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EFFECTIVENESS OF AN ORAL HEALTH CARE TRAINING WORKSHOP FOR SCHOOL TEACHERS: A PILOT STUDY

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ABSTRA CT

Background: **School teachers play key roles in imparting appropriate and up-to-date knowledge to pupils and students. However, most teachers in developing countries like Nigeria have poor knowledge and motivation about oral health which may be due to inadequate training in the area of oral health. This might be one of the reasons for the poor oral hygiene among them and their students.**

Objectives: **To evaluate the effectiveness of an oral health care training programme organized for teachers in Eruwa, Oyo state, Nigeria.**

Methods: **An intervention study was conducted among 40 school teachers who attended a two day oral health training workshop at Eruwa, headquarters of Ibarapa East Local Government Area. Training methods included lectures and demonstrations on aetiology, clinical features, treatment and prevention of common oral diseases. Pre- and post- evaluation written tests were administered to the participants to assess the effectiveness of the training. The knowledge scores were rated as poor, fair and good knowledge scoring <50.0%, 50.0-60.0% and > 60.0% respectively. Frequencies, percentages and means of relevant variables were generated. Paired t-test was used to compare means at P<0.05.**

Result: **The mean age of the teachers was 40.13 ±7.24 years. There were 16 (40.0%) males and 24 (60.0%) females. Twenty (50.0%) of the participants had poor pre-training knowledge as compared to 7 (17.5%) after the training. Thirteen (32.5%) had fair pre-training knowledge as compared to 17 (42.5%) post training. Only (2.5%) of the participants had good pre-training knowledge as compared to 18 (45.0%) post training. The mean scores of the pre- and post-evaluation tests were 31.70 ±11.31 and 48.20 ±11.16 respectively. There was a statistically significant difference between the mean scores of the pre and post evaluations P<0.05.**

Conclusions: **The training workshop improved the knowledge of school teachers regarding oral health.**

Keywords: Effectiveness, Oral health training, Teachers.

INTRODUCTION

During the school year, children spend most of their time with their teachers. Similarly, the knowledge and skills needed to attain their future goals and nurture hidden potentials are acquired during this period. School teachers by virtue of their training can influence a large number of children thereby play major role in the planning and implementation of oral health preventive programs. Hanganu *et al.*,[1] reported that school based health promotion and preventive efforts are efficient since many children can be reached through the classrooms. Teachers can provide the necessary skills about oral health care to children. The teachers can also help with early detection of oral diseases with subsequent prompt referral. This will translate into better oral health when these children grow up.

School teachers are not always able to adequately inform the children and the society about oral health. This may be due to their poor knowledge of oral health. [2-5] In addition, the oral health education sessions conducted by teachers at schools were observed to be deficient in content and in methods.[2]

Reports from the American Surgeon General's conference on Children and oral health indicated that children loose an estimated 52 million hours of school

each year because of oral diseases.[6] Furthermore, poor oral health among children has been related to decreased school performance, poor social relationships, and less success later in life,[7] this is most likely due to the missed days in school and the resulting psychological affectation. If teachers are able to detect oral diseases early, it will pave way for the arrest of progression as well as reduce the need for expensive dental procedure. Holt and Kraft[7] reported that teachers may not understand psychosocial problems resulting from oral diseases except they are well informed about what the diseases are and its possible impact.

From an effective school based oral health programme, the capacity of teachers in the delivery of oral health care can improve if training programmes are organized for them rather than the usual situation of having to read oral health documents on their own. Nyandindi[8] reported that teachers trained in workshops had improved quality of oral health education sessions than when they studied oral health manuals alone. This had led to the establishment of a national programme for oral health education carried out by primary school teachers in Tanzania.[9]

With teachers being well informed through the oral health training workshop, they will be better equipped to enlighten the children thus leading to an improved oral health for both teachers and students.

MATERIALS AND METHODS

This intervention study was carried out among all 40 teachers who attended the workshop from 10 primary and 10 secondary schools in Eruwa, headquarters of Ibarapa East Local Government Area of Oyo state. The schools were randomly selected from a sampling frame obtained at the Local government secretariat. Eruwa is a rural community with a population of about 70,000 people situated about 60 kilometers south of Ibadan, the capital city of Oyo State, in southwestern Nigeria[10]. The main occupation of the inhabitants of Eruwa are farming and trading.

The 40 teachers were randomly selected by their school authority to attend an oral health care training programme at one of the secondary schools in Eruwa. All the 40 teachers consented to participate and written informed consent was obtained from them before the commencement of the training. The training was carried out using a lecture manual and visual aids.

Prior to the training, all participants were given a pre-test in form of a 35 item semi-structured self-administered questionnaire consisting of socio-demographic data and knowledge of the aetiology, clinical features, treatment and prevention of common oral diseases.

The total obtainable mark for knowledge of oral care was 100% with poor, fair and good knowledge scoring <50%, 50-60% and >60% respectively.

Post-test was carried out 30 minutes after the training using the same questionnaires that were used in the pre-test. Data were cleaned, entered into a personal computer and the Statistical Package for Social Science (SPSS) version 19 was used for the analysis[13]. Frequencies, mean, median and mode were generated and paired t-test was used to compare means at $P<0.05$

RESULTS

Of the 40 teachers who participated in this study, 24 (60.0%) were females and 16 (40.0%) were males. Twenty-six (65.0%) of the participants were primary school teachers while 14 (35.0%) taught in secondary schools. The age range of the participants was between 25 and 55 years with the mean age being 40.13 ±7.24 years. The modal age group was 31 to 40 years which constituted 52.5% of the participants. Five (12.5%) of the participants were single while 33 (82.5%) and 2 (5.0%) were married and widowed respectively. Twenty-two (55.0%) of the participants had National Certificate of Education (NCE) as their highest level of education while 18 (45.0%) were university graduates.

On knowledge questions from the pre-test, 52.5% of the teachers did not know the alveolar process was a structure in the mouth as compared to 22.5% post-test (see pie-charts). Also from the pre-test, 37.5% knew the vocal cords were not found in the mouth as compared with 75% post-test. In addition from the pre-test, 37.5% of respondents knew fluoride was used in preventing caries as compared to 75.0% post-test. Eighty-five percent of respondents did not know that oral health education could be given in the market place. This came down to 7.5% post intervention.

Table 1 shows the distribution of participants by years of teaching experience. The majority (30%) of the participants had 5 or less years of teaching experience.

Table I: Distribution of participants by years of teaching

Years of Teaching	n	%
0 - 5	12	30.0
6 - 10	10	25.0
11 -15	3	7.5
16 - 20	7	17.5
21 - 25	1	2.5
26 - 30	7	17.5
TOTAL	40	100.0

Twenty-four (60.0%) and 5 (12.5%) had poor knowledge pre-training and post-training respectively. Two and a half percent and 40.0% had good knowledge pre-training and post-training respectively. There was a statistically significant difference between mean scores of the pre- (31.7) and post- (48.2) evaluation (P<0.05)

Table 2: Overall knowledge percentage of participants pre- and post-training

Knowledge score	Pre-training		Post-training	
	No	(%)	No	(%)
Poor (<50.0%)	24	60.0	5	12.5
Fair (50.0-60.0%)	15	37.5	17	42.5
Good (>60.0%)	1	2.5	18	40.0

DISCUSSION

The relevance of school teachers in imparting knowledge to school children and the public cannot be over emphasized. It therefore becomes paramount that the teachers themselves must be equipped with adequate and up-to-date information, as this will translate to increasing the capability of the students in taking informed decisions especially on oral health. The WHO stated that providing education on oral health in schools help children to develop personal skills, provides knowledge about oral health and promotes positive attitudes and healthy behavior[14]. Furthermore, teachers form the bedrock for sound education in the lives of the students they teach and giving correct information and mentorship will contribute to the holistic development of the students. Studies have reported that teachers have an important influence on the outcome of a child's behavior, reasoning and decision making. [13,14]

In this study, the majority of the teachers had poor knowledge about oral health which is similar to the findings in previous studies.[2-5] The reason for the poor knowledge of teachers about oral health might be due to the lack of information on oral health during schooling. This may also translate to poor knowledge and attitude of the public about oral health.

The knowledge of teachers about oral health in this study improved after being taught during the training programme. This finding is similar to the report from Tanzanian studies[8,9] that teachers who participated in an oral health training programme had their poor knowledge of oral health improved. He further reported that student's knowledge and practice of oral health improved significantly after being taught by teachers who participated in the training. In addition, the impact of this training on oral health will be felt in not too long a time in the community where this present study was carried out. A research is needed to explore into this in future.

Studies out of an East African country, Tanzania on the impact of health education on primary school pupils before and after teachers' training showed that the students' knowledge and practices of oral health issues improved significantly after being taught by the teachers who underwent the training[9]. This is because the teachers who underwent the training had significant improvement in their knowledge level. The result of this study is similar as the level of knowledge of the teachers improved significantly (Table 2) after the training with a larger percentage having good knowledge.

CONCLUSION

Parents entrust the education of children into the hands of teachers. It is hoped that these teachers have up-to-date information and can impact positively, the lives of the students they teach. On this premise, this training was undertaken. After the training, there was a significant improvement in the knowledge of the teachers about oral health. These teachers it is hoped will transfer the knowledge gained to the other teachers and school children, thereby improving the oral health of the community.

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