ORAL HYGIENE AWARENESS AMONG JUNIOR HIGH SCHOOL STUDENTS IN GHANA

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INTRODUCTION

An individual cannot be truly healthy and happy unless he or she is free from oral and craniofacial diseases and conditions (HHS, 2000). The World Health Organization (WHO) has taken a holistic review of the oral health burden worldwide and has shown that despite great improvements in oral health in several countries, global problems still persist (Petersen, 2003; Phelan et al. 2009; Petersen, 2011).

Oral health diseases such as dental caries (Turgut et al. 2011), gingivitis (Matthews et al. 2012; Tanner et al. 2012), periodontal disease (Al-Zarea, 2013; Baelum and Lopez, 2013), tooth loss (Buchwald et al. 2013; Hayasaka et al. 2013), oral mucosal lesions (Kose et al. 2011), oropharyngeal cancers (Ahmad, 1989; Boyle et al. 2003), HIV/AIDS-related oral diseases (Petersen, 2006; Tobias et al. 2012) and bad breath (Levit, 2003; Hutchinson, 2013) are major public health problems worldwide. Of the aforementioned oral health diseases, dental caries and periodontal disease are more prevalent and are an important component of global disease burden particularly in developing countries like Ghana.

Oral health diseases can affect the quality of life of an individual from childhood through adulthood and can impact negatively on communication due to missing, discolored and damaged teeth. Oral health diseases are associated with marked pain and impaired social functioning.

Ample evidence exists to show that oral health diseases are related to dental behavior (Huew et al. 2011; Diouf et al. 2012). Harerra et al in 2005 showed that the prevalence of dental caries and periodontal diseases decrease with improvements in oral hygiene and a decrease in the consumption of sugar products among school children (Herrera et al. 2005).

Poverty is arguably the most important determinant of health and ill-health (Sgan-Cohen and Mann, 2007). Globally, the greatest burden of oral health diseases is on the disadvantaged and poor population groups and it is known that the prevalence of dental diseases closely mimic the level of social deprivation (de la Fuente-Hernandez and Acosta-Gio, 2007; Squassi et al. 2008; da Fonseca, 2012). With high levels of malnutrition and under nutrition on the African continent where majority of the population are desperately poor, the likelihood of an increase in oral health diseases is very eminent.

The objective of this study was to evaluate the oral health awareness, attitudes and behavior of Junior High School (JHS) students of Wenchi in the Brong Ahafo Region of Ghana using self administered structured questionnaires in English language and data analyzed using SPSS version 16.0 for windows. 77% brushed their teeth twice daily, 54% brushed for 3 or more minutes at any particular tooth brushing time, 92% used fluoride tooth paste whiles 97% had never visited a dentist before. Public education on proper oral hygiene practices is therefore imperative and of crucial importance.

Keywords: Wenchi; Brong Ahafo Region; fluoride tooth paste; SPSS

MATERIALS AND METHODS

The study population was JHS students randomly selected from a Junior High School in Wenchi in the Brong Ahafo Region of Ghana. Structured questionnaires in English language were designed and pretested on 10 prospective participants for easy readability, easy comprehension, question design and length. As a result of pretesting, some open-ended questions were converted into close-ended questions. All questions were therefore closed-ended.
The questionnaires were administered by the researchers with assistance from two selected teachers at the JHS.

The questionnaires informed respondents of the objectives of the study, elicited socio-demographic data from respondents including gender, religion and whether they lived with their biological parents or not.

A total of 200 consenting JHS students participated in the study. The survey was conducted in March 2014.

Permission to conduct the survey was obtained from the Head Master of the school. Parents and guardians approval were sought through letters issued and signed by the head of the school.

Students were encouraged to fill the questionnaires by themselves with assistance from researchers and the selected teachers who helped in this study.

The questionnaires included fourteen (14) items designed to evaluate the knowledge, attitudes and behavior of young students regarding their oral health. The data obtained was analyzed using Statistical Package for Social Sciences (SPSS) version 16.0 for windows.

RESULTS

The total study population was 200 JHS students attending a Junior High School at Wenchi in the Brong Ahafo Region of Ghana comprising 86 females (43%) and 114 males (57%). Respondents’ age ranged from 13 to 16 years.

Most of the respondents were Christians (90%) and lived with single parents (45%) (table 1)

All the respondents agreed that it was important to brush their teeth. When they were asked the frequency of their teeth brushing in a day, 22% said they brushed their teeth once in a day, 77% said they brushed their teeth twice in a day while 1% brushed three times in a day.

8% of respondents said they brushed their teeth less than 1 minute, 38% brushed more than 1 minute but less than 2 minutes whiles 54% said they brushed their teeth for 3 or more minutes at any particular tooth brushing time.

92% of respondents said they used fluoridated tooth paste to brush their teeth, 7% said they used the chewing stick to brush their teeth while 1% used plantain peel to brush their teeth. 91% of respondents said their source of teeth cleaning agents were always available whiles 9% said their source was not always available. 19% of respondents said they brushed their teeth every morning whiles 81% said they brushed both morning and evening.

Almost all the respondents (99%) had not seen a dental floss before and did not know what it was used for however 89% of respondents said they had seen and used a mouth wash before.

When respondents were asked whether they have had gum bleeding before, majority (79%) said no, 20% said yes and 1% did not know. 74% had never developed any other oral infection before while 26% had developed other oral infections apart from gum bleeding.

56% of respondents said there was a dentist in their community whiles 44% said there was no dentist in their community. 3% had heard had visited a dentist before whiles 97% said they had never visited a dentist before.

Out of those who said they had visited a dentist before, 1% said they visit the dentist once every three months, once every year (1%) whiles the remaining 1% were not sure how often they visit the dentist.

95% of the respondents said it was important to visit a dentist regularly whiles 5% thought it was unnesscessary to visit a dentist regularly.

Majority of respondents (72%) said their parents/guardians do not supervise them when they are brushing their teeth. 28% however said they receive supervision from parents/guardians when brushing their teeth.

Asked whether regular teeth brushing prevents one from developing gum bleeding and other oral infections, majority (90%) said yes.

DISCUSSION

The study population was 200 JHS students at Wenchi in the Brong Ahafo Region of Ghana. Wenchi is the capital of the Wenchi Municipal District in the Brong Ahafo Region of Ghana.

The male (57%) dominance reflects the current picture in most remote areas of developing countries like Ghana.
where girl child education is still considered irrelevant. The fact that majority of the respondents were Christians (90%) is in line with the most popular religion of the people of Ghana.

Majority of respondents lived with either a single parent (45%) or with relatives (30%). In Ghana, it is quiet common for children to live with one parent or relatives especially if both parents are no longer together. Compelling factors such as poverty or the death of a parent may cause a child to live with foster parent(s).

Tooth brushing habits become established during the early years of childhood and last throughout a lifetime (Martignon et al. 2012). Ample evidence exists to show that tooth brushing is very beneficial to human beings (Addy and Hunter, 2003; Seow et al. 2003). The fact that all respondents agreed that teeth brushing was important is very positive indeed. The situation however is grimmer in absolute deprived areas of Ghana where potable drinking water and electricity are luxury.

It is known that brushing frequency can affect the effectiveness of tooth cleaning (Schmidt and Arnold, 1989). Professional recommendations for individual oral hygiene include tooth brushing at least twice daily for 2-3 minutes with gentle force (Ganss et al. 2009).

Whiles twice daily tooth brushing seems to be an established practice in several industrialized countries such as the United States of America (Vargas et al. 2003; Chattopadhyay, 2008), this goal is still far from being realized in developing countries such as Ghana (Mickenautsch et al. 1999; Bruce et al. 2002) or Nigeria (Akpata, 2004; Oredugba, 2004). In this study however, majority (77%) of respondents brushed their teeth twice daily which is in line with accepted recommendations.

Increasing urbanization increases access to sugar products, tobacco and alcohol use which contribute significantly to the pathogenesis of oral health diseases. It has been shown that diet particularly cola containing drinks can cause demineralization of the dentin of the teeth (Choi et al. 2012) and it is therefore recommended that tooth brushing should be performed at least 1 hour after the consumption of cola drinks (Kwoni et al. 2012).

54% said they brushed their teeth three minutes or more at any particular time. Kwoni et al in 2012 showed that prolonged toothbrushing can irritate gingival tissues (Kwoni et al. 2012).

Evidence has shown that tooth brushing with fluoridated toothpaste is effective in reducing the incidence of dental caries (Sarita and Tuominen, 1992). In this study, 92% of respondents brushed their teeth with fluoridated toothpaste which is very commendable. Different types of tooth pastes are readily available on the Ghanaian market at affordable prices which is probably why 91% of respondents said their source of tooth cleaning agents were always available. It is amazing however that some respondents still use the primitive chewing stick (7%) and plantain peel (1%) for teeth cleaning.

The use of other recommended oral hygiene methods such as the use of mouthwashes were quite popular in this study population (89%). The use of the dental floss was however rare among respondents which could be attributed to lack of oral health education and/or cost. Dental flossing has been shown to remove plaque and reduce the incidence of dental caries (Redinova and Nagaeva, 1999; Clifford et al. 2012).

In most developing countries, oral health services are mostly offered at the Regional or Central hospitals and very little importance is given to preventive or restorative dental care. In Africa, there is shortage of oral health personnel and dental service is generally limited to pain relief or emergency care but not prevention. Preventive oral health is therefore in a transitional stage in Ghana.

Ghanaian families are usually large, often with four to five children coupled with busy parental/guardian schedules makes it difficult for parents/guardians to monitor their children’s dental health effectively. This probably accounts for why most of the respondents (72%) did not receive any supervision from parents/guardians when brushing their teeth.

Public education on proper oral hygiene practices is imperative and of crucial importance. Well focused educational campaigns emphasizing preventive and restorative oral health could definitely bring about positive results.

CONCLUSION

Given the extent of oral health problem globally, it is imperative that pragmatic efforts be put in place to reduce the global burden especially on developing countries.

This study was conducted on subjective self-reported data obtained from JHS students with varying levels of language ability and understanding of questions which were included in the questionnaires. This may have influenced the selection of responses. Due to this anticipated problem however the questionnaires were pretested on selected students from the same school before the study was conducted.

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REFERENCES


