

Quality of Life of Hearing Impaired Young Adults Using Hearing Aid

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ABSTRACT

Objective: To assess the quality of life of hearing impaired young adults using hearing aid.

Study Design: Descriptive study

Place and Duration of Study: This study was conducted at the Department of ENT, Fatima Memorial Hospital College of Medicine & Dentistry, Lahore from 1st January 2018 to 30th June 2018.

Materials and Methods: Fifty individuals were collected from the “Hamza Foundation Academy for the Deaf” with “severe degree” hearing loss, all over the “age of 18 -34 years” (young adults). The patients answered the questions after the effective use of hearing aid. The questionnaire consists of “16 questions” about general quality-of-life and other aspects: physical, psychological, environmental and social relations. Questionnaire collected all objectives of study.

Results: This study shows that there were 3 (6.0%) subjects had poor quality of life, 28 (56.0%) subject had Moderate QOL and 19 (38.0%) subjects had Good Quality of Life after using hearing aid.

Conclusion: This study shows that usages of hearing aids are clearly associated with impressive improvements in the social, emotional, psychological, and physical well-being of people with severe degree hearing loss. Specifically, hearing aid usage is positively related to restore the hearing impaired person’s function in society.

Key Words: Hearing aids, Hearing loss, Quality of life

Citation of articles: Rafique HF, Zaman S, Mushtaq F. **Quality of Life of Hearing Impaired Young Adults Using Hearing Aid. Med Forum 2018;29(10):93-96.**

INTRODUCTION

The World Health Organization (WHO) estimated in 2008 that over 360 million persons have disabling hearing loss which represents 5.3% of the world population. Hearing loss is an important public health concern with substantial economic and societal costs. In infants and children hearing impairment retards developmental language and educational progress. In adults, it causes difficulties in both professional and social life as well as stigmatization. Apart from consequences to the individual person, hearing loss also leads to high costs to society.¹ Hearing impairment can be caused by many factors including infections during childhood such as measles, mumps and meningitis, chronic otitis media, exposure to excessive or prolonged noise, head/neck injuries, use of ototoxic medications such as certain types of chemotherapies and antibiotics, industrial solvents, congenital abnormalities and infections and prenatal problems, certain nutritional deficiencies, genetic disorders and aging.²

People with hearing impairment face great difficulties in their day to day life. They are less likely to be in paid work and more likely to be retired or employed part-time.³

An extensive survey found clear associations between hearing loss and feelings of loneliness, distress, depression, anxiety and summarization. Young people are more deeply affected than older people.⁴ Young people with hearing loss are more prone to a decline in psychosocial health than older hearing impaired people the risk of severe depression increased by five percent per dB of individual hearing loss. The feeling lonely was found to increase by seven percent per dB of hearing loss.

Younger people more severely affected with hearing impairment. Mild distress states are considered part of normal life and do not interfere with normal social functioning. However, elevated levels of distress with symptoms such as worry, irritability, tension, poor concentration and insomnia may force a person to give up and withdraw from major social roles, especially the occupational role. Therefore, the impact of hearing impairment in adults younger than 70 years may be greater than the impact in elderly people.⁵

Hearing, auditory perception is the ability to perceive sound by detecting vibrations, changes in the pressure of the surrounding medium through time, through an organ such as the ear. Sound may be heard through solid, liquid, or gaseous matter.⁶ In humans and other vertebrates, hearing is performed primarily by the auditory system: mechanical waves, known as vibrations are detected by the ear and transducer into

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Received: July, 2018;

Accepted: August, 2018

nerve impulses that are perceived by the brain (primarily in the temporal lobe).⁷

Hearing loss, deafness, hard of hearing, or hearing impairment (a term considered derogatory by many in the deaf community), is a partial or complete inability to hear. Hearing loss can be categorized by which part of the auditory system is damaged. There are three types of hearing loss. (1) conductive hearing, (2) sensori-neural hearing loss (SNHL) and (3) mixed hearing loss. Degree of hearing loss is: mild, moderate, moderately severe, severe, profound loss. We measure the different degree and type of hearing loss with the help of hearing graphs called audio gram.⁸

Treatment of severe degree hearing loss used hearing aids. A hearing aid is an electro acoustic device which is designed to amplify sound for the wearer, usually with the aim of making speech more intelligible, and to correct impaired hearing as measured by audiometry. In the United States, Hearing aids are considered medical devices and are regulated by the Food and Drug Administration (FDA).⁹ A hearing aid is a miniature amplification system. The easiest way to categories the type of hearing aid is to describe where it's worn: put simply, hearing aids can either be worn in the ear or behind the ear. Its key parts include: a microphone, an amplifier (most employ digital signal processing), a miniature loudspeaker called a receiver and a battery. These are the types of hearing aids.¹⁰ Body worn hearing aid, in-the-ear (ITE), in-the-canal (ITC), completely-in-the-canal (CIC) and behind the ear (BTE).¹¹

Hearing aids improve overall quality of life for most users. Hearing aid users enjoy better overall health than non-users. They are perceived by their families to have better cognitive functioning than non-users and to be less introverted. The most beneficial effects of hearing aids are found in the users' social lives, taking part in group activities, and family relationships.¹² Hearing impaired people with hearing aids have greater self-confidence, stronger self-image and better communicative functioning, resulting in overall higher self-esteem, than those without aids.¹³ Hearing aids help to reduce deterioration in psychological functioning as a result of hearing impairment. It can reverse social, emotional and communication dysfunctions caused by hearing impairment. They are more likely than non-users to engage in activities involving other people. Hearing aids improve most aspects of emotional life and they have greater warmth and less negativity in personal relationships than non-users.¹⁴

MATERIALS AND METHODS

This descriptive study was carried out at Department of ENT, Fatima Memorial Hospital College of Medicine & Dentistry, Lahore from 1st January 2018 to 30th June 2018. through Hamza Foundation Academy for the

Deaf" through a self design questionnaire from 50 individuals with "severe degree" hearing loss, all over the "age of 18-34 years" (young adults). The patients answered the questions after the effective use of hearing aid. The questionnaire consists of "16 questions" about general quality-of-life and other aspects: physical, psychological, environmental and social relations. The data was entered and analyzed through SPSS-20.

RESULTS

In collecting data of 50 subjects, there were 20(40.0%) male subjects and 30 (60.0%) female. Fifty hearing impaired young adults using hearing aid from 18 to 34 years age limit but the mean age was 19 to 24 years and the mean 20.88 ± 1.480 years (Table 1, Figures. 1-2).

In the collected data from 50 subjects there were 41 (82.0%) subjects using 1 (Unilateral) hearing aid and 9 (18.0%) subjects using 2 (Bilateral) hearing aids (Table 2).

Table No.1: Gender and age distribution of subjects (n=50)

Variable	No.	%age
Gender		
Male	20	40.0
Female	30	60.0
Age (19-24)		

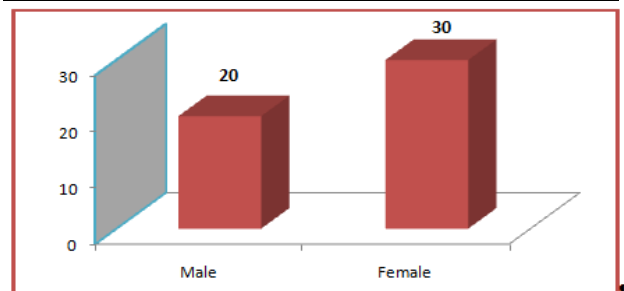


Figure No. 1: Distribution of genders

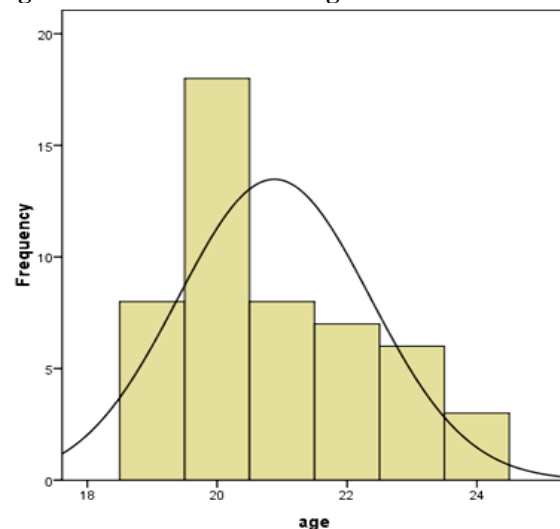


Figure No. 2: Age of the patients

In the collected data from 50 subjects there were 3 (6.0%) subjects had poor quality of life, 28 (56.0%) subject had Moderate QOL and 19 (38.0%) subjects had Good Quality of Life after using hearing aid. This study shows that usage of hearing aid improve overall quality of life of hearing impaired young adults (Table 3, Figure 3).

Table No.2: Subject using hearing aid (n=50)

Subject	No.	%
One hearing aid	41	82.0
Two hearing aids	9	18.0

Table No.3: Quality of life of hearing aid user (n=50)

Quality of life	No.	%
Poor	3	6.0
Moderate	28	56.0
Good	19	38.0

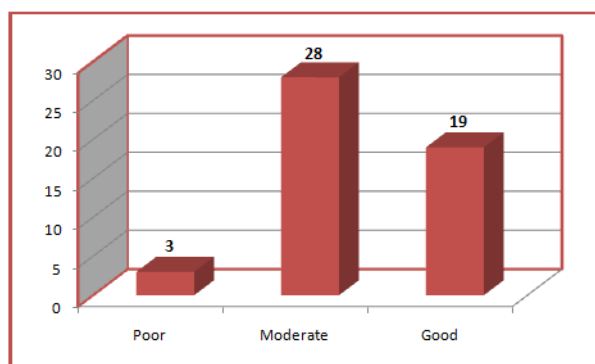


Figure No. 3: Frequency of quality of life hearing aid users

DISCUSSION

Communication is an important aspect of everyday life especially for adults. Hearing loss can impair the exchange of information and therefore reduces the quality of life. The purpose of this study was to investigate the quality of life in young adults who are hard of hearing after wearing a hearing aid.¹⁵ In 2012 a study was conducted by Mondelil, Maria Ferenda Capoanirorarcia; Souza Il, Patricia Jorge Soalhei de to identify the quality of life of hearing impaired older adults after fitting hearing aid. Through the World Health Organization Quality of Life Questionnaire. They had 30 individuals all over the 60 years of age. The patients answer the WHOQOL questions after the use of hearing aid. There was a significant improvement in quality of life in general, as far as leisure activities were concerned, there were no major changes regarding the frequency of negative feelings; even after the hearing aid fitting. The use of hearing aid favored the overall quality of life of the individuals evaluated.¹⁶ While in present study we identify the quality of life of hearing impaired young adults with severe degree hearing loss after using hearing aid.

Through a self design questionnaire using COSI (Client orientation scale of improvement) scale.

In present study we collect data from 50 hearing impaired young adults all over the age of 18 to 35 years of age. The patients answer the questions after using hearing aid. It has been observed that the psycho-social problem related with hearing decreased considerably, feeling handicapped in term of hearing loss became less, and the quality of life increase.

In 2009 Soghratfaghihzadeh, Abdollah Moossavo and Saeideh Mehrkian conducted this study to investigate the quality of life in elderly people who are hard of hearing after wearing hearing aid. A questionnaire about satisfaction with hearing aid was filled by participants.

The results showed a significant improvement of quality of life after using hearing aid in all participants and betterment of their most important problem; the communication and exchange of information. In conclusion with respect to the beneficial effects of hearing aids is presbycusis.¹⁷

In present study we collected data from 50 subjects all over the age of 18 to 35 years old. This study show that there were 3 (6.0%) subjects had poor quality of life, 28 (56.0%) subject had Moderate QOL and 19 (38.0%) subjects had Good Quality of Life after using hearing aid.

This study shows us the better improvement of Quality of Life in young adults using hearing aid. In return, this study helps us to understand, to which extent their independence and function is restored in society.

CONCLUSION

The usages of hearing aids are clearly associated with impressive improvements in the social, emotional, psychological, and physical well-being of people with severe degree hearing loss. Specifically, hearing aid usage is positively related to restore the hearing impaired person's function in society.

Author's Contribution:

Concept & Design of Study: Hafiza Fatima Rafique
 Drafting: Saira Zaman
 Data Analysis: Faiza Mushtaq
 Revisiting Critically: Hafiza Fatima Rafique, Saira Zaman
 Final Approval of version: Hafiza Fatima Rafique

Conflict of Interest: The study has no conflict of interest to declare by any author.

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