

A study based on the 200 students randomly selected from academic institutions of Dindigul district of Tamil Nadu. Various questions were asked from the students on the matrix of emotional symptoms faced by students.[18] Out of 200 students 165 not really felt anxiety and frustration regarding their hearing loss. Similarly according to our calculations out of 194 participants 58 almost never felt anger for the things that happened to them and were uncontrolled. The Department of Otorhinolaryngology at Karl Landsteiner Private University published a study between 2017 and 2019. Poelten showed similar results of musical therapy by hearing impaired students who were using cochlear implants. People of the between 65 to older felt relief after music therapy and 88% were found using MT to improve their mood and relax themselves.[4] Relatively in our data analysis 70 out 194 people went for movies, shopping and other activities to enhance their mood. The aims of another study occurred in Jordan were to look at ways to cope used in deaf schools and find out the psychological and social problems that hearing-impaired pupils face. The data collected from a sample selected at random of 150 deaf students—67 men and 83 females—was explained via the descriptive analytical approach. Based to the findings, students with hearing loss exhibit an average amount of social and psychological problems as well as the use of ways to cope.[4] Another study emphasized academic and students with and without hearing loss demonstrate different psychological behaviour. The goal of the study was to compare the academic performance, mental abilities, psycholinguistic capacity, and social skills of 25 children that were monaurally hearing impaired to 25 children who were not. In accordance to the outcomes, there were no significant differences in the two groups' results on cognitive or self-concept tests.[19] in

average students the common stressors found environmental and academic stressor. [20] At colleges and universities, there is currently a comparative study design to assess stress levels and ways of coping among hearing aid users and those who did not use. Among multidisciplinary residents high stress can turn out into burnout syndrome.[21]

Conclusion

It is concluded that there is positive correlation between stress scale and brief coping strategies. The negative consequences of stress can be observed in their academic performance.

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