**"An Investigative Examination to Evaluate the Frequency and Impact of Excessive Utilization of Earphones and Audio Devices Among Young Adults in the District of Fatehgarh Sahib, Punjab”**

**Ms. Bhupinder Kaur\*, Assistant Professor, School of health science**

**RIMT University, Mandi, Gobindgarh Punjab**

**ABSTRACT**

"An Investigative Examination to Evaluate the Frequency and Impact of Excessive Utilization of Earphones and Audio Devices Among Young Adults in the District of Fatehgarh Sahib, Punjab. **Objective:** To examine how widespread the excessive use of earphones and music devices is among younger adults. To evaluate the impact of excessive use of earphones and music devices on younger adults. To investigate the correlation between the overuse of earphones and music devices and specific demographic factors among individuals in the district of Fatehgarh Sahib, Punjab. The study employed an exploratory research design, and the sample of 200 students was selected using a non-probability purposive sampling technique. The population of present study was younger adults of colleges and universities of district Fathegarh Sahib. To evaluate the frequency, manner, and consequences of overusing earphones and other music devices through a self-designed questionnaire. Data was collected through demographic data sheet for assessment of demographic variable.

"Factors such as age, gender, educational attainment, academic discipline, year of study, religious affiliation, relationship status, residential area, and family income were considered. A self-designed questionnaire was employed to evaluate the frequency and prevalence of the excessive use of earphones and other music devices among young adults. A self-structured checklist was used to assess the effect of earphones and also self-structured likert scale to assess the prevalence and pattern of using earphones and other musical devices. The findings indicate that among younger adults, 1.5% experienced severe hearing effects, 34.0% had moderate impacts, and 64.5% exhibited mild effects. Consequently, it can be inferred that the majority of younger adults encountered mild effects on their hearing
**Key wards**- Prevalence, Music devices,Younger adults, earphones, demographic variables

**INTRODUCTION**

The expansion of science and technology, new discoveries, and the seeming distribution of technological knowledge have all contributed to the development of the music industry. According to the researchers, using headphones while playing video games, viewing films or listening to music on personal players has extended from teenagers to adults and even some senior folks. PMPs (personal musical players) are extensively used by teenagers and young adults, according to research. Additionally, studies have shown that high school students are more prone than other adults to use their PMPs at higher volumes for longer stretches of time.

Additionally, research has revealed that when compared to other adults, high school kids are the most likely to listen to their PMPs for longer periods of time at higher settings. understanding of the free-field equivalent sound pressure levels (SPLs) recorded at the PMP's highest volume setting ranged from 91 to 125 dB(decibels) and the fear that the use of these devices may be dangerous to hearing health is justified.

Contrarily, in contemporary society, people wear ear buds not only to listen to music but also to filter out background noise from the street, bus, taxi, or other modes of public transit, all of which cause hearing loss and damage to the ears. It may take a long time for hearing issues or hearing loss to be diagnosed, making treatment and intervention difficult once they are. The availability of long-lasting, rechargeable batteries makes using portable music player devices to listen to music one of its key advantages. The majority of young people overuse portable music players, which might cause ear and hearing problems. The main problem is that youngsters frequently listen to loud music.

**Asghar Mohammadpoorasl, et al. (2018)** stated that 86.4% of participants had previously used headphones and that 60.2% of students reported having a history of hearing loss and hearing impairment. The majority of participants use their cell phones to listen to music, and 89.6% of them do so while using headphones or earphones. The findings showed that of those who used earphones, 51.32 percent used ear buds, 42.2 percent used supra-aural earphones, and 6.5 percent utilised headphones. In comparison to other students, those who used earphones, used them more frequently over the week, and had used them for longer had greater hearing loss scores.

**Harshitha S and Azeem Ayesha Siddiqua (2017)** conducted a survey to see how widespread and dangerous earphone use is among teenagers. It was decided to use an ex post facto research approach and to use a practical sample technique. In this study, 84 men and 83 women between the ages of 15 and 24 took part. A self-structured questionnaire with nine items was created. The results were also shown in pie charts and bar graphs, and conclusions were produced in line with the data. The responses from the samples were evaluated, percentages were computed, and the results were also exhibited.

**Asghar Mohammadpoorasl, Mohammad Hajizadeh, Soudabeh Marinet al(2015)** conducted a cross-sectional investigation on the prevalence and usage patterns of headphones among students and their relationship to hearing loss. Using a proportional cluster sampling technique, 890 students were randomly chosen to make up the sample. "The information was collected through the use of a self-completed questionnaire. The results of the study revealed that 86.4% (95% CI: 84.0 - 88.5) of the participants had previously used earphones and that 60.2% (95% confidence interval (CI): 56.9 - 66.4) of the students had a history of hearing loss and hearing impairment. The majority of the participants (81.7%) and 89.6% of them utilised headphones to listen to music on their cell phones. The findings showed that 51.3% of individuals who used earphones did so with ear buds, 42.2% using supra-aural earphones, and 6.5% with in-ear headphones.

**NEED OF THE STUDY**

Thanks to modern technology, it is common to see both children and adults utilising electronic gadgets including earphones, headphones, home theatres, and disc jockeys. because it is convenient to listen to music at loud volumes greater than 85 dB whenever and whenever. However, not everyone is aware that frequent use of these gadgets can harm your hearing permanently.

As per the World Health Organization (WHO) report (1), among the 466 million individuals globally grappling with profound hearing impairment, 34 million are children. According to estimates, about 900 million people would have a severe hearing loss by 2050. Hearing loss can be brought on by a variety of circumstances, including genetics, birth complications, some virus diseases, recurrent ear infections, the use of particular medications, exposure to loud noises, and ageing. Children's hearing loss of 60% can be avoided. 1.1 billion young people (aged 12 to 35) are at risk of hearing loss as a result of exposure to loud noises during leisure activities.

**Mehdi Wandadi1, Vahid Rashedi2 et al (2014)**

Iranian medical students' listening preferences and the prevalence of personal music players were the subject of a cross-sectional descriptive study.The sample consisted of 250 pupils. A self-structured questionnaire was used to calculate prevalence. 91.2% of students used headphones overall, 10.4% used them for more than an hour each day, and 52% had the volume set higher than the device's output capacity, according to a study. The most popular music players were cell phones, while the most common headphone design was in-ear. 34.4% of those who had used a personal music player acknowledged having tinnitus. The study's findings showed that students used personal music players very frequently.

**Hossein Ansari, Asghar Mohammadpoorasl et al 2013)** cross-sectional study on the habits of Iranian adolescents in the northeast of the country regarding the use of earphones and music players. 2,359 high school pupils were randomly chosen for the study. A self-administered multiple-choice questionnaire was used to obtain the data. The findings revealed that 42.2% of males and 47% of females, or 44.3% [confidence interval (CI) 95%: 38.3-50.3] of the respondents, respectively, reported a history of hearing issues. Notably, 36.8% of the participants admitted to listening to music continuously without pausing or taking breaks. Nearly 49.6% (CI 95%: 44.4-54.4) of the students said they listened to music that was "somewhat loud" (gain setting at 50%) or "very loud" (gain setting greater than 50%). Regarding the type of earphones used, 17.1% of the participants wore headphones, 34.8% wore ear buds, 32.3% wore supra-aural earphones, and 15.8% wore no earphones at all. The investigation came to the conclusion that students use ear buds and music players in dangerous ways. It is vital to plan instructional programmers in this area for teenagers, particularly in high schools. Thus, we observed that young adults nowadays who are enrolled in universities are fond of music and that they do so while strolling, travelling, and even when studying. Additionally, we observed in public locations, private buses, colleges, and universities. We also observed that people spend most of their time on their personal music devices to listen to music, which is why they are becoming estranged from their families and friends. Many roadside accidents occur as a result of wearing headphones while driving and walking alongside or on the road because they are unable to hear the outside horns of vehicles asking for the side. They are also facing the problems of ear like hearing loss, hearing impairment and many more. That’s why we think that we have to check the prevalence rate, pattern and effect of excessive use of earphones and other musical devices young adults.

**PROBLEM STATEMENT**

An exploratory study to assess the prevalence and effects of excess use of ear phones and music devices among younger adults in district Fathegarh sahib, Punjab.

**OBJECTIVES**

1. To assess the prevalence of excess use of earphones and music devices among younger adults.
2. To assess the effects of excess use of earphones and music devices among younger adults.
3. To find out the association between excess use of earphones and music devices with their selected demographic variables of district Fathegarh sahib, Punjab.

**RESEACH DESIGN:**"A non-experimental research design, specifically an exploratory design, was employed to investigate the prevalence, patterns, and impacts associated with the excessive use of earphones and music devices among undergraduate students in the state of Punjab

**RESEARCH SETTING -** This study was carried out at degree colleges and universities located in the district of Fatehgarh Sahib within the state of Punjab

**VARIABLES**

**Independent variables-** An independent variable is considered to be a factor that is thought to have a causal or influential effect on the dependent variable. In this research, the independent variables pertain to degree students
**Dependent variables-** "The dependent variable comprises the responses that result from the impact of the independent variables, which the researcher aims to predict or explain."

In the context of this research, the dependent variable pertains to the excessive utilization of earphones and music devices.
**TARGET POPULATION -** The study's population comprised individuals classified as younger adults within the age range of 22 to 28 years who were enrolled in degree colleges in the state of Punjab. After confirming the eligibility of the sample, written informed consent was procured from the participants in this age group.

**SAMPLE AND SAMPLING TECHNIQUES--**The sample was drawn by using Non-Probability purposive sampling technique.

**SAMPLE SIZE-** The sample of study comprised of 200 Younger Adults to assess the prevalence, pattern and effects of excess use of earphones and music devices at degree college, Punjab.

**DATA COLLECTION TOOL-**Data collection tools was self structured and validate by experts.

A self-designed questionnaire was employed to evaluate the frequency, trends, and consequences associated with the excessive use of earphones and other musical devices among young adults

 **Analysis and interpretation**

**Table No 1: Frequency and percentage Distribution of Demographic characteristics of younger adults of private colleges and universities**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | N=200 |  |
| **Variables** | **Opts** | **Percentage (%)** | **Frequency(f)** |
| AGE | 20-21 years | 54.5% | 109 |
| 22-23 years | 16.0% | 32 |
| 24-25 years | 24.5% | 49 |
| 26 & above | 5.0% | 10 |
| GENDER | Male | 39.5% | 79 |
| Female | 60.5% | 121 |
| EDUCATION LEVEL OF STUDENT | Diploma Level | 4.0% | 8 |
| Graduation | 69.5% | 139 |
| Post-Graduation | 7.5% | 15 |
| Others | 19.0% | 38 |
| STREAM OF STUDY | Medical | 12.0% | 24 |
| Non – medical | 5.5% | 11 |
| Humanities | 30.0% | 60 |
| Commerce | 28.5% | 57 |
| Other | 24.0% | 48 |
| YEAR OF STUDY | 1st year | 33.5% | 67 |
| 2nd year | 16.5% | 33 |
| 3rd year | 40.5% | 81 |
| 4th year | 2.5% | 5 |
| 5th year | 7.0% | 14 |
| RELIGION | Hindu | 32.0% | 64 |
| Muslim | 1.5% | 3 |
| Sikh | 63.0% | 126 |
| Others | 3.5% | 7 |
| RELATIONSHIP STATUS | Single | 70.5% | 141 |
| Committed | 12.0% | 24 |
| Broken up | 7.5% | 15 |
| Married | 1.5% | 3 |
| Unmarried | 8.5% | 17 |
| AREA OF RESIDENCE | Urban | 50.5% | 101 |
| Rural | 49.5% | 99 |
| FAMILY INCOME | 10,000 – 50,000 | 45.5% | 91 |
| 51,000 – 100,000 | 26.0% | 52 |
| 101,000 – 200,000 | 17.0% | 34 |
| 201,000 – 500,000 | 11.5% | 23 |

Table 1 the frequency and percentage distribution of the younger adults were shown. According to age, it was discovered that the age group 20 to 21 years had the highest percentage of younger individuals (54.5%), followed by 24 to 25 years (24.5%), 22 to 23 years (16.0%), and 26 and older (5.0%). The majority of people were females (60.5%) and men (39.5%), respectively. Most young adults (69.5%) are enrolled in graduation programmes, followed by others (19.0%), post-graduate (7.5%), and diploma level (4.0%). Younger individuals (30.0%) are most likely to major in humanities, followed by commerce (28.5%), other fields (24.0%), medicine (12.0%), and non-medicine (5.5%). Younger persons typically enrol in their third year of study (40.5%), followed by their first year (33.5%), second year (16.5%), fifth year (7.0%), and fourth year (2.5%). maximum number of youth. Sikh faith saw the largest decline (63.0%), followed by Hinduism (32.0%), other religions (3.5%), and Islam (1.5%). Younger adults make up the majority of the single (70.5%), committed (12.0%), unmarried (8.5%), broken up (7.5%), and married (1.5%) demographics. Urban areas account for the majority of younger adults (50.5%), followed by rural areas (49.5). Maximum number of younger individuals were from families with monthly incomes between 10,000 and 50,000 ($45.5%), followed by 51,000 and $1.0 million ($26.0%), 101,000 and $2,000 ($17.0%), and 201,000 and $5,000 ($11.5%).

Hence, it was established that a predominant number of younger adults were engaged in pursuing their educational degrees.Younger adults tend to be unmarried and live primarily in urban areas. The majority of the younger adults, however, came from families with monthly incomes between 10,000 and 50,000.

|  |  |  |
| --- | --- | --- |
| **Demographic Data** | **Levels (N=200)** | **Association with EFFECT OF EXCESS USE Score** |
| **Variables** | **Opts** | **SEVERE** | **MODERATE** | **MILD** | **Chi Test** | **P Value** | **df** | **Table Value** | **Result** |
| AGE | 20-21 years | 2 | 39 | 68 | 3.967 | 0.681 | 6 | 12.592 | Not Significant |
| 22-23 years | 1 | 13 | 18 |
| 24-25 years | 0 | 13 | 36 |
| 26 & above | 0 | 3 | 7 |
| GENDER | Male | 3 | 25 | 51 | 4.808 | 0.090 | 2 | 5.991 | Not Significant |
| Female | 0 | 43 | 78 |
| EDUCATION LEVEL OF STUDENT | Diploma Level | 0 | 4 | 4 | 3.462 | 0.749 | 6 | 12.592 | Not Significant |
| Graduation | 3 | 45 | 91 |
| Post-Graduation | 0 | 7 | 8 |
| Others | 0 | 12 | 26 |
| STREAM OF STUDY | Medical | 0 | 7 | 17 | 7.411 | 0.493 | 8 | 15.507 | Not Significant |
| Non – medical | 0 | 2 | 9 |
| Humanities | 0 | 25 | 35 |
| Commerce | 2 | 21 | 34 |
| Other | 1 | 13 | 34 |
| YEAR OF STUDY | 1st year | 1 | 23 | 43 | 5.306 | 0.724 | 8 | 15.507 | Not Significant |
| 2nd year | 1 | 12 | 20 |
| 3rd year | 1 | 26 | 54 |
| 4th year | 0 | 0 | 5 |
| 5th year | 0 | 7 | 7 |
| RELIGION | Hindu | 1 | 21 | 42 | 6.312 | 0.389 | 6 | 12.592 | Not Significant |
| Muslim | 0 | 3 | 0 |
| Sikh | 2 | 41 | 83 |
| Others | 0 | 3 | 4 |
| RELATIONSHIP STATUS | Single | 2 | 50 | 89 | 4.035 | 0.854 | 8 | 15.507 | Not Significant |
| Committed | 0 | 7 | 17 |
| Broken up | 1 | 5 | 9 |
| Married | 0 | 1 | 2 |
| Unmarried | 0 | 5 | 12 |
| AREA OF RESIDENCE | Urban | 0 | 34 | 67 | 3.174 | 0.205 | 2 | 5.991 | Not Significant |
| Rural | 3 | 34 | 62 |
| FAMILY INCOME | 10,000 – 50,000 | 1 | 33 | 57 | 7.433 | 0.283 | 6 | 12.592 | Not Significant |
| 51,000 – 100,000 | 2 | 21 | 29 |
| 101,000 – 200,000 | 0 | 7 | 27 |
| 201,000 – 500,000 | 0 | 7 | 16 |

**Association between excess use of earphones and music devices with their demographic variables.**

The relationship between the level of score and the socio-demographic characteristic is shown in the table. Based on the third goal, the level of knowledge and particular demographic characteristics were linked using the Chi-square test. The level of scores and other demographic factors do not significantly correlate. At the 0.05 level of significance, the estimated chi-square values were lower than the table value.

**DISCUSSION AND SUMMARY**

The study delves into the primary discoveries, scrutinizing how they align with observations from analogous research endeavors. The goal of the study was to assess the prevalence, pattern, and effects of excessive use of headphones and other musical devices among younger people in District Fathegarh Sahib, Punjab. The findings of the study and those of previous investigations have been discussed in light of the objectives.

**Objective 1**To assess the prevalence of excess use of earphones and music devices among younger adults.

**Finding** Finding Younger adults used earbuds and other musical devices 1.48% of the time, followed by 35% of everyday users. 62% of younger individuals use these gadgets daily for a half-hour to an hour. When travelling, 26% of younger adults like to listen to rock music. Younger adults used their mobile phones to listen to music at home in 83% of cases. These results were in agreement with those of **Asghar Mohammadpoorasl, Mohammad Hajizadeh et al.** conduct a study on prevalence and pattern of using headphones and its relationship with hearing loss among students. The study results showed that most of the participants listened to music on their cell phone 81.7% and 89.6% of them used headphone for listening to music.

**Objective 2.**To assess the effect of excess use of earphones and music devices among younger adults.

**Findings 2.** Younger adults experienced severe (1.5%), moderate (34.0%), and mild (64.5%) hearing impairment. The majority of younger adults had a mild effect on their hearing, it may therefore be said. These results were in line with those of a study on the effects of students using earbuds excessively conducted by **Viktor Magnusson**. The findings of the study indicated that mild (60%), moderate (35%), and severe (5%), hearing impairments.

**Objective 3.**To find out the association between excess use of earphones and music devices with their selected demographic variables of district Fathegarh sahib, Punjab.

**Findings 3.** According to the study's findings, there was a strong correlation between participants' demographic factors (Age, Gender) and their degree of knowledge (p 0.05). Student's educational level, the study's stream, and the year it was conducted. The level of knowledge did not significantly correlate (p0.05) with any of the demographic factors (religion, relationship status, area of residence, and family income

**Major finding related to demographic characteristics of younger adults**

* Maximum younger adults in the age group of 20-21 years i.e. 54.5%.
* There was 39.5% males and 60.5% females.
* Maximum younger adults were studying in graduation i.e. 69.5%.
* Maximum younger adults were from humanities stream i.e. 30.0%
* Maximum younger adults were in third year i.e. 40.5%.
* The most of the younger adults were in Sikh religion I.e. 63.0%.
* Maximum younger adults were single i.e. 70.5%
* Most of the younger adults reside in urban area 50.5%.
* Maximum no. of younger adults was from the family having annually income from Rs 10,000- 50,000 i.e. 45.5%.

The summary of the study, its finding and conclusion, the implication of the nursing education, nursing administration and nursing research has been started. This chapter ends with suggestion and recommendation for research in future.

**Conclusion:-**

The results of a research study indicate that hearing impairment in younger adults manifests with varying degrees of severity, with 1.5% experiencing a severe impact, 34.0% showing a moderate effect, and the majority, accounting for 64.5%, displaying a mild effect. This discerning analysis leads to the conclusion that the prevailing influence on the hearing of younger adults predominantly falls within the category of mild impairment.

In scrutinizing the data, it becomes evident that a significant proportion of the younger adult population under investigation exhibits only a mild effect on their hearing capabilities. The prevalence of mild hearing impairment, constituting almost two-thirds of the studied demographic, suggests a noteworthy trend in the observed outcomes. The comparatively lower percentages of severe and moderate impacts underscore the predominantly mild nature of hearing effects within this age group.

The research findings shed light on the nuanced spectrum of hearing impairment experienced by younger adults. The categorization of severity levels provides a detailed insight into the distribution of these effects, with mild impact emerging as the prevailing condition. Such insights are invaluable in understanding the nuances of hearing health in the younger population, offering a basis for targeted interventions and further investigations into the factors contributing to mild hearing impairment. As ongoing research delves deeper into these dynamics, the comprehension of hearing-related issues among younger adults is expected to evolve, fostering more effective strategies for prevention and intervention in the realm of auditory health

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