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Self Ear Cleaning Among Health Workers in Nigeria

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Abstract:
Background: *Self-cleaning of ears with cotton bud is a common practice worldwide and the hazards associated with this action are well documented. Nevertheless very few studies have been done on this subject in Nigeria.*
Objective: *To determine the prevalence of self-ear-cleaning and its sociodemographic correlates among health workers in Nigeria.*
Settings and Design*: A cross-sectional survey conducted in a Tertiary institution in Nigeria.*
Methods: *Semi-structured questionnaires were administered on a randomly selected sample of 150 respondents. The outcome variable was self-ear-cleaning. Independent variables were sociodemographic variables, materials used and ear-cleaning habits. The data collected were analyzed using SPSS version 15.*
Results: *There were 150 respondents (M:F =1:1.41). Mean age was 33.9 (standard deviation=9.12). Prevalence of self ear cleaning was 94%. Cotton buds were the most frequently used object (in 87.3%). The commonest reason for this practice was ear itching (48.7%). Majority of those who indulge in self ear cleaning own cotton buds (80%). There was strong association between self ear cleaning and sex (x^2=8.929, P=0.004), ownership of cotton bud (x^2=58.064, P=0.000) and those that think that self ear cleaning is beneficial(x^2=26.600, P=0.000). Conclusion: From this study, majority of the subjects indulged in self ear cleaning and cotton bud is the commonest object used. Many of the health workers have an erroneous believe that it is beneficial. Hence, there is need for increase awareness through health education in the hospitals and other public places.*
Keywords: *Health workers, Nigeria, prevalence, self-ear-cleaning, socio-demographic variable*

I. Introduction

Self-ear-cleaning, the insertion of objects like cotton bud into the ear with the aim of cleaning them is a common practice worldwide[1,2,3,4,5]. Some of the reasons given for this practice include; ear itchiness, irritation, ear blockage, ear pain and discharge while others see it as normal habit[6]. The combination of secretions from the ceruminous and sebaceous glands and desquamated epithelium from the tympanic membrane and skin lining the external auditory canal form the ear wax[2].

It has been established that earwax (cerumen) protects, clean, lubricates the skin of the ear canal and traps foreign bodies in the external auditory canal[1,6]. It is said to be self cleansing (through a mechanism of a "conveyor belt" process of epithelial migration, aided by jaw movement) hence does not need to be cleaned[1]. By this process, cerumen in the external auditory canal is moved outward along with dirt, and particulate matter within the ear canal. Afterwards, this epithelium reaches the outside of the ear canal and flakes off[7]. It is believed by experts that self ear cleaning interferes with this natural process and may predispose to certain diseases of the ear[1].

Insertion of objects e.g. cotton buds inside the ears is not only unnecessary but also potentially dangerous and has widely been condemned worldwide by otolaryngologists[6]. This is due to well documented complications like trauma (e.g. tympanic membrane perforation), impacted ear wax, otitis externa and retention of foreign body [1,8,9,10]. Impacted cerumen is seen in about 2% to 6% of the general population. It can cause a variety of symptoms including itching, pain, hearing loss, tinnitus, dizziness [11]. Furthermore, untreated impacted wax can lead to 'hearing loss, social withdrawal, poor work function and even mild paranoia'[11,12]. Otitis externa is an infection of the external ear with potentially serious implications for hearing[1]. Acute otitis externa is one of the most common infections encountered by clinicians[1]. It has an annual incidence of 1:100 to 1:250 in the general population with regional variations based on age and geography, and a lifetime incidence of up to 10%[1,13]. Little studies have been conducted on the practice of self ear cleaning in Nigeria. Hence, this study aimed at investigating the prevalence and sociodemographic correlates of self-ear-cleaning among health workers in a tertiary hospital in Nigeria.

II. Materials And Methods

The study was a cross-sectional survey approved by an institutional ethical review committee. The target population was the Health workers in Babcock University teaching Hospital, Ilisan-Remo, Ogun state, Nigeria. A minimum sample size of 150 was determined and respondents were selected by stratified random sampling. Data were collected with a self-administered pretested semi-structured questionnaire. Inclusion criteria were subjects that gave consent to participate in the study.

The questionnaires contained information on bio-data, practice of self ear cleaning, object used and reasons for the practice of self ear cleaning. Questions about ownership of cotton buds and perception of benefit of self-ear-cleaning were also included. Hence, the major outcome variable was self-ear-cleaning (yes or no). Independent variables included sociodemographic variables, perception of benefit of self-ear-cleaning, reason (s) for practicing self ear cleaning, owning cotton buds and moving about with cotton buds. The questionnaires were not labeled in order to ensure confidentiality.

Data entry and analysis were done with the Statistical Package for the Social Sciences (SPSS) version 15. Data analysis was univariate (proportions, means and standard deviations, medians and ranges), bivariate (crosstabs), of the outcome variable and independent variables that showed tendencies when P values less than 0.05 were considered significant.

III. Results

A total of 150 questionnaires were administered. The male respondents were 62 (41.3%) while the female was 88 (58.7%) giving a male to female ratio of 1:1.4. Their age ranged from 17 years to 66 years with a mean of 33 ± 9.12 SD. From Table 1, the highest response was in the age group of 30 - 39 years representing 44.7% of the respondents. Majority (62.7%) of the respondents were Yoruba by tribe. One hundred and forty five (96.7%) were Christian, while 5 (3.3%) practice Islamic religion. One hundred and two (68.0%) had tertiary education, 38 (25.0%) had post-secondary, while 10 (6.7%) had primary education (Figure 1). Forty six (30.7%) of the respondents were doctors, 34 (22.7%) were nurses, 7 (4.7%) were pharmacists, 6 (4.0%) were physiotherapist, 15 (10.0%) were laboratory scientist while 42 (28.0%) were non clinicians. One hundred and forty one (94.0%) of the respondents had indulged in self ear cleaning. One hundred and forty (93.3%) of the respondents clean both ears while unilateral self-ear-cleaning was seen in 1(0.6%) respondent (right ears only). Forty five (30%) subjects clean their ear thrice weekly, 36 (24%) weekly, 23(15.3%) monthly while 22 (14.7%) subjects practice self ear cleaning every day. Cotton bud was the object used by most of these subjects for the purpose of self ear cleaning and majority (39.9%) of them used it because of feeling of itchiness in the ears (Figures 2&3). One hundred and one (67.3%) respondents used cotton buds on their own, From those who got introduced to self ear cleaning, 31 (88.6%) were introduced to it by their parents, 3 (8.6%) by health care provider, 1 (2.9%) by their spouses. Table 2 shows the prevalence by other selected respondent characteristic and associations with self-ear-cleaning. Self-ear-cleaning was significantly higher among females than among males, among those who own cotton bud and move around with cotton bud. It was also significantly higher among those whose perception was that self-ear-cleaning was beneficial.

IV. Discussion

This study was carried out amongst health workers in a tertiary hospital in Nigeria. These respondents were expected to have right knowledge about self ear cleaning and educate the rest of the populace. It is however sad to note that the prevalence of self-ear-cleaning in this study group was high (94%). Researchers have reported high prevalence of self ear cleaning amongst Nigerians; Olaosun et al[1] in a study done amongst youth corpers in Osun state, Nigeria observed that 93.4% of the respondents indulge in self ear cleaning. Afolabi et al, Amutta et al and Olajide et al had similar observations of 90%, 80% and 92.8% in studies done in Kaduna, Sokoto and Niger state of Nigeria respectively[2,6]. In Kuala Lumpur, Malaysia, Lee et al[3] reported a prevalence of 92%. The reason for this may be the erroneous perception and wrong understanding that health workers and other members of the community have about this practice. It should be noted that some researchers have observed lower prevalence in similar studies carried out in the western world; Hobson and Lavy [4] in London found a prevalence of 53%, in a hospital-based study with a low response rate. This low response (325 out of 1000 responded) probably accounted for the low prevalence. Macknin et al[5] also found a prevalence of 62% in a pediatric clinic in Cleveland, Ohio, United States. These findings may also suggest a lower prevalence of self ear cleaning in these environments.

In this study, cotton bud was the commonest object used to clean the ear canal (87.3%); other objects used were keys, match stick, feathers, broom stick, nails and towels. This finding is similar to the observations of researchers in previous studies done[3,4,5,6,14]. Most of the respondents clean both ears regularly and the reason for the practice of self ear cleaning in majority of these respondents was itchiness of the ears. Afolabi et al[2] and Olajide et al[6] made similar discovery in studies done on adult Nigerians. However, Amuta et and Lee et al found that most of their subject practice self ear cleaning with the aim of removing dirt and wax from their ear

canals[3,14]. It is noteworthy that, ear itchiness in these subjects could be as a result of medical conditions like allergy, otomycosis or ezcema, for which they should be assessed and treated by the otolaryngologist. There was association between the practice of self ear cleaning and sex (as this practice was more common in the women than men). Self ear cleaning was significantly associated with ownership of cotton bud, the act of taking cotton bud everywhere and the believe that self ear cleaning is beneficial. In many of the previous studies done, researchers made similar observation that most of the respondents believe that self ear cleaning was beneficial[1,3,6].

Since self ear cleaning has been associated with complications like trauma, foreign body impaction, tympanic membrane perforation and otitis externa, this study therefore has a public health care implications. The health workers ought to give health talk to patients and other members of the community about the adverse effect of self ear cleaning but unfortunately, many of them practice it. There is a high likelihood that these health workers will give wrong advice to patients that self ear cleaning is beneficial, thus encouraging them to indulge in it. Hence, a large proportion of the population are at risk of its' harmful effects. Therefore, there is a need for more continuous medical education for the health workers and health education for the general public. Continuous medical education with ear care in focus should be embarked on by hospitals to educate all ranks of health workers with the aim of improving their understanding of the care of the ear, danger of self ear cleaning and to further disseminate these information to the general public.

Health education should be carried out over the social media with the aim of educating the general public on the harmful effects of self ear cleaning. Campaigns should also be mounted against the sale and purchase of cotton buds. This study has some limitations; it is hospital based study, hence may not give the full picture of what obtains in the community. In addition to this, the sampling was convenient and the subjects were relatively few in number. In spite of these, this study has revealed an important fact about Nigerian health workers and the need for urgent action to be taken in educating these people and the general population about self ear cleaning.

V. Conclusion

This study presents strong evidence of a high prevalence of self ear cleaning among the hospital workers. Cotton bud was the commonest object used for this practice and commonest reason for cleaning their ears was to relieve itching in the ears. Most of them had an erroneous believe that self ear cleaning is beneficial.

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Authors' contribution:

[15]. SM - Study conceptualization, data collection and analysis, manuscript writing
[16]. OT - Data analysis
[17]. CC - Directed the study and manuscript writing
[18]. AK - Manuscript writing
[19]. KC - Data collection
[20]. KJ - Data collection

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Table 1: Sociodemographic variables of the respondents

CATEGORY		FREQUENCY	PERCENT(%)
Age	<20	5	3.3
	20-29	43	28.8
	30-39	67	44.7
	40-49	26	17.3
	50-59	8	5.3
	>60	1	0.7
Gender	Male	62	41.3
	Female	88	58.7
Tribe	Yoruba	94	62.7
	Ibo	46	30.7
	Hausa	6	4.0
	Others	4	2.7
Religion	Christianity	145	96.7
	Islam	5	3.3
Education	Primary	-	-
	Secondary	10	6.5
	Post-secondary	38	25.0
	Tertiary	102	68.0

Figure 1: Occupation of respondents

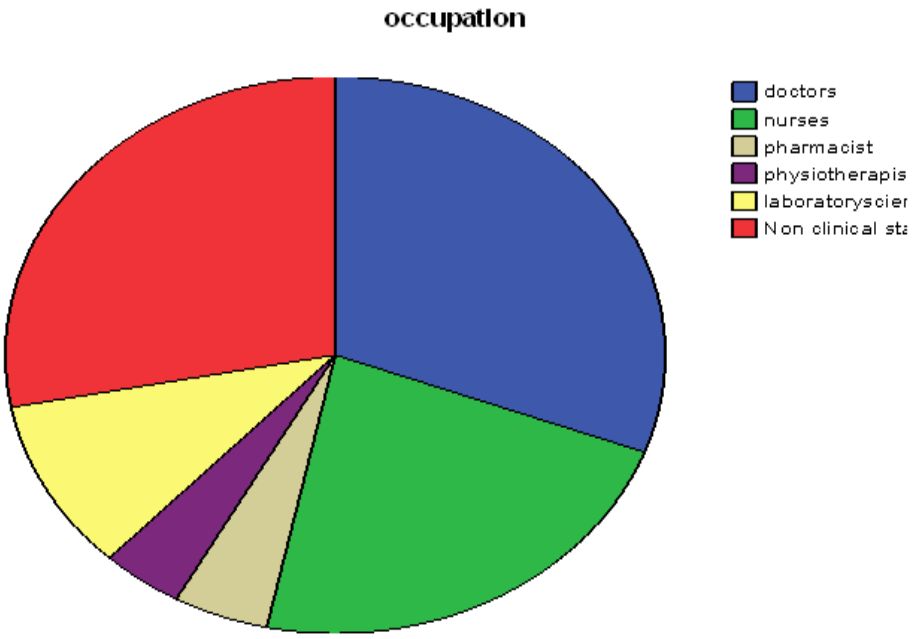

Figure 2: Reasons for practicing self ear cleaning.

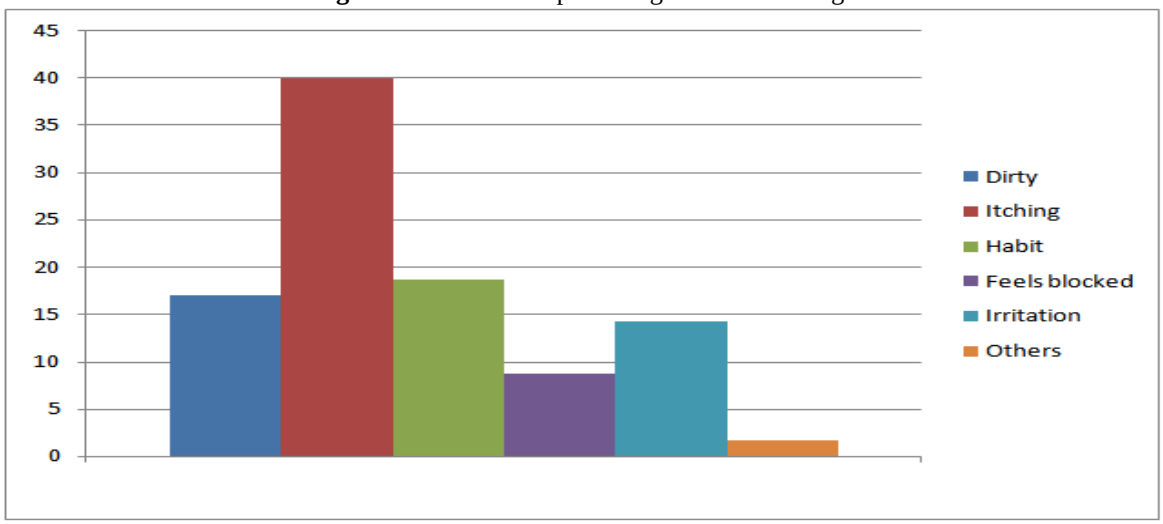

Figure 3: Objects used for self ear cleaning.

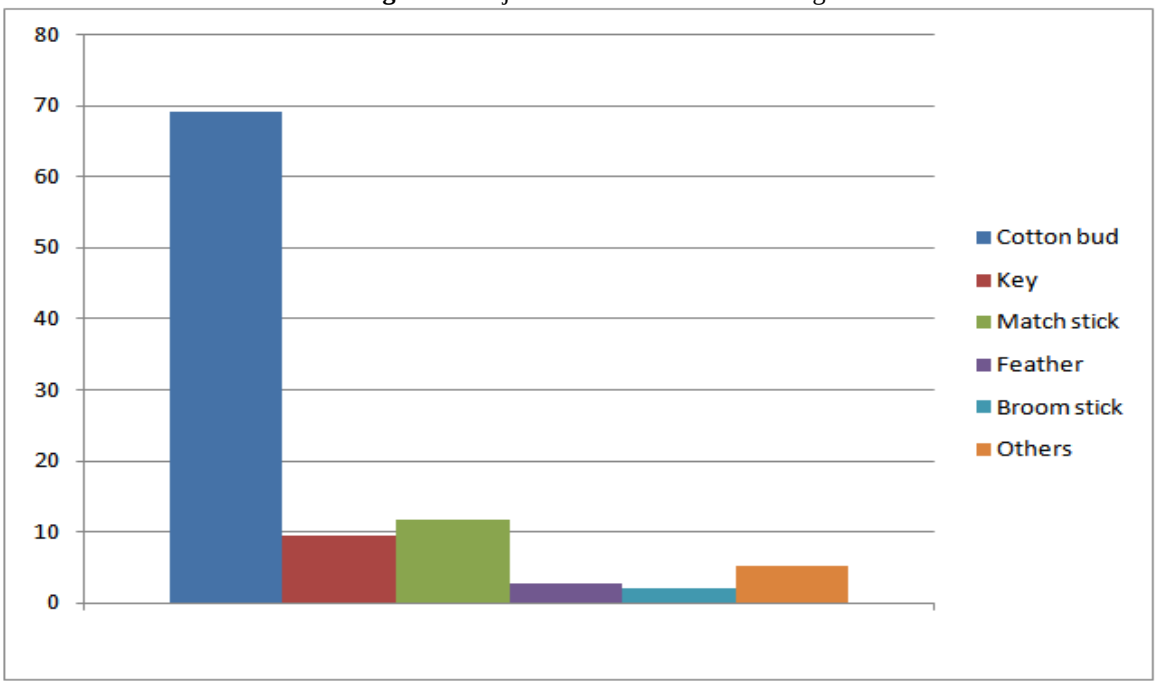

Table 2: Prevalence by other selected respondent characteristic and associations with self ear cleaning

Variable	Practice self ear cleaning Yes	Practice self ear cleaning No	Total	X^2	P value
Sex					
Male	54	8	62	8.929	0.004
Female	87	1	88		
Occupation					
Doctor	39	7	46		
Nurses	33	1	34	10.288	0.173
Pharmacist	7	0	7		
Physiotherapist	6	0	6		
Lab Scientist	15	0	15		
Non Clinician	41	1	42		
Own cotton bud	120	0	120	58.064	0.000
Take cotton bud everywhere	9	0	9	43.617	0.000
Ear cleaning has benefit	117	1	118	26.600	0.000