

# Self medication for oral health problems in Cameroon

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**Objective:** To assess the use of self medication in oral health problems in Cameroon. **Methods:** This multi-regional cross-sectional survey was conducted in three towns; Bamenda, Yaounde and Buea over a 10 month period. The questionnaire elicited information on demography, oral problem for self medication, substance used for self medication, source of the substance, duration of self medication, reason for self medication, source of advice of the drugs or those products used, opinion about the substance, effect and duration. **Results:** The prevalence of self medication for oral health problems was 67.8% which was significantly associated with age, marital status and location. The most frequently self medicated oral health problem was toothache (54.7%). The majority (64.5%) of the respondents used pharmaceutical products while a minority (7.7%) used dangerous substances such as petrol and vinegar for self medication. Sources of substances of self medication included pharmacy (55.6%), road side vendors (26.1%), native healers (7.8%), mobile drug vendors in buses (5.3%), and others (5.3%). The choice of substances used for self medication was mostly guided by the advice from relatives. **Conclusion:** The majority of the respondents self-medicated for oral health problems. Unmarried, urban residents, aged 21–30 years reported significantly increased self-medication for oral health problems. Evidently dangerous substances were utilised for self-medication in this study, necessitating awareness and other forms of intervention.

**Key words:** Access, behavioural science, oral health, pain, outcomes

Health seeking behaviour is a typical response in the presence of a disease condition or an infective process. This response, geared towards optimal wellness, recovery, and rehabilitation, is usually a function of individual, societal and environmental factors<sup>1–3</sup>. In developing countries, self medication is the commonest chosen pathway. The underlying reasons are inadequate health care, poverty, illiteracy, drug abuse, poor access to health services due fewer trained physicians and easy availability of traditional herbal medicines<sup>4</sup>. Cost has been cited as a major reason why many low income households opt for the self-care option<sup>5</sup>.

Previous studies have cited oral health problems as one of the commonest reasons for self medication with antibiotics<sup>6,7</sup>. Recent evidence from developing countries indicates an inverse trend: an increasing prevalence of oral health problems, yet low visits to dental healthcare facilities; a trend which seems to suggest that many individuals from these regions resort to obtaining and consuming medications for oral health problems without a prescription from a dentist. Granted that self medication is considered acceptable in some health condition<sup>8,9</sup>, there could be some

associated negative effects. These may include poor self diagnosis and use of contraindicated medications, drug resistance, adverse drug reactions, taking expired drugs, taking of wrong doses, and drug dependence or addiction<sup>10–13</sup> especially when using opioids and tranquilisers. The economic, health, social and other impacts of self medication qualify it as a public health problem. Available literature shows the link between self medication and socioeconomic status. For example, self-care strategies for toothache usually take precedence over professional health services among low income adults in Maryland<sup>14</sup> and individuals seeking care in a rural dental clinic in north Florida<sup>15</sup> Kouame *et al.*<sup>16</sup> reported self medication to be one of the most frequent causes of late odontostomatologic consultations. The unrestricted access to all forms of medications due to poor legislation, bizarre and unenforced official policies on self medication in many African countries favours widespread self-medication with orthodox and traditional medication. Although self medication is common place in Sub-Saharan African, there appears to be a paucity of data quantifying rates or prevalence of self medication for oral health

problems. The only previous studies available were hospital based research<sup>17,18</sup>. However, it is common knowledge that the majority of residents in developing countries have poor access to healthcare facilities. This scenario justifies the need for a community based survey to ascertain the actual magnitude of this form of health seeking behaviour. The objective of the study was to assess the use of self medication in oral health problems in Cameroon.

## MATERIALS AND METHODS

This multi-regional cross-sectional survey was conducted in three towns; Bamenda, Yaounde and Buea which represent three out of 10 regions in Cameroon. Bamenda represents the North West region, Yaounde represents the Central regions while Buea represents the South West regions. The study was conducted over a 10 month period (October 2009–August 2010). The calculated sample size for was 73 for each of the three regions based on the fact that the mouth and teeth accounted for 5% of self medication<sup>19</sup>, 95% confidence interval and 5% error margin. Participants were both customers and traders in the respective markets which were selected randomly from the different parts of the market. Informed consent was obtained from the participants before administration of the questionnaire. Individuals, who have not experienced oral health problems and those who understood neither French nor English were excluded. The tool of data collection was a pretested, 17-item semi-structured questionnaire. The questionnaires were self-administered to literate respondents and interviewer administered to the illiterate respondents. The questionnaire elicited information on demography, oral problem for self medication, substance used for self medication, source of the substance, duration of self medication, reason for self medication, source of advice of the drugs or those products used, opinion about the substance, effect and duration. Ethical approval was obtained from the respective regional delegates of public health in the three provinces. Data analysis was done using Epi-info 3.5.1 and data were presented in tabular and graphic form. Test of significance was done using chi square statistics with  $P < 0.05$  considered as significant.

## RESULTS

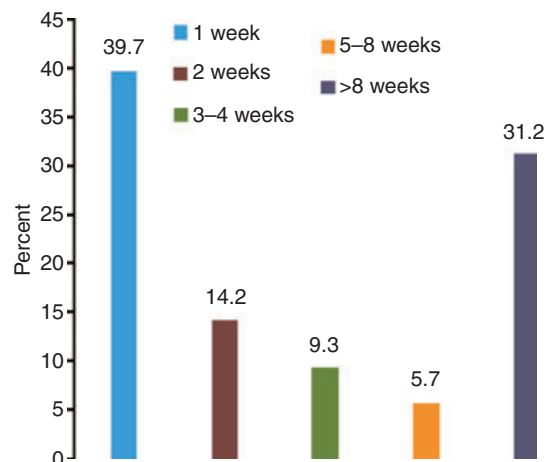
A total of 283 individuals participated in the survey with 94 (33.2%) from North West region, 95 (33.6%) from Central regions and 94 (33.2%) from South West regions. The majority of the respondents were 21–30-years-old (37.8%), females (51.9%), single (67.1%) urban residents (56.5%) and belonged to a low income group (78.8%). The prevalence of self medication was 67.8%.

Age, marital status, highest educational level, income status were significantly associated with self medication for oral health problems (Table 1). The majority of respondents (86.4%) felt better after using the medications; out of which, 39.7% and 31.2% experienced the beneficial effect in 1 week and after 4 months respectively (Figure 1). Self medicated oral health problems were toothache (54.7%), bleeding gums (13%), bad breath (9.4%), gum swelling, cheek problems (4.7%), tooth mobility (4%) and other dental treatment 14% (Figure 2); out of which 64.5% used pharmaceutical products, 27.8% herbal products and 7.7% other products such as petrol etc. (Figure 3). Sources of the self-medication were a pharmacy (38.0%), hospital

**Table 1** Relationship between demography characteristics and self medication for oral health problems

Characteristics	Yes	No	Total	P-value
	n (%)	n (%)	n (%)	
Age (years)				
<20	59 (67.8)	28 (32.2)	87 (100)	0.001*
21–30	82 (76.6)	25 (23.4)	107 (100)	
31–40	25 (73.5)	9 (26.5)	34 (100)	
41–50	13 (61.9)	8 (38.1)	21 (100)	
>50	13 (38.2)	21 (61.8)	34 (100)	
Sex				
Female	99 (67.3)	48 (32.7)	147 (100)	0.852
Male	93 (68.4)	43 (31.6)	136 (100)	
Marital status				
Single	139 (73.2)	51 (26.8)	190 (100)	0.021*
Married	48 (57.8)	35 (42.2)	83 (100)	
Divorced	5 (50.0)	5 (50.0)	10 (100)	
Income class				
Low income	145 (65.0)	78 (35.0)	223 (100)	0.144
Middle income	27 (79.4)	7 (20.6)	34 (100)	
High income	20 (76.9)	6 (23.1)	26 (100)	
Residence				
Rural	70 (56.9)	53 (43.1)	123 (100)	0.001*
Urban	122 (76.3)	38 (23.7)	160 (100)	

\*Statistically significant.



**Figure 1.** Duration at experiencing symptom alleviation among the respondents.

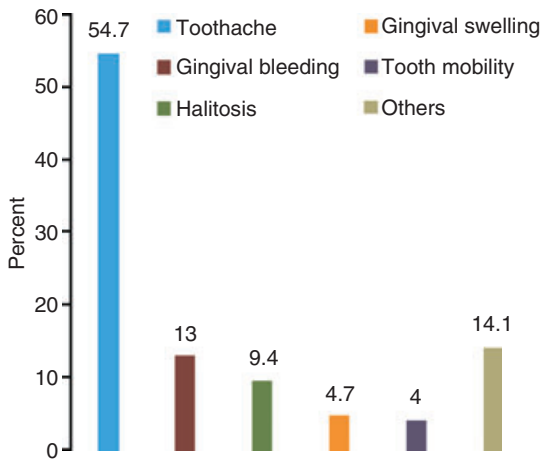


Figure 2. Oral health problem that triggered self medication among respondents.

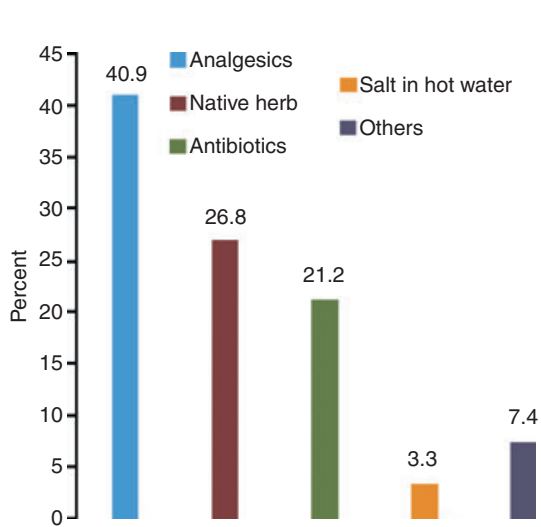


Figure 3. Type of substance used for self medication among the respondents. Other include vinegar, petrol, urine, alum, snuff, ice pack, 'Touch and Go'.

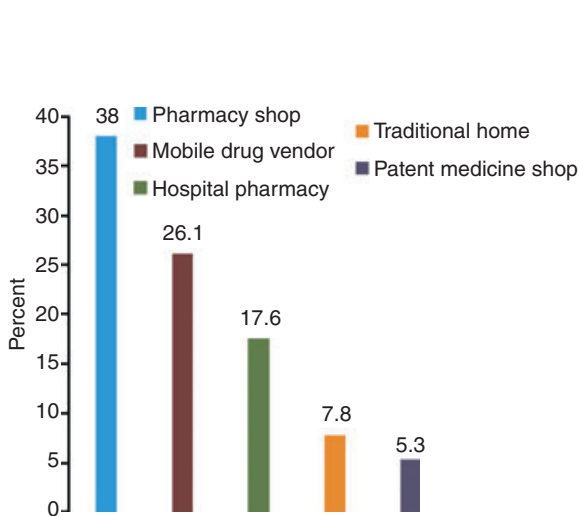


Figure 4. Source of substance used for self medication among the respondents.

pharmacy (17.6%), native healers (7.8%), mobile drug vendors in buses (5.3%), road side vendors (26.1%) and others (5.3%) (Figure 4). The reasons for indulgence in self medication were lack of time (37%), lack of money (46.5%) perception of problem as minor (13.8%) and tradition and religious belief (2.8%) (Figure 5). The choice of self-medication was guided by advice from relatives in 32.9% of the respondents (Figure 6). About four-tenths (43.2%) of the respondents believed the medications gave temporary pain relief, while under a quarter (20.7%) believed that they are effective, 16.2% useful in stressful situations, 9.9% didn't know about their effects and 4.1% believed that it cures illnesses (Table 2).

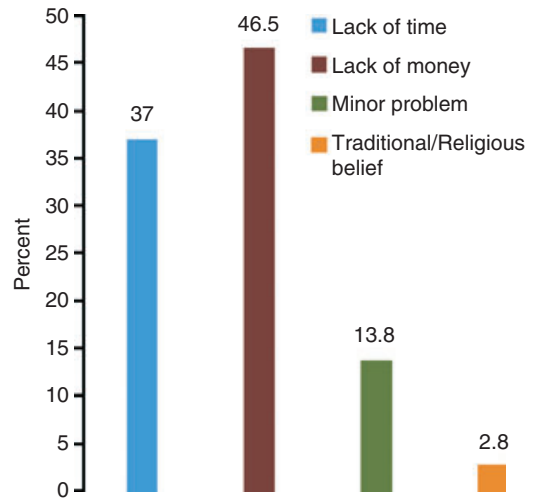


Figure 5. Reason for self medication among the respondents.

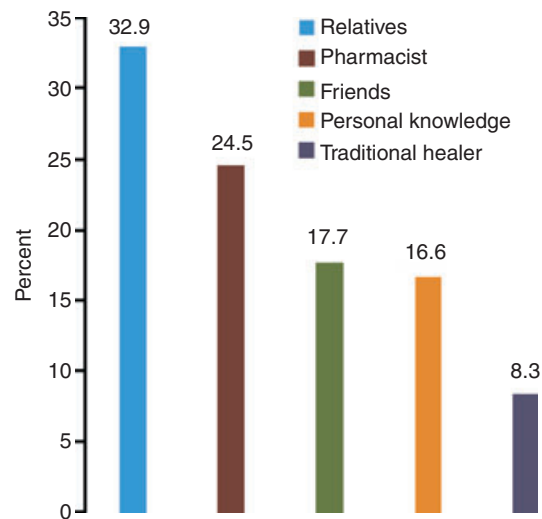


Figure 6. Source of advice on substance used for self medication among the respondents.

**Table 2** Respondents' attitude about self medication practices

Opinion	Frequency (n)	Percent
Temporary pain relief	96	43.2
Effective	46	20.7
Useful in stressful situations	36	16.2
Don't know about their effects	22	9.9
Curative in nature	9	4.1
Natural products	5	2.3
Previous properly prescribed	2	0.9
They are cheaper option	1	0.5

## DISCUSSION

The prevalence of self medication for oral health problem in this study was 67.8%. This was higher than 37.3% and 42.0% previously reported in hospital based research in the Ivory Coast and Nigeria respectively<sup>17,18</sup>, and 48% documented in Burkina Faso<sup>20</sup>. The higher prevalence implies that community based surveys are more valid than hospital based research in quantifying the actual magnitude of oral health behaviour. This is because not all oral health problems are eventually brought to the dentist's attention as an earlier study revealed that as much as one quarter of the population gives up care despite experiencing pain or embarrassment due to oral health problem<sup>20,21</sup>. Age was significantly associated with self medication for oral health problems. The prevalence increased with increasing age climaxing at 21–30 years and decreased thereafter with the lowest level among the elderly. A similar assertion has been made by Yousef *et al.*<sup>22</sup> in Jordan. Residence in an urban area was significantly associated with self medication for oral health problems in this study. The higher frequency of self medication among urban residents documented in previous study may be the explanation<sup>23</sup>.

Toothache affects diet, diet choices, disturbs sleep and impairs overall health motivating individuals to seek urgent help. Available literature shows that the main reasons for self medication is pain<sup>17,18</sup>. However, the use of self-medication by an individual in the clinical state of acute orofacial pain associated with lack of, or inadequate, care to relieve the symptoms<sup>24</sup>. Pain is distress in nature, thereby posing as a driving force for self medication in individuals to alleviate symptoms or avoid the need for dental attendance<sup>25</sup>. Gingival bleeding, gingival swelling and tooth mobility which are manifestations of periodontal disease result in chronic discomfort leading to self medication. Halitosis is a disturbing oral symptom that hampers personal and social relations thus necessitating attention seeking by individual sufferers in the form of self medication and others.

The majority of respondents (86.4%) felt better after using the medications. About one-third (31.2%)

experienced the perceived beneficial effect after 4 months. The long duration before experiencing the perceived beneficial effect attest to chronicity of self medication which may be associated with adverse consequences like addiction, reversible and irreversible deformities, antibiotics resistance, bleeding tendencies, peptic ulcer and analgesics nephropathy.

Earlier studies indicated that reported poverty and lack of information are barriers to buccodental consultation services<sup>26</sup>. In this study, lack of money and lack of time were the most frequent reasons for using self medication for health problems. Other reasons included traditional belief, religious belief and perception of the problem as minor. The lack of financial means has been cited as the first obstacle in the accessibility of oral care<sup>20,21</sup> and one of the main reasons of self-medication<sup>17</sup>. Time saving, financial reason and individual perception of the severity of the health condition have also been documented as the reason for self medication in Jordan<sup>7,22</sup> and Nigeria<sup>27</sup>.

Analgesics were the most commonly used substances for self medication. This was similar to Souaga *et al.*'s<sup>17</sup> finding in the Ivory Coast and Afolabi *et al.*'s<sup>18</sup> finding in Nigeria. It could be explained by the fact that toothache was the most common oral health problem. Native herbs were the second most frequent utilised substances. High prevalence of consultation with traditional healers and local herb use for toothache among individuals living in the Tanga Region of Tanzania have been reported with 40% relief for more than 6 months<sup>28</sup>. It confirms the fact that individual in Africa that rely on self-medication for oral health problem are more likely to use modern medicines than traditional ones<sup>20</sup>. The disposition to utilise lay sources of care like native healers hampers the effectiveness of modern professional health agents and delivery system. There is evident reliance on traditional healers and plant products when dealing with a broad range of oral health concerns<sup>29</sup> from ethnomedicine survey use of plants in the treatment of oral ailments like toothache, plaque and caries, pyorrhea and aphthae<sup>30</sup>. The role of the traditional healer in healthcare delivery and the belief in unorthodox care may have resulted in a high frequency of native herbs for self medication. One-fifth of the respondents used antibiotics for oral health problems, confirming the unrestricted access to antibiotics with its attendant complication in developing countries. Dangerous substances like vinegar, petrol, tobacco, alum and touch and go which are corrosive and unorthodox chemicals were used by 7.4% of the respondents. Such dangerous substances used for an oral health problem have also been reported in studies in the southern parts of Nigeria<sup>31,32</sup>. There is a need for reorientation as complications emanating from the use of these dangerous substances may either be reversible or irreversible. For example, some topically applied

substances when taken for tooth pain relief have been reported to cause oral chemical burns<sup>24</sup>.

In this study, the sources of substances for self medication were mainly pharmacies, followed by roadside vendors (general provision shops and kiosks along the road), native healers, mobile drug vendors in buses and others, like hawkers, village markets etc. In parallel, a large number of pharmacies, street-market traders and traditional healers play a significant role in providing oral health care<sup>20</sup>. The unrestricted access and readily availability of drugs on demand from hospitals, pharmacies; patient medicine stalls, roadside stalls, and hawkers in developing countries account for the diversity of substances for self medication<sup>33–36</sup>.

In this study, half (50.6%) of respondents reported receiving their advice from relatives and friends, 24.5% from pharmacists, 17.7% from personal knowledge, and 8.3% from traditional healers. This is similar to the findings of Yousef *et al.*<sup>22</sup> in Jordan. Significant others were a veritable source of advice as they serve an important role in caring for sick family members or relatives. Pharmacists and patient medicine dealers in developing countries are consulted for any form of health problem because of their ease accessibility, fast services and no consultation fee. The utilisation of a traditional healer in an oral health problem among the respondents was 16.7% reported by a community dwelling adult Chinese people in Hong Kong experiencing orofacial pain<sup>37</sup> but lower than the 1.3% reported in a household survey in Burkina Faso<sup>20</sup>. The role of the traditional healer in dental care in developing countries<sup>28,38</sup> may also explain their relevance in perpetuating self medications for oral health problem among the respondents.

The description of respondents experiences with self medication for oral health problems include temporary reliever of pain, useful in a stressful situation, natural product, cheaper alternative, effective, curative in nature and no felt effect. The varied nature of respondents' experiences with self medication for oral health problems may be explained by the diversity of oral health conditions, reasons and utilised substance for self medication. Some of the participants correctly described self medication as a step in self care behaviour<sup>39</sup>. Lay measures in tooth pain relief, resulted in limited and uncertain benefits<sup>40</sup> fitting the descriptors like temporary reliever of pain and no felt effect. Cheaper alternative, effective and curative in nature, descriptions may have guided respondents into falsely believing that self medication for oral health problem are appropriate thus perpetuating the behaviour<sup>39</sup>.

## CONCLUSION

The majority of the respondents self-medicated for oral health problems with pharmaceutical products, herbs,

corrosive substances and unorthodox chemicals. Unmarried, urban residents, aged 21–30 years reported significantly increased self-medication for oral health problems. The high prevalence of self-medicated and the use of corrosive unorthodox chemicals reported in this study necessitate awareness creation and introduction of preventive and mitigating interventional programmes. Development of an official government policy on prescription and over-the-counter medications is also recommended.

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