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ORIGINAL ARTICLE

Relationship Knowledge Transmission of COVID-19 and Fear of Dental Care During Pandemic in South Sulawesi, Indonesia

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ABSTRACT

Objective: To determine the relationship of transmission of COVID-19 virus knowledge with dental care during a pandemic. **Material and Methods:** Online questionnaire using Google forms distributed through social media (WhatsApp groups, Facebook, line groups) using a combination of convenience and snowball sampling. The level of knowledge about coronavirus transmission was measured using a questionnaire consisting of 5 statement items. This questionnaire uses the Guttman scale with 3 response and anxiety categories for dental care as measured using a modified questionnaire from the Dental Fear Survey. This questionnaire consisted of 9 question items using a Likert scale. **Results:** 285 respondents came from WhatsApp media users (89.9%) with an average age of 29.91 years. Respondents who experienced "dental health problems" during the pandemic were 44.7%. The knowledge of respondents about the transmission of the COVID-19 virus in dental care was 79.9% and the knowledge of the fear of caring during the pandemic period was 31.85% afraid. Statistical analysis showed a significant relationship between knowledge about transmission of the COVID-19 virus and fear of dental care (r_s=0.388, $p<0.001$). **Conclusion:** The results obtained have a significant relationship between knowledge about transmission and fear for dental care during the COVID-19 pandemic in South Sulawesi Province.

Keywords: SARS Virus; Coronavirus Infections; Dental Care; Fear.

Introduction

Fear of dental care usually refers to normal unpleasant emotional reactions to certain threatening stimuli that occur in situations related to dental care [1]. The impact caused by the fear of dental care in many experienced the wider community so that delaying or avoiding dental care, those who fear often have poor dental health [2,3]. Fear of dental treatment such as pain, fear of injection, fear-based on bad experiences in the past, and fear carried out uncleanly or fear of infection during treatment [4], and children's fears are also influenced by parental dental anxiety [5].

Some studies have found that several people worry that some dentists might use unclean or unsterile instruments, making them at risk of contracting an infection. This fear is a barrier for some people to do dental treatment [3,6-8]. The research results from several countries that knowledge, behavior, and processes during the practice for dentists during the Covid-19 period were reported to be good [9]. A dental treatment procedure cannot be free from the risk of infection. Cross infections during dental care procedures can occur through the transmission of infectious agents between patients and health care workers in the dental care environment. Transmission of infection can occur through infected aerosols, blood, saliva, and instruments contaminated by secretions [3,10]. Patients and health professionals in the field of dentistry are surrounded by aerosols that contain microbes during dental treatment originating from the use of dental burs, water, and air spray, and other instruments that produce aerosols [11].

Cross infections in dentistry can occur through many pathogenic organisms found in the oral cavity and respiratory tract can also be transmitted during dental care [7,10]. Besides, 2019-nCoV also has the potential to spread through droplets and aerosols from infected individuals in dental clinics and hospital [12]. Thus, the transmission of droplets and aerosols 2019-nCoV is the most important problem in dental clinics and hospitals because it is difficult to avoid the formation of large amounts of aerosols and droplets mixed with saliva and even the blood of patients during dental practice [13]. In December 2019, a coronavirus novel was identified in Wuhan, China, in patients with pneumonia of unknown cause [14,15]. This outbreak has developed rapidly and has become a public health crisis that has spread to other parts of the world. The coronavirus novel comes from a family of single-stranded RNA viruses known as Coronaviridae. This family of viruses is known as zoonosis or is transmitted from animals to humans.

After a rapid increase in cases, on January 9, 2020, WHO declared the coronavirus novel discovered by the name 2019-nCoV and then was officially named SARS-CoV-2 by a group of researchers from the International Committee on Taxonomy of Viruses because of the genome sequence set for this coronavirus novel bears a close resemblance to other beta-coronaviruses such as SARS-CoV and MERS-CoV. SARS-CoV-2 is estimated to have an incubation period of 1 to 14 days, which is also the duration of medical observation and quarantine in exposed patients. The rapid spread of COVID-19, in particular, has been seen in Italy with a relatively easy transmission route through coughing, sneezing, and inhalation droplets, which can also occur through contact with asymptomatic patients [14].

Based on the spread of SARS-CoV-2 and the occurrence of its spread to health care providers, health workers in the dental profession are at high risk of nosocomial infections and potentially become carriers of this disease. These risks can be associated with exposure to saliva, blood, and aerosols/droplets that are formed during most dental care procedures and the position of health workers close to the patient's oropharyngeal area [14,16].

At present, in Indonesia, there is a lot of media information that informs about the risk of COVID-19 transmission, both in general and through dental care. Besides, requests to limit dental care unless an

emergency has occurred result from the risk of transmission of COVID-19 through dental care. Information about the ease of transmission of COVID-19 makes people afraid of being infected with COVID-19 so they are reluctant to go to health care providers, including dental services, and finally decide not to do or delay dental care during COVID-19.

Material and Methods

Study Design and Sample

This type of research is quantitative survey research with a cross-sectional study design. The sampling technique in this study uses a combination of convenience and snowball sampling. The sample used was a community of social media users (WhatsApp, Line, Facebook) through several groups known to researchers. For groups that are known to be asked to continue or send a questionnaire to other groups that he knows.

Data Collection

The Questionnaire sent using Google form. This research was conducted on May 21 - June 13, 2020. The number of samples that returned the questionnaire was 285 samples. The questionnaire to determine the level of knowledge about the transmission of coronavirus during dental care was measured using a questionnaire consisting of 5 statement items. This questionnaire uses the Guttman scale with three response categories that can be selected, namely "Yes", "No", and an additional option that is "Don't Know". Answer Yes has a score of 1, and the answer No / Don't Know has a score of 0. This questionnaire has been tested for validity (Pearson product-moment = 0.64-0.73) and reliability (Cronbach alpha = 0.79).

This knowledge assessment level is done by looking at the average value of each question item so that the average level of knowledge regarding the transmission of the coronavirus through dental care will be obtained. While the level of fear for dental care during the COVID-19 pandemic period was measured using a questionnaire modified from the Dental Fear Survey. This questionnaire consisted of 9 question items. This questionnaire uses a 5-point Likert scale with response categories to choose from namely a score of 1 = No Fear, 2 = Little Fear, 3 = Enough Fear, 4 = Fear, 5 = Very Fear. This questionnaire has been tested for validity (Pearson product-moment = 0.75-0.93) and reliability (Cronbach alpha = 0.79).

Data Analysis

To determine the relationship of knowledge about transmission of the COVID-19 virus with dental care during a pandemic using the Spearman Correlation Test. To find out whether the data is normally distributed using the Kolmogorov Smirnov normality test. Data analysis using computer programs with SPSS version 25 (SPSS Inc., Chicago, Ill., USA).

Ethical Clearance

This study was approved by the Health Research Ethics Committee of the Hasanuddin University Faculty of Dentistry, protocol #UH 17120322.

Results

The research sample of 285 social media users returned the questionnaire through Google Form, which came from several districts in South Sulawesi. Indonesia. Social media that are widely used through WhatsApp are 259 (89.9%), through channels as 18 (6.2%) while through Facebook as many as 8 (2.7%)

Table 1 shows the average age of respondents was 29.91 years in which the most age categories >18 years (94.4%), female gender (64.9%). Based on the education level, most respondents had a Bachelor's level of education (50.9%), followed by the high school education group (33.3%). Then based on the type of student employment (55.1%), the second is 15.8% government employees and 13.7% private employees.

Table 1. Distribution of research respondents.

Variables	N	%
Age		
< 18 Years	16	5.6
≥ 18 Years	269	94.4
Sex		
Male	100	35.1
Female	185	64.9
Education		
Junior High School	8	2.8
Senior High School	95	33.3
Diploma	19	6.7
Bachelor	145	50.9
Master	12	4.2
Doctor	6	2.1
Employee		
College Student	151	55.1
Government Employees	45	15.8
General Employees	39	13.7
Entrepreneurs / Traders	15	5.3
Other Occupations	15	5.3
Does Not Work	20	7.0

A total of 131 respondents (46%) experienced dental health problems during the Covid-19 pandemic. Table 2 also shows that the most common dental health problems were toothache (55.7%), mouth ulcers (31.3%), gum bleeding (24.4%) and complaints of bad breath (16.0%). Types of treatment measures taken by respondents were self-treating 42.7%, not treated or left as much as 31.3%, and 13.7% online consultation with dentists and only 6.1% of respondents came to the dentist. Respondents who did not visit the dentist were 93.9%, with the most reason being that I did not need to go to the clinic/dentist practice at 34.1%, followed by limited dental health services during the COVID-19 pandemic of 27.6% and fear of contracting coronavirus through dental care 26.0%.

Table 2. Distribution of dental and oral health problems experienced by respondents and dental care carried out during the COVID-19 pandemic.

Variables	N	%
Dental and Oral Health Problems*		
Cavities / Toothache / Tooth Ache	73	55.7
Thrush / Oral Cavity Injury	41	31.3
Bleeding Gums	32	24.4
Swollen Gums	21	16.0
Bad Breath	21	16.0
Remaining Tooth Root	16	12.2

Rocking Teeth	6	4.6
New Growing Teeth	3	2.3
Control Orthodontic Treatment	2	1.5
Broken Teeth	1	0.8
Type of Treatment Performed (N = 131)		
Self Medication	56	42.7
No Treatment was Done	41	31.3
Online Consultation with Dentists	18	13.7
Call My Dentist	8	6.1
Go to a Clinic / Dentist's Office	8	6.1
Reasons for not Visiting the Dentist (N = 123)		
I Don't Need to go to the Dentist's Clinic / Practice	42	34.1
Limited Dental Health Services During the COVID-19 Pandemic	34	27.6
I am Afraid of Contracting Corona Virus Through Dental Care	32	26.0
I Have Never Been to a Dental Clinic / Clinic	10	8.1
I Have Always Been Afraid of Dental Treatment	5	4.1

*More than one possible answer.

Table 3 shows that 77.2% received information about coronavirus transmission through dental care. A total of 53.2% received information from one source of information, 20% from two sources of information and 14.1% from three sources of information. The most types of media as a source of information are social media (62.3%), Internet (50.9%), health workers (31.4%) and television (24.5%).

Table 3. Distribution of information sources and media types.

Variables	N	%
Source of Information		
One Source of Information	117	53.2
Two Sources of Information	44	20.0
Three Sources of Information	31	14.1
Four Information Sources	16	7.3
Five Information Sources	11	5.0
Six Sources of Information	1	0.4
Total	220	100.0
Media Type*		
Social Media	137	62.3
Internet	112	50.9
Medical Personnel	69	31.4
Television	54	24.5
Friend	37	16.8
Newspaper	14	6.4

*More than one possible answer.

Based on Table 4 that the average correct response of respondents was 79.9% and respondents who did not know the knowledge about virus transmission during the pandemic were 20.1%. Table 4 shows the highest distribution of the percentage of "Yes" answers (89.1%) found in the second question about the risk of coronavirus transmission when touching an instrument or object in a clinic/dentist practice affected by droplets from patients infected with coronavirus while the percentage of answers "Yes" the lowest (73.3%) is in the third question about the risk of coronavirus transmission through water spray (aerosol) produced when performing the dental treatment using dental burs. Also, the "I Don't Know" answer has a percentage, which is the opposite of the "Yes" answer. The highest percentage of "I Don't Know" (27.7%) is in the third question, while the lowest percentage of "I Don't Know" (10.2%) is in the second question.

Table 4. Distribution of knowledge about transmission of COVID-19 through dental care in the clinic / dentist practice.

Questions	Answers					
	Yes		No		Not Know	
	N	%	N	%	N	%
Do you think there is a risk of contracting the corona virus if you are in close proximity to a patient or dentist during dental treatment during the Covid-19 pandemic?	247	86.7	7	2.4	31	10.9
Do you think there is a risk of contracting the coronavirus if it touches an instrument or object in a clinic / dentist's practice that is affected by droplets (dripping from coughing / sneezing) during dental treatment during the Covid-19 pandemic	254	89.1	2	0.7	29	10.2
Do you think that the coronavirus can be transmitted through aerosols (water droplets containing droplets of patients) when using dental burs?	199	69.8	7	2.4	79	27.7
Do you think that the coronavirus can enter a person's body through the oral mucosa (a layer of mucous membranes in the mouth) during dental treatment?	209	73.3	7	2.4	69	24.2
Do you think that the coronavirus is at risk of being transmitted through saliva mixed with droplets from patients contracting the coronavirus during dental care?	230	80.7	2	0.7	53	18.6

Table 5 shows the distribution of subjects' level of fear of dental care during the COVID-19 pandemic. The first and fifth questions each received the highest number of answers on the same option, namely "Enough Fear" (28.8%). Respondents who answered the second question got the most answers on the "Fearful enough" option (29.5%). Respondents who answered the third and eighth questions received the same number of answers, namely the "Fearful" option (28.4%). Respondents who answered the fourth question got the most answers on the "Little Fear" option (29.5%). Respondents who answered the fifth question got the most answers on the option "a little scared" and "quite scared" (28.8%). The seventh and eighth questions get the most answers in the "Fear" option (31.5% and 30.5%, respectively) and respondents who answer the ninth question get the most answers in the "Fearful enough" option (33.3%).

Table 5. Percentage of respondents' level of fear of dental care during the COVID-19 pandemic.

Questions	No Fear	A Little Afraid	Enough Afraid	Fear	Very Afraid
	N (%)	N (%)	N (%)	N (%)	N (%)
Q1 - Do you feel afraid to go to the dental clinic / practice during the COVID-19 pandemic?	31 (10.9)	76 (26.7)	82 (28.8)	77 (27.0)	19 (6.7)
Q2 - Do you feel afraid to sit in the waiting chair of the clinic / dentist's practice during the COVID-19 pandemic?	53 (18.6)	80 (28.1)	84 (29.5)	57 (20.0)	11 (3.8)
Q3 - Do you feel afraid of taking dental x-rays during the COVID-19 pandemic?	61 (21.4)	73 (25.6)	81 (28.4)	58 (20.3)	12 (4.2)
Q5 - Did you (i) feel afraid to sit / lie in the dental chair during the COVID-19 pandemic?	46 (16.1)	84 (29.5)	73 (25.6)	70 (24.6)	12 (4.2)
Q6 - Do you feel afraid to make direct contact with health personnel in the clinic / dentist's practice during the COVID-19 pandemic?	39 (13.7)	82 (28.8)	82 (28.8)	67 (23.5)	15 (5.2)
Q7 - Do you feel afraid to do a dental examination using a mouth glass during the COVID-19 pandemic?	41 (14.4)	67 (23.5)	82 (28.7)	78 (27.4)	17 (6.0)
Q8 - Do you (i) feel afraid to do a dental treatment using dental burs (producing aerosols) during the COVID-19 pandemic?	27 (9.5)	73 (25.6)	76 (26.6)	90 (31.6)	19 (6.7)

Q9 - Do you (i) feel afraid to do dental treatment that causes bleeding (e.g., pulling teeth) during the COVID-19 pandemic?	37 (13.0)	59 (20.7)	81 (28.4)	87 (30.5)	21 (7.4)
If all things are considered, what level of fear do you have for dental care during the COVID-19 pandemic?	21 (7.3)	72 (25.3)	95 (33.3)	74 (26.0)	23 (8.1)

In Figure 1, the highest percentage of respondents who were most feared for transmission of the virus if they were treated for dental care during a pandemic is the question (Q7), "Do you (i) feel afraid to do a dental treatment using burs (producing aerosols) during the COVID pandemic -19? ", Amounting to 38.2%, followed by questions (Q8) and (Q9) namely 37.9% and 34.0%. Overall the average percentage of fears for dental care during the COVID-19 pandemic was 31.8%.

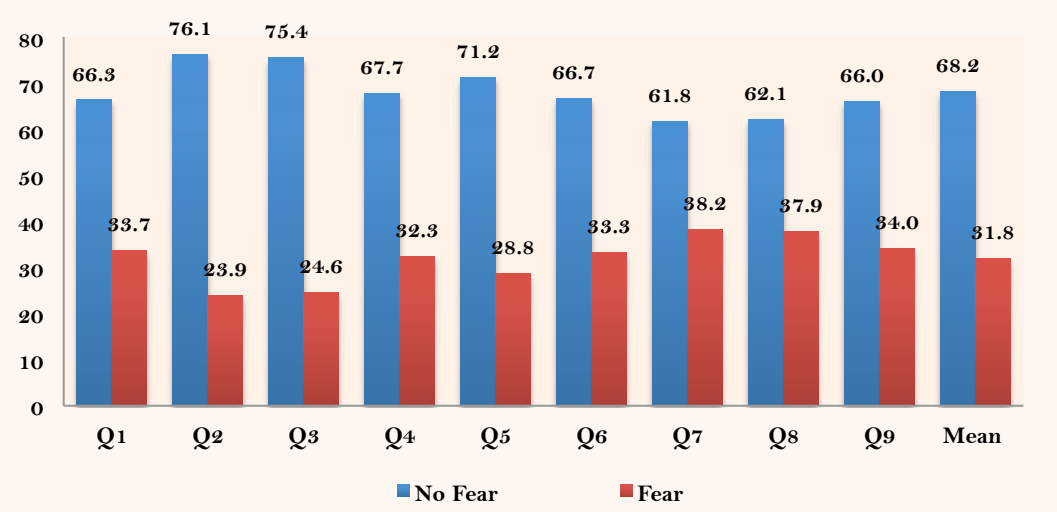

Figure 1. Percentage of respondents' fear level of dental care during the COVID-19 pandemic.

Table 6 shows that the average respondent's knowledge of virus transmission during the pandemic is equal to 4, meaning that the respondent's knowledge is good, while the average value of fear of dental care = 25.79 means that fear is fearful. The results of statistical analysis with the Spearman Rho Test showed that there was a significant relationship between the level of knowledge of the Covid-19 virus transmission problem and the fear of dental care during the pandemic by 38.8% with a p-value <0.001.

Table 6. Relationship between the level of knowledge about transmission of COVID-19 with the level of fear for dental care during the COVID-19 pandemic.

Variables	Mean	SD	p-value	rs
Knowledge About Transmission	4.00	1.47	0.001*	0.388
Fear for Dental Care	25.79	8.63		

*Correlation of Spearman Rho (rs); *Statistically Significant.

Discussion

Based on Basic Health Research by the Ministry of Health of the Republic of Indonesia in 2018, the proportion of dental and mouth problems in Indonesia was recorded at 57.6% and in South Sulawesi at 68.9% [17]. During the COVID-19 pandemic, dental and oral diseases were an unavoidable problem. This situation is no different from the situation during the pandemic, people experiencing dental health problems as much as

45.86%. To avoid and prevent dental and mouth problems during the COVID-19 pandemic, a group of people chose to pay more attention to their oral health by improving oral hygiene practices and following prevention recommendations [18].

In this study, the most common dental health problems that occur are cavities / aching teeth / aching teeth by 55.7%, and this is according to a report from the Basic Health Research in Indonesia in 2018 that tooth decay/cavities/pain is the most common dental problem occurred in Indonesia with a proportion of 45.3% and in South Sulawesi with a proportion of 55.5% [17]. Furthermore, it was found that Aphthous Stomatitis of 31.3% was the most common oral problem during the COVID-19 pandemic. Sprue or Recurrent Aphthous Stomatitis (RAS) is a common oral mucosal disease characterized by pain and recurrent ulceration [19]. The results of previous studies suggest that disorders of the genetically mediated and adaptive immune system play an important role in the development of this disease. Factors that modify RAS's immunological response include genetic predisposition, viral and bacterial infections, food allergies, vitamin and microelement deficiencies, systemic diseases, hormonal imbalances, mechanical injury, and stress [20]. The high incidence of thrush can be associated with increased stress during the COVID-19 pandemic. The spread of epidemics of infectious diseases, such as COVID-19, is related to psychological distress and mental illness [21,22].

The most action to overcome the dental and mouth problems they experienced during the pandemic COVID-19 with "self-medication" amounted to 42.7%. This is by the results of Basic Health Research by the Ministry of Health of the Republic of Indonesia in 2018, from 57.6% that the Indonesian population who have dental health problems, the majority (42.2%) choose to do self-medication, and of 68.9% of the population of South Sulawesi who has dental health problems, the majority (38.8%) choose to do the treatment yourself [17]. This shows that public awareness to do dental treatment in the clinic/dentist practice is still quite low.

The second most action taken by research subjects related to dental and oral health problems they experienced was "not taking any action" of 31.3%. This result is supported by Basic Health Research results by the Ministry of Health of the Republic of Indonesia in 2018 in Indonesia and in South Sulawesi, where the proportion of people who did not take any action was 32.1% and 34.7%, respectively [17]. In this study, 34.1% of subjects chose to not to the dentist's clinic/practice because they feel they don't need to go to the dentist. This high percentage is supported by the most frequently cited reasons for not visiting a dentist, including the lack of dental and oral health knowledge (30%) followed by dental problems that are not severe enough to start a dental visit (23%), which can indicate that a person is not will go to the dentist unless the symptoms are severe enough to visit the dentist [23]. This can be attributed to the culture of people in Indonesia who assume that someone goes to the doctor or dentist if they are already sick. Factors that cause people to not do dental health care because of fear. The results of previous studies fear for children as much as 48.9% [24], while the results of research from all age groups as much as 22.11%. Based on research in China, the number of people who come to the dentist for dental care is not urgent during the COVID-19 pandemic decreased compared to during the pre-COVID-19 [23]. This could be due to government regulations that limit the types of dental health services that can be carried out and because of increased public fear of COVID-19, so people prefer to stay at home and only a few go-to dental care clinics [25]. This study showed that 27.6% of respondents chose not to go to the clinic/dentist's practice because of the types of dental and oral health services that were restricted during the COVID-19 pandemic and 26.0% of subjects were afraid of contracting COVID -19 through treatment tooth. Poor children's oral health is correlated with the highest percentage of history of toothache. Dental anxiety and fear have a relationship with a history of dental pain in children under the age of five years [26], while the need for dental health care based on the results of previous studies as

much as 84.2% and an impact on quality of life as much as 72.1% [27]. The results of the study before obtaining the impact of dental health problems especially dental caries on the quality of life of children aged 8-10 years by 68.0% [28].

Social media service providers crucially disseminate information about COVID-19 throughout the world. Of 77.2% of respondents in this study obtained information about the risk of transmission of COVID-19 for dental care, and as much as 62.3% obtained this information from social media. The Internet and social media are currently considered as a means of finding health information. However, social media also has shortcomings, such as being a media for spreading rumors and misinformation, causing people to panic and confuse [29]. One can easily find official government websites that actively disseminate information about COVID-19 via the Internet. Besides, the WHO Centers for Disease Control and Prevention, some health organizations and journals regularly enter and update information on being aware of COVID-19 and specific directions regarding COVID-19 on various online platforms. The policy that limits certain types of dentistry services during the COVID-19 period also caused many articles to explain why dental care was limited during the COVID-19 pandemic.

The research results on the knowledge of transmission of COVID-19 through dental care were most answered in the second question of touching objects / the environment around the clinic/dentist practice affected by droplets of patients infected with the virus (89.1%). The results of this study are in line with the results of other studies that state that 92% of subjects choose "the spread route of COVID-19 through touch on objects or surfaces that have been in contact with patients infected with the COVID-19 virus [23].

Respondents answered "yes" to questions about the risk of coronavirus transmission through saliva (saliva) containing droplets from patients infected with coronavirus while performing dental care by 80.70%. These results are consistent with research conducted in the USA (74.8%) and the UK (81.3%) [30].

The survey results that the Indonesian people visited for dental care from previous research amounted to 38.3% [31], this is no different from visits to dentists during the pandemic 34.14% and most visited facilities were at the Public Health Center as much as 30% and in hospitals 16.1% and to the dentist 54%, while during the pandemic to the dentist only 6.1%. During the pandemic period, 42.7% of respondents experienced dental and mouth problems. Factors that influence because respondents have knowledge about transmission of COVID-19 at the dentist's office [31]. In this study, data were obtained that subjects had different levels of fear for each dental treatment activity. Approximately 38.2% of subjects felt "afraid" to do dental treatment using bur. The high level of fear in this procedure can be attributed to the transmission of coronavirus, which can occur through aerosols and other bodily fluids. The spread of the COVID-19 virus through inhalation transmission carries a very high risk when dental procedures are performed using a handpiece accompanied by irrigation, which can produce aerosols containing saliva, blood, or other secretions [3,13,32].

From the questions about the level of fear of dental care carried out during the COVID-19 pandemic, the answer "fear enough" was the answer most chosen by the study subjects and obtained the average total score of the level of fear for dental care during the COVID pandemic 19, which is 25.51, from a total score of 45, which can indicate that the community of social media users feel quite afraid to do the dental treatment during the COVID-19 pandemic.

The ease of accessing social media and the Internet allows one to obtain information about COVID-19, including information on the transmission of the coronavirus in general, as well as in the dental care environment. One of the psychological effects resulting from the opening of information about COVID-19 is the increase in one's vigilance and fear of transmission of COVID-19. The fear of being infected is one of the

many factors that cause a person to be reluctant to go to a dental care clinic. Widespread SARS-CoV-2 distribution and reports of its spread to health care workers, including dentists, are at high risk for nosocomial infections and can be potential carriers of the disease. The risks referred to can be related to dental intervention, including aerosol formation, handling sharp objects, and the dentist's proximity to the patient's oropharyngeal area [18]. Based on the risk obtained by the dentist or dental hygiene to provide recommendations to patients, several things that patients must pay attention to are pre-rinsed with oxidizing agents, or rinses containing hydrogen peroxide (1-1.5%), povidone-iodine (betadine), recommended concentration of 0.2%, or chlorine dioxide as long as the patient is not contraindicated in one of these oxidative mouth rinses [33].

A common obstacle in conducting large-scale online surveys is that it is difficult to limit respondents' geographic location who take online survey research and the lack of a sampling frame, such as email lists or social media accounts in a population. This causes the determination of the minimum sample size that cannot be done in this study because there is no data regarding the total population of social media users in South Sulawesi Province. Therefore, researchers use a time limit to collect samples by taking into account several things such as rules of thumb, which may be useful for researchers who conduct online research using non-probability samples, including the number of samples between 30-500 and in multivariate studies, the sample size must be at least 10 times greater than the number of variables studied [34].

Conclusion

The state of knowledge of samples about the transmission of the COVID-19 virus in dental care that answered correctly was 79.93% and felt afraid to do the dental treatment during the pandemic period was 31.85% and there was a significant relationship between knowledge about transmission of the virus with fear of treatment teeth during the pandemic.

Authors' Contributions

BDP https://orcid.org/0000-0002-1835-8591 Conceptualization, Methodology, Validation, Formal Analysis, Investigation, Writing - Original Draft and Writing - Review and Editing.

All authors declare that they contributed to critical review of intellectual content and approval of the final version to be published.

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None.

Conflict of Interest

The authors declare no conflicts of interest.

Data Availability

The data used to support the findings of this study can be made available upon request to the corresponding author.

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