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Dentists Attitudes and Barriers towards Chairside Medical Conditions Screening in a Dental Setting in Makassar, Indonesia

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ABSTRACT

Overall health can be affected by oral health. Examination of medical conditions in the dental treatment room in addition to providing a record of access to the primary care system, this also improves overall health outcomes. The purpose of this study was to explore and assess the attitudes and constraints felt by dentists in examining various medical conditions in the dental treatment room in Makassar City, South Sulawesi Province, Indonesia. This type of research is exploratory with a cross-sectional study design. A validated questionnaire with Likert scale (1 = very unimportant / willing to 5 = very important / willing) was given to 100 randomly selected dentists who practiced in Makassar City. Friedman two-way non-parametric analysis of variance is used to see whether there are significant differences in the distribution of responses. The result on 100 subjects showed a mean age of 30.5 years, 77 (77%) of whom were women. 95 (95%) subjects answered the identification of patients to prevent/control the severity of medical conditions is very important, most dentists consider the examination of hypertension more important (mean rank 2.96), more willing to refer patients to doctors, and discuss the results of examinations with patients directly after the examination is done (mean rank 2.69), more willing to take blood pressure measurements (mean rank 3.36), and considers the doctor's obligations and costs are obstacles that need to be considered in conducting the examination (mean rank 4.09 and 3.96). There is a significant difference ($p \leq 0.05$) in terms of the distribution of responses for each item of each question (Q2 p = 0.012, Q3 p = 0.000, Q4 p = 0.000, Q5 p = 0.000). Conclusion of this study showed that there are differences in attitudes and obstacles felt by dentists in examining various medical conditions in the dental treatment room

Keywords: Attitude, Dentist, Makassar, Medical Screening.

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INTRODUCTION

The World Health Organization (WHO) in Noncommunicable Diseases Country Profile 2018 reports that noncommunicable diseases (NCDs) are the main causes of death globally and one of the major health issues in this century, so WHO has established a Global Action Plan for Prevention and Control NCD 2013-2020 (Global NCDs Action Plan). Non-communicable diseases such as cardiovascular disease, cancer, and other non-communicable diseases are responsible for 71% or 41 million of the 57 million deaths that occur globally, whereas if the data are specified for Indonesia, the results are very worrying. The mortality rates due to NCDs is 73% of the total number of deaths dominated by cardiovascular disease and the possibility of premature death between ages 30 to 70 years due to NCDs is 26%.[1]

An important component of any prevention oriented initial health care is the identification of people with an increased risk of disease who can benefit from the initial intervention thereby preventing the onset or control of the severity of the disease.[2]

Oral health is an integral component of general health.[2] The causative factors and risks of oral diseases are often the same as those involved in common diseases. Overall health, well-being, education, child development, family and community can be affected by oral health.[3] Dentists are in an ideal position to take an expanded role in providing limited preventive primary care and visits to dentists are opportunities to provide examinations with the aim is to identify patients who are at high risk for non-communicable diseases such as cardiovascular disease, infectious diseases such as Human Immunodeficiency Virus (HIV) infections, and other systemic diseases that have a reciprocal relationship with oral conditions.[4]

Examination of medical conditions in the dental care room, in addition to being able to provide access to the primary care system, also improves overall health outcomes and also has potential value not only from a public health perspective but also as an approach to provide additional information regarding patient health that can have an impact on the delivery oral health services.[5]

An initial data shows that 62% of dentists report screening for diabetes and CVD which provides immediate results to help inform their treatment plan.[6] Data from surveys among adult patients attending dental clinics in the community indicate that most patients think of examinations in the treatment room dental is important, and they are willing to participate in these activities.[7] There are also previous studies that assess the attitudes, willingness and barriers of dentists to examine various medical conditions in dental care rooms in Saudi Arabia reporting that almost all dentists who are subject to assess that through examination of various important medical conditions carried out.[8]

Based on data from the Basic Health Research (RISKESDAS) in 2013, South Sulawesi Province was included in the category of the five provinces with the highest prevalence of hepatitis, coronary heart disease and heart failure. Based on the latest RISKESDAS data in 2018, in South Sulawesi there was an increase in the prevalence of diabetes mellitus, hypertension, hepatitis, pulmonary tuberculosis compared to data from the same research conducted in 2013. Specifically for oral health data, the proportion of dental and oral health problems was at second highest after Central Sulawesi Province.[9,10] Makassar City is the capital of South Sulawesi Province which has an area of 175.77 km^2 with a population recorded in August 2019 of 1,500,000 people and as many

as 710 dentists registered in Indonesian Dentist Association Branch Makassar.[11]

In connection with the WHO report, and some data and findings of previous studies, it is time to explore and assess the attitudes and obstacles experienced by dentists in examining various medical conditions in the treatment room to increase the risk of various medical conditions and other related risks, especially in Makassar City, South Sulawesi Province, Indonesia.

MATERIAL AND METHODS

This type of research is exploratory with a cross-sectional study design. This research was conducted in January - February 2020 in several dental practices in Makassar City. The population in this study was 710 dentists who practiced in licensed clinics in Makassar City and then randomly selected (simple random sampling) and obtained 100 dentists. The subjects involved were dentists who practiced in Makassar City, were willing to participate in the study, and were cooperative in filling out the complete research questionnaire. The exclusion criteria for this study were dentists registered as lecturers at the Faculty of Dentistry and dentists who were difficult to access or were unreachable.

Assessment

The questionnaire used consisted of validated questions that had been tested before, used to collect data.[13] The questionnaire include questions asked about the socio-demographic characteristics of the subject (eg age, sex, specialization and educational history) and asked about attitudes and obstacles felt by dentists toward examining certain medical conditions in the dental treatment room. The various medical conditions chosen are cardiovascular disease, diabetes, HIV, and hepatitis. Time, cost, patient wishes, obligations, health insurance, and patient demographic characteristics were noted as hindrance.

The response for the second part uses a five-point Likert Scale. For the second and fifth questions (Q2 and Q5) have answer choices 5 = very important, 4 = important, 3 = not sure, 2 = not important, and 1 = very not important, while the third and fourth questions (Q3 and Q4) have answer choices 5 = very willing, 4 = willing, 3 = not sure, 2 = not willing, and 1 = very uneven. The questionnaire takes about 5-10 minutes to complete. Official permission was obtained from the Faculty of Dentistry of Hasanuddin University to collect data.

Statistical Analysis

Data processing in this study uses Microsoft Excel and IBM SPSS 22.0 for Windows. Descriptive statistics were performed to report the subject's sociodemographic characteristics, attitudes and barriers of the subject dentist to examining various medical conditions in the dental treatment room.

Two-way Friedman analysis of non-parametric analysis of ANOVA was performed to calculate the value of the average number of ranks (ranking with a high average shows very important and important/very willing) and to see if there are significant differences in terms of the distribution of responses for each item related to the question given. Data in this study are presented in the form of tables, graphs and narratives.

RESULT

Research on the attitudes of dentists towards examining various medical conditions in the dental treatment room in Makassar was conducted from January 28 to February 9, 2020. Research on 100 dentists practicing in Makassar has been approved in the form of research informed consent.

Based on the table 1, the sociodemographic characteristics of the whole study subject. Of the 100 dentists who were the subjects of the study, the number of female dentists was more (77%) than male dentists (23%). The highest number of subjects among general dentists was 89 people (89%) and the most subjects of dentists who had practiced less than 10 years were 51 people (51%) compared to those who practiced for 10 years or more as many as 49 people (49%).

Figure 1 shows the subject's attitude towards the importance of identifying patients so that they can get from interventions to prevent or control the emergence of various medical conditions. As many as 99% of dentists answer that it is "very important" and "important".

Table 2 shows the dentist's response to the second question (Q2) to the fifth (Q5). As shown in Table 2, almost all dentists in this study responded that examining various medical conditions such as cardiovascular disease, hypertension, diabetes mellitus, HIV, and hepatitis in the dental treatment room at their clinic were "very important" and " important "to do. As many as 88 (88%) respondents said that it was very important to check the condition of hepatitis. As many as 87 (87%) for examining HIV condition, and 1 (1%) subject considered that HIV testing was not necessary. The Friedman test showed that there was a statistically significant difference in the importance of a dentist examining cardiovascular disease, hypertension, diabetes mellitus, HIV, and hepatitis ($\chi 2$ [4] = 12.787, p = 0.012). Furthermore, a conventional post hoc ANOVA test was performed with Bonferroni correction to see pairwise comparisons. The observed difference, however, was not significant after adjusting the p value to 0.005

Most (97%) dentists in this study were willing to discuss the results of the examination with patients directly after the examination was carried out and this was followed by 95 (95%) subjects willing to refer patients to consult a doctor. As many as 85 (85%) subjects were willing to conduct examinations that required sending samples to an outside laboratory, but there were 8 (8%) subjects who were not willing to do so. Friedman's test showed that there was a significant difference ($\chi 2$ [3] = 39,582, p = 0,000). Comparison of post hoc pairs with adjustments to the value of p (0.0083) shows that there is a significant difference in the average rank between conducting tests that can show results on the spot and conducting tests that require sending samples to the laboratory (mean rank 2.54 and 2.09, p = 0,000), between discussing the results of the examination with the patient directly after the examination was carried out and conducting examinations that required sending samples to the laboratory (mean rank 2.69 and 2.09 p = 0,000), and between referring the patient for consultation with the doctor and conduct examinations that require sending specimens to the laboratory (mean rank 2.69 and 2.09 p = 0.000). The subject was significantly more willing to discuss the results of the examination with the patient directly after the examination was carried out, and referring the patient for consultation with a doctor than to conduct an examination that required sending specimens to the laboratory.

Regarding willingness to collect samples or measurements, Table 2 shows that 97 (97%) dentists were very willing and willing to take blood pressure measurements followed by 62 (62%) who were willing to measure height and weight for body mass index (BMI) in treatment room in their clinic. Fewer dentists in clinics were very willing and willing to collect oral fluids for diagnostic of saliva and blood droplets, respectively 57 (57%) and 58 (58%) subjects, while those who were not willing to do so 18 (respectively) 18%) and 19 (19%) subjects. The mean rank shows 100 dentists in this study were willing to measure blood pressure (3.36), followed by collecting height and weight data (BMI) (2.57) and taking a drop of blood with a finger prick (2.07) and who least willing is to collect oral fluids for the diagnosis of saliva (2.00). The entire Friedman test showed that there were significant differences ($\chi 2$ [3]=129.84, p=0.000). Post hoc paired comparison analysis with adjusted p values (0.0083) showed that there was a significant difference between the dentist's willingness to measure blood pressure and oral cavity for salivary diagnostics (mean rank 3.36 and 2.00 p=0.000), between willingness to measure height and weight and oral cavity fluid for salivary diagnostics (mean rank 2.57 and 2.00 p=0.000), between willingness to measure blood pressure and take a sample of blood droplets by pricking a finger (mean rank 3.36 and 2, 07 p=0.000), between willingness to measure height and weight (BMI) and taking a blood drop sample by pricking a finger (mean rank 2.57 and 2.07 p=0.000), and between height and weight measurements (BMI) and blood pressure measurement (mean rank 3.36 and 2.57 p=0.000). The dentists who were the subjects in this study were more willing to measure blood pressure and measure height and weight (BMI) than to collect oral cavity for salivary diagnostics and to take a sample of blood droplets by pricking a finger.

Dentist's responses based on the importance of the problems faced when considering health checks in their clinical care rooms are shown in Table 2 that physician obligations are a very important and important issue in practice as many as 98 (98%) subjects and are followed by time and cost 97 (97%) and 95 (95%) subjects respectively. Fewer dentists who answered the insurance coverage problem were very important and important as many as 82 (82%) and there were 7 (7%) subjects who answered this matter was not important. The Friedman test shows that there is a statistically significant difference ($\chi 2$[5] = 89.43, p=0.000).

Comparison of post hoc pairs with adjusted p values (0.003) shows a significant difference only in the average rating between insurance coverage and time (mean rank 2.87 and 3.69 p=0.000), demographic characteristics of patients and time (mean rank 2.74 and 3.69 p=0.000), insurance coverage and costs (mean rank 2.87 and 3.96 p=0.000), patient demographic characteristics and costs (mean rank 2.74 and 3.96 p=0.000), patient wishes and insurance coverage (mean rank 3.67 and 2.87 p=0.000), doctor's obligations and insurance coverage (mean rank 4.09 and 2.87 p=0.000), doctor's obligations and patient wishes (mean rank 4,09 and 3.67 p=0.003), demographic characteristics and patient desires (mean rank 2.74 and 3.67 p=0.000), and finally between demographic characteristics and physician obligations (mean rank 2.74 and 4.09 p=0.000). Most respondents consider that it is more important for doctors' obligations, time, and cost as a potential problem to implement the examination of medical conditions in the treatment room rather than insurance coverage.

Table 3 shows the distribution of dentist responses to the second question (Q2) to the fifth question (Q5) based on the period of practice. As shown in table 4, all subjects who practiced for less than 10 years responded that examining various medical conditions such as cardiovascular disease, hypertension, diabetes mellitus, HIV, and hepatitis in the dental treatment room at their clinic was important. Subjects who practiced 10 years or more largely responded to this important matter but there was 1 subject (2%) who was unsure about examining cardiovascular disease and 1 subject (2%) who answered HIV testing was not important to do.

Based on the subject's response to the third question (Q3), both dentists who have practiced for less than 10 years or who have practiced 10 years or more are mostly more willing to discuss the results of the examination with patients directly after the examination (98% and 96%, respectively) and referring patients for consultation with a doctor (98% and 92%, respectively) rather than conducting examinations that require samples to the laboratory.

Based on the subject's willingness to collect data or samples in their practice (Q4), the majority (98%) of subjects who practiced under 10 years and (96%) who practiced 10 years or more were willing to take blood pressure measurements, followed by the willingness to take high data and body weight (BMI), respectively 80% for subjects practicing under 10 years and 84% for subjects practicing 10 years or more. The percentage of subjects who responded were willing to take the smallest sample of oral cavity in dentists who practiced for more than 10 years, while the percentage of subjects who responded were willing to take the smallest blood samples in the group of dentists who practiced for less than 10 years.

Regarding the issues that need to be considered in conducting a health examination in a clinic (Q5), most subjects from two groups of subjects based on the period of practice consider issues such as time, cost, insurance coverage, patient wishes, physician obligations and demographic characteristics to be important, however dentists who have practiced 10 years or more in this study consider the issues of physician obligations, time, costs and patient desires more important to consider than the problems of insurance coverage and demographic characteristics of patients. No dentist who practiced under 10 years answered the insignificance of all the problems in the fifth question, while there were dentists who practiced 10 years or more answered insurance coverage and demographic characteristics were not important to consider 7(14%) each and 6(12%).

DISCUSSION

This study is the first study that explores the attitudes of dentists towards examining various medical conditions in a dental treatment room in one particular region in Indonesia, namely in the City of Makassar, South Sulawesi, Indonesia. In general, most of the dentists who were the subjects in this study had a positive attitude and were willing to perform various medical conditions in the dental treatment room where they practiced. This is in line with research conducted in Saudi Arabia where 85% of the subjects stated that examining various medical conditions in the dental care room was important.[8] Similar studies have also been conducted among United States general

dentists where 89.7% of the subjects considered identification of important patients to prevent or control the emergence of various medical conditions.[4]

In this study, almost all subjects who were dentists practiced responded that examining various medical conditions such as cardiovascular disease, hypertension, diabetes mellitus, HIV, and hepatitis in the dental treatment room at their clinic was very important. This is consistent with the statement of the Swedish National Board of Health and Welfare which stresses the importance of key preventive measures such as medical examinations. The need for an increased risk of type II diabetes to offer lifestyle changes, early identification of patients with an increased risk of coronary heart disease, and collaboration between dental and medical care has proven to be an effective way to find unknown hypertension.[12]

In this study, hepatitis was the most chosen by dentists as an important medical condition and was very important to be examined. The results of this study are in line with those conducted in Saudi Arabia, but slightly different from similar studies conducted in the United States which found that hypertension medical conditions were chosen as the most important. Hepatitis is important to check because current data shows that more than 325 million people in the world have been infected by the hepatitis B and C viruses and are responsible for estimating 1.3 million deaths that cannot be prevented each year. Hepatitis is an infectious disease and is dubbed the silent killer because liver disease is often asymptomatic and is not detected until its terminal phase.[13] On the other hand, hypertension is important because the consequences of high blood pressure that are not treated or treated are known and include an increased risk of heart disease, stroke, kidney disease, and retinopathy.[14]

The dentist's response related to willingness shows that most respondents are willing to discuss the results of the examination with the patient directly after the examination is done and refer the patient for consultation with a doctor. The results of this study are in line with those conducted in Saudi Arabia, but in contrast to those conducted in the United States where most of the samples are more willing to refer patients to doctors and conduct examinations that can show immediate results on site.[4,8] Appropriate referrals are integral to treatment quality health. In connection with discussing the results of examinations and referrals, the dentist must involve the patient by informing the treatment plan and its alternatives for decision making, while the patient must be referred due to several considerations such as the level of training and experience of the dentist, the extent of the problem, the complexity of the treatment, the patient's wishes, and the presence of medical complications.[15]

Dentists in this study were more willing to collect data measuring blood pressure, height and weight (BMI). This is in line with research in Saudi Arabia and the United States.[8,4] Blood pressure measurement is more often done because it is cheap and easy to do and is a non-invasive technique for detecting hypertension, assuming the effectiveness of the therapy provided, leads to protection against the risk of death and records.[16] Dental and oral health service providers are in an important position to play an active role in the management of patients with a history of hypertension because many antihypertensive agents interact with pharmacological agents used in dental practice.[17]

Body mass index (BMI) is an epidemiological instrument that measures the level of adiposity of related diseases.[18] BMI is important because various studies on BMI associated with caries status have been conducted frequently. A study in India found a significant relationship between caries and BMI. The study also suggests that the calculation of BMI should be included in the standard for taking pediatric patient history which can help in identifying potential health problems of a developing child.[19] Dentists should consider regular healthy weight promotion including BMI testing to maximize benefits to the population.[18] Fewer subjects are willing to take saliva and blood samples in their practice, although in a study conducted in the United States that took blood and urine samples, it is known that abnormal laboratory test results are very common in patients who want to do dental treatment.[20]

Based on the problems / obstacles that are felt to implement the examination of various medical conditions in their practice, most dentists answer obligations and time are important issues that need to be considered, while demographic characteristics and patient insurance coverage are less important obstacles felt. This is consistent with research conducted in the United States and Saudi Arabia.[4,8] A study in New York and Portland explained that time was included in the system level constraints because it was noted that the visit was short due to some other important priorities such as patient complaints and other medical conditions . For example, sometimes patients are not asked about their history of drug or alcohol use because the examination depends on the service provider, the patient's medical problems and time availability.[21] The consultation time at a clinic is determined by the characteristics of the doctor and the patient. The time involved in implementing medical conditions at the clinic is a problem because it is related to the large number of patients, lack of staff and adequate equipment. Doctors with long consultation times tend to reduce prescribing and give more advice on lifestyle and other health promotions.[22] Insurance barriers are more felt by patients and this is evident from research conducted in the United States about the reasons people tend to avoid health care even though they are aware of This need is due to inadequate insurance coverage.[23]

The subjects of this study both those who practice less than 10 years and those who practice 10 years or more choose hypertension, diabetes and hepatitis are important in the second question. This is slightly different from studies in the United States where the results of examining hypertension, cardiovascular disease, and diabetes are more important to be done according to two groups (subjects who practice 10 years or less and who practice more than 10 years).[4]

Subjects who practiced less than 10 years in this study were more willing to refer patients for consultation with a doctor. This is in line with research in the United States. Subjects who practice 10 years or more are more willing to discuss the results of examinations with patients directly. This is different from previous studies that show subjects who have a 10-year or more history are also more willing to refer patients for medical consultations.[4]

Based on the willingness to collect data or samples, subjects who practiced less than 10 years and who practiced 10 years or more were both more willing to take blood pressure measurements and height and weight measurements than taking oral fluids for diagnostic of saliva and blood droplets by pricking a finger. In contrast

to previous studies in the United States which showed subjects who practiced 10 years or less and who practiced more than 10 years were both more willing to take blood pressure measurements followed by taking oral fluids.[4]

Based on the problems/obstacles felt by the subjects in this study in line with previous studies in the United States.[4] Subjects who have practiced for less than 10 years consider the patient's wishes and physician obligations as important, while those who practice 10 years or more consider the doctor's obligations are problems that are more important.[4] There are advantages in this research besides the first study that examined on this topic, this study also used a validated questionnaire.[8] Samples were dentists from several different specialties and were representatives of all dentists practicing in Makassar City Dental Clinic with techniques simple random sampling. The obstacle felt in this study was the location of the practice that was difficult to reach so that the subject was changed.

CONCLUSION

Based on the results of research on 100 subject dentists who practice in Dental Clinics in Makassar City, South Sulawesi, it can be concluded that there are differences in attitudes and obstacles felt by dentists in examining various medical conditions in their clinical treatment rooms.

The need for further studies on a larger scale regarding the implementation of dental and oral health services and their use by patients so that they can be considered in improving the quality of dental and oral health services in Makassar City, South Sulawesi. The need for studies regarding the implementation of examinations of medical conditions in dental clinics, especially how dentists in the management of patients with HIV and other infectious diseases.

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Table 1. Sociodemographic Characteristics of Subjects (n=100)

Variable	Frequency (%), or Mean ± SD
Age	30.5 ± 4.29
Gender	
Male	23 (23%)
Female	77 (77%)
Specialization	
General dentist	89 (89%)
Prosthodontist	4 (4%)
Endodontist	5 (5%)
Oral and maxillofacial surgery	2 (2%)
Period of Practice	
< 10 years	51 (51%)
≥ 10 years	49 (49%)

Source: Primary Data, 2020

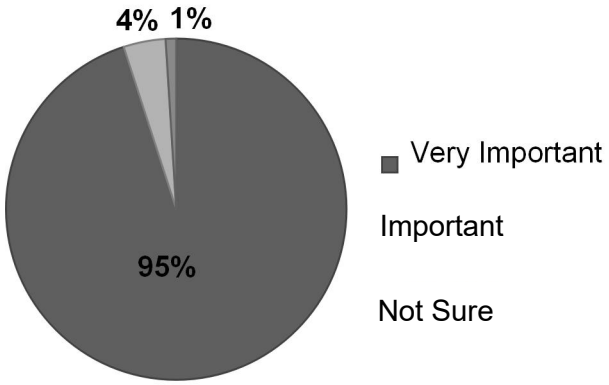

Figure 1. Graph of distribution of subject attitudes towards the importance of identifying patients who might benefit from interventions to prevent or control the emergence of various medical conditions (n=100)

Table 2. Response distribution (frequency and percentage), mean rank, and pairwise comparisons of Questions Q2-Q5, (n=100)

Q2. In your opinion, how important is it for a dentist to examine each of the	**Very Important**	**Important (4) n (%)**	**Not sure (3) n (%)**	**Not important**	**Very not important (1)**	**Total**	**Median (IQR)**	**Mean + rank**	***Pairwise Comparisons***
Table 2: Continued.									
Q4. How much do you want to collect the following samples or data as part of your practice?	**Very willing (5)n(%)**	**Willing (4) n(%)**	**Not sure (3) n(%)**	**Not willing (2) n (%)**	**Very not willing (1) n(%)**	**Total**	**Median (IQR)**	**Mean + rank**	***Pairwise Comparisons***
									a b c d
(b) Hypertension	81 (81)	19 (19)	0 (0)	0 (0)	0 (0)	100	5(0)	2.96	**b**
(c) Diabetes mellitus	80 (80)	20 (20)	0 (0)	0 (0)	0 (0)	100	5(0)	2.94	**c**
(d) HIV	87 (87)	12 (12)	0 (0)	1 (0)	0 (0)	100	5(0)	3.08	**d**
(e) Hepatitis	88 (88)	12 (12)	0 (0)	0 (0)	0 (0)	100	5(0)	3.14	**e**
The Friedman test tested for a significant difference between the mean rank $\chi 2$ (4) = 12.787, p = 0.012; * there is a significant difference at p <0.05									
Q3. If you are considering incorporating a health examination into your practice, how much are you prepared to do each of the following?	**Very willing (5) n (%)**	**Willing (4) n(%)**	**Not sure (3) n (%)**	**Not willing (2) n (%)**	**Very not willing (1) n(%)**	**Total**	**Median (IQR)**	**Mean + rank**	***Pairwise Comparisons***
									a b c d
(a) Carrying out inspections that can show results directly on the spot	49 (49)	43 (43)	3 (3)	5 (5)	0 (0)	100	4(1)	2.54	**a** *
(b) Carrying out examinations that require sending samples to the laboratory	30 (30)	55 (55)	7 (7)	8 (8)	0 (0)	100	4(1)	2.09	**b** * * *
(c) Discuss the examination with the patient directly after the examination was carried out	53 (53)	44 (44)	1 (1)	2 (2)	0 (0)	100	5(1)	2.69	**c** *
(d) Refer the patient for consultation with a doctor (physician)	54 (54)	41 (41)	3 (3)	2 (2)	0 (0)	100	5(1)	2.69	**d** *
The Friedman Test tests the significant difference between mean rank $\chi 2$ (3) = 39.582, p = 0.000; * there is a significant difference at p <0.05									

a) Oral cavity for diagnostic of saliva	16 (16)	41 (41)	25 (25)	18 (18)	0 (0)	100	4 (1)	2.00	**a** * *
b) Drops of blood by pricking a finger	16 (16)	42 (42)	23 (23)	19 (19)	0 (0)	100	4 (1)	2.07	**b** * *
c) Measurement of blood pressure	64 (64)	33 (33)	0 (0)	3 (3)	0 (0)	100	5 (1)	3.36	**c** * * *
d) Height and weight (IMT)	28 (28)	54 (54)	10 (10)	8 (8)	0 (0)	100	4 (1)	2.57	**d** * * *
The Friedman test tests for a significant difference between mean rank $\chi 2$ (3) = 129.842, p = 0.000; * there is a significant difference at p <0.05									
Q5. If you are considering involving health checks in your practice, how important is each of the following issues?	**Very important (5) n (%)**	**Important (4)n (%)**	**Not sure (3) n (%)**	**Not important (2) n (%)**	**Very not important (1) n (%)**	**Total**	**Median (IQR)**	**Mean + rank**	***Pairwise Comparisons***
									a b c d e f
(a) Time	45 (45)	52 (52)	3 (3)	0 (0.0)	0 (0)	100	4 (1)	3.69	**a** * *
(b) Cost	54 (54)	41 (41)	4 (4)	1 (1)	0 (0)	100	5 (1)	3.96	**b** * *
(c) Insurance coverage	28 (28)	54 (54)	10 (10)	7 (7)	1 (1)	100	4 (1)	2.87	**c** * * * *
(d) Patient's wishes	47 (47)	45 (45)	7 (7)	1 (1)	0 (0)	100	4 (1)	3.67	**d** * * *
(e) Obligations of doctor	59 (59)	39 (39)	2 (2)	0 (0)	0 (0)	100	5 (1)	4.09	**e** * * * *
(f) Demographic characteristics of patients	25 (25)	56 (56)	13 (13)	6 (6)	0 (0)	100	4 (0.75)	2.74	**f** * * * *
The Friedman test tested for a significant difference between mean rank $\chi 2$ (5) = 89.442, p = 0.000; * there is a significant difference at p <0.05									

+ Higher mean rank indicates more important / more willing; † Median (IQR) = Median with interquartile distance
(Source: Primary Data, 2020)

Table 3. Response Distribution (Frequency and Percentage) based on length of practice (n=100)

Q2. In your opinion, how important is it for a dentist to examine each of the following?	**Period of Practice <10 Years (n=51)**			**Period of Practice ≥10 Years (n=49)**			**Total**
	Important n (%)	**Not sure n (%)**	**Not important n (%)**	**Important n (%)**	**Not sure n (%)**	**Not important n (%)**	
a) Cardiovascular disease	51 (100)	0 (0)	0 (0)	48 (98)	1 (2)	0 (0)	100
b) Hypertension	51 (100)	0 (0)	0 (0)	49 (100)	0 (0)	0 (0)	100
c) Diabetes mellitus	51 (100)	0 (0)	0 (0)	49 (100)	0 (0)	0 (0)	100
d) HIV	51 (100)	0 (0)	0 (0)	48 (98)	0 (0)	1 (2)	100
e) Hepatitis	51 (100)	0 (0)	0 (0)	49 (100)	0 (0)	0 (0)	100
Q3. If you are considering incorporating a health examination into your practice, how much are you prepared to do each of the following?	**Period of Practice <10 Years (n=51)**			**Period of Practice ≥10 Years (n=49)**			
	Willing n (%)	**Not sure n (%)**	**Not willing n (%)**	**Willing n (%)**	**Not sure n (%)**	**Not willing n (%)**	**Total**
a) Conduct an inspection that can show results directly on the spot	47 (92)	2 (4)	2 (4)	45 (92)	1 (2)	3 (6)	100
b) Conduct an examination that requires sending samples to the laboratory	45 (88)	3 (6)	3 (6)	40 (82)	4 (8)	5 (10)	100
c) Discuss the results of the examination with the patient directly after the examination is carried out	50 (98)	1 (2)	0 (0)	47 (96)	0 (0)	2 (4)	100
d) Refer the patient for consultation with a doctor (physician)	50 (98)	1 (2)	0 (0)	45 (92)	2 (4)	2 (4)	100

Table 3. Continued

Q4. How much do you want to collect the following samples or data as part of your practice?	**Period of Practice <10 Years (n=51)**			**Period of Practice ≥10 Years (n=49)**			**Total**
	Willing n (%)	**Not sure n (%)**	**Not willing n (%)**	**Willing n (%)**	**Not sure n (%)**	**Not willing n (%)**	
e) Oral cavity for salivary diagnostics	30 (59)	15 (29)	6 (12)	27 (55)	10 (20)	12 (25)	100
f) Drops of blood by pricking a finger	28 (55)	15 (29)	8 (16)	30 (61)	8 (16)	11 (23)	100
g) Measurement of blood pressure	50 (98)	0 (0)	1 (2)	47 (96)	0 (0)	2 (4)	100
h) Height and weight (IMT)	41 (80)	7 (14)	3 (6)	41 (84)	3 (6)	5 (10)	100

Q5. If you are considering involving health checks in your practice, how important is each of the following issues?	**Period of Practice <10 Years (n=51)**			**Period of Practice ≥10 Years (n=49)**			**Total**
	Important n (%)	**Not sure n (%)**	**Not important n (%)**	**Important n (%)**	**Not sure n (%)**	**Not important n (%)**	
(g) Time	49 (96)	2 (4)	0 (0)	48 (98)	1 (2)	0 (0)	100
(h) Cost	49 (96)	2 (4)	0 (0)	46 (94)	2 (4)	1 (2)	100
(i) Insurance coverage	46 (90)	5 (10)	0 (0)	36 (74)	6 (12)	7 (14)	100
(j) Patient's wishes	49 (96)	2 (4)	0 (0)	43 (88)	5 (10)	1 (2)	100
(k) Obligation of doctor	49 (96)	2 (4)	0 (0)	49 (100)	0 (0)	0 (0)	100
(l) Demographic characteristics of patients	42 (82)	9 (18)	0 (0)	39 (80)	4 (8)	6 (12)	100

(Source: Primary Data, 2020)