



Research Article

JMR 2017; 3(3): 127-131
May- June
ISSN: 2395-7565
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www.medicinarticle.com
Received: 06-05-2017
Accepted: 15-06-2017

Herbal/Traditional medicine use and self-medication among patients prior to seeking oral health care in a tertiary health facility in Nigeria

Okoh Mercy¹, Enabulele Joan E.²

¹ Department of Oral and Maxillofacial Surgery and Pathology, University of Benin, Edo State, Nigeria

² Department of Restorative Dentistry, University of Benin, Edo State, Nigeria

Abstract

Background: Self-medication is commonly practiced in Nigeria. The aim of this study was to determine the prevalence of herbal medicine use and self-medication practices among dental out patients presenting at a tertiary health care center in Benin, and to determine factors associated with these practices. **Methods:** A prospective descriptive cross-sectional study. Data was collected using an interviewer administered questionnaire. The questionnaire consisted of 3 sections: 1) bio-data, 2) history of herbal/ traditional medication used prior to presentation, identity as well as mode of application of the traditional medicine, 3) history of self-medication prior to presentation. The data collected was analysed using IBM SPSS Statistics version 21.0. **Results:** A total of 119 participants were recruited for this study. The participants consisted of 42 adult males and 77 adult females giving a male female ratio of 1:1.83. About 24.4% had used herbal/traditional medication prior to presentation. Plant roots and leaves soaked in alcohol was reported to have been used by 17.1% of those who used herbal/traditional medication. There was statistically significant relationship between the level of education attained by participants and use of herbal/traditional medication. Almost half (49.6%) of the participants had used a form of self-medication prior to presentation at the dental clinic. The drugs consisted of combination of analgesics and antibiotics. The commonest analgesics reported were paracetamol and diclofenac while the commonest antibiotic reported was ampiclox. **Conclusion:** There should be consistent dental health awareness to downplay the practice of herbal medicine and self-medication prior to seeking professional oral health care.

Keywords: Self-medication, Traditional medicine, Herbal medicine, Nigeria.

INTRODUCTION

The use of traditional medicine, of which herbal medicine is a significant part, is relatively high in Africa: the World Health Organization (WHO) reported a prevalence of herbal medicine use of about 80% of the population^[1]. In Africa, reliance on herbal medicines is relatively high among rural populations, and is associated with a lack of access to public healthcare^[1]. Use of herbal medicine may also be associated with social and cultural influences^[2], perceived efficacy^[3,4], beliefs about safety, and general ease of access^[4]. However, even in the context of relatively high access to public healthcare, such as in urban areas, Africans still rely on alternative or traditional systems of care^[5,6]. The use of herbal medicine when public healthcare is available has an effect on care-seeking behaviour of patients^[3], rational use of drugs^[7], health outcomes and outcomes of care^[3]. Patients with general access to Western medicine may use herbal medicine concomitantly, and often without the knowledge of a healthcare professional^[4].

Self-medication is the inappropriate use of drugs to treat self-diagnosed disorders or symptoms of the disease, or the intermittent or continued use of a prescribed medication for chronic or recurrent disease or symptoms^[8,9]. Self-medication is commonly practiced all over the world^[10-12]. However, in developing countries like Nigeria, the situation is disheartening, especially because of poor medical/dental services available, and lack of proper control of pharmaceutical products by the relevant government agencies^[13,14].

Although, the practice of self-medication has been extensively researched^[2,4,6,10,12,13], however, only few studies^[15,16] have examined herbal medicine use and self-medication among dental patients in developing countries. The aim of this study was to determine the prevalence of herbal medicine use and self-medication practices among dental out patients presenting at a tertiary health care center in Benin, and to determine factors associated with these practices.

*Corresponding author:

Dr. Okoh Mercy
Department of Oral and
Maxillofacial Surgery and
Pathology, University of Benin,
Edo State, Nigeria
Email:
mercy.okoh[at]uniben.edu

METHOD

This was a prospective descriptive cross-sectional study of patients who presented for professional oral health care at the Oral Diagnosis clinic of the Dental Centre, University of Benin Teaching Hospital.

Data was collected using an interviewer administered questionnaire. The questionnaire consisted of 3 sections: 1) bio-data (gender, age, occupation, marital status and level of education attained), 2) history of herbal/ traditional medication used prior to presentation, identity as well as mode of application of the traditional medicine, 3) history of self-medication prior to presentation .

The data collected was analysed using IBM SPSS Statistics version 21.0. The data was subjected to descriptive analysis in the form of frequencies, percentages, cross-tabulations, mean and standard deviation. Chi square was used to determine association between variables with P-value set at 0.05.

The research was conducted in accordance with ethical principles, including the World Medical Association Declaration of Helsinki, and only patients who gave informed consent were recruited for the study.

RESULTS

A total of 119 participants were recruited for this study. The participants consisted of 42 adult males and 77 adult females giving a male female ratio of 1:1.83. The participants' age ranged from 17 to 75 years with a mean age of 34.87±13.65 years. Those within the ages of 17 and 25 years had the highest representation. There was almost equal representation of married and unmarried adults with a higher proportion of the participants being dependants (Table 1).

Less than a quarter (24.4%) had used herbal/traditional medication prior to presentation. Majority of who however did not know the name

or constituents of the herbal/traditional medication they used. Plant roots and leaves soaked in alcohol was reported to have been used by 17.1% of those who used herbal/traditional medication (Table 2).

More than half (53.3%) of those who used these herbal/traditional preparations did not get any relieve. The most common mode of application of the herbal/traditional medication was by gagging and this accounted for 44.8% of those who used herbal/traditional medication (Table 3). Almost all (96.9%) those who used herbal/traditional medication had a relapse of dental pain hence their presentation for professional care.

There was statistically significant relationship between the level of education attained by participants and use of herbal/traditional medication prior to seeking professional oral health care. There was a reduction in use of herbal/traditional medication as level of education attained increased however, all those with no formal education claimed not to have used herbal/traditional medication (Table 4).

Almost half (49.6%) of the participants had used a form of self-medication prior to presentation at the dental clinic. Multi drugs were used by 24.1% of those who adopted the use of self-medication/pharmacy prescription of over the counter drugs prior to presentation. Mono-drug therapy was used by 67.2%, while 8.7% did not have an idea of the type of drug used. The drugs consisted of combination of analgesics and antibiotics. The commonest analgesics reported were paracetamol and diclofenac while the commonest antibiotic reported was ampiclox. Mono-drug therapy consisted mainly of analgesics. There was nostatistically significant relationship between the socio-demographic characteristics of the participants and those of self-medication/pharmacy prescription of over the counter drugs prior to presentation. However a higher percentage of those who attained secondary education reported use of self-medication/pharmacy prescription of over the counter drugs prior to presentation (Table 5).

Table 1: Socio-demographic characteristics of the participants

Characteristics	Frequency	Percent
Gender		
Male	42	35.3
Female	77	64.7
Marital status		
Single	59	49.6
Married	57	47.9
Widowed	3	2.5
Level of education attained		
No formal education	5	4.2
Primary education	14	11.8
Secondary education	33	27.7
Tertiary education	67	56.3
Age (years)		
17-25	39	32.8
26-35	31	26.1
36-45	22	18.5
46-55	15	12.6
55-65	9	7.6
66-75	3	2.5
Socio-economic group		
professionals and managerial officers	12	10.1
Skilled Workers	25	21.0
Semi-skilled Workers	4	3.4
Unskilled workers	29	24.4
Unemployed/dependants	49	41.2
Total	119	100.0

Table 2: Type of herbal/traditional medication used by the participants

Herbal/traditional medication	Frequency	Percent
Unknown/ not recalled	18	62.1
Plant root/herbal leaves soaked in alcohol	5	17.1
Herbal toothpaste	2	6.8
Garlic	1	3.4
Agbo	1	3.4
Alum, potash, herbal leaves soaked in salted warm water	2	6.8
Total	29	100.0

Table 3: Mode of use of herbal medication

Mode of use	Frequency	Percent
Chewing	2	6.9
Drinking	6	20.7
Gagging	13	44.8
Topical application to affected tooth	5	17.2
Inhaling	1	3.4
Used as toothpaste	1	3.4
Both chewing and drinking	1	3.4

Table 4: Relating socio-demographic characteristics with use of herbal/traditional medication

Characteristics	Herbal/traditional medication use		Total n (%)
	Yes n (%)	No n (%)	
Gender			P = 0.40
Male	10 (23.8)	32 (76.2)	42 (100.0)
Female	19 (24.7)	58 (75.3)	77 (100.0)
Marital status			P = 0.34
Single	11 (18.6)	48 (81.4)	59 (100.0)
Married	18 (31.6)	39 (68.4)	57 (100.0)
Widowed	0 (0.0)	3 (100.0)	3 (100.0)
Level of education attained			P = 0.01
No formal education	0 (0.0)	5 (100.0)	5 (100.0)
Primary education	5 (35.7)	9 (59.3)	14 (100.0)
Secondary education	13 (39.4)	20 (60.6)	33 (100.0)
Tertiary education	11 (16.4)	56 (83.6)	67 (100.0)
Age (years)			P = 0.96
17-25	9 (23.1)	30 (76.9)	39 (100.0)
26-35	7 (22.6)	23 (74.2)	31 (100.0)
36-45	6 (27.3)	16 (72.7)	22 (100.0)
46-55	3 (20.0)	12 (80.0)	15 (100.0)
55-65	3 (33.3)	6 (66.7)	9 (100.0)
66-75	1 (33.3)	2 (66.7)	3 (100.0)
Socio-economic group			P = 0.72
Professionals and managerial officers	3 (25.0)	9 (75.0)	12 (100.0)
Skilled Workers	8 (32.0)	17 (68.0)	25 (100.0)
Semi-skilled Workers	2 (50.0)	2 (50.0)	4 (100.0)
Unskilled workers	8 (27.6)	21 (72.4)	29 (100.0)
Unemployed/dependants	8 (16.3)	41 (83.7)	49 (100.0)
Total	119	100.0	119 (100.0)

Table 5: Relating socio-demographic characteristics with the use of self-medication/pharmacy prescription of over the counter drugs prior to presentation

Characteristics	Self-medication/pharmacy prescription of over the counter drugs use		
	Yes n (%)	No n (%)	Total n (%)
P = 0.70			
Gender			
Male	22 (52.4)	20 (46.6)	42 (100.0)
Female	37 (48.1)	40 (51.9)	77 (100.0)
P = 0.12			
Marital status			
Single	33 (55.9)	26 (44.1)	59 (100.0)
Married	26 (45.6)	31 (54.4)	57 (100.0)
Widowed	0 (0.0)	3 (100.0)	3 (100.0)
P = 0.30			
Level of education attained			
No formal education	2 (40.0)	3 (60.0)	5 (100.0)
Primary education	6 (42.9)	8 (57.1)	14 (100.0)
Secondary education	21 (63.6)	12 (36.4)	33 (100.0)
Tertiary education	30 (44.8)	37 (55.2)	67 (100.0)
P = 0.60			
Age (years)			
17-25	23 (59.0)	16 (41.0)	39 (100.0)
26-35	13 (41.9)	18 (58.1)	31 (100.0)
36-45	12 (54.5)	10 (45.5)	22 (100.0)
46-55	7 (46.7)	8 (53.3)	15 (100.0)
55-65	3 (33.3)	6 (66.7)	9 (100.0)
66-75	1 (33.3)	2 (66.7)	3 (100.0)
P = 0.55			
Socio-economic group			
Professionals and managers	4 (33.3)	8 (66.7)	12 (100.0)
Skilled Workers	14 (56.0)	11 (44.0)	25 (100.0)
Semi-skilled Workers	2 (50.0)	2 (50.0)	4 (100.0)
Unskilled workers	12 (41.4)	17 (58.6)	29 (100.0)
Unemployed/dependants	27 (55.1)	22 (44.9)	49 (100.0)
Total	119	100.0	119 (100.0)

DISCUSSION

The present study was an attempt to study the prevalence of herbal medicine use and self-medication practices among dental outpatients and to determine factors associated with these practices. The prevalence of the use of herbal medication prior to presentation at the dental clinic was 24.4%, and the mode of application was mostly through gaggling. There was a statistically significant relationship between the level of education attained by participants and the use of herbal/traditional medication prior to seeking professional oral health care; with a reduction in the use of herbal/traditional medication as the level of education attained increased. This is similar to a previous study^[15] that reported a significant reduction in self-medication with increased level of education. Alcohol preparation was used in 17.1% of cases to alleviate oral pain in the present study. This is less than the 21.6% use of concentrated alcohol reported from a tertiary dental centre in Ibadan^[16]. The use of herbal/traditional medication should be of concern to clinicians. The types and contents of these herbal preparations vary according to different cultures and customs of the people^[17]. These substances may pose a serious health problem by causing more harm to the dentition and the overall health of the patient because of the poor knowledge of the safety profiles of these substances^[15]. Also worrisome is the well-known fact that chronic usage of alcohol can predispose subjects to cancers including oral malignancies^[12,17], and may also make the oral mucosa more permeable to other carcinogens^[18].

The prevalence of self-medication (49.6%) in this study was similar to the 48.9% reported from a tertiary dental centre in Ibadan^[16], but higher than the 30% from a study in India^[19], and 42% reported by Afolabi *et al.*,^[13] in a study in Ondo State dental services. Although the proportion was lower than the 80.6% reported in Niger Delta by

Anyanechi and Saheeb^[15]. These differences may be due to demographic and clinical variables. Self-medication was mostly single drug therapy rather than in combination, commonly analgesics and antibiotics. Mono-drug therapy consisted mainly of analgesics. The most commonly abused substances/medication is analgesics/NSAID (paracetamol and diclofenac) and antibiotics (ampiclox). This is because analgesics and antibiotics are widely available and easily procured over the counter in Nigeria^[20]. The availability and accessibility of antibiotics and analgesics over the counter without prescription by authorized health professionals should be discouraged because this can lead to issues of inadequate dosing and antibiotic resistance may arise. This behaviour resulting in the intake of a suboptimal dose of antibiotics and excess dose of analgesics/NSAID may lead to the development of resistant bacterial strains, hepatic damage and gastrointestinal complications, respectively^[13, 21,22]. Besides, several risks are potentially involved in self-treatment^[23], including delays in seeking professional advice, incorrect self-diagnosis, dangerous drug interactions, masking of a severe condition, and risk of abuse.

In the present study, a higher percentage of male participants practice self-medication when compared to female participants. This finding is in agreement with many studies conducted by Giriraju^[24] Ilhan *et al.*,^[25] Shankar *et al.*,^[26] Ritu *et al.*,^[27] and Sweileh^[28]. Furthermore, there are few studies^{16, 29}, which showed contrary results where female participants were more involved in self-medication compared to male participants. The reason for less females than males practicing self-medication in this survey is because females tend to seek medical/dental help more promptly than their male counterparts, which may be the reason for their less indulgence in self-medication practices^[20,30].

Also, the present survey reported use of self-medication was higher in those who attained secondary and post-secondary education. This was corroborated by many other studies ^[16,30], that showed that socioeconomic and educational variables were major contributors to self-medication practices, with lower income and higher education being associated with the tendency to engage in self-medication. It possible that educated people have a vague idea of the cause of their dental ailments and an idea of what drugs to use; this may account for the high percentage of respondents who used self-prescribed antibiotics and analgesics in this study ^[16].

The use of herbal/traditional medicine and self-medication should be of great concern because it cuts across all sections of the adult dental population with possible risk of serious adverse effect that can endanger the life of patients. Dental health education should be engaged on a priority to make people realise the dangers of self-medication. This study is limited by the fact that it was hospital based, and the study population consisted of those attending the dental clinic. Although this population is crucial to examine, these findings may have limited generalizability to other population.

CONCLUSION

There should be significant and consistent dental health awareness to downplay the practice of herbal medicine and self-medication prior to seeking professional oral health care. Dental services should be made readily available and affordable, and there should be policy to ensure that drugs/substances are not prescribed irrationally or sold over the counter without appropriate prescription.

Conflict of Interest

The authors have no conflict of interest.

Acknowledgement

The authors wish to express their appreciation to the Head of Department and staffs of Oral Diagnosis and Radiology Department for the approval and assistance given to us to carry out this research. This research was solely funded by the author. No external financial support or grant.

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