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Research Article

A STUDY PROFILE OF SELF EAR CLEANING IN NIGERIAN RURAL COMMUNITY

**WaheedAtiladeAdegbiji¹, Gabriel ToyeOlajide^{2*},
Olawale Olubi³ and AbdulAkeem Adebayo Aluko⁴**

¹Department of ENT, Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria

²Department of ENT, Federal Teaching Hospital Ido-Ekiti, Ekiti State,
Nigeria/Afe-Babalola University Ado-Ekiti (ABUAD), Nigeria

³Department of ENT, Lagos State University Teaching Hospital, Lagos, Nigeria

⁴Department of ENT, Aminu Kano Teaching Hospital, Kano, Nigeria

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ABSTRACT

Background: Self ear cleaning is a common practice among many people despite associated complications. It constitutes a significant proportion of health problems in many settings and its prevalence varies. This study aimed at determining the prevalence, sociodemographic features, clinical presentation, associated complications and management of self ear cleaning in a rural community of Nigeria.

Materials and methods: This is a cross sectional community based study of self ear cleaning. The study was carried out over a period of three months between October and December 2017. Interviews assisted questionnaire was administered to obtain data.

Results: Prevalence of self ear cleaning was 93.7%. Male respondents were 46.4% while female respondents were 53.6% given a male to female ratio of 1:1. Commonest reason for self ear cleaning was dirty/earwax in 30.2%. Both ears were most commonly cleaned in 51.1%. Right ear in 29.6% was commoner than left ear in 19.3%. Commonly used object in self ear cleaning were sticks, finger and cotton bud in 43.3%, 33.8% and 26.3% respectively. Common clinical features were otalgia, itching ear, dirty ear canal/earwax and hearing loss in 62.3%, 46.9%, 43.9% and 34.1% respectively. Common diagnoses were 33.8% personal hygiene, 24.0% allergy and 17.9% earwax impaction. Complications recorded were impacted foreign body in 35.8%, injury external ear in 21.8% and traumatic perforated tympanic membrane in 4.7%. Treatment of other ENT illnesses was 17.6% in participants. Referrals to other specialist were 9.5% of respondents. Conservative/medical treatments were 51.1%. Foreign body removal was recorded in 21.8% of participants.

Conclusions: Self ear cleaning is a common ear habit among people. A Prevalence of self ear cleaning of 93.7% was recorded in this study. Reasons are ignorant, social as well ear diseases including allergy. The habit is associated with avoidable complications.

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INTRODUCTION

Self cleaning of the external auditory canal with different types of objects is a common practice worldwide ^{1,2}. Major reasons for self ear cleaning were to remove ear wax in form of personal hygiene and because earwax was considered as a dirt from the ear ³⁻⁶.

Other reasons for self ear cleaning includes feeling of ear discomfort, earache, hearing impairment and itching ^{7,8}. There are various object used for self ear cleaning and these were

cotton bud, key, soapy water, feathers, stick, Biro cover, finger and so on ^{2,9}.

The complications of self ear cleaning were ear trauma, traumatic tympanic membrane perforation, impacted object, inflammation, otitis externa from bacterial and fungal infection ⁹⁻¹¹. Other complications includes interferes with the self cleansing function of the external auditory canal which may lead to accumulation and subsequently earwax impaction. ^{12,13}. There is paucity of literature on self ear cleaning in low income country. This study aimed at determining the

*Corresponding author: **OlajideToye Gabriel**

Department of Ear, Nose & Throat, Federal Teaching Hospital, IdoEkiti, Ekiti State, Nigeria /Afe-Babalola University Ado-Ekiti (ABUAD), Nigeria

prevalence, sociodemographic features, clinical presentation, associated complications and management of self ear cleaning in a rural community of Nigeria.

MATERIALS AND METHODS

This was a 3 – month s cross sectional descriptive rural community based study of residents of Akanran, Olorunda, and 5 surrounding villages in Oyo state, Nigeria, between October and December 2017.

These communities were about 30kilometres from Ibadan, the Oyo state capital. The linked roads were rough with poor accessibility, no regular electricity supply and there was no pipe borne water. They were predominantly farmers and civil servants. The village head and the family head were seen during village and landlords meeting. The village head and family head were health educated on otorhinolaryngological, head and neck diseases. The scope of our study was explained to them.

It is multicultural population comprising the three major ethnic groups of Nigeria (Yoruba, Hausa, Ibo) and non Nigerians. The participants were selected from the social strata such as market, schools, hospitals and other institutions. The samples were selected by multistage sampling technique. Informed consent was obtained and pre-tested semi-structured questionnaires were used as instrument of data collection. The questionnaires were self administered. The data obtained includes information on sociodemographic features, self ear cleaning, frequency of ear cleaning, type of object used, associated complications and indications for self ear cleaning. Confidentiality was assured.

Detailed otological examination and pure tone audiometry assessment were done. Free medical treatment and minor ear, nose and throat procedure were given. Participants that required further investigation and major surgery were referred to tertiary centre. Ethical clearance was sought for and obtained from the ethical and research committee of the hospital. All data obtained were collated and analyzed by using SPSS version 16.0. Data were expressed in simple frequency table, percentages, bar charts and pie charts.

RESULTS

A total of 382 participants consented for the study out of which 358 had practice self ear cleaning. Prevalence of self ear cleaning was 93.7%. All age group were represented with peaked age group 21-30 years represented 156 (43.6%) of the participants (**Figure 1**). Male respondents were 166 (46.4%) while female respondents were 192 (53.6%) given a male to female ratio of 1:1. About 212 (59.2%) practiced Islam while 146(40.8%) practiced Christianity. Based on education level, 137 (38.3%) had no formal education, primary were 79 (22.1%), secondary were 81 (22.6%) and post-secondary were 61 (17.0%). Common occupation were farming, Unemployed, artisans, and driving in 129 (36.0%), 72(20.1%), 48 (13.4%), and 43 (12.0%) respectively. Majority (62.3%) of the respondents were Yoruba by tribe. Table 1 showed sociodemographic features of the respondents. Commonest reason for self ear cleaning was due to dirty/earwax in 108(30.2%). Other reasons for self ear cleaning among the respondents were personal hygiene, itching, hearing impairment and water in 81 (22.6%), 56 (15.6%), 39 (10.9%) and 37 (10.3%) respectively (**Table 2**). Majority 63.7% of

respondents believed that self ear cleaning were not harmful, 92 (25.7%) of respondents claimed that it was harmful while 38 (10.6%) were not sure. Both ears were most commonly cleaned among the participants in 183 (51.1%). The right ear in 106 (29.6%) was commoner than left ear in 69 (19.3%). **Figure 2** showed the laterality of self ear cleaning among the participants.

Commonly used object in self ear cleaning were sticks, finger and cotton bud in 155 (43.3%), 121 (33.8%) and 94 (26.3%) respectively. Other objects used by the respondents are shown in Table 3. Ear cleaning were performed by self in 178 (49.7%), parent in 122 (34.1%), friend in 31 (8.7%) and spouse in 27 (7.5%). Common clinical features among the participants were otalgia, itching ear, dirty ear canal/earwax and hearing loss in 223 (62.3%), 168 (46.9%), 157 (43.9%) and 122 (34.1%) respectively. Others were tinnitus in 41 (11.5%), bleeding in 23 (6.4%) and ear discharge in 19 (5.3%) **Figure 3**. In this study, common diagnoses were 121 (33.8%) personal hygiene, 86 (24.0%) allergy and 64 (17.9%) earwax impaction. Others are shown in Table 4.

Complications noted in this study are impacted foreign body in 128 (35.8%), injury externa ear in 78 (21.8%) and traumatic perforated tympanic membrane in 17 (4.7%). However 135 (37.7%) did not have any form of complications. Information on ear cleaning was from 237 (66.2%) family, 34 (9.5%) neighborhood and 87 (24.3%) imitation. Treatments of other ENT illnesses were given to 63 (17.6%) respondents. Referral to other specialist was recommended for 35 (9.5%). Health education was delivered to all participants. Conservative/medical treatments were given to 183 (51.1%) respondents. Foreign body was removed from 78 (21.8%) participants (**Table 5**).

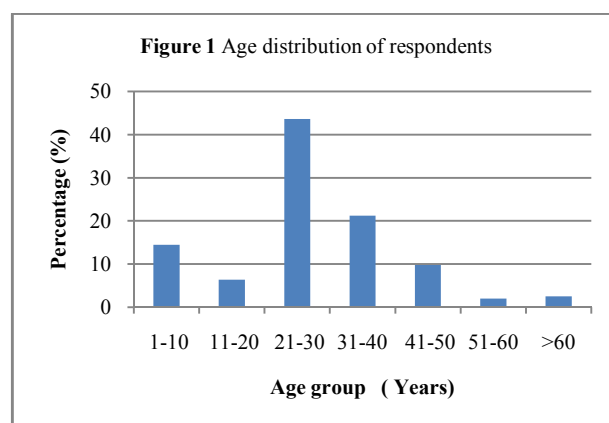


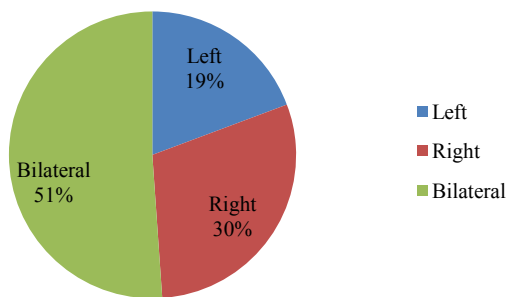
Table 1 Sociodemographic features of respondents

Sociodemographic features	Number	Percentage (%)
Sex		
Male	166	46.4
Female	192	53.6
Religion		
Islamic	212	59.2
Christianity	146	40.8
Education level		
Nil	137	38.3
Primary	79	22.1
Secondary	81	22.6
Post secondary	61	17
Patients occupation		
Unemployed	72	20.1

Business	38	10.6
Driver	43	12
Industrial worker	30	8.4
Farming	129	36
Artisans	48	13.4
Ethnicity		
Yoruba	223	62.3
Hausa	39	10.9
Ibo	32	8.9
Non Nigerians	64	17.9

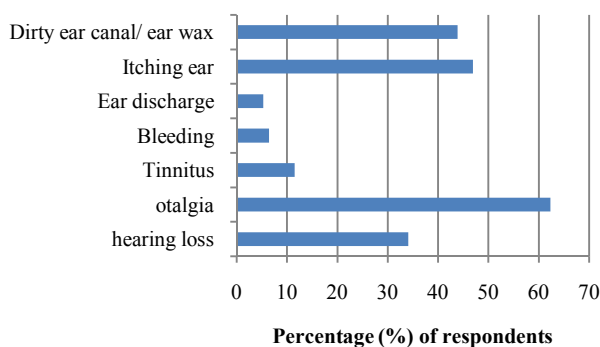
Table 2 Reasons/Indications for self ear cleaning

Indications	Number	Percentage (%)
Dirty/earwax	108	30.3
Personal hygiene	81	22.6
Itching	56	15.6
Hearing impairment	39	10.9
Water	37	10.3
Ear blockage	19	5.3
Ear discharge	18	5.0

Figure 2 Laterality of self ear cleaning

Table 3 Common objects used for self ear cleaning

Objects	Number	Percentage (%)
Sticks	155	43.3
Finger	121	33.8
Cotton bud	94	26.3
Feathers	45	12.6
Keys	26	7.3
Toothpick	14	3.9
Biro cover	9	2.5
Paper roll	2	0.8

NB: Some Respondents uses more than one objects

Figure 3 Clinical feature/presentation of respondents


NB: Some of the respondents have more than one clinical feature

Table 4 Diagnosis among the self ear cleaning

Diagnosis	Number	Percentage (%)
personal hygiene	121	33.8
Allergy	86	24.0
Ear wax impaction	64	17.9
Otitis externa	34	9.5
Otitis media	29	8.1
Hearing impairment	24	6.7
Total	358	100.0

Table 5 Management for self ear cleaning

Management	Number	Percentage (%)
Complications		
Nil		
Injury to externa ear	135	37.7
Impacted foreign body	128	35.8
Traumatic perforated tympanic membrane	78	21.8
Information on ear cleaning	17	4.7
Family	237	66.2
Imitation	87	24.3
Neighbour	34	9.5
Treatment of other ENT illnesses	63	17.6
Referral to other specialist	34	9.5
Health education	358	100
Conservative/medical treatment	183	51.1
Foreign body removal	78	21.8

DISCUSSION

In this community study, practice of ear cleaning is very common with high prevalence in the study rural population. The findings in this study is consistent with value from other studies ^{1,2}. Like in this study the prevalence of self ear cleaning has been persistently above 90% ^{1,2}. Lower prevalence of self ear cleaning were recorded in studies done among health professionals ^{14,15}. In this study, the peaked age of self ear cleaning was third decades. This is due to their high social activities. Similar findings was in other studies ^{16,17}. Contrarily, peaked prevalence was recorded at fourth decade in another study ¹⁸.

In this study, there was female preponderance over male counterpart. Female are more active in personal hygiene. A similar finding was recorded in other study ¹⁷. Other studies revealed more male preponderance over female ^{19,20}. Majority of the study population had formal education and still practice self ear cleaning while minority has no formal education. This is an evidence of low level of health education. Similar findings were recorded in other studies ^{16,21}.

In this study, most participants indulged in self-ear practices due to dirty/earwax, personal hygiene, itchiness, hearing impairment and water in the ear canal. These findings were similar to report from other studies ¹⁵⁻¹⁷. Earwax was believed to be dirt due to its sticky brownish nature and necessitated cleaning or washing during bath. Earwax may also induced ear discomfort which required soothed by available object.

In this study, both ears were most frequently cleaned by the participants. Non pathological indications of self ear cleaning like earwax, personal hygiene are the majority and accounts for bilateral ear cleaning. Unilateral cleaning of right or left ear is less common and usually arises from ear disorders such as ear discharge. This findings concurred with previous studies ^{15,22}.

There are different types of object used in self ear cleaning. This depends on the available object in the environment. In the village set up commonest used object was sticks of different types. Other common object in this study included finger, cotton bud and feathers. This finding is contrary to the observations in previous studies^{18,19,21,23}.

Common clinical features among the studied patients were otalgia, itching, hearing loss and dirty/earwax at osteocartilagenous junction of external ear which is subsequent to ear cleaning. Earwax impaction prevented sound wave conduction to the tympanic membrane may leads to hearing impairment and tinnitus in the patients. The presenting otalgia resulted from bruises sustained and otitis externa from ear cleaning. Most of the itchy ear arises from allergy, earwax, infections and object in the ear commonly initiate ear cleaning. We observed that our respondents cleaned their ear canal very often. Majority has become habitual or chronic ear cleaner. It is a regular activity just like regular bathing and brushing of teeth. Commonest diagnosis of ear cleaning in the studied community was personal hygiene. Others included allergy, earwax impaction and otitis externa. Unless this were diagnosis and treated it may be difficult to stop this dastard self ear cleaning practice. Other rare diagnosis included various form of otitis media and hearing impairment. Medical opinion should be sought from Otorhinolaryngologist if ear symptoms persist for more than 48 hours. This findings were recorded in previous studies^{2,9,10,16,17}.

No complication was recorded in a third of the participants while complications were reported in more than half. However most of the complications were self limit and managed at home. Commonest complication was injury to the externa ear while others were impacted foreign body and traumatic perforated tympanic membrane. A major source of information on self ear cleaning was from family. Other sources were by imitation and neighborhood. Other ENT diseases diagnosed were treated while non ENT disorders were referred to appropriate specialist. All participants were educated on danger of self ear cleaning and seeking specialist intervention in persistent symptoms. Foreign bodies were removed by instrumentation under direct vision and some by syringing. The underlying diseases and complications were treated by conservative and medical treatment.

CONCLUSION

Ear cleaning is a common otological habit among people. A prevalence of self ear cleaning of 93.7 % was noted in this study. Associated reasons are ignorant, social as well as underlying ear diseases including allergy. The habit is associated with avoidable complications. Health education and treatment of underlying causes is significant to reduce this habit.

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Competing interests

All the authors declare that there was no competing interests.

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