Knowledge, Attitudes and Practices Related to Dental and Oral Health among Medical, Pharmacy and Dentistry Students in Mali (West Africa)

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Introduction

In the two last decades, Dental disease prevalence decreased in developed countries [1,2] when in Sub-Saharan Africa, it is increasing [3-10]. From 46 countries, WHO funded that only 14 countries have adopted a national policy and guidelines in Dental and Oral Health issues [6]. From Francophone African countries (West and Central), Dental and Oral Health studies have been done among primary and secondary schools [5-10], rarely among University’s student community. WHO thinks that Dental and Oral Hygiene is the preventive requirement for better knowledge, attitudes and practices in case. Which make us looking among health’s student requirement in this topic. Our specific aim is to evaluate Dental and Oral Health knowledge, attitudes and practices among Health’s student with the hypotheses as: (i) Health’s student training and practices enhance dental and oral health care and policy-making, (ii) The lack of appropriate information and education can influence patients inadequate behavior in dental and oral hygiene and health. As an exploratory and descriptive rapid KAP study survey, this study with mixed methods (quantitative and qualitative approaches) is focused on University Health Schools as Medicine, Pharmacy, and Dentistry and Oral Health students. Who will deserve community, referential and school hospital in urban and rural areas in West, Central and East Africa (Mali, Cameroon, Djibouti, Benin, Togo, Chad, and Mauritania).

Objective

Our specific aim was to describe and evaluate Dental and Oral Health knowledge, attitudes and practices among Health’s student.

Methods

As exploratory study based on a mixed approach (quantitative as KAP Survey and qualitative as Focus Group) and on volunteer free consenting participatory approach. In fact, 355 students participated to this study (56.6% males for 43.4% females) between 16 to 29 years old. The first heath class students were more representatives with 42.50%. In regard to KAP survey outcomes, we performed 3 focus groups interviews focused on best oral and dental health best practices (one with males, one with females and one mixed males-females together). The goal of this exploratory study is to build a Health Student Research-Participatory Program as Community-Based Health Program in a closed rural intensive rice and food garden production area of Bamako. It’s to establish three axial Health Students Association / Community-Based-Intervention on Oral and Dental Health, Ophthalmological Health and ORL Health. These three medical care issues need a specific technical implementation issues.

Results

Knowledge of oral health students: According to dental and oral health, 86.20% of students had good knowledge from their medical courses (not before starting medical school!) and from the TV, respectively 27.30% and 22.30% (Tables 1 and 2).

Tooth decay was corongly defined in 74.0% of cases (cancer or contagious diseases) and they knew gingivitis in 83.4% of cases. To recognize someone attack by tooth decay,
29.90% of students said that she/he most have an obstructed tooth and 39.66% found that she/he most have a tooth sensitive to hotness and coldness. Students said, tooth decay was transmitted through little or no hygiene of the mouth in 82.00% cases. Dental caries was the most known condition among students with 93.20% followed by gingivitis with 50.10% of cases.

According to the link 87.60% of students said that there is a link between oral health and general health. The highest risk factor for oral diseases was poor oral hygiene with 94.10% (Table 3). The students defined dental caries in 74.08% of cases as a kind of cancer or contagious disease and 83.40% knew what gingivitis is. According to students to know that a person is affected, they often have toothache after eating cold or hot foods in 39.60% of cases or having teeth closed in 29.90% of cases.

For the transmission 82.00% of the students said that the decay is transmitted by the lack of hygiene of the mouth. For prevention 83.90% of students said that brushing their teeth after each meal made it possible to fight decay, but it is not easy to practice as:

We know that the best practices are to brush our teeth after each meal, but we don’t practice it correctly...girls can more do it than guys as they’ve an obsession of their appearance and smelly contact to neighborhood (Male, FGI).

Yes, it will be embarrassing to have bad haling for a girl...even for the guy, but the social standard beauty and healthy pressing is more stuff on girls than guys... (Female, FGI).

For the treatment of caries and gingivitis, the students said that there is a treatment in 86.80% of the cases.
Just after wake up. As you know, in our tradition, you cannot talk to go on bed. For several people, once a day is common, the morning oral instrumental means. Morning brushing was performed in 1.30% who used the tooth scrub stick and 2% did not use any frequency of 96.70% using toothbrushes with toothpaste versus major program against caries. KANE AW, and et al. Reported a said it was good that the government or an NGO launched a health problem in school with 33.80% of cases. AIDS was the most frequently mentioned sensitive to advertising. AIDS was the most frequently mentioned (20.70%) and motivated by pain in 93% of cases [8]. Gabon reported that attendance at the dental office was low serious for the country, and 90.98% of the students said that they were afraid to make a dental disease. KOKO J. et al. In Libreville, Student oral health practices: In our oral health study, 66.48% of the students did not have a consultation with the dentist (Table 8).

But 89.60% of the students agreed to be consulted in the case of oral health problems (Table 9). For the place of purchase of the toothbrush, 48.50% of the students said that they bought their brush at the corner shop (Table 10). SIDIBE M. in his work in Bamako reported that oral hygiene accounted for 88.97% of cases and 11.03% of students had poor oral hygiene and 44.33% had.

According to the students the oral pathologies are 91.80% serious for the country, and 90.98% of the students said that they were afraid to make a dental disease. KOKO J. et al. In Libreville, Gabon reported that attendance at the dental office was low (20.70%) and motivated by pain in 93% of cases [8].

For sensitivity to advertising 51.30% of students were sensitive to advertising. AIDS was the most frequently mentioned health problem in school with 33.80% of cases.

For the launch of a program against caries 95.50% of students said it was good that the government or an NGO launched a major program against caries. KANE AW, and et al. Reported a frequency of 96.70% using toothbrushes with toothpaste versus 1.30% who used the tooth scrub stick and 2% did not use any oral instrumental means. Morning brushing was performed in 89.60% of cases [11].

In general, it’s common to brush teeth at our wake up and before to go on bed. For several people, once a day is common, the morning just after wake up. As you know, in our tradition, you cannot talk to anyone before washing your month and your face... so it more usual to do it as soon as you wake up and greet your parents and neighborhood (Male, FGI).

Overall, students recognized the role of oral hygiene in the prevention of oral diseases; hence the large number of students who said they would talk about oral hygiene to their future children (.). The study found that the oral health services were under-utilized by students (Table 8).

Eating habits are progressing with the mode of urbanization; students should be made aware of the role of sugars in the manifestation of dental caries, which brings us to the importance of education in oral health.

The establishment of a prevention program in oral health will be necessary in university environment and student involvement is recommended.

Instead of dental and oral diseases prevention, 83.90% students thought that brushing teeth after each meal will be efficient. And also, 66.48% haven't done preventive dental and oral consultation and 48.50% used ordinary teeth brush. They thought that treatment (tooth decay and gingivitis), 86.8 were confidents.

According to the risk to contract a dental and oral disease, 32.10% students said are under risk to contract it. Health students considered that they are most exposed to dental and oral diseases matters as they don't brush correctly their teeth and that in case of surgeon issues, 66.50% will not use it.

For behavior change, 53.50% of the students advised their friends to go to the health center, and 93.80% of the students said that they would talk about oral hygiene to their children.

Discussion

In general, the different studies in Sub-Saharan Africa, showed as family (52.50%), schools educational programs (44.50%) are the most information sources on dental and oral health promotion. In this study, 32.10% of students considered are under dental and oral disease risk.

Contrary to the studies at primary school where Sibide M study [9] showed that dental and oral hygiene is deficient at 88.9% and Tapsoba, et al. in Burkina Faso [10] found that 20% of pupils use stick-brush and 9% their fingers as teeth brush. He fund that the toothbrush is the most used (72%) and in 98% of the cases with toothpaste. The tooth-rubbing stick is used by 20% and 9% of children use their fingers to clean their teeth. 252 children (84%) have never been to the dentist. The 16% who consulted at least once did not do so on a preventive basis. 27% have already heard of fluoride, mostly on television, when they advertise toothpaste. But only 17% know its role in the prevention of oral diseases [11].

Compared to the mode of transmission and recognition of a person with caries and gingivitis efforts are to be provided. For the prevention of tooth decay the majority of students was aware of appropriate measures and recognized that there was a treatment for caries.

According to Mike’s study, tooth brushing was the activity that students regarded as the most important 85% and 92% of the students thought it helped “enough or a lot to avoid caries.” Regular use of dental services as well as teeth cleaning by the

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**Table 8:** Health students' Dental office frequentation.

<table>
<thead>
<tr>
<th>Have you been once to Dental Consultation</th>
<th>Score</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>119</td>
<td>33.52</td>
</tr>
<tr>
<td>No</td>
<td>236</td>
<td>66.48</td>
</tr>
<tr>
<td>Total</td>
<td>355</td>
<td>100.00</td>
</tr>
</tbody>
</table>

**Table 9:** Oral and dental using patterns among health students.

<table>
<thead>
<tr>
<th>Purchage site</th>
<th>Score</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic store</td>
<td>172</td>
<td>48.50</td>
</tr>
<tr>
<td>Pharmacy Office</td>
<td>129</td>
<td>36.30</td>
</tr>
<tr>
<td>Market place</td>
<td>27</td>
<td>7.60</td>
</tr>
<tr>
<td>Friend</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Not concerning</td>
<td>22</td>
<td>6.20</td>
</tr>
<tr>
<td>NGO donation</td>
<td>5</td>
<td>1.40</td>
</tr>
<tr>
<td>Total</td>
<td>355</td>
<td>100.00</td>
</tr>
</tbody>
</table>

**Table 10:** Purshage of Teethbrush.

In usual for health student or professional to advise than to use surgery for ourselves....we know better the prognostic and we’re most afraid to nosocomial diseases more current in surgery than routine consultation or short hospitalization. And as we said: oral and dental intervention is painful! (Males/females FGI).

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In general, it is common to brush teeth at our wake up and before to go on bed. For several people, once a day is common, the morning just after wake up. As you know, in our tradition, you cannot talk to anyone before washing your month and your face... so it more usual to do it as soon as you wake up and greet your parents and neighborhood (Male, FGI).

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Regular use of dental services as well as teeth cleaning by the...
dentist are also preventive methods prepared by the pupils since more than 85% of them value them [2].

In SAMB A study in 2005 in Dakar (Senegal), mothers estimated in 49.70% that caries is caused by bacteria and sugar. In order to avoid decay, 14% of mothers thought that they had to rinse their mouths with water, 45.18% had to go regularly to the dentist and 39.50% needed fluoride.

Sugar is incriminated in caries and 46.80% of mothers think it is bad for the teeth against 5.70% who thought otherwise.

In the study by DIEDHIOU I in 2004, mothers defined caries as the sugar plus bacteria association; 46.8% of them advocated the use of the stick-rubbing tooth as oral hygiene equipment [12].

Conclusion

This study permit to appreciate health’s student perception and practices toward dental and oral health issues. It appears the need to reinforce the training module on prevention of dental and oral (health) care to health students and to develop a community-participation approach to reach both urban and rural area for better oral and dental health promotion. It can be an Evaluated research-training program for these health students and medical residents.

Improving the oral health of students necessarily involves strengthening mass awareness campaigns, introducing into the curriculum modules for prevention and promotion of health in general and oral health in particular. In our study, few students went to the dentist’s surgery, which required systematic visits to faculties by public health dentists for oral health screening and education.

Acknowledges

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References


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