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Exploring the Link Between Health Facilities and Dental Personnel Availability with Dental Service Utilization in South Buton District, Southeast Sulawesi Province

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ABSTRACT

Introduction: Based on the data on visits and dental health service in the Public Health Centers over the past three years, a decrease in the number of visits has been observed. In 2019, there were 2,492 visits; in 2020 the number decreased to 1,040 visits; and in 2021, there was a further decline to 950 visits. The purpose of this study was to analyze the factors associated with the utilization of oral and dental health services in South Buton Regency.

Method: This research was a quantitative study using a Cross-Sectional Study approach. The population in this study consisted of 1.805 visits, and the sample included a portion of the total visits by oral and dental patients at the public health centers in South Buton Regency, with 95 samples selected from 9 public health centers.

Result: The research result indicate that the knowledge variable has a phi value of 0,391, access has a phi value of 0.359, facility availability for health services has a phi value of 0.290, and the availability of oral and dental health personnel has a phi value of 0.339. This indicates that all mentioned variables are weakly associated, except for the knowledge variable which has a moderate association with a utilization of oral and dental health services in South Buton Regency.

Conclusion: The research results show that the variable availability of health service facilities has a phi value of 0.290 and the availability of dental and oral health workers has a phi value of 0.339.

Introduction

Oral and dental health is an integral part of general health, because oral and dental health will

affect the health of the body. The role of the oral cavity is very large for human health and welfare. In general, a person is said to be healthy, not only for a healthy body but also for a healthy mouth and teeth. Oral and dental health plays a very

important role in supporting the health of a person's body.

Oral and dental health status is generally expressed in terms of the prevalence of dental caries and periodontal disease, because dental caries and periodontal disease are experienced by almost everyone in the world. The oral health status assessment method, especially dental caries, uses Decay Missing Filled Teeth (DMF-TO), while for oral hygiene, the Oral Hygiene Index Simplified (OHIS) is used.^[1]

Based on The Global Burden of Disease Study, oral and dental health problems, especially dental caries, are a disease experienced by almost half of the world's population (3.58 billion people). Gum (periodontal) disease is the 1st most common disease in the world. Meanwhile in Asia Pacific, oral cancer is the 3rd most common type of cancer.^[2] Oral and dental health is often neglected by society. Low awareness in caring for oral dental health by visiting oral and dental health service facilities is one of the causes of oral and dental disease in Indonesian society. The 2018 Basic Health Research results state that the largest proportion of dental problems in Indonesia are damaged/cavities/sick teeth (45.3%). Meanwhile, the majority of oral health problems experienced by the Indonesian population are swollen gums and/or ulcers (abscesses) of 14%. Out of 57.6% of the population having oral and dental health problems, only 10.2% access dental health services. One of the efforts to overcome various oral and dental health problems is to provide oral and dental health services.^[2]

Community Health Centers is a health service facility that organizes community health efforts and individual health efforts at the first level, by prioritizing promotive and preventive efforts so as to achieve the highest degree of public health.^[2]

Oral health problems are known as important factors that have a negative impact on daily life and affect the quality of life related to the oral cavity because they can affect a person to enjoy life and socialize. Various studies in the field of Dentistry prove that a person's quality of life is also influenced by the level of oral and dental health of the person.^[3]

The average patient visit to the health center is in an advanced condition for treatment, so it can be interpreted that the level of public awareness in

general to seek treatment as early as possible is still not implemented. People visit when they have a toothache. This can be seen from the low number of visitors who use health services at the public health center. Utilization of oral and dental health services is not only in the form of tooth extraction and fillings, but the public must visit at least once every 6 months.^[4]

Based on the Profile of the Southeast Sulawesi Health Office for oral and dental health service data in 2019 there were 58,333 visits, in 2020 there were 35,798 visits and in 2021 the number of visits to oral and dental health service facilities was 53,643 visits. For South Buton Regency, there are 950 visits. South Buton Regency itself is ranked 6th in which visits are low compared to 11 other Regencies or Cities in Southeast Sulawesi. The utilization of oral and dental health services by the community in South Buton Regency is still lacking when compared to their capacity. If you look at the data on visits that come to check for dental disease, the population is 80,176 people in 2021. The number of dentists at the Public health center in the Sulawesi region Southeastern as a whole numbered 157 people.^[5]

The number of community health centers visits in the last three years has shown an increasing trend, in 2019 the number of visits was 45,656 visits, then in 2020 it increased to 49,026 visits and in 2021 it increased again to 51,759 visits. The increase in visits is an accumulation of outpatient visits as a whole and in oral and dental services there has been a decrease in visits.^[6]

Based on data from public health visits in 2018, the number of visits to oral and dental health facilities totaled 2,650 visits with the most dental problems being pulp disease of 26.9% and the most visits in the age group 6-7 (13,2%). The number of visits in 2019 decreased to 2,492 visits with the most dental problems being pulp disease of 24.3% and the most visits being in the 6-7-year-old group (12,8%). In 2020 the number of visits decreased to 1,040 visits with the most dental problems being pulp disease of 40.3% and the most visits being in the age group 6-7 (26.44%). In 2021 there will be another decrease to 950 visits with the most dental problems being pulp disease of 42% and the most visits being in the age group 6-7 year (21.05%). The most visits were in the 6-7 years age group with the most cases being pulp disease.^[6]

Based on an initial survey conducted by the authors of patients at several Community Health Centers in the South Buton Regency Region, out of the ten patients interviewed, 60% said that they did not know the types of services available at the dental polyclinic, and 40% who already knew the services provided. is in the oral and dental polyclinic, then as many as 70% say dental nurses who sometimes don't smile and greet in serving patients and as many as 30% say nurses are kind and friendly.

Method

This type of research is a quantitative study with a Cross Sectional Study approach, namely to determine the factors related to the utilization of oral and dental services in South Buton Regency, Southeast Sulawesi Province.

Result

The results of this study can be described in table form for each research variable:

Table 1 shows that of the 95 respondents studied, there were 26 respondents who stated that health service facilities were sufficient. Furthermore, from 26 respondents who stated that there were sufficient health service facilities, there were 19 respondents (73.1%) who utilized oral and dental health services. Then from 69 respondents who stated that health service facilities were lacking, there were 28 respondents (40.6%) who used oral and dental health services. This means that more respondents with adequate health care facilities utilize oral and dental health services. The results of the chi square statistical test at the 95% level of confidence ($\alpha = 0.05$) show that the value of

$X^2_{count} = 7.978 >$ the value of $X^2_{table} = 3.841$, which means there is a relationship between health service facilities and utilization of oral and dental services. The results of the closeness test showed that the value of $\phi = 0.290$, which means that there is a weak relationship between health service facilities and utilization of oral and dental services in South Buton District, Southeast Sulawesi Province.

Table 2 shows that of the 95 respondents studied there were 33 respondents who stated the availability of health workers in the existing category. Furthermore, of the 33 respondents who stated the availability of health workers in the existing category, there were 24 respondents (72.7%) who used oral and dental health services. Then of the 62 respondents who stated the availability of health workers in the non-existent category, there were 23 respondents (37.1%) who used oral and dental health services. This means that there are more respondents in the category who use oral and dental services. The results of the chi square statistical test at the 95% level of confidence ($\alpha = 0.05$) show that the value of $X^2_{count} = 10.938 >$ the value of $X^2_{table} = 3.841$, which means there is a relationship between the availability of health workers and the utilization of oral and dental services. The results of the closeness test showed that the value of $\phi = 0.339$, which means that there is a weak relationship between the availability of health workers and the utilization of oral and dental services in South Buton District, Southeast Sulawesi Province.

Table 1.
Availability Distribution Health Service Facilities Based On Utilization of Oral and Dental Services In South Buton District, Southeast Sulawesi Province

Health Service Facilities	Utilization of Oral and Dental Services				Total	
	Take Advantage		Do Not Take Advantage			
	n	%	n	%	n	%
Enough	19	73,1	7	26,9	26	100,0
Less	28	40,6	41	59,4	69	100,0
Total	47	49,5	48	50,5	95	100,0

Table 2.
The Distribution of the Availability Of Health Workers Based On The Utilization of Oral and Dental Services In South Buton District, Southeast Sulawesi Province

Availability of Health Workers	Utilization of Oral and Dental Services				Total	
	Take Advantage		Do not take advantage			
	n	%	n	%	n	%
There is	24	72,7	9	27,3	33	100,0
There is not	23	37,1	39	62,9	62	100,0
Total	47	49,5	48	50,5	95	100,0

Discussion

Utilization of oral and dental health services is the utilization or use of oral and dental health service facilities in the form of oral and dental health services and programs aimed at individuals or groups, with the aim of maintaining oral and dental health.^[7]

The relationship between health service facilities and utilization of oral and dental services

.^[8]States that service facilities will affect consumer perceptions. The more complete service facilities insured by the government and the private sector, the consumer demand for health services in several countries is increasing.^[8] Likewise with the view.^[9] Which states that the completeness of Public health center facilities also determines patients in choosing health services. Public health center need to pay attention to facilities in preparing strategies to attract consumers. The health facilities provided include infrastructure, parking lots, comfortable waiting rooms, inpatient rooms and other supporting services.^[10]

Facilities or facilities are another element that is considered to influence the utilization of health services because they can affect the length of time waiting to receive the desired health service. With the means of waiting time will feel more pleasant.^[11] Facilities or facilities are facilities for medical devices used by public health

center in providing health services including dental health services to overcome the problems encountered and the variety of drugs given are important factors to attract patients who can guarantee continuity of treatment.

This research is in line with research conducted by^[12] showing that facilities have a positive influence, meaning that increased facilities will be able to increase consumer willingness to seek inpatient treatment at Permata Blora Hospital.^[13] Likewise in research of Anggraeni which states that hospital facilities have a significant relationship with the selection of health services at the hospital. This study shows that there is a tendency for respondents who state that the hospital facilities are complete, they will choose services at the Hasanuddin University Hospital.^[14]

The relationship between the availability of health workers and the utilization of oral and dental services

Availability of health workers in this case is the presence of these health workers at the Public health center when serving patients, because even though all the health workers at the Public health center are there, they are sometimes not available when patients need them, this is due to various activities including; training, meetings and so on so that further evaluation is needed regarding the duties and functions of existing staff and it is necessary to take wise steps to overcome this. In

addition, there are still many people who do not know the profession of each health worker, so they do not know their duties at the public health center. The spatial distribution of dentists in Indonesia shows that the distribution of the highest number of dentists is in Java-Bali while the lowest is in Papua with the ratio of dentists to the population in Indonesia is 1:17.105.^[15]

The health workforce is a key component of the health system and is critical to increasing the accessibility of health services. Residential areas with a high ratio of dentists to population will tend to utilize dental services.^[16]

Even though there is a policy of placing health workers in Indonesia using a non-permanent employee system for medical staff, doctors and dentists, the distribution is still uneven, especially in remote areas. The distribution of dental medical personnel in Indonesia is still uneven due to large differences in the number of dental medical personnel between islands.^[17]

One of the policies that aims to assist the government in terms of equal distribution of dentists in Indonesia is Minister of Health Regulation 39 of 2017 concerning the implementation of an internship program for Indonesian doctors and dentists.^[18] However, until now this policy has not been implemented, so there is a need for an integrated policy approach and standardization of the implementation of dentist internship programs in Indonesia. There is a need for policy adjustments for dentists, especially specialist dentists, and additional programs such as conducting teledentistry innovations with a focus on areas where the number of dentists or dental specialists is small.

This research is in line with research conducted by^[19]which states that there is a significant relationship between the presence of health workers and the use of Public health center. Human resources or health workers at the Public health center play the role of implementing health services so that this role is expected to be in accordance with their main duties and functions, education and skills.^[20]

Conclusion

1. There is a weak relationship between health service facilities and utilization of oral and dental services in South Buton District, Southeast Sulawesi Province.
2. There is a weak relationship between the availability of health workers and the utilization of oral and dental services in South Buton District, Southeast Sulawesi Province.

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