

Original Article

## Oral Health-Seeking Behavior During The COVID-19 Emergency Policy Period in Padang City, Indonesia

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### ABSTRACT

The increase in positive cases of Coronavirus Disease (COVID-19) has encouraged the Indonesian government to take lockdown policies by implementing Large-Scale Social Restrictions (PSBB) and Emergency Community Activity Restrictions (PPKM), which affect the paralysis of the health sector, especially dentistry. All actions in dental practice are limited to emergency case handling only, and many dentists have closed during the pandemic. The purpose of this study was to determine the differences in oral health-seeking behavior during the first phase of the lockdown in Padang City, West Sumatra, Indonesia. A survey method with a cross-sectional design was done by involving 120 respondents who have dental pain history. The data was collected by a self-administered questionnaire via google-form then analyzed by computerization using the fisher test. The results showed that during the PSBB period, most of the people in Padang (85%) treated dental pain independently, and only 15% asked for caregiver aids, specifically, only 3.3% of respondents take professional service. Meanwhile, during the PPKM period, the utilization of healthcare has increased by around 56,7%, (especially 43.4% treated by dental professionals, and 43.3% of respondents did self-medication. Thus, there was a significant difference of finding dental pain treatment behavior during PSBB and PPKM in Padang City ( $p = 0.004$ ). As a result, limitation search for managing oral problems during COVID-19 has encouraged society to take self-medication or non-professional caregivers, so it is highly recommended to consult with dental professionals in the course of the pandemic through teledentistry without face-to-face meetings.

**Keywords:** COVID-19, Behavior, Oral Health-Seeking, Emergency, Policy

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## INTRODUCTION

Since the first emergence of positive cases of COVID-19 in Indonesia, until the significant increase of cases per day from March 2020 to July 2021, the Indonesian government has implemented *Large-Scale Social Restrictions* (PSBB), transitional PSBB, *Community Activity Restrictions* (PPKM) and micro PPKM during the COVID-19 emergency<sup>1,2</sup>. A few provinces in Indonesia including West Sumatra implemented PSBB for 3 stages starting from April 23 to June 7, 2020. Then, based on the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/MENKES/260/2020 dated April 17, 2020, the

West Sumatra Provincial Government also implemented the PSSB for 14 days, starting from April 22, 2020 to May 5, 2020 through the Regulation Number 180-297 of 2020. It is related to the temporary suspension of everyone's activities outside the home, one of which was by urging the public to reduce treatment activities to medical facilities except for handling emergency cases. Furthermore, the second phase of PSBB was extended from May 6 to May 29, 2020 and phase three from May 30 to June 7, 2020. After the end of the PSBB and Transitional PSBB, the West Sumatra implemented PPKM from 3-20 July 2021<sup>3</sup>.

COVID-19, which was announced by *World Health Organization (WHO)* has announced COVID-19 as a pandemic outbreak in March 2020, so it has greatly affected paralysis in various health sectors, especially the practice of dentistry<sup>4</sup>. The rapid transmission of COVID-19 between humans poses a high risk for dental practitioners, who are often exposed to saliva, blood, patient breathing, and aerosols during dental and oral care<sup>5-9</sup>. A number of policies by related parties around the world, even in Indonesia, such as the *American Dental Association and the Iowa Dental Board*, the *Indonesian Dental Association (PDGI)*, and the *Association of Indonesian Faculties of Dentistry (AFDOKGI)*, also recommend stopping all dental practices starting March 16, 2020, and limited services specifically for emergency cases only<sup>7,10,11</sup>.

Several policies aimed to break the chain of COVID-19 spreading set by the Dental Association as well as the Central Government and Regional Governments in Indonesia are also very influential on the practice of dentistry and patient visits to dental practice. Oral complaints especially dental pain is one of the main reasons patients seek treatment<sup>12,13</sup>. However, the rules that call for the handling of only emergency dental and oral cases indirectly also have an impact on the number of dentist practices that are closed<sup>6,8</sup>. So that, people who have oral health problem have difficulty accessing dental health services and negatively affect the quality of life of each individual<sup>14</sup>. To the best of the author's knowledge, there has been no research on the behavior of seeking dental pain treatment during the COVID-19 pandemic policies. So, this research is very important to know the behavior of finding dental pain treatment during the implementation of government policies during the COVID-19 pandemic in Padang City, West Sumatra Province, and is expected to be a reference in socializing and taking other policies when facing a pandemic emergency situation.

While scientific studies were explored during the outbreak of COVID-19, there is no research about community dental health behavior, specifically during large-scale policy period in Indonesia. So, this research is required to fully elucidate Indonesian health behavior during two lockdown stages.

## METHOD

This research is a cross-sectional study conducted from June 2020 to October 2021. The samples in the study were obtained using purposive sampling techniques with the following criterias: 1) aged over 17 years; 2). Have complaints of cavities or dental pain during the emergency period of the COVID-19 pandemic (PSBB and PPKM and trying to treat them); 3) reside in the city of Padang, West Sumatra, Indonesia minimal for five years,; 4) be willing to be a research sample. A total of 120 respondents (60 respondents during each the PSBB and PPKM period) participated by filling out a number of questions through a *Google Form* related to the sociodemographic characteristics of respondents and dental and oral treatment search behavior during the COVID-19 pandemic. The three main questions to assess respondents' behavior in seeking dental treatment include not doing anything, doing self-medication, and getting treatment. The next question delves into self-medication information provided by respondents with the use of traditional medicines or modern medicines. Meanwhile, outgoing treatment is given an open question with the choice of answers to seek treatment through dental professional service or non-dental professional caregiver. The data was analyzed by *fisher-tests*, then processed using a computerized system.

## RESULTS

Respondents who participated in the PSBB were dominated by females (61.7%) in the age range of 31–40 years (41.7%). Likewise, in the PSBB condition, more respondents were female (58.3%) at the age of 31–40 (43.3%). The percentage based on education and employment levels during PSSB and PPKM was quite different. Most of the respondents' education levels during the PSBB period were in the middle category (55%), and they worked as civil servants (41.7%). Meanwhile, during the PPKM period, most respondents already had a higher education level (60%) and were private employees (40%) (Table 1).

**Table 1.** Frequency distribution of respondents' characteristics on dental treatment seeking behavior during the COVID-19 emergency PSBB and PPKM periods in Padang City, West Sumatra (n=120)

Characteristics of Respondents	PSBB		PPKM	
	n	%	n	%
Age (years)				
-30	21	35	20	33.3
-40	25	41.7	26	43.3
-50	14	23.3	14	23.3
Gender				
Male	23	38.3	25	41.7
Female	37	61.7	35	58.3
Recent Education				
SD	1	1,7	-	-
Middle-High School	33	55	24	40
College	26	43.3	36	60
Work				
Not Working	19	31.7	20	33.3
Private Employees	11	18.3	24	40
State Officer	25	41.7	8	13.3
Self employed	5	8.3	8	13.3

**Table 2.** The differences in dental treatment search behavior during the COVID-19 emergency PSBB and PPKM periods in Padang City, West Sumatra (n=120).

No	Treatment Search Behavior	PSBB		PPKM		p-value
		n	%	n	%	
1.	Self-medication using					0.004*
	A. Modern medicines	31	51.7	22	36.6	
	B. Folk remedies	20	33,3	4	6,7	
	Total	51	85	26	43.3	
2.	Looking for treatment out					
	A. Professional Dental Service	2	3.3	26	43.4	
	B. Non-Professional Dental Service	7	11.7	8	13.3	
	Total	9	15	34	56.7	

*p*<0.05

Table 2 shows that not only in the PSBB period but also in the PPKM period, the majority of efforts to overcome dental pain were dominated by self-medication using modern medicines rather than traditional remedies. Meanwhile, looking for professional treatment

during the two periods was still a small proportion, like only 3.3% at PSBB and 43.4% at PPKM.

Unfortunately, almost all Indonesian patients will visit Non-Professional Dental Service to solve their oral pain, such as uncertified dental therapists. This study result proves that a number of respondents overcome their dental problems by Non-Professional Dental Service, around 11.7% at PSBB and 13.3% at PPKM, respectively. Hence, oral health seeking behavior between PSBB period and PPKM had a significant difference (*p* =0.004).

## DISCUSSION

PSBB has been the "best of the worst" government's solution given that there is a very high risk if the government chooses the lockdown or territorial quarantine policy option during COVID-19 pandemic. Based on Indonesian Regulation Article 55 of Law, Number 6 of 2018, the implementation of regional quarantine gives rise to the responsibility of local governments and the central government to meet all the basic living needs of the people and the well-being of society<sup>15</sup>. On one hand, lockdown emergency policies like PSBB and PPKM were chosen by the government as pandemic emergency mitigation in the Regulation of the Minister of Health Number 9 of 2020 to break the chain and prevent the possible spread or contamination of COVID-19 but it also had some negative impacts, especially on the health sector<sup>3,16,17</sup>.

The implementation of the PSBB and PPKM policies certainly has an impact on several lines of health seeking activities, including delayed access to necessary medical treatment and routine dental care<sup>2,16,18</sup>. This study proved that most samples who experienced dental pain during the PSBB period do self-medicate with contemporary drugs (85%) and use traditional medicines (33.33%). On the contrary, respondents during the PPKM period not only take self-medicate but also began to seek treatment from dental professional service (34%). The reason caused by the region regulation to travel was not as tight as PSBB phase. As long as the other reason is according to Manu et al.'s 2019 research, around 77.8% of respondents managed toothache with self-medication using both traditional and modern remedies, but the

hazards of an inaccurate diagnosis or ineffective treatment could arise from this circumstance of self-medication which could increase dental health problem<sup>17</sup>.

In general, sociodemographic can be one of predisposing factors that affect dental health-care seeking behaviour during COVID-19 pandemic<sup>4,19-23</sup>. Women more suffer from dental pain than men during the PSBB and PPKM period and manifest to their health treatment behaviour. This result is linear to some study in the prior life before pandemic, for example Chambisa's study claimed that the more percentage of oral health seeking behaviour done by women than men, then it is supported by Yaddanapalli research, said that men take advantage of less dental care than women. However, it is contrary to a study conducted by Malvania in 2011 which stated that men visit dental practices more than women. The difference is caused by the number of respondents and sampling technique<sup>25-27</sup>.

According to social constraints, the closure of dental offices and served only emergency cases result in many people prefer to do self-medication by looked for alternative treatments and methods to deal with their dental health issues<sup>24</sup> (Lee et al., 2021). One of the solutions linear to new global phenomena like digitalization era. Regarding the internet of things and online health platform also lead the society not only using self-medication that cause several potential misleading choices, but also can find treatment out by professional dental care give for example using teledentistry<sup>8</sup>.

Teledentistry is a new concept remarkable futuristic breakthrough and a component of telemedicine using information technology to allow virtual face-to-face contact between dental professionals and patients. It has the potential to increase accessibility, enhance oral healthcare delivery, and cut costs, which involves sending clinical data and photographs over long distances for dental consultation and treatment planning<sup>7-9</sup>. Dental professionals' use of teleconsultation services may affect patients' decisions on whether to get treatment. People may be more likely to seek medical advice online if these services are provided than they would be to visit a physical clinic<sup>26</sup>.

Financial aspect also affect the dental health seeking behaviour. During the pandemic, there was a very noticeable increase in the unit cost of every dental procedure, which was

partly brought on by the high cost of level 3 personal protective equipment. All respondents dealt with dental pain by going to a health clinic for treatment (100%) during the PPKM period that provide Indonesian National Health Insurance (BPJS), for example visit dental clinic and community health center (puskesmas) Puskesmas is the most popular treatment option because the costs are carried entirely by BPJS and similar to result of Manu's study<sup>17</sup>. Meanwhile, the important concept about finding treatment out is dental primary care providers and dental public health professionals seek to restore the population to healthy oral hygiene practices without hastening the development of COVID-19<sup>28</sup>.

## CONCLUSION

The behavior of finding dental treatment during the PSBB and PPKM in the city of Padang, West Sumatra, Indonesia is very significantly different. During the PSBB period, it was more dominated by independent treatment, while during the PPKM period, respondents had sought treatment out. As a result, there are a number of significant difficulties that must be addressed together as a result of the development in behavior in handling dental health issues autonomously during the COVID-19 epidemic. Designing strategies that enable accurate and secure access to oral health information is essential for dental practitioners, scientists, and policymakers. It is highly recommended that an adequate education about the best way to solve the oral problem during the emergency situation is a crucial priority with using teledentistry as an alternative way. In addition, the health promotion from the related stakeholder and strengthening the ethics decision making surrounding self-medication and non-professional caregiver usage during emergencies will potential to modify personal conduct.

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## CONFLICTS OF INTEREST

The author declare no conflict of interest.

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