

RESEARCH COMMUNICATION

Screening for Oral Cancer/Pre-cancer: Knowledge and Opinions of Dentists Employed in the Public Sector Dental Services of Sri Lanka

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Abstract

Objective: The aim of the present study was to assess knowledge and opinions related to oral cancer screening among dentists employed in public sector dental services in Sri Lanka. **Materials and methods:** The study population consisted of a total of 1,020 dentists employed in the public sector dental services as at December 2007. The data were collected by means of a postal questionnaire consisting of 23 items focusing on demographic characteristics, knowledge and opinions about screening for oral cancer/precancer. **Results:** 387 completed questionnaires were returned giving a response rate of 38%. The overall knowledge score for oral cancer screening was 2.79 ± 0.76 . There were no significant differences between time since graduation, position held and knowledge scores. Around 68-70% of respondents agreed/strongly agreed that their knowledge about oral cancer/pre cancer was current. Though 77% agreed/strongly agreed that dentists are adequately trained in oral cancer screening, nearly 63% disagreed/strongly disagreed that medical officers are adequately trained to perform oral screening. Nearly 81% agreed/strongly agreed that they were adequately trained in oral cancer screening whilst 70% also felt that they needed further training in oral cancer screening. **Conclusions:** the results revealed that a fairly large proportion of respondents were knowledgeable about oral cancer screening but as there was a reasonable percentage whose knowledge about oral cancer screening was poor there is a need for continuing education programmes.

Key Words: Oral cancer screening - opinions - knowledge - dentists

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Introduction

Oro-pharyngeal cancers are the most common type of cancer in Sri Lanka and accounts for 14.4% of all cancers. With an age-standardized incidence rate of 15.4/100,000 it is ranked first among all cancers in males and in females with an age-standardized incidence rate of 4.5/100,000 it is ranked fourth (Cancer Registry, 2002). Though the oral cavity is accessible to visual examination to patients and health care workers, it is most unfortunate that many of these lesions are not detected at the early stages but only at an advanced stage when prognosis is likely to be poor. Oral cancer is largely preventable by avoiding and controlling risk factors such as use of tobacco and consumption of alcohol (Cancer Research Campaign, 2000). Moreover, about 90% of small lesions of oral cancer are clinically detectable as asymptomatic red/white lesions and many small lesions are slow growing. Hence attention has been drawn to the possibility of population screening as a preventive strategy for oral cancer (Speight and Morgan, 1993).

Population based oral cancer screening programmes have been conducted in many countries including Sri

Lanka (Warnakulasooriya et al., 1984; Sanakaranarayan et al., 2006). However, as the effectiveness of such population based oral cancer screening programmes is still not clear, mass screening for oral cancer is not recommended as public health policy (Warnakulasuriya and Johnson, 1996; Kujan et al., 2006a). Therefore for the purpose of early detection, screening within general dental practice, general medical practice and by non-professional health care workers on an opportunistic basis has been recommended (Speight et al., 1993; Warnakulasuriya and Johnson, 1996).

Oral mucosal screening is now considered as an integral part of routine dental care (Field et al., 1995) and oral health care providers should therefore have appropriate knowledge and skills in oral screening. Hence many researchers particularly from the developed countries have assessed knowledge, views and practices related to oral cancer prevention and early detection among oral health care providers. Though oral cancer is the most common cancer and dentists have a vital role in its prevention and control such studies have not been conducted in Sri Lanka. Therefore, the aim of the present study was to assess knowledge and opinions related to

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Materials and Methods

The study population consisted of dentists employed in the public sector dental services where a majority of dentists in Sri Lanka practice. A complete list of dentists employed in the public sector was obtained from the Office of the Government Dental Surgeons Association. According to this list, a total of 1020 dentists were employed in various capacities in the public sector dental services as at December 2007. All 1020 were included in the sample. The data were collected by means of a postal questionnaire.

The questionnaire consisted of 23 items focusing on demographic characteristics, knowledge and opinions about screening for oral cancer/precancer. Four items in the questionnaire assessed knowledge about screening for oral cancer/precancer while 13 items assessed opinions regarding knowledge and prevention of oral cancer, training and practices related to oral screening. With respect to items that were related to assessing opinions, the respondents were asked to indicate their responses in a 5-point scale: strongly agree, agree, disagree, strongly disagree and don't know. The questionnaire was pre-tested in a group of 30 dentists and based on their responses, modifications were made to the questionnaire. The questionnaire with a covering letter by the first author indicating the purpose of the study and a self-addressed stamped envelope to facilitate the return of the completed questionnaire was mailed to all 1020 dentists. They were also requested to return the completed questionnaire within two weeks. A reminder was sent four weeks after the initial mailing to all non-respondents.

A knowledge score was calculated for each respondent based on the answers to the 4 knowledge items. A correct response was given the score of 1 whilst an incorrect response or a "don't know" response was given the score of 0. A total knowledge score out of 4 was computed for each respondent with possible scores ranging from 0-4.

Results

Of 1020 questionnaires, 46 were returned as those dentists could not be traced at the given address possibly due to them being transferred from the station. A total of 387 completed questionnaires were returned giving an overall response rate of 38%. However one questionnaire had to be disregarded, as it was incomplete and hence 386 questionnaires were available for analysis. Responses were received from dentists working in all 25 districts of Sri Lanka.

Table 2. Respondents' Opinions Regarding their Knowledge of Oral Cancer

Opinion	++	+	-	--	?
My knowledge about oral cancer is current	9.1	59.3	23.3	1.6	6.7
My knowledge about oral precancer is current	12.2	57.8	22.3	1.6	6.1
My patients are knowledgeable about risk factors for oral cancer/precancer	3.4	28.2	50.3	9.1	9.0
My patients are knowledgeable about signs and symptoms of oral cancer	3.4	19.9	55.4	11.7	9.6

Percentage data. ++, Strongly agree; +, Agree; -, Disagree; --, Strongly disagree; ?, Don't know

Table 1. Knowledge of Oral Cancer Screening with Reference to Time since Graduation and Position Held

Variable	Knowledge score	P value*
Time (years)		
0-5 (87)	2.78 ± 0.80	
>5-10 (112)	2.72 ± 0.76	
>10 (187)	2.83 ± 0.74	0.47
Position		
House officer/senior house officer/post graduate (58)	2.56 ± 0.70	
Specialist (21)	2.86 ± 0.85	
General dentist/administrator (307)	2.83 ± 0.76	
Overall score (386)	2.79 ± 0.76	0.054

Data are Mean ± SD *oneway analysis of variance

A majority of respondents (33%) had graduated from dental school 11-20 years ago whilst 22% had up to 5 years of experience as a dentist. The time since graduation for 15% of respondents was over 20 years. Nearly 76% of the respondents were functioning as general dental practitioners within the public sector dental services while 5% and 4% were specialists and dental administrators respectively

Table 1 shows the knowledge of oral cancer screening of respondents according to time since graduation and position held. The overall knowledge score was 2.79 ± 0.76. There was no significant difference between knowledge scores and time since graduation. The mean knowledge score of specialists was higher (2.86) than house officers/senior house officers/post graduates (2.56) or general practitioners/administrators (2.83) but the difference between groups was not significant.

Around 68-70% of respondents agreed or strongly agreed that their knowledge about oral cancer and precancer was current. A majority (59%) had disagreed or strongly disagreed that their patients were knowledgeable about risk factors for oral cancer/precancer and 67% either disagreed or strongly disagreed that their patients were knowledgeable about signs and symptoms of oral cancer/precancer (Table 2).

Respondents' opinions regarding practices related to oral cancer prevention and early detection is shown in Table 3. Nearly 72% strongly agreed that they do not hesitate to refer patients with suspicious lesions to specialist. Though 77% agreed/strongly agreed that dentists are adequately trained in oral cancer screening, nearly 63% disagreed/strongly disagreed that medical officers are adequately trained to perform oral cancer screening. Of the respondents, 86% and 82% felt that dentist should be trained to provide tobacco and alcohol cessation education respectively. Nearly 81% agreed or

Table 3. Respondents' Opinions Regarding Practices Related to Oral Cancer Prevention and Early Detection

Opinion	++	+	-	--	?
I do not hesitate to refer my patients to a specialist if a suspicious lesion is found	71.8	19.4	3.9	4.1	0.8
Dentists are adequately trained in oral screening	19.2	58.0	17.3	3.4	2.1
Medical officers are adequately trained in oral screening	3.4	19.4	48.7	14.0	14.5
I am competent to educate patients on tobacco cessation	26.7	62.7	7.5	1.0	2.1
I am competent to educate patients on alcohol cessation	21.8	58.8	15.0	1.6	2.8
Dentists should be trained to carry out tobacco cessation education	27.7	58.5	8.0	2.6	3.1
Dentists should be trained to carry out alcohol cessation education	24.9	57.5	10.9	3.4	3.4
I am adequately trained in oral cancer screening	20.2	60.6	14.5	1.8	2.8
I need further training in oral cancer screening	25.1	45.1	21.2	4.9	3.6

Percentage data. ++, Strongly agree; +, Agree; -, Disagree; --, Strongly disagree; ?, Don't know

strongly agreed that they were adequately trained in oral cancer screening whilst 70% also felt that they needed further training.

Discussion

Though the response rate was low (38%) it is noteworthy that responses were received from dentists working in all 24 districts of Sri Lanka. An almost similar response rate (40%) has been reported for a study on the same topic conducted among dentists practicing along the Texas-Mexican border of the US (Alonge and Nagendran, 2003). The low response rate may have introduced non-response bias into the results as it is generally assumed that respondents compared to non-respondents are those who are likely to be interested in the topic under study. Thus it is difficult to generalize the findings to dentists employed in the public sector health services of Sri Lanka at large. Nevertheless despite these limitations the study provides some important information about dentists' knowledge and opinions regarding oral screening for oral cancer and pre cancer.

The respondents had a good knowledge of oral cancer screening with 65% obtaining a score of 3 or more of a maximum score of 4. The extensive coverage of the topic of oral cancer in different disciplines of the undergraduate dental curriculum may have contributed to this. However, having assessed the knowledge of oral cancer prevention and early detection among US dentists Yellowitz et al., (2000) concluded that these dentists were not as knowledgeable as they could be about oral cancer prevention and early detection. Time since graduation was not associated with dentists' knowledge of oral screening. On the other hand it has been reported that the year of graduation was significantly associated with knowledge of diagnostic procedures including oral screening with those who recently graduated obtaining higher knowledge scores compared to those who graduated early (Yellowitz et al., 2000; Clovis et al., 2002)). Also knowledge of oral screening did not vary between dental specialists, house officers/senior house officers or general dental practitioners in the present study. However in a study conducted in the UK, it has been reported that dental specialists' knowledge of oral cancer screening was consistent with that of current reports but there were gaps in the knowledge of general dental practitioners (Kujan et al., 2006b), suggesting that dental specialists and general

dental practitioners differed in their knowledge with respect to oral screening

It was heartening that 72% strongly agreed that they do not hesitate to refer a patient to a specialist if a suspicious lesion is found. If such cases are confirmed as positive by a specialist, it will allow treatment to be initiated at an early stage ensuring better prognosis. According to the results around 68-70% of the total sample was of the opinion that their knowledge about oral cancer and precancer was current. Of these, 70% had obtained a high knowledge score for oral screening indicating that those dentists who perceived their knowledge about oral cancer/ precancer to be current were in fact knowledgeable. In contrast Yellowitz et al., (1998) found that though most dentists believed that their knowledge about oral cancer was current, they were not really knowledgeable. Confirming with other studies (Yellowitz et al., 1998; Alonge and Narendran, 2003), a majority of respondents believed that their patients were not knowledgeable either about risk factors or signs and symptoms of oral cancer/precancer. This highlights the need for patient education on risk factors for oral cancer and oral screening in the dental clinic setting.

With respect to opinions regarding practices related to oral cancer screening, a very high percentage of the respondents agreed/strongly agreed that they as well as other dentists are adequately trained in oral cancer screening but a majority of them perceived that medical officers are not adequately trained in this procedure. A similar finding has been reported by Alonge and Narendran (2003). In fact these respondents' perceptions have been confirmed empirically in a recent study. When opinions related to oral cancer prevention and screening were compared among medical and dental care providers, it was found that dental care providers were significantly more likely to feel adequately trained to perform oral screening than their medical counterparts (Patton et al., 2006). Oral health receives little emphasis in medical curricula and hence such perceptions by dentists regarding the ability of their medical colleagues to perform oral cancer screening are to be expected. As general medical practitioners are more likely to see patients at high risk for oral cancer (Goodman et al., 1995), it is important that they are educated and trained in oral screening for early detection of oral cancer.

As oral cancer/precancer can be prevented by controlling risk factors such as use of tobacco and

consumption of alcohol, it is necessary that dentists educate their patients on the importance of quitting these behaviours. Thus opinions of dentists with respect to their training and ability to provide tobacco and alcohol cessation education were assessed in this study. A majority agreed or strongly agreed that they were competent to educate patients on tobacco and alcohol cessation. However, Johnson et al. (2006) have reported that most dentists in primary care in the UK felt that they were not well prepared to assist patients in tobacco quitting. Also a majority of the respondents believed that dentists needed training in tobacco and alcohol cessation education. In contrast only about 10% of Texas-Mexico dentists felt that dentists should be trained to provide tobacco and alcohol cessation education (Alonge and Narendran, 2003). The finding that 82-86% of respondents felt that dentists required training on tobacco and alcohol cessation activities indicates a need for education on behavioural counselling both in dental schools and through continuing education programmes. Respondents' opinions regarding their training in oral cancer screening appeared to be inconsistent. A majority felt that they were adequately trained in oral cancer screening but most of them also felt that they needed further training. If they are adequately trained it could be questioned why they need further training in oral cancer screening? There are two possibilities. It may be that when responding to the question they may have not paid sufficient attention to the word "adequate". On the other hand they may have felt that they were adequately trained up to the present time but in today's dynamic context and scientific progress they would benefit by further training.

In conclusion, the results of the present study revealed that a fairly large proportion of respondents were knowledgeable about oral cancer screening. However as there was a reasonable percentage whose knowledge about oral cancer screening was poor there is a need for continuing education programmes on oral cancer to update the knowledge of dentists. Furthermore as knowledge and opinions of dentists regarding oral cancer prevention and early detection can influence their practices, the information obtained from this study will be useful when developing protocols for oral cancer screening in the dental clinic setting.

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References

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