

# Incidence of Otitis Externa in Insert Headphone Users

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**Abstract:-** In our modern world, most people are users of insert headphones for multiple purposes. This study was conducted to check whether there is a correlation between the use of insert headphones and otitis externa, which is an inflammatory disease of the external ear.

**Keywords:-** Otitis Externa, Insert Headphones, Hospital, Ear Problems.

## I. INTRODUCTION

Otitis externa is a condition which affects the external auditory canal. It causes an inflammation in the external auditory canal.[1,2,3] The external auditory canal is the canal through which sound waves must pass to reach the tympanic membrane.[4] Any mechanism that causes disruption of the external auditory canal's protective mechanism can lead to pathogen overgrowth and inflammation of that part. Disruption of the external canal's protective mechanism can be due to an interruption in wax formation, trauma to the canal or any blockage.[5]

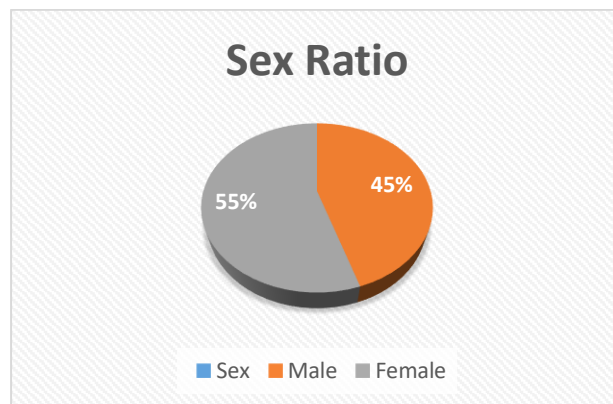
Insert headphones are made up of a rubber coat which when inserted into the ear can cause blockage of the external sound waves from entering into the ear.[6] Thus, usage of insert headphones can lead to disruption of the external auditory canal's protective mechanism and can cause chronic otitis externa in these patients.

## II. MATERIALS AND METHODOLOGY

A research was conducted in a private university in South India over a period of 3 months, from January 2019 to March 2019. The sampling frame comprised of patients who were diagnosed with otitis externa in the ENT Out Patient Department of the college. The sample size taken was 60 patients. The patients were diagnosed to have otitis externa on the basis of their clinical symptoms and by clinical examination.

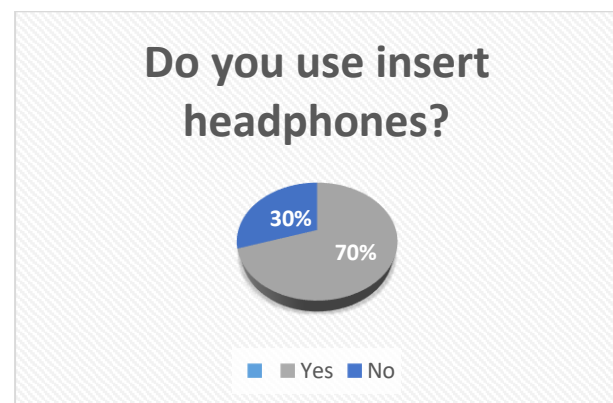
The patients were then asked a set of questions on the usage on insert headphones after obtaining written informed consent from them. Ethical clearance was obtained from the Institutional Ethics Committee of Saveetha Medical College and Hospital, Chennai. Data were entered in Microsoft Excel 2013 and statistical analysis was done.

## III. RESULTS



Pie Chart 1:- Sex Ratio (n= 60)

Pie Chart 1 shows the ratio of males and females that were a part of the study. Out of the total 60 patients that were questioned, 55% of them were Female (33 Patients) and the remaining 45% of the patients were male (27 Patients).



Pie Chart 2:- Question 1- Do you use insert headphones? (n=60)

Out of the 60 patients that were questioned on whether they use insert headphones, 70% of the patients (42 Patients) said that they use insert headphones while 30% of the patients (18 Patients) said that they haven't used insert headphones till date.

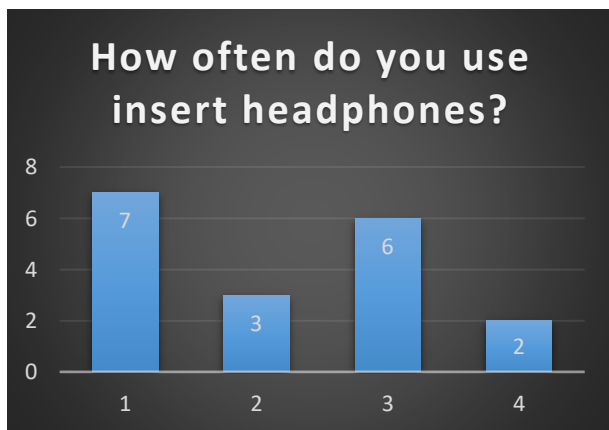


Pie Chart 2:- For those who use insert headphones, do you have a habit of using insert headphones frequently? (n= 42)

The patients who stated that they have used insert headphones were then asked whether they use insert headphones frequently. Out of the 42 patients who were questioned, 43% of the patients( 18 Patients) stated that they do use insert headphones frequently while 57% of the patients( 24 Patients) stated that they do not use insert headphones frequently.

**Question 3 – How often do you use insert headphones?**

- 1: Once a week.
- 2: Twice a week.
- 3: Thrice a week.
- 4: More than 3 times in a week.



Bar Graph 1:

The patients who stated that they use insert headphones frequently were then asked how often they use insert headphones. Out of the 18 patients who were questioned, 38.9% of the patients( 7 patients) stated that they used insert headphones atleast once a week, 16.7% of the patients(3 patients) stated that they used insert headphones atleast twice a week, 33.3% of the patients ( 6 patients) stated that they used insert headphones atleast 3 times a week and 11.1% of the patients( 2 patients) stated that they used insert headphones more than 3 times a week.

**IV. CONCLUSION**

- A) 55% of the patients interviewed were female and 45% of them were male.
- B) 70% of the patients used insert headphones whereas 30% of the patients hadn't used insert headphones.
- C) 43% of the patients use insert headphones frequently whereas 57% of the patients do not use insert headphones frequently.
- D) 38.9% of the patients used insert headphones atleast once a week, 16.7% of the patients used insert headphones atleast twice a week, 33.3% of the patients used insert headphones atleast 3 times a week and 11.1% of the patients used insert headphones more than 3 times a week.

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