



## Dental Faculty Students' Understanding of Dental Care during the COVID-19 Pandemic

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### Abstract

**Background:** Teeth are one of the important organs in the stomatognathic system. Public awareness of the importance of dental and oral examinations is a concern for health practitioners. This is supported by the fact that the Indonesian population who receive dental and oral care when experiencing dental and oral problems is still relatively low. The occurrence of the COVID-19 pandemic has resulted in restrictions on visits to the dentist. Students can utilize teledentistry to consult with dentists.

**Purpose:** Hence, the dental students' understanding towards dental care during the COVID-19 pandemic can be known.

**Methods:** The research was conducted at the Faculty of Dentistry, Prof. Dr. Moestopo (Beragama) University in August-September 2022. The number of subjects in this study was determined by total sample, snowball method who had filled out the questionnaire.

**Result:** Based on the results of the research that has been conducted, it appears that the most respondents involved in this study are female, as many as 90.5%. Respondents who have knowledge of how to seek treatment or consult a dentist by telephone or teledentistry since the pandemic are 74.3%.

**Conclusion:** This study reveals that dental students' understanding of dental care during the COVID-19 pandemic is quite good. One of the efforts to prevent the spread of COVID-19 is through the use of teledentistry which is considered very effective and efficient.

**Keywords:** COVID-19, dental students, teledentistry.

### Introduction

The stomatognathic system is the functional unit of the body that coordinates the functions of mastication, swallowing and speech. The main components of the stomatognathic system are the temporomandibular joint, masticatory muscles and the tooth-periodontal complex that work in harmony and are closely related in a system. Therefore, teeth are one of the important organs in

the stomatognathic system. Disorders that occur in the teeth will disrupt the stomatognathic system.<sup>1</sup>

Public awareness of the importance of dental and oral examinations is a concern for health practitioners. This is supported by the fact that the Indonesian population who received dental and oral care when experiencing dental and oral problems is still relatively low, which is only 31.1%. Therefore, the motivation of each

individual to make regular visits to the dentist needs to be improved.<sup>2</sup>

Oral and dental diseases are currently ranked 8th out of the top ten outpatient diseases. In addition, the Household Health Survey (SKRT) reported by the Indonesian Ministry of National Health in 2013 showed that 70% of people suffered from dental caries and gingivitis (gum inflammation) and in adults, 73% suffered from dental caries.<sup>3</sup>

The prevalence of caries in developing countries is still quite high. Caries can cause discomfort to the patient, and lead to pain in the tooth. This condition will have a negative impact on the patient.<sup>4</sup> For a student, this will interfere with the learning process, so that students cannot achieve again.

On March 11, 2020, the World Health Organization (WHO) declared the Corona virus disease outbreak, COVID-19 as a global pandemic. This status was declared due to positive cases outside China which increased thirteen times in 114 countries with a total death toll at that time reaching 4,291 people. WHO stated that so far there has never been a pandemic triggered by the corona virus and at the same time, there has never been a pandemic that can be controlled. On that basis, WHO is asking countries to take urgent and aggressive action to prevent and overcome the spread of the COVID-19 virus.<sup>5</sup> Coronavirus disease 2019 (COVID-19) is a new type of disease that has never been identified before in humans. The virus that causes COVID-19 is called Sars-CoV-2. Based on scientific evidence, COVID-19 can be transmitted from human to human through coughing/sneezing droplets, The people most at risk of contracting this disease are people who are in close contact with COVID-19 patients including those who care for COVID-19 patients.<sup>6</sup>

## Result

The results in this study can be seen in the following tables

**Table 1** Frequency Distribution of Respondents Based on Gender

Gender	Frequency	Percentage
Female	67	90.5
Male	7	9.5
<b>Total amount</b>	<b>74</b>	<b>100</b>

The COVID-19 pandemic means that people are unable to visit the dentist as regularly as they did before the pandemic. The Executive Board of the Indonesian Dental Association (PB PDGI) has issued a circular letter on dental service guidelines during the COVID-19 virus pandemic. One of the things stated in the letter is to delay action without symptomatic complaints.<sup>7</sup>

Teledentistry has been developed to facilitate online consultation to patients.<sup>8</sup> However, it is not yet known whether all students at the Faculty of Dentistry, Prof. Dr. Moestopo (Beragama) University are aware of and utilize these facilities. Based on this background, this study aims to explain the understanding of students at the Faculty of Dentistry, Prof. Dr. Moestopo (Beragama) University towards dental care during the COVID-19 Pandemic.

## Material and Methods

This research was conducted at the Faculty of Dentistry, Prof. Dr. Moestopo University (Religious) in August-September 2022. Determination of the number of subjects in this study was determined by total sample, snowball method. The number of subjects used were 74.

The type of research used is descriptive research, with a cross sectional research design. The subjects in this study were students of the Faculty of Dentistry, Prof. Dr. Moestopo University (Religious) who had filled out a questionnaire.

This study used the informed consent sheet and questionnaire in the form of Google form. The first data analysis is data entry, then descriptive analysis is carried out which is presented in tabular form.

The results of the study in table 1 show data obtained from 74 research respondents who have participated, consisting of 90.5% (67 respondents)

are female and as many as 9.5% (7 respondents) are male.

**Table 2.** Frequency Distribution of Respondents Based on the Use of Mouthwash During the COVID-19 Pandemic

Use mouthwash regularly during the pandemic	Frequency	Percentage
Yes	35	47.3
No	39	52.7
<b>Total amount</b>	<b>74</b>	<b>100</b>

The results of the study in Table 2 show data obtained from 74 research respondents who have participated, consisting of 47.3% (35 respondents)

who routinely use mouthwash during the pandemic and as many as 52.7% (39 respondents) who do not use mouthwash.

**Table 3** Frequency Distribution of Respondents Based on Frequently Used Mouthwash during the COVID-19 Pandemic

Frequently used mouthwash during the pandemic	Frequency	Percentage
Non-alcoholic mouthwash	20	27
Alcohol mouthwash	17	23
Herbal mouthwash	15	20.3
Not using mouthwash	22	29.7
<b>Total amount</b>	<b>74</b>	<b>100</b>

The results of the study in table 3 show data obtained from 74 research respondents who have participated, consisting of 27% (20 respondents) who use non-alcohol mouthwash, 23% (17

respondents) who use alcohol mouthwash and as many as 20.3% (15 respondents) use herbal mouthwash. The remaining 29.7% (22 respondents) did not use mouthwash.

**Table 4** Frequency Distribution of Respondents Based on Reasons for Using Mouthwash

Reasons for using mouthwash	Frequency	Percentage
Prevents bad breath	20	27
To avoid bacterial buildup	18	24.3
For a fresher mouth	14	18.9
Not using mouthwash	22	29.7
<b>Total amount</b>	<b>74</b>	<b>100</b>

The results of the study in table 4 show data obtained from 74 research respondents who have participated, consisting of 27% (20 respondents), using mouthwash for reasons to prevent bad breath. Respondents as much as 24.3% (18

respondents) on the grounds that there is no accumulation of bacteria in the oral cavity. Another reason is to make the mouth feel fresher as many as 18.9% (14 respondents). Meanwhile, 29.7% (22 respondents) did not use mouthwash.

**Table 5** Frequency Distribution of Respondents Based on Visits to the Dentist During the COVID-19 Pandemic

Visiting the dentist during the pandemic	Frequency	Percentage
Yes	49	66.2
No	25	33.8
<b>Total amount</b>	<b>74</b>	<b>100</b>

The research results in table 5 show data obtained from 74 research respondents who have participated, consisting of 66.2% (49 respondents)

who have visited the dentist during the pandemic. Respondents who never visited a dentist during the pandemic were 33.8% (25 respondents).

**Table 6** Frequency Distribution of Respondents Based on Reasons for Visiting Dentists during the COVID-19 Pandemic

Reasons to visit the dentist during the pandemic	Frequency	Percentage
Dental pain	8	10.8
Routine control (once every 6 months)	4	5.4
Scaling	14	18.9
Orthodontic appliance control	20	27
Tooth filling	1	1.4
Endodontic treatment	1	1.4
Tooth extraction	1	1.4
Never visited a dentist during the pandemic	25	33.8
<b>Total amount</b>	<b>74</b>	<b>100</b>

The research results in table 6 show data obtained from 74 research respondents who have participated, consisting of 1.4% (1 respondent) who visited the dentist during the pandemic for reasons of filling, nerve treatment and tooth extraction. Respondents who came for dental pain were 10.8% (8 respondents). Respondents who

came for routine control were 5.4% (4 respondents), while for scaling were 18.9% (14 respondents). The most common reason for coming to the dentist was for orthodontic appliance control as many as 27% (20 respondents).

**Table 7** Frequency Distribution of Respondents Based on Whether They Fear Coronavirus Exposure When Visiting a Dentist During the COVID-19 Pandemic

Are you afraid of being exposed to the Coronavirus when visiting the dentist during the Pandemic?	Frequency	Percentage
Yes	33	44.6
No	26	35.1
Never visited a dentist during the pandemic	15	20.3
<b>Total amount</b>	<b>74</b>	<b>100</b>

The research results in table 7 show data obtained from 74 research respondents who have participated, consisting of 44.6% (33 respondents) who feel afraid of being exposed to the Corona

virus when visiting a dentist during a pandemic. Respondents who did not feel afraid were 35.1% (26 respondents).

**Table 8.**Frequency Distribution of Respondents Based on Choosing a Dentist to Visit during the COVID-19 Pandemic

<b>Choosing a Dentist to Visit During the COVID-19 Pandemic</b>	<b>Frequency</b>	<b>Percentage</b>
Choosing a clinic that prioritizes sterilization of equipment and rooms	21	28.4
Choosing a regular dentist	29	39.2
Never visited a dentist during the pandemic	24	32.4
<b>Total amount</b>	<b>74</b>	<b>100</b>

The research results in table 8 show data obtained from 74 research respondents who have participated, consisting of 28.4% (21 respondents) who choose clinics that prioritize sterilization of

tools and rooms when visiting dentists during a pandemic. Respondents who chose their usual dentist were 39.2% (29 respondents).

**Table 9** Frequency Distribution of Respondents Based on Actions Taken by Dentists during the COVID-19 Pandemic

<b>Actions taken by dentists during the pandemic</b>	<b>Frequency</b>	<b>Percentage</b>
Non-emergency cases	27	36.5
Emergency cases	15	20.3
Do not know	32	43.2
<b>Total amount</b>	<b>74</b>	<b>100</b>

The research results in table 9 show data obtained from 74 research respondents who have participated, consisting of 36.5% (27 respondents) who answered that the actions taken by dentists during the pandemic were non-emergency cases. Respondents who answered that dentists took

emergency action during the pandemic were 20.3% (15 respondents). Respondents who did not know what actions dentists took during the pandemic had the largest percentage, namely 43.2% (32 respondents).

**Table 10** Frequency Distribution of Respondents Based on What They Did When Experiencing Dental Pain During the COVID-19 Pandemic

<b>Things to do when experiencing dental pain during the pandemic</b>	<b>Frequency</b>	<b>Percentage</b>
Buying over-the-counter medications (without a dentist's prescription)	12	16.2
Visit the dentist and ask for a prescription	36	48.6
Never visited a dentist during the pandemic	26	35.1
<b>Total amount</b>	<b>74</b>	<b>100</b>

The research results in table10 show data obtained from 74 research respondents who have participated, consisting of 16.2% (12 respondents) who chose to buy over-the-counter drugs (without

a dentist's prescription) during the pandemic. Respondents who chose to come to the dentist and ask for a prescription were 48.6% (36 respondents).

**Table 11.** Frequency Distribution of Respondents Based on Knowing How to Seek Treatment or Consult a Dentist by Phone or Online Since the COVID-19 Pandemic

Knowing how to seek treatment or consult a dentist by phone or online since the pandemic	Frequency	Percentage
Yes	55	74,3
No	19	25,7
<b>Total amount</b>	<b>74</b>	<b>100</b>

The research results in table 11 show data obtained from 74 research respondents who have participated, consisting of 74.3% (55 respondents) who know how to seek treatment or consult a

dentist by telephone or online since the pandemic. Respondents who did not know about this were 25.7% (19 respondents).

**Table 12** Frequency Distribution of Respondents Based on Knowledge that They Can Get Prescription Medicine After Consulting a Dentist by Phone or Online Since the COVID-19 Pandemic

Knowing that you can get prescription drugs after consulting with a dentist by phone or online since the COVID-19 pandemic	Frequency	Percentage
Yes	59	79,7
No	15	20,3
<b>Total amount</b>	<b>62</b>	<b>100</b>

The results of the study in table 12 show data obtained from 74 research respondents who have participated, consisting of 79.7% (59 respondents) knowing that they can get prescription drugs after

consulting with dentists by telephone or online since the pandemic. Respondents who did not know about this were 20.3% (15 respondents).

**Table 13.** Frequency Distribution of Respondents Based on the Need for Patients to Know the Management of Dental Care in the New Normal Order

It is necessary for patients to know the management of dental care in the new normal order	Frequency	Percentage
Yes	72	97,3
No	2	2,7
<b>Total amount</b>	<b>74</b>	<b>100</b>

The results of the study in table 13 show data obtained from 74 research respondents who have participated, consisting of 97.3% (72 respondents) think that it is necessary for patients to know dental care procedures in the new normal order. Respondents who considered it unnecessary were 2.7% (2 respondents).

## Discussion

Circular Letter No.2776 / PB PDGI / III-3 / 2020 concerning Guidelines for Dentistry Services during the COVID-19 Virus Pandemic, clearly

describes information regarding the management of preventing transmission of COVID-19 in dental practice rooms. WHO also stipulates the prevention or limitation of the spread of COVID-19 with standard precautions.<sup>7</sup>

Related to the COVID-19 pandemic, this study was conducted to find out how the Faculty of Dentistry students at Prof. Dr. Moestopo University (Beragama) understand dental care during the COVID-19 pandemic. The COVID-19 pandemic has caused various changes. Indonesia has tried to control and break the COVID-19 chain



by making and implementing applicable regulations. However, in dealing with COVID-19, the role of various sectors is needed, including the government, health workers and also public awareness to be able to heed the appeals of the government and health workers and increase self-awareness to prevent the spread of the COVID-19 virus.<sup>6</sup>

Based on the results of the research that has been conducted, it appears that the most respondents involved in this study are female, as many as 90.5%. This is because the majority of Faculty of Dentistry students are female.

Respondents who routinely used mouthwash during the pandemic were 47.3%. More respondents did not use mouthwash during this pandemic. The type of mouthwash that is often used by respondents is non-alcoholic mouthwash, 27%. The most common reason for using mouthwash is to prevent bad breath, which is 27%. Based on research by Ferdina et al in 2022, it is said that the use of mouthwash during a pandemic will be able to reduce the risk of COVID-19 transmission. The most effective Povidone iodine concentration is 1% for 15 seconds and can reduce viral activity by 99.99%.<sup>9</sup>

Respondents who continued to visit the dentist during the pandemic were 66.2%. The most common reason why respondents continue to visit the dentist during a pandemic is because of orthodontic appliance control. Based on research conducted by Wahyuni et al in 2019, it is said that orthodontic treatment takes a long time to complete. Regular visits for orthodontic appliance control must be adhered to with an interval of about 4-6 weeks. Patients must show high motivation and seriousness in treatment, in order to get maximum results. Failures that occur during orthodontic treatment, generally occur because patients are not orderly in conducting routine controls.<sup>10</sup> Therefore, during the pandemic, patients should still visit the dentist for orthodontic appliance control.

Respondents who felt afraid when visiting the dentist were 44.6%, while respondents who never

visited the dentist during the pandemic were 20.3%. During the pandemic, respondents prefer to visit their usual dentist, 39.2%, rather than choosing a clinic that prioritizes sterilization. This shows that respondents are more concerned with the convenience of seeing a familiar dentist, rather than a clinic with good sterilization equipment. Respondents' knowledge regarding cases worked by dentists during the pandemic has also been asked in this research questionnaire. The majority of respondents were students of the Faculty of Dentistry who were in the first semester, as many as 71.6%. Therefore, knowledge of what actions are taken by dentists during a pandemic does not seem appropriate, because many respondents answered non-emergency cases as much as 36.5%, while 43.2% stated that they did not know to answer this question. Cases performed by dentists during a pandemic based on Circular Letter No.2776 / PB PDGI / III-3 / 2020 concerning Guidelines for Dentistry Services During the COVID-19 Virus Pandemic, it is said that dentists are asked to postpone action in the absence of complaints, which means that only emergency cases are carried out during this pandemic.<sup>7</sup>

What respondents did when experiencing dental pain, 48.6% chose to visit the dentist and ask for a prescription, while 16.2% chose to immediately buy over-the-counter drugs (without a doctor's prescription). Respondents who chose not to visit the dentist were 35.1%. Respondents who have knowledge of how to seek treatment or consult a dentist by telephone or teledentistry since the pandemic are 74.3%. The remaining 25.7% were respondents who did not know about it. Respondents who know that they can get prescription drugs after consulting with a dentist by phone or online since the pandemic are 79.7%. The American Dental Association (ADA) describes teledentistry as "the use of telehealth systems and methodologies in dentistry", which includes a wide range of technologies and measures to deliver medical, health and educational services virtually.<sup>11</sup> The use of teledentistry is considered very effective and

efficient, so as to reduce direct contact and prevent the spread of COVID-19.<sup>12</sup>

Respondents who felt it was necessary for patients to know the management of dental care in the new normal order as much as 97.3%. This is in line with Desi PS's research in 2021 which states that in the current new normal era, it is highly recommended to develop a high standard teledentistry application and service management system to support services in the field of dentistry. Teledentistry as a medium for transition and collaboration between conventional systems and digital systems is considered to be able to support and greatly assist patients in overcoming oral health problems during the COVID-19 pandemic.<sup>12</sup>

### Conclusions and Suggestions

Based on the results of the research that has been conducted, it can be concluded that the understanding of dental students towards dental care during the COVID-19 pandemic is quite good. This can be seen from the results of the study which show that the majority of respondents know how to seek treatment or consult a dentist by telephone or online since the pandemic through teledentistry. One of the efforts to prevent the spread of COVID-19 is through the use of teledentistry which is considered very effective and efficient.

Although the existence of teledentistry cannot fully replace dental practice, it is hoped that the public can sort out what cases are urgent enough to be examined by a dentist immediately. Non-emergency dental cases are expected to be postponed until the pandemic is over. Dental care should still be done at home so that the condition of the teeth and mouth can be maintained optimally.

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