

Oral Cancer Knowledge Level among Dentists in Medan, Indonesia

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Abstract:

Background: Oral cavity cancer is cancer that includes the lips, tongue, salivary glands, and other places in the mouth. The case of oral cancer is still a health problem throughout the world. Most cases of the oral cavity are found at an advanced stage due to delay in diagnosis by the dentist. Oral cavity cancer can be detected early so that the treatment and treatment is also more guaranteed success. This study aims to determine the level of knowledge of dentists in the city of Medan regarding the definition, etiology and risk factors, clinical symptoms, diagnosis, early detection and prevention of oral cancer.

Materials and Methods: This type of research is a descriptive study with a cross sectional approach involving 100 dentists. Data was collected using an online questionnaire consisting of questions regarding the definition, etiology and risk factors, clinical symptoms, diagnosis, early detection and prevention of oral cancer. Data analysis was carried out descriptively which was calculated in percentage form.

Results: The results showed that from 100 respondents, the gender of the most respondents was female by 70%, the age of the most respondents was 30-39 years by 45%, the level of knowledge about the definition of oral cancer was good at 99%, the level of knowledge about the etiology and risk factors of cancer oral cavity is good by 54%, level of knowledge about clinical symptoms of oral cancer is good by 87%, level of knowledge about diagnosis of oral cancer is good by 82%, level of knowledge about early detection and prevention of oral cancer is good at 100%.

Conclusion: Based on the results of the study, it can be concluded that the level of knowledge of dentists in the city of Medan regarding oral cancer is good.

Key Word: oral cancer, knowledge level, early detection

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I. Introduction

Oral cavity cancer is cancer that includes the lips, tongue, salivary glands, and other places in the mouth. Cases of oral cavity cancer have become a health problem worldwide.^{1,2} Oral cancer cases continue to grow every year, both new cases and deaths. In 2020 there were 657,000 new cases and 330,000 deaths worldwide.³ A number of new cases and deaths were also found in Asia, namely 377,713 new cases and 177,757 deaths.⁴ Likewise in Indonesia, in 2012 there were 5,329 new cases and 2,250 deaths.⁵ Actually, oral cancer can be diagnosed earlier so that the death rate will be reduced.^{6,7,8,9} However, most cases of oral cancer are found at advanced stages (III and IV).^{6,10} Dentists have an important role in providing knowledge about early detection of oral cancer.^{6,7,10,11} This is because dentists can detect oral cancer at an early stage, lesions in the form of ulcers suspected of being oral cancer, increase public awareness for prevention.⁹ This can be achieved with sufficient knowledge of the dentist about oral cancer so that if the disease is found at an early stage, the patient will be hospitalized. Treat earlier and the percentage of treatment success will be more guaranteed.^{6,7,8,11}

Research conducted by Joseph et al in 2011 regarding awareness of oral cavity cancer among dentists in Kuwait obtained results where out of 153 participating dentists, 116 dentists received high scores, 20 dentists received moderate scores and 17 dentists received low scores.⁹ Research conducted by Gisele et al in 2018 regarding the level of knowledge of dentists about oral cancer in 189 dentists in Brazil consisting of 84 young dentists and 105 senior dentists using a questionnaire. As many as 19% of the total number of participants got a good score where 6.7% of them were senior dentists. This study obtained results where the knowledge of senior dentists about oral cavity cancer was higher than that of young dentists.⁶ The research was conducted by Wimardhani et al in 2021 regarding the knowledge and practice of dentists on oral cavity cancer in Jakarta using a questionnaire. The results obtained from 402 dentist participants, namely a quarter of the participants received a high score. Dentists in private practice also obtained higher scores than dentists working in public health center. There are no dentists who have good knowledge of diagnostic procedures for oral cancer.¹¹ Early detection is closely related to the prevention and treatment of oral cancer. Oral cavity cancer can be detected earlier if the dentist has knowledge and experience. Until now, there has been no research on the level of

knowledge of dentists regarding oral cancer in the city of Medan. Therefore, researchers want to investigate further about the level of knowledge of dentists about oral cancer in the city of Medan. Oral cancer cases are still a health problem throughout the world. Most cases of oral cavity are found at an advanced stage. The reason is delay in diagnosis by dentists. Oral cavity cancer can be detected earlier so that treatment and care are also more successful.

II. Material And Methods

This type of research is descriptive with a cross-sectional approach to determine the level of knowledge of general dentists in Medan City about oral cancer. The location of this research is a health institution and private practice of general dentists in Medan City. The study population was general dentists in Medan, 100 people. Data is collected through an online-based questionnaire that will be filled out by research respondents. The questionnaire consists of 15 questions regarding definition, etiology and risk factors, clinical symptoms, diagnosis, early detection and prevention of oral cancer. Respondents who answered 76-100% of all questions correctly would be categorized as good. If you answer 56-75% of all questions correctly, it will be categorized as sufficient. If you answer <56% of all questions, you will be categorized as lacking.

Study Design: Descriptive with a cross-sectional study

Study Location: This research is held in Medan, Indonesia

Study Duration: October 2021 to December 2021

Sample size: 100 people

Sample size calculation: The statistical analyses were conducted using SPSS software version 23.0. The relationships between the levels of knowledge about the risk factors and the diagnostic procedures with the sociodemographic factors were analysed using the χ^2 test. A significance level of .05 was used for all analyses.

Subjects & selection method: The study population was drawn from dentists in Medan, Indonesia. Every dentist is asked to fill in questionnaire and will be counted and grouped into 3 groups: good, medium, lack

Inclusion criteria:

1. General dentist in Medan city
2. General dentists who work in health institutions and private practice in the city of Medan
3. General dentists who are willing to be respondents

Exclusion criteria:

1. Dentist over 60 years old
2. Dentists who never practice
3. Dentists who are not practicing for some reason

Statistical analysis

The statistical analyses were conducted using SPSS software version 23.0. The relationships between the levels of knowledge about the risk factors and the diagnostic procedures with the sociodemographic factors were analysed using the χ^2 test. A significance level of .05 was used for all analyses.

III. Result

This research was conducted on 100 respondents which consisted of 30 men (30%) and 70 women (70%). Table 1 shows the distribution of the sex groups of the respondents. The largest percentage is in the female group, which is equal to 70%. The smallest percentage is in the male group, namely 30%.

Table no 1 Shows distribution and respondents frequency by gender which consisted of 30 men (30%) and 70 women (70%). The smallest percentage is in the male group, namely 30%.

Table no 1 : Shows distribution and respondents frequency by gender

Gender	Frequency	Percentage
Men	30	30%
Women	70	70%
Total	100	100%

Table no 2: The distribution of respondents by age. The largest percentage is in the 30-39 year age group, which is 45%. The smallest percentage is in the 50-59 year age group, which is 4%.

Table no2:Distribution of respondents by age

Age	Frequency	Percentage
20-29	37	37%
30-39	45	45%
40-49	14	14%
50-59	4	4%
Total	100	100%

Table no3:Shows Distribution of the level of knowledge of respondents regarding the definition of cavity cancer. There were 99 respondents (99%) with levelgood knowledge and 1 respondent (1%) with sufficient level of knowledge.

Table no3 :Distribution and frequency of respondents' knowledge level regarding definitions oral cavity cancer

Knowledge Level	Frequency	Percentage
Good	99	99%
Medium	1	1%
Lack	0	0%
Total	100	100%

Table no4:Shows The distribution of the level of knowledge of respondents regarding the etiology and risk factors for oral cancer. There were 54 respondents (54%) with a good level of knowledge, 42 respondents (42%) with a sufficient level of knowledge and 4 respondents (4%) with a good level of knowledge not enough.

Table no 4 :Distribution of the level of knowledge of respondents regarding the etiology and risk factors for oral cancer

Knowledge Level	Frequency	Percentage
Good	54	54%
Medium	42	42%
Lack	4	4%
Total	100	100%

Table no 5:Shows the distribution of respondents' level of knowledge regarding the clinical symptoms of oral cavity cancer can be seen in table 5. There were 87 respondents (87%) with a good level of knowledge, 13 respondents (13%) with a sufficient level of knowledge and no respondents who had a poor level of knowledge.

Table no 5: Shows the distribution of respondents' level of knowledge regarding the clinical symptoms of oral cancer

Knowledge Level	Frequency	Percentage
Good	87	87%
Medium	13	13%
Lack	0	0%
Total	100	100%

Table no 6:Shows the distribution of the level of knowledge of respondents regarding the diagnosis of oral cavity cancer can be seen in table 6. There were 82 respondents (82%) with a good level of knowledge, 17 respondents (17%) with a sufficient level of knowledge and 1 respondent (1%) with a lack of knowledge.

Table no 6: Showsthe distribution of the level of knowledge of respondents regarding the diagnosis of oral cavity cancer

Knowledge Level	Frequency	Percentage
Good	82	87%
Medium	17	13%
Lack	1	100%
Total	100	100%

Table no 7:Shows The distribution of respondents' level of knowledge regarding early detection and prevention of oral cancer. All respondents had a good level of knowledge regarding early detection and prevention of oral cancer.

Table no 7: Shows the distribution of respondents' level of knowledge regarding early detection and prevention of oral cancer

Knowledge Level	Frequency	Percentage
Good	100	100%
Medium	0	0%
Lack	0	0%
Total	100	100%

IV. Discussion

The results of this study indicate that the majority of respondents are female dentists (70%) (Table 1). The results of this study are in line with the research of Spaulonci et al. In Brazil in 2018 where there were more female dentist respondents (66.7%).⁶ This was the case with research conducted by Wimardhani et al. In Jakarta in 2021 where the number of female dentist respondents is also higher (79.6%).¹¹ The number of female respondents in this study is higher because most interested in dentistry are women. Thus, the number of dentistry graduates is automatically dominated by women.^{24,25}

The results of this study indicate that the largest age group of dentists in this study was at the age of 30-39 years, totaling 45 people (45%) (Table 2). The results of this study are in line with previous research, namely Joseph et al. in Kuwait in 2011 where the majority of respondents were dentists under the age of 40 (60.6%).⁹ The results of this study are also in line with Wimardhani et al. in Jakarta in 2021, the result is that most respondents are dentists aged 30-49 years (37.8%).¹¹ Dentists aged between 30-39 years have had quite a lot of experience and most of them are also curious about science newer dentistry with the aim of being able to provide maximum service to their patients. This research was conducted during the Covid-19 pandemic where elderly dentists were more susceptible to the Covid-19 virus, so some did not open their practices.²⁶

The level of knowledge of dentists in the city of Medan regarding the definition of oral cancer is good. This can be seen from the 100 participating dentists, 99 dentists (99%) (Table 3) answered correctly that oral cancer is a malignancy in the lips, gingiva, tongue and all other mucosal areas. This is influenced by information that has been obtained during lectures and available journals. In accordance with the literature where oral cancer is an abnormal and uncoordinated growth in the oral cavity. The sublocations that are usually used to classify oral cavity cancers are the lips, tongue, floor of the mouth, buccal, hard palate, alveolar, retromolar trigone and soft palate.

The level of knowledge of dentists in the city of Medan regarding the etiology and risk factors for oral cancer is good. This can be seen from the number of dentists in the city of Medan who answered questions correctly regarding the etiology and risk factors for oral cancer as many as 54 people (54%) (Table 4). The results of this study are different from the research conducted by Wimardhani et al. in Jakarta in 2021 where most dentists have a low level of knowledge about the etiology and risk factors for oral cancer (35.6%).¹¹ The results of this study are the same as those of Joseph et al. in Kuwait in 2012 where dentists have a good level of knowledge regarding the etiology and risk factors for oral cancer (75.8%). Different for each person so that there are several differences of opinion and knowledge obtained regarding the etiology and risk factors for oral cancer. Based on the literature, the etiology and risk factors for oral cancer are tobacco, patients with a previous history of oral cancer, alcohol use, old age, betel nut, UV light exposure, viral infections and lack of nutrition. Factors that are not at risk are hot food and drinks, spicy food, obesity, oral hygiene that is not maintained, dentures that do not fit properly, patients with a family history of cancer, chronic infections.

The level of knowledge of dentists in the city of Medan regarding clinical symptoms of oral cancer is good. This can be seen from the number of dentists who answered questions about clinical symptoms of oral cancer correctly, namely 87 dentists out of a total of 100 dentists who responded (87%) (Table 5). These results can be obtained because dentists have obtained information about clinical symptoms of oral cancer easily in online journals, textbooks, etc. This study is also in line with that conducted by Spaulonci et al. in Brazil in 2018 where the clinical symptoms of oral cancer were ulcers that didn't hurt, got bigger over time, with or without mobility (69.3%).⁶ This is also in line with the research of Joseph et al. In Kuwait in 2012 where the clinical symptoms of oral cancer were painless, with or without mobility (70.1%).⁹ Based on the literature, the clinical symptoms of oral cancer vary, but there are several characteristics that can usually be recognized such as ulcers that have persist in the oral cavity for a long time, no pain, unusual lumps, rough patches in places that are usually smooth, red or white patches and sometimes accompanied by unexplained pain in the ear.

The level of knowledge of dentists in Medan regarding the diagnosis of oral cancer is good. This can be seen from the number of dentists who answered questions regarding the diagnosis of oral cancer, namely 82

people (82%) (Table 6). This result is different from the research conducted by Joseph et al. In Kuwait in 2012 where the level of knowledge of dentists regarding the diagnosis was moderate/sufficient (41.8%).⁹ The results of this study were also different from the research conducted by Wimardhani et al. In Jakarta in 2021 where the level of knowledge regarding the diagnosis of oral cancer is quite low (93.5%).¹¹ The results of this study are different due to a lack of training in diagnosing oral disorders and thorough examination during the undergraduate curriculum and the lack of clinical experience of dentists.^{9,11} Thorough examination of the oral cavity can see whether there are lesions in the form of ulcers that are suspected of being oral cancer. Anamnesis is no less important where usually the patient will be asked about work, history of cancer, family, history of smoking, alcohol consumption, betel nut, etc. The answers to these questions can be considered as risk factors for oral cancer in patients.^{14,20,21} Some dentists only focus on the problems complained of by patients without examining other parts.^{25,28} Intraoral and extraoral examinations are also very important to do. Appropriate examination is able to identify diagnosed conditions such as malignancy.

The level of knowledge of dentists in Medan regarding early detection and prevention of oral cancer is good. This can be seen from the number of dentists who answered questions regarding early detection and prevention of oral cancer, namely 100 people (100%) (Table 7). This result is in line with research conducted by Joseph et al. in Kuwait in 2012 where the level of knowledge about early detection is quite high (98%).⁹ Early detection is very important in fighting oral cancer and can improve quality of life. Early detection also reduces the incidence and mortality of oral cancer.^{16,21} Dentists play a very important role in early detection because during treatment, dentists should examine the entire oral and extraoral cavity of the patient and if there are abnormalities in the patient, they can further treatment is carried out.^{16,18} This is also because oral cavity cancer is usually painless and without complaints. In the end, the patient feels fine without knowing that there is an ulcer of the oral cavity or clinical symptoms.^{13,14,18,21}

V. Conclusion

Based on the results of the study, it can be concluded that the level of knowledge of dentists in the city of Medan regarding oral cancer is good.

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