



## Knowledge, Attitude and Practice of Ear Care in Saudi Community

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**Abstract:** Ear cleaning and removing the available wax out of them is one of the most widely spread habits among the different populations despite the harmful effect and consequences that could result. Ear wax is useful and protective for the human ears, and in normal cases, it exists in healthy amounts inside the ear canal. The current study aims to investigate the knowledge, attitudes, and practices of ear care among Saudi community members through studying a sample composed of 200 participants from both rural and urban populations. A self-administered questionnaire composed of 15 items had been administered to the study groups. Findings of the study had shown that there is a lack of knowledge and a high practice of incorrect habits, besides to the low awareness level among the rural population regarding ear care compared to the urban population. The study recommends that there is a need to perform more studies and increase the awareness of the community members towards the correct and healthy way of ear care.

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### 1. Introduction:

Ear wax is a normal, healthy substance with a number of functions. It cleans, lubricates and protects the lining of human ears by trapping dirt and repelling water. It usually breaks down naturally and falls out of the ears in tiny flakes (Burton & Doree, 2009).

A high proportion of the population, either educated or illiterate do not realize that the majority of ear disorders are due to the lack of hygiene maintenance of the ears. For instance, otitis externa is an acquired infection that affects individuals practicing swimming sport in non-clean water bodies (Parks & Parks, 2014).

Ears are not only a hearing organ, but also play a key and crucial role in maintaining the body balance that is important to allow the individual practice his/her daily activities. Still, there is a lack of knowledge and awareness regarding the best care practices of human ears. Non-hygienic individual behaviors and habits could affect both human hearing ability and body balance, such as objects that could penetrate the tympanic membrane, allergy reactions, bacterial and fungal infections, loud sounds from the surrounding environments, and using unhealthy tools to clean the ears (Seikel *et al.*, 2015). The presence of a specific amount of human ear wax is useful for keeping and maintaining healthy ears, since it protects

ears against the penetration of foreign objects and bodies, and does not allow them to move forward in the ear canal (Stamper & Johnson, 2015).

However, individuals still using several objects, such as cotton buds and pins, to enhance the ear cleaning and discard the available ear wax. In several cases, these used objects and tools could be risk factors and penetrate the tympanic membrane and perforate it.

Moreover, the exposure to a loud noise in sudden situations, such as explosions or heavy construction works could lead to hearing loss. On the other hand, less sharp sounds such as loud music and sounds originating from the external environment participate in hearing loss when the individual is exposed to them over a long time period.

The current study aims to investigate the awareness of Saudi community members regarding the unhygienic habits followed to clean the ears and assess their knowledge, attitudes, and practices.

### 2. Methodology:

The ongoing study is a descriptive cross-sectional study that was performed over 45 days in the ENT clinic in King Abdulaziz Medical City. The study had included both rural and urban categories. The study sample was composed of 200 participants distributed over two groups.



Age of the participants was pre-determined to be between 18 and 65 years old, as they will be able to respond to the study questionnaire.

Two study groups, both rural and urban, were studied and compared together, the rural group representing the low socio-economical and educational category while the urban group representing the high socio-economical and educational category.

A pre-designed questionnaire, containing Yes and No questions were distributed to the study participants and they were requested to read and answer the questions carefully.

Participants' responses, representing their attitudes and knowledge, were measured statistically by calculating the percentages of their Yes and No answers. Harvested data were tabulated, organized, coded and exported to the Statistical Package for Social Sciences (SPSS) software (IBM Corporation V. 20.0). Researchers had performed a Chi-square analysis to detect the participant's knowledge, attitudes and practices level among the two studies groups (Rural and Urban). The study was performed under the institutional research and ethics committee.

### 3. Results:

Results shown in Table 1 represents the study participants' responses to the study questions. Researchers had performed a brief demonstration regarding the correct and incorrect ear hygiene practices.

### 4. Discussion:

Study questions were mainly oriented towards the participant's knowledge, attitudes, and practices.

Findings of the study had shown that incorrect practices such as using objects to clean the ears canals, sudden or gradual exposure to loud noise, using ear drops randomly and blowing the nose roughly were highly encountered among the rural population higher than the urban population. Knowledge regarding the harmful impact of using foreign objects or sharp tools was found to be unsatisfactory among the rural population, but satisfactory among the urban population.

Previous results are consistent with Hobson and Lavy (2005) who had reported that 68% of studies patients were using wet or sharp objects to get rid of the wax in their ear canal. Furthermore, Nussinovitch et al. (2004) had reported that using foreign objects to clean and remove the ear wax was the main causative agent of otitis externa among the examined children.

In another study conducted by Kravitz *et al.* (1974), it had been indicated that individuals are ignoring any cautions and warnings regarding using foreign objects to clean the ear canal.

Clark (1991) had shown that the knowledge level regarding the harmful effect of exposure to noise that listening to loud music and using headsets was the most common among study individuals and they were not

aware of their harmful effect because they could enjoy that.

Table 1: Study participants' responses to the distributed study questionnaires.

| Item   | Rural      |           | Urban      |           | P-value |
|--|------------|-----------|------------|-----------|---------|
|  | Yes<br>(%) | No<br>(%) | Yes<br>(%) | No<br>(%) |         |
| I try to clean my ears with wet objects or sharp tools such as pens or pencils     | 87%        | 13%       | 9%         | 91%       | 0.216   |
| I had a previous infection of my ears  | 69%        | 21%       | 21%        | 79%       | 0.431   |
| I have a previous history regarding an object that got stuck in my ear canal       | 38%        | 62%       | 0%         | 100%      | 0.107   |
| I have experienced difficulties in my hearing ability                              | 90%        | 10%       | 4%         | 96%       | 0.000   |
| Normally I blow my nose roughly when I have cold or influenza                      | 93%        | 7%        | 12%        | 88%       | 0.003   |
| I normally use ear drops without doctor consultation when I have an ear pain       | 86%        | 14%       | 14%        | 86%       | 0.103   |
| I use headsets when listening to loud audio (i.e. music)                           | 34%        | 66%       | 23%        | 77%       | 0.000   |
| I am exposed to noisy sounds from external sources such as the working environment | 61%        | 39%       | 5%         | 95%       | 0.179   |
| I am aware of the risk of the outer environment noise exposure                     | 17%        | 83%       | 93%        | 7%        | 0.000   |
| I have been exposed to sudden noise, such as gunfire                               | 41%        | 59%       | 3%         | 97%       | 0.203   |
| I have a medical condition, such as DM, HTN, Kidney disorders, or any other.       | 44%        | 56%       | 9%         | 91%       | 0.000   |
| I require medical consultation and help because of poor hearing ability            | 98%        | 2%        | 7%         | 93%       | 0.913   |
| I use oils to clean my babies' ears  | 15%        | 85%       | 27%        | 73%       | 0.001   |
| I realize the importance of neonatal screening for hearing status                  | 9%         | 91%       | 86%        | 14%       | 0.000   |
| I have cleaned my ears with the help of unspecialized individuals                  | 75%        | 25%       | 13%        | 87%       | 0.936   |



Same previous findings were discussed by Miyake and Kumashiro (1986) who demonstrated that using headsets are a risk factor, where he found that 22% of the rural and 82% of the urban study populations were using headsets to listen to loud music.

Current study findings had shown that 17% and 7% of the rural and urban populations, respectively, had been exposed to noisy sounds from outer sources such as the working environment. These findings indicate that they have a good knowledge level regarding the exposure to external noisy sounds as a risk factor negatively affecting their hearing ability.

According to the previously demonstrated findings, the current study suggests that it is highly recommended to educate people and increase their awareness level regarding the ear care habits, especially rural populations. Moreover, policymakers in the Ministry of Health (MOH) are recommended to perform awareness campaigns meant with oral hygiene, these campaigns should target both rural and urban communities, concentrating on rural and non-educated categories, and encourage healthcare providing parties and institutions to participate effectively in these campaigns.

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There are no conflicts of interest among authors.

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