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**Oral Potentially Malignant Disorder Awareness Level Among Elder Community In The Belawa Distric, Wajo, South Sulawesi, Indonesia**

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**Abstract**

**Objective:** to assess awareness of senior community in the Belawa distric, Wajo, South Sulawesi, Indonesia regarding their oral soft tissue abnormality specifically regard to Oral potentially malignant disorders, and to assess community ability to descript any pain or uncomfortably origin from their oral cavity.

**Methods:** A self-made questionnaire written in Indonesia language was given to the old aged-adult based on WHO criteria with age range between 45 to 75 years old, who was willing to participate in this study. The questioner consists some picture representing oral mucosal cavity with clinical feature of some ulcers, clinical feature of candida infection, and some clinical appearances of oral potentially malignant disorders.

**Results:** In term of oral mucosal diseases questions, 22 (55%) participants had history of ulceration, however only 5 (45%) participants could specifically point out its previous ulcer location. However, history of pain only stated by 11 (28%) participants, 24 (60%) did not experienced any pain, and 5 (12%) did not answer the questions.

**Conclusion:** knowledge and awareness regarding oral health lesion, especially the associated-potentially malignant lesion was far from ideal in the Belawa Community.

**Keywords:** Belawa, OPMD, Pain, Awareness

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## Introduction

Oral potentially malignant disorders (OPMDs) is a terminology refer to lesion or condition with a risk of malignant transformation. World Health Organization (WHO) defined the OPMD into two subgroups. 1). Precancerous lesion, refer to any morphologically altered tissue which pose higher risk of transformation into malignancy compared to the normal tissue, 2). The precancerous condition is a disease or patient's habit that might not changing the local tissue appearance, however is related to a higher risk to develop certain local tissue into cancer and not necessarily marked by a pre-existing lesion.<sup>1</sup> Epidemiology, OPMD lesion and condition demonstrated wide-different geographical prevalence of 1% - 5% all over the world. It is more common on older population of 50 to 69 years old groups, although some publication reported tendency of this diseases found on patient less than 30 years old.<sup>2</sup>

Knowledge is considered as a key factor in improving and caring towards intraoral health, including in detecting any hard and soft tissue abnormality either from subjective pain experienced or by any morphological changing in the oral cavity.<sup>3</sup> In his publication, Bhat PK *et al* demonstrated from a cross-sectional study that knowledge and better oral health were closely associated.<sup>4</sup> By having more knowledge and frequent encouragement through personal or community education, people outlook toward their oral health will positively impacted.

As a one of early presentation of the oral cancer, OPMD might play urgent role in reducing high morbidity and mortality rates associated with cancer. However, it is one of urgent consideration that public awareness, even the dental community, regarding the sign and symptoms of OPMD entities is far from appropriate.<sup>5</sup> Thus, this study aimed to assess awareness of senior community in the Belawa distric, Wajo, South Sulawesi, Indonesia regarding their oral soft tissue abnormality specifically regard to OPMD lesions, and to assess community ability to descript any pain or uncomfortably origin from their oral cavity.

### Methods

A cross-sectional study was performed at two senior community light exercise clubs established by community health Centre to encourage elder population under its authority area. This study proceeds with the ethical clearance from the Dental Review Board of the Dentistry Faculty Hasanuddin University. Non-probabilistic sample applied for the senior person who were attending their clubs on two scheduled time points.

A self-made questionnaire written in Indonesia language was given to the old aged-adult based on WHO criteria with age range between 45 to 75 years old, who was willing to participate in this study. The questioner consists of 10 open and ended questions begin with personal identification of subject's name, age, sex, occupation and residence. The next item referring any uncomfortable or pain the subject had felt, any ulcer or abnormality in their soft tissue areas with the WHO oral topography code modification, pain or uncomfortable characteristic. Moreover, the questioner listing information regarding subject's device condition following information regarding the devices. Lastly, the questioner consists some picture representing oral mucosal cavity with clinical feature of some ulcers, clinical feature of candida infection, and some clinical appearances of oral potentially malignant disorders.

Before the questioner filled in, participants were informed regarding the questioner and how to answer it correctly, following with inform consent explanation and signed if they have agreed to participate. At all times, one of investigator would present and ready to assist participant by explaining the questioners until they fully understood. Moreover, the investigator would ready to translate the questions into local language whenever needed. Participants have been given time as much as they need to answer the question and allowed to discuss with their peer regarding their oral health situation.

Answer from the questioner subsequently tabulated and categorized accordingly on the excel sheet and the results analyzed using excel Microsoft windows office for window software.

**Results**

This study was followed by 40 participants. Among them 95 % (38 participants) were female dan 5% male (2 participants). Characteristic epidemiology for the study volunteer was depicted in Tabel 1. All female volunteers were house hold mother, while the male participants working to help in the farming. Educational background mostly the same, none of them went through a college.

Tabel 1. Distribution of study population by gender and age

	Age Group			Total
	50 - 60	61 - 70	71 - 80	
<b>Gender</b>				
<b>Female</b>				
No	22	14	2	38
%	58	37	5	95
<b>Male</b>				
No	1	1	0	2
%	50	50		5
<b>Total</b>				
No	23	15	2	40
%	58	37	5	100

In term of oral mucosal diseases questions, 22 (55%) participants claimed to had history of ulceration, 16 (%) were not recall to have any mucosal complain, and 2 (5%) did not answer the question (Graphic 1). It is interesting to note that of eleven participants with ulcer history, only 5 (45%) of them could specifically pointed out its previous ulcer location, while the remaining could not know or remembered the exact location (Insert graph 1). However, history of pain only stated by 11 (28%) participants, 24 (60%) did not experienced any pain, and 5 (12%) did not answer the questions (Graph 2). In the insert of graph 2, of 11 participant experienced pain, 10 (91%) identified their pain in increasing characteristic, 1 (9%) with a pain intensity did not change, and none of them related the pain in intermittent pattern.

Intraoral devices such as prothesis might contribute to any mucosal abnormality. It was tabulated that most participants (29 or 73%) did not wear any intraoral devices, 6 (15%) using full prothesis, and 5 (12%) using partial denture. Out of 9 prothesis wearer have designed and fabricated their prothesis to the *denturist* which are dental technician without any formal education, 1 (4%) went to the dental nurse, and only 1 (4%) went to the dentist for their prothesis.

## Discussion

The present study has demonstrated general view regarding recognition of oral health condition. Lack of public awareness to their oral soft tissue health not only because the health promotional programs are yet to be designed and implemented, but also because health care facilities do not support any informative knowledge as well as access to understand more.<sup>6</sup> This hypothesis concluded from the national statistical data for 2016 and 2017 which demonstrated zero number for diseases of oral mucosal.<sup>7</sup> Logically, this data did not represent health problem in the oral cavity based on theoretical understanding that every and each person in one point of their life had an oral lesion whether they are aware or just being ignorant with the lesion occurrences. Furthermore, the data remains as an ignored an unrepresented major social problem and highly contribute to the morbidity and probably even the mortality.<sup>8</sup>

Our study demonstrated that senior female was more active in the exercise club (Table 1). Reason for this behavior might because culturally, women positioned as a house hold worker makes them easier to manage their time. Other reason probably because male and female ratio in this district reach 94,4 which means every 100 female there would be 94,4 male or less male compared the female. It was hard to assess whether education contribute to community awareness toward oral mucosal health due to homogen educational background of the volunteer. However, Kapoor D *et al* evaluated that education greatly affecting general health awareness via knowledge to access dental services.<sup>9</sup>

The self-reporting history of ulceration covered that 55% (22) participants had oral ulceration once in their live. We did not detailed characteristic of their ulcer in consideration that it would takes more time for the participants to remember. When the question refers to the exact location of the ulcer, only 23% (5) out of 22 participant that care to remember the uncomfortable sites (Figure 1). The volunteer ignorance not only depicted their lack of knowledge regarding oral representation of systemic health, but can lead to delayed treatment if the ulcer associated with any malignancy.<sup>10</sup>

In term of history of non-dental origin pain, only 28% (11) participants remember any uncomfortable, burning mouth, or pain in their oral cavity. This number is lower compared the

reported prevalence of 33.7%, 23%, 58.8% dan 41.6% in some studies from a different range of age.<sup>11-14</sup> This data surely contradicts with the ulceration data where higher participant claimed to had an ulcer in one point of their life. The background for this inconsistency probably due to the pain origin from the ulcer might not too intense to remember, or again, lack of understanding regarding the pain as one way of our body to crying for more care. It is however, worth to note that 91% (10) participant characterized their pain in increasing state, only 9% (1) reported intermittent pain, and none participant reported continuous intensity of pain (Figure 2). Nevertheless, pain is a subjective feeling and is not easy to measure between one person to another. It is also important to highlight that the pain might be origin from systemics background which was in this study demonstrated by only 46% participants include gout, arthritis, high cholesterol, dermatology complain, back pain, indigestion, and hypertension. Data of systemic background was a self-reported measured and need to be confirmed with participants official medical notes.

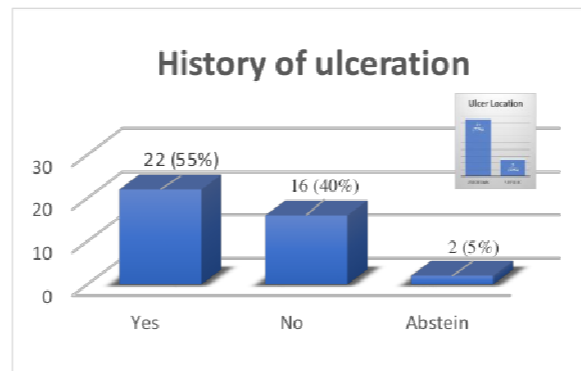
Furthermore, number of participant wearing prothesis in total only 28% with full prothesis design 15% (6), and 12%(5) for partial denture. It is interesting to note that 82% (9) participant favor to see denturist for their prothesis rather than dentist. In Indonesia, in general, denturist usually individual with denture made-heritage skills rather than academical knowledge. The reason behind this is most probably because financial reason where dentist commonly known with higher price than the denturist. Secondly, because villager individual might felt easier and more comfortable to visit denturist due whom mostly are native person from the village.

This study in general support our hypothesis that knowledge and awareness regarding oral health lesion, especially the associated-potentially malignant lesion were far from ideal in the Belawa Community.

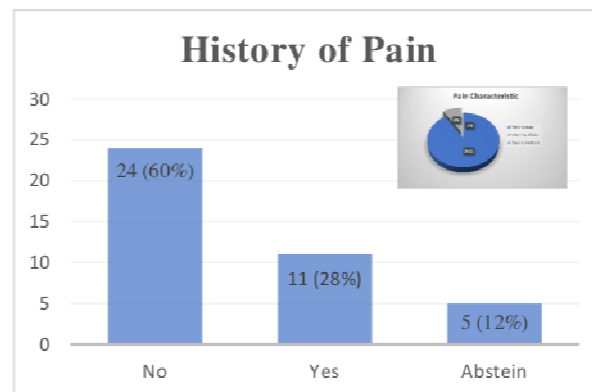
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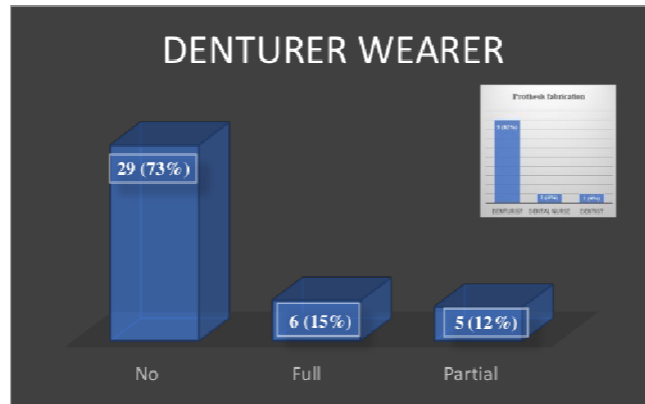
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**Figure 1.** Self-reporting history of ulceration, Insert: Number of participant who can point out their past ulceration location based on modified WHO oral topography



**Figure 2.** Self-reporting history of pain, insert: Pain pattern experienced by study participants



**Figure 3.** Number of study participant wearing an intraoral devices.; Insert graph demonstrated designer and fabrication of participant prothesis.

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