



Attitude and awareness of the health hazards associated with self-ear cleaning using cotton buds amongst adult patients attending Federal Medical Centre Lokoja, North central Nigerian

Ogah SA¹, Odekunle RR², Enesi IE³ and Lawal Wd⁴

¹Department of Surgery, Federal Medical Center, Lokoja; ²Department of Family Medicine, Federal Medical Center, Lokoja; ³Department of Ophthalmology, Federal Medical Centre, P.M.B. 1001, Lokoja, Nigeria; ⁴Dept. of Surgery, Federal Medical Center, Lokoja.

Correspondence: stephenogah@yahoo.com

ABSTRACT

Background: Health hazards associated with self ear cleaning using the cotton buds has been a big community health issue for long. Getting the people to accept these health hazards as real is a bigger issue up to the time of this survey.

Aims: To determine the attitude and awareness of the health hazards associated with self-ear cleaning amongst adult patients attending Federal Medical Centre Lokoja, North central Nigeria.

Materials and Methods: Adult patients attending ENT, GOPD and Staff clinics of the Federal Medical Centre Lokoja who granted their consent were recruited by convenience sampling method for this study. Patients were given an informed consent agreement form to read after which they were asked to sign it and then complete an anonymous questionnaire. A total of 500 questionnaires were applied based on Fisher's formula. Sample collected were

collated, studied and analyzed.

Results: Of the 500 anonymous questionnaires applied, 482 (96.4%) responses were received while 18 did not respond. The modal age group was 21-30 years, males were 140 and females were 342 and the male to female ratio was 1:2.4. Civil servants 251 (52.1%) top the occupation list followed traders. Of the 482 responses 376 (78.0%) were aware of the health hazards associated with self ear cleaning and majority of them 144 (46.2%) got their information from the doctor. Cotton buds were used by 319 (89.6%) of the individuals and pain was the commonest complication associated followed by ear injury.

Conclusion: Self-ear cleaning is common among the subjects irrespective of the high level of awareness. More health education is needed to discourage this unhealthy practice.

Key words: self-ear, cleaning, cotton buds, health, hazards.

INTRODUCTION

Cotton buds or swabs are common in most of our homes and are commonly used by mothers to clean their children's ears. However, adults are also noted to be using it as well. Many of its applications include

cosmetic usage to apply or clean up makeup, to give first aid treatment by using it to apply some medications to an area of the body, for taking microbiological specimen from an area in the body to the laboratory for microscopy, culture and sensitivity tests,





cleaning of optical drive, used by the artist or craft men in painting and dying works.¹⁻³

Problems like wax impaction,⁴ otitis externa,⁵ canal lacerations, traumatic tympanic membrane perforation⁶ and foreign body impaction can also occur.^{7,8} Attempt to remove wax with cotton swabs may result in wax impaction, a buildup or blockage of wax in the ear canal can cause tinnitus and other otological symptoms requiring hospital consultation and treatment to resolve.⁹ It has been shown that repeated cleaning of the external auditory canal can predispose the external auditory canal to irritation and other injury that can trigger of otitis externa.¹⁰ The use of cotton buds in the ear canal is a common cause of traumatic tympanic membrane perforation in our environment and the solution is not to have used it at the first instance.¹¹

This study is aimed at determining the awareness of the health hazards associated with self-ear cleaning, also the degree of acceptability of these health hazards and finally how the people intend to avoid such health hazards.

MATERIALS AND METHODS

Description of study area

Lokoja is the administrative capital of Kogi state, Nigeria. Lokoja town has a heterogenous population made up of the Igala, Ebira, Yoruba, Nupe, Okun, Oworo, Bassa-Nge, Kakanda, Egbura and Hausa. The population as estimated in the 2006 census indicated that the local government Lokoja had a population of 195,261. 45% of which comprises civil servants and business people, while 30% is made up of students and vocational workers and 25% farmers. Lokoja

town lies on latitude 7° 49' North of the equator and longitude 6° 44' East of the Greenwich meridian. The town is the most centrally located in Nigeria, located at the confluence of the rivers Niger and Benue. The study will be carried out in Federal Medical Centre Lokoja, a 500-bed federal government hospital, which serves as a reference, teaching and specialist centre.

Study Population: Adult patients attending the ENT, GOPD and Staff clinic of the Federal Medical Centre Lokoja, Kogi State.

Study Design

It is a cross-sectional hospital based prospective study.

Ethical Consideration

Approval for this study was obtained from the Ethical Review Committees of the Federal Medical Centre, Lokoja where this research was carried out, after which informed consent was obtained from patient. The study was done at no cost to the patient, acceptance or refusal to participate in the study did not in any way affect the treatment of the illness patients presented with and information from the subjects were made confidential with the questionnaires being anonymously used.

Sample size

The sample size was determined using Fisher's formula for the cross sectional study. $N = Z^2 p q / d^2$ (Where N is the desired sample size)

Z = the standard normal deviation which is 1.96 (at 95% confidence interval)

P = the prevalence of self-ear cleaning of 34%¹².

q = 1 - p,



$q=1-0.16=0.84$
 $d=0.05$ (the precision)
 $N= (1.96)^2 \times 0.34 \times 0.83 / (0.05)^2 = 433.66$
Sample size was 434 calculated and was rounded up to 500 in case of any attrition.

Sampling Method

Recruitment was done as the subjects were coming to the hospital facility

Conclusion Criteria

1. Adult patients attending the E.N.T, GOPD and Staff Clinic of Federal Medical Centre Lokoja.
2. Subjects who gave their consent.
3. Educated enough to read, understand and signed the consent form.

Exclusion Criteria

1. Very ill patients
2. Psychiatric patients
3. Uneducated patients that cannot read or fill questionnaire

Methodology

Both male and female adult patients attending ENT, GOPD and Staff clinics of the Federal Medical Centre Lokoja who gave their consent were recruited as they come to the hospital for this study. Patients were given an informed consent agreement form to sign after which they were asked to complete an anonymous questionnaire so as to hide their identity. A total of 500 samples consisting of 150 males and 350 females were collected for this study as calculated using Fisher's formula. Sample collection took 1 month after which the questionnaires were collated, studied and analyzed.

Results

Of the 500 anonymous questionnaires

applied, 482 (96.4%) responses were received while 18 did not respond. The modal age group was 21-30years, mean was = males were 140 and females were 342 and male to female ratio of 1:2.4 (Table1).

Table1: Age distribution of patients

Age group	Number (%)
21-30	296(61.4%)
31-40	82(17.0%)
41-50	52(10.8%)
51-60	52(10.8%)
Total	482(100.0%)

Modal age group=21-30years

Civil servants were 251(52.1%), traders 101(21%), farmers 63(13.1%), business people 19(3.9%) and others 48(9.9%) as shown in Figure1. The majority of them had higher school education and above.

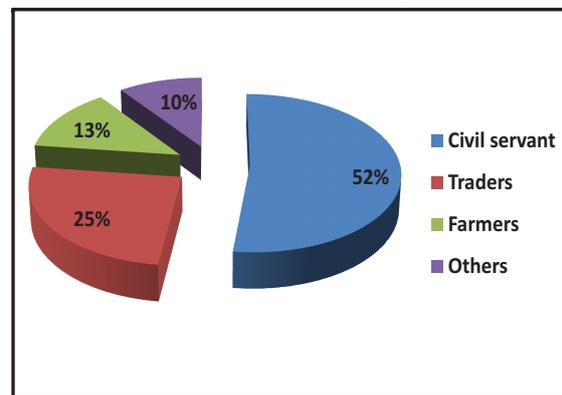


Figure 1: Occupation of patients

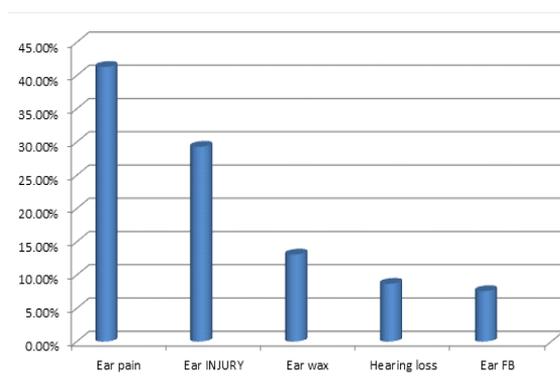
Out of the 482 responses received, 376 (78.0%) of them were aware of the health hazards associated with self ear cleaning with cotton buds while 106 (22%) were

unaware. The main source of their information was Doctors 144 (46.2%), Nurses 69(22.1%), friends and relatives 99(31.7%) as shown in Table 2.

Table 2: The sources of information on health hazards of self-ear cleaning.

Information Source	Number (%)
Doctors	208(55.3%)
Nurses	69(18.4%)
Relatives and friends	58(15.4.0%)
Others	41(10.9%)
Total	376(100%)

Admitted self-ear cleaning were 356 (93.2%) of those who were aware of the health hazards, while only 20 (6.8%) were not in the habit of doing it. Materials used by most of them were cotton buds 319 (89.6%), birds feather 28 (7.8 %) and sharp objects like match sticks/biro cover 9(2.6%). Ear pain was the commonest complications observed by most patients followed by trauma to the affected ear (Fig.2).



FB – Foreign Body

Figure 2: The frequency of complications associated with self-ear cleaning

DISCUSSION

In this study we found a female preponderance for cotton buds self ear cleaning amongst the participants. We are not surprised as females are the ones caring for babies and children in our homes. Often, they see it as a duty to clean their children's ears and they use cotton buds commonly in doing that. However, this finding is different from a study by Adeyi et al¹³ who found more males in their study of 141 subjects involved in the use of cotton buds for self-ear cleaning. In this survey, we also found other objects like bird's feathers, match sticks and biro cover were also being used by some of the participants in lesser frequencies. It may be possibly due to the fact that some of these people do it as a habit and so could use whatever object they may lay their hands on clean their ears or that they have ear diseases that may appear to them as minor and so ignored medical consultations. Prevalence found in this study is 93.2% and this is high when compared to studies by Gadanya et al¹² and Adeyi et al¹³ who found 73% and 81.6% respectively. Their studies were conducted amongst healthcare professionals who should know better and hence not surprising about their lower values. Although a study by Hobson et al⁸ also reported even a much lower prevalence which may have been due to a high dropout rate from the study despite the large sample size of 325. This prevalence is like that obtained by Amutta et al¹⁴ (91.2%) and Olaosun et al¹⁵ (93.4%).

Civil servants top the occupation list in this study followed by traders which is not surprising as the healthcare facility where the study was carried out is in the state capital city of Lokoja with a low population of farmers and other rural dwellers. Also found



in this survey is that 55% of the awareness of this health hazards was created by doctors to their patients and that there is a low awareness being created by other health care workers. This is not good enough and all healthcare workers should participate actively in the awareness program in rural and semi-urban areas to discourage self-ear cleaning.

The commonest complication noticed in this study was ear pain followed traumatic perforation of the tympanic membrane and this is similar to findings reported in previous studies.¹⁵⁻¹⁷ Although wax impaction, otitis externa, cotton buds trapping in the external auditory canal were not found in this study, they are still regarded as common complications of self ear cleaning as previously reported.¹⁸ This is a hospital based study carried out amongst adults who were educated enough to fill a questionnaire and so, the study excluded the rural dwellers, children and uneducated persons which could have some limitation on the study to some extent. Another possible limitation was the fact that the study was a self-reported behavior of previous health practices which could easily have been influenced by social desirability and recall bias. Further studies will be needed in both the community and hospital to assess the prevalence of cotton bud use among our people so as to determine a realistic prevalence.

CONCLUSION

Self-ear cleaning is common among our people especially women irrespective of their level of education. It is obvious that people are still doing it irrespective of their awareness and we advise that all health workers team up to keep discouraging these

patients, relatives and friends about the attitude of self-ear cleaning.

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