

The Effect Of Anxiety On Dentists Working In Public Health Centers In Makassar City, Indonesia During The Covid-19 Pandemic

Selviawaty Sarifuddin Panna¹, Ayub Irmadani Anwar², Fuad Husain Akbar²

¹Postgraduate Student in Public Dental Health, Faculty of Dentistry, Hasanuddin University, Makassar, Indonesia

²Department of Dental Public Health, Faculty of Dentistry, Hasanuddin University, Makassar, Indonesia

Abstract

Objective: To determine the effect of anxiety on dentists working in public health centers throughout Makassar City, Indonesia during the covid-19 pandemic.

Methods: Questionnaire Instrument Fear and anxiety assessment of dental care professionals. This type of descriptive observational research with cross-sectional research design and analysis using the Chi-Square test

Results: 10 people (71.4%) had high anxiety levels in primary health care dentists and 21 people (65.6%) aged 41-50 years had high anxiety levels. Age 51-60 6 people (75.0%) tall. From the results of statistical tests, it was obtained that the anxiety level of the dentist at the puskesmas was above the value of $p < 0.05$, which means that there was no influence between age and gender on the level of anxiety.

Conclusion: Dentists at all puskesmas in Makassar City, Indonesia have high levels of anxiety during the Covid-19 pandemic. There is no influence between gender, age, and anxiety level of dentists in public health centers in Makassar City, Indonesia.

Keywords: Anxiety, Dentists Working, Covid-19 Pandemic.

I. INTRODUCTION

In early 2020, the Novel Coronavirus 2 (SARS-CoV-2) acute respiratory syndrome emerged and caused the coronavirus disease (COVID-19) to be declared a Public Health Emergency of International Concern (PHEIC) by the Director-General of the World Health Organization (WHO) (Karabag, 2020), the government declared quarantine and focused on reducing transmission by limiting activities, but the impact on the economy caused anxiety, uncertainty and fear in everyone and health workers (Iurcov et al., 2021; Vergara-Buenaventura et al., 2020).

Makassar City is one of the provincial capitals in Indonesia, located in South Sulawesi, which has also been affected by COVID-19 to date. Based on data from the South Sulawesi Provincial Health Office, there were 2217 confirmed cases of COVID-19, 197 cases that died, 1911 cases recovered, 1433 patients under

surveillance, and 2621 people under monitoring (Retnaningsih et al., 2020).

The COVID-19 outbreak has disrupted the lives of many people around the world. The rapid increase around the world creates a sense of uncertainty and anxiety (Bakioğlu et al., 2021; Imran et al., 2020). Mild anxiety is natural and fosters preventive and guarding behavior, with persistent anxiety that you may panic and make more mistakes that lead to irrational decisions and behaviors. Being on the list of high-risk professions, dentists are highly expected to manage severe anxiety about the current pandemic situation (Al-Rabiaah et al., 2020; Imran et al., 2020).

In addition to the risk of contamination, healthcare workers have suffered high levels of stress during the Covid-19 pandemic. Many studies have looked at high levels of anxiety, stress symptoms, mental disorders, and post-traumatic stress among healthcare workers

during the Covid-19 pandemic (Chirico et al., 2021; Duarte et al., 2020; Vizheh et al., 2020). Taking into account the spread of infection, the Executive Board of the Indonesian Dentist Association issued a circular regarding "Guidelines for Dental Services During a Pandemic" (Ahmed et al., 2020; Liu et al., 2020; Trumello et al., 2020). Dentists are still reluctant and afraid to treat patients in such situations, they even temporarily close their practice until things return to normal (Ahmed et al., 2020; Chor et al., 2021)

Therefore, this questionnaire-based research was conducted to determine the level of anxiety of dentists working in public health centers throughout Makassar City, Indonesia during the COVID-19 pandemic.

2. METHOD

This type of research is descriptive observational with a cross-sectional research design. This research was conducted on June 26-July 3, 2020 online. The research subjects were all dentists who served in public health centers in Makassar City, South Sulawesi Province, Indonesia totaling 55 dentists who were willing to send questionnaires from 65 dentists.

The research instrument consisted of a structured questionnaire that asked for demographic information, including name, gender, health center where they worked, email, and history of drug/sedative use. In addition, the participants responded to a 7-item question regarding the level of anxiety during the Covid-19 pandemic.

The assessment of the anxiety level of dentists at public health centers in Makassar during the COVID-19 pandemic was assessed using the Fear and anxiety assessment of dental care professional questionnaire which was adapted from previously published research and had high validity, consisting of 7 questions with yes/no answers. Each yes answer was given a score of 2 and each no answer was given a score of 1. Then, the number of answer points in each section was calculated, and the level of anxiety was grouped and categorized as low (Total score < 9), moderate category (9 < Total score < 12), and high category (12 < Total score). The questionnaire takes approximately 2-5 minutes to fill out. The official permit has been approved by the Health Research Ethics Commission of the UNHAS RSGM in Makassar City, Indonesia with

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RSGMUNHAS/2020).

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Primary data types and data processing using Microsoft Excel and SPSS 22.0 for Windows. Descriptive statistical data analysis was conducted to describe the demographics and other selected characteristics of the respondents. Univariate analysis (Nonparametric test) was used to explore the significant relationship between sample characteristics and dentist anxiety levels during the Covid-19 pandemic.

3. RESULTS

An online survey regarding the anxiety level of dentists at the public health center in Makassar during the Covid-19 pandemic was carried out using a questionnaire created on a google form. The distribution of the questionnaire link was carried out from June 26 to July 3, 2020, via WhatsApp social media.

This study included dentists at public health centers throughout the city of Makassar, Indonesia. The number of samples consisted of 55 dentists (51 women and 4 men) based on the inclusion and exclusion criteria that had been set which can be seen in Table 1.

Demographic characteristics based on the study population are shown in Table 1. Among the 55 dentists, the percentage of female dentists was higher than that of male dentists (92.7%) female and (7.3%) male. Based on age group, 1 respondent is 20-30 years old (1.8%) 14 respondents are 31-40 years old (25.5%) 32 respondents are 41-50 years old (58.2%) and 8 respondents are 51-60 years old (14.5%) As many as 100% of dentists have no history of taking sedative drugs/substances.

Based on the results of the study, it was found that the score for the most anxiety level questions answered Yes to P4 as many as 53 (96.40%) and the most answered No to P6 as many as 36 (65.50%).

The anxiety level of dentists who worked at the Makassar City Health Center during the Covid-19 pandemic, from 55 respondents, 37 (67%) dentists with high anxiety levels, moderate anxiety levels were 16 (29%) and low was 2 (4%).

Table 3 shows the relationship between the demographic variables of public health center dentists and anxiety. In the female gender, there were 51 dentists including 34 (66.7%) dentists having high anxiety levels, 15 (29.4%) moderate, and 2 (3.9%) dentists having low

anxiety levels. Meanwhile, there were 4 male dentists at the public health center. Among them 3 (75.0%) had high anxiety levels, 1 (25.0%) were moderate, and none of the male health center dentists had low anxiety levels. From the results of statistical tests, it was obtained that the anxiety level of the dentist at the puskesmas was high but the value of $p = 0.038$ ($p < 0.05$) means that there was no influence between gender and anxiety level.

Then the dentist at the public health center aged 20-30 years as many as 1 (100.0%) had a moderate level of anxiety. Dentists aged 31-40 years as many as 4 (28.6%) had a moderate level of anxiety, 10 (71.4%) had high. Age 41-50 years 2 (6.3%) had low anxiety levels, 9 (28.1%) moderate, and 21 (65.6%) high. Age 51-60 years 2 (25.0%) have a moderate level of anxiety and 6 people (75.0%) high. From the results of statistical tests, it was found that the anxiety level of the dentist at the public health center was high but the value of $p = 0.674$ ($p < 0.05$) means that there is no effect between age and anxiety level.

4. DISCUSSION

The spread of coronavirus (Covid-19) poses a challenge to the realm of dentistry and dental universities, in all affected countries. The arrival of Covid-19 at the end of 2019 to Europe, which was the epicenter of the pandemic, unexpectedly came from Wuhan, China. The speed of reaction and the type of response to this disease vary widely around the world based on differences in health care systems, economies, and political ideologies (Chew et al., 2020; Musfirah & Nurlinda, 2021; Rachmawati et al., 2021). The highest category of transmission of Covid-19 is in health workers. Because the transmission of SARS-CoV-2 during dental procedures can occur through inhalation of aerosols/droplets from infected patients or direct contact with mucous membranes, oral fluids, and contaminated instruments (Shah et al., 2020; Zhang & Li, 2020; Zhu et al., 2020).

The Covid-19 pandemic is a non-natural disaster that can have an impact on everyone's mental health and psychosocial conditions. In this time of the pandemic, it's natural for dentists to have the fear of being infected by their patients (Al-Rabiaah et al., 2020). In addition, there is no vaccine or treatment for

this epidemic, further increasing anxiety about the thought of being infected (Coulthard, 2020). Several large-scale observational studies have been conducted in this area, making it clear that the COVID-19 pandemic elicited a strong and mixed response from psychiatrists and health care workers that mental health is being considered at multiple levels, among health care workers, and in vulnerable populations. Based on its quality, the evidence in the available literature is relatively low, it still contains many observations and suggestions for all professions working in this field (Consolo et al., 2020). Similar infectious diseases cause psychological trauma to health care workers including anxiety about being infected while caring for infected patients, or infecting family members. The impact of the rapid spread of Covid-19 has now affected dentists (Consolo et al., 2020; Zhang & Li, 2020).

Previous studies, conducted when SARS emerged from Guangdong China, in November 2002 and spread rapidly, revealed that significant emotional distress was present in 18%-57% of healthcare workers and was associated with anxiety about transmission, concern for family, stress, work, and discomfort.¹⁶ Research conducted in Israel, shows that dentists have a high risk of experiencing anxiety. Furthermore, regarding the relationship between Covid-19 factors and psychological factors with an increase in psychological stress, one of the findings showed that the anxiety of contracting Covid-19 from positive patients was associated with an increase in the dentist's psychological stress. This is supported by scientific evidence showing that there is a reluctance on the part of dentists to treat patients with infectious diseases such as HIV and tuberculosis (Consolo et al., 2020; Rajkumar, 2020).

Of the 55 subjects, all dentists at public health centers in Makassar City, Indonesia, suffered from high and moderate levels of anxiety, due to the Covid-19 outbreak. The anxiety of public health center dentists during the Covid-19 pandemic occurred because it was known that the main route of transmission of the coronavirus was through droplets and aerosols, increasing the likelihood that dentists and dental hygienists could become infected and further impact the spread of the virus (Al-Rabiaah et al., 2020; Ge et al., 2020). In

addition, there is no vaccine or treatment for this epidemic, further increasing anxiety about the thought of being infected (Ge et al., 2020)

The results of the analysis in graph 1 show that 37 (67.3%) public health center dentists had high levels of anxiety during the Covid-19 pandemic. This is in line with a study in the journal *Fear and Practice Modifications among Dentists to Combat Novel Coronavirus Disease (COVID-19) Outbreak* which found that a large number of dentists were afraid of being infected by their patients or co-workers. This could be because the current panic may have diverted potential respondents' attention to other priorities, perhaps related to the prolonged critical condition in many countries (Al-Rabiaah et al., 2020).

Likewise with research conducted in Liaoning China, more than half of the study sample (52.1%) reported that they felt anxious and worried about the Covid-19 pandemic. But despite their anxiety, the majority paid more attention to their mental health, spending more time relaxing, resting, and exercising after the pandemic. The positive impact of this pandemic has helped the participants overcome their anxiety and anxiety about the pandemic (Shacham et al., 2020).

In table 3, the results of statistical tests based on gender indicate that male and female dentists are at the same risk of experiencing anxiety during this pandemic with a p -value = 0.038 ($p < 0.05$) which means that there is no effect between gender and level of anxiety. anxiety, meaning that in this study there was no influence between gender and the anxiety level of the dentist at the public health center. Based on the age of the statistical test results obtained p -value = 0.674 ($p < 0.05$) which means that there is no influence between age and anxiety levels, meaning that in this study there is also no effect between age and anxiety levels of dentists at the puskesmas. Psychological implications such as fear and anxiety are natural during a time of the pandemic, especially when the number of infected individuals and the death toll is rising sharply (Al-Rabiaah et al., 2020; Munthali & Xuelian, 2020; Paredes et al., 2021).

5. CONCLUSION

Dentists at all public health center in Makassar City, Indonesia, have high levels of anxiety during the Covid-19 pandemic. There is no influence between gender, age, and anxiety

level of dentists in public health centers in Makassar City, Indonesia.

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6. SUGGESTION

It is suggested that the government and the Indonesian Dentist Association should collaborate to provide timely and quality psychological services to dentists. So that dentists don't have to worry when facing the Covid-19 pandemic.

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Table 1. Distribution of research samples based on characteristics (N=55)

Characteristics	n	%
Gender		
Male	4	7.3
Female	51	92.7
Age		
20-30 years	1	1.8

31-40 years	14	25.5
41-50 years	32	58.2
51-60 years	8	14.5
History of Consumption of Drugs/Sedatives		
Yes	0	0
No	55	100

Table 2. Scores of answers to questions on the anxiety level of public health center dentists during the covid-19 pandemic (N=55)

No	Anxiety	Yes		No	
		n	%	n	%
P1	Are you afraid of getting infected with Covid-19 from patients and co-workers?	52	94.50	3	5.50
P2	Are you anxious when giving medication to a patient who has a cough or is suspected of having a cough?	50	90.90	5	9.10
P3	Do you feel restless when talking to patients around you?	24	43.60	31	56.40
P4	Are you afraid that you may carry infections from your dental practice back into your family?	53	96.40	2	3.60
P5	Are you afraid of being quarantined if you get infected?	33	60.00	22	40.00
P6	Are you worried about the cost of treatment if you become infected?	19	34.50	36	65.50
P7	Do you get scared when you hear people are dying of Covid-19?	42	76.40	13	23.60

Table 3. Univariate analysis of anxiety levels

variable	Anxiety Levels			P-value
	Low	Moderate	High	
Gender				
Male	0 (0.0%)	1 (25.0%)	3 (75.0%)	0.896
Female	2 (3.9%)	15 (29.4%)	34 (66.7%)	
Age				
20-30 years	0 (0.0%)	1 (100.0%)	0 (0.0%)	0.674
31-40 years	0 (0.0%)	4 (28.6%)	10 (71.4%)	
41-50 years	2 (6.3%)	9 (28.1%)	21 (65.6%)	
51-60 years	0 (0.0%)	2 (25.0%)	6 (75.0%)	

* Chi-Square Test