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Profile of Indications for Tooth Extraction Based on the Sociodemographics of the Community in Seram Island Maluku Indonesia during the Moestopo Jelajah Nusantara 2024

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ABSTRACT

Background: The condition of the oral health of the Indonesian people is still in the poor category. Based on Riskesdas 2018 data, in Maluku there are 66.7% of people still have problems with oral health. People who have received oral care from medical personnel are 7.2%. This is due to the lack of health centres with dentists. Seram Islands is one of the islands in Maluku Indonesia that still lacks Dentist personnel at its Sub-District Health Centre. This condition has an impact on the high level of tooth decay experienced by the community from a young age. Low knowledge of the causes of tooth decay, limited services for oral health causes the community to have a mindset, that tooth extraction is the best solution to the dental problems faced, even though clinically the teeth can still be maintained.

Objectives: This study aims to obtain an overview of the profile of indications for tooth extraction based on the sociodemographics of the community in Seram Island, Maluku.

Methods: Retrospective descriptive study analysing secondary data based on sociodemographic characteristics such as age, gender, extracted tooth region and disease diagnosis. The sampling technique was total sampling of all patients who underwent tooth extraction in the implementation of Social Activity Moestopo Jelajah Nusantara 2024 in 8 sub-districts in Seram Island Maluku.

Results: Tooth extraction was mostly carried out in the female group (68.9%) with an adult age category of 26-45 years (47.2%), the most commonly extracted region was the mandibular molar tooth region (50.4%) with a diagnosis of gangrene radix (55.9%).

Conclusion: The indication for tooth extraction in Seram Island Maluku was dental caries that had developed gangrene radix and was carried out mostly in the adult female group and mostly carried out on the lower jaw molar teeth.

KEYWORDS: Indications for Tooth Extraction, Sociodemographics, Tooth Extraction, Dental Caries, Gangrene Radix**.**

ARTICLE DETAILS

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I. INTRODUCTION

Tooth extraction is a procedure that is often performed in dental practice. Tooth extraction is defined as the painless removal of the entire tooth or tooth root with minimal trauma to the supporting tissues of the tooth, so that it can heal properly and there are no prosthetic problems after extraction. (Bonanthaya et al., 2021.; Kidd & Fejerskov, 2016) Indications for tooth extraction include reasons of unrestorable dental caries, reasons of severe periodontal disease, orthodontic and prosthetic reasons, severe fractures, and based on patient wishes due to economic and social factors. (Bonanthaya et al., 2021; Broers et al., 2022)

Data from the Basic Health Research (Riskesdas) in Indonesia in 2018 stated that 57.6% of the Indonesian

population had oral problems with the largest proportion of dental problems being toothache and tooth decay (cavities) which reached 45.3%.(Khairunnisa Kenji et al., 2022) Several studies report that caries is the most frequent reason for tooth extraction. Caries or cavities are the most common cause of tooth extraction in both women and men. (Gossadi et al., 2015) Similar research conducted by Sharif et al, stated that 68.1% of extractions were caused by caries, especially in permanent teeth with the highest percentage at the age of 36-45 years around 32% and for the posterior region in the mandibular first molar around 22.2%.(Sharif et al., 2020) Several studies have shown that dental caries and periodontitis are the most common indications for permanent tooth extraction. Based on sociodemographics, the indication for tooth extraction in both men and women. the most common cause is dental caries, especially in the posterior teeth..(Broers et al., 2022; Kaura et al., 2023)

The condition of the oral health of the Indonesian people is still in the poor category, especially in Eastern Indonesia. Based on Riskesdas 2018 data, in Maluku, Indonesia, 66.7% of people still have problems with oral health. People who have received oral care from medical personnel are 7.2%. This is due to the fact that there are still few health centres that have dentists. Oral and dental disease is a biological, psychological and social phenomenon, so good oral health promotion and good access to services will help in preventive efforts or prevention of oral and dental disease problems.(Wahyuni et al.,2023) Seram Island is located north of Ambon Island, Maluku Province, Indonesia. On Seram Island there are three regencies, namely Central Maluku Regency with the capital city of Masohi and two regencies resulting from the expansion of East Seram Regency with the capital city of Bula and West Seram Regency with the capital city of Piru. Based on observations in the field, Puskesmas (Community Health Centre) in Seram Island Maluku still lack dentists. This condition has an impact on the high level of tooth decay experienced by the community from a young age. Low knowledge of the causes of tooth decay, limited services for oral health causes the community to have a mindset that tooth extraction is the best solution to the dental problems faced, even though clinically the teeth can still be maintained. Research conducted by Warouw, said that 78% of people tend to wait until their teeth are very damaged so that the action taken is tooth extraction. (E Warouw et al., 2014; Wahyuni et al.,2023.)

The high rate of tooth extraction in Indonesian society and occurring at a relatively young age requires attention. Disadvantages of education on oral health is one of the factors that influence people to extract teeth that can still be preserved. In fact, tooth loss can be a disadvantage for patients because it can reduce masticatory efficiency, tooth migration and rotation, problems with the *temporo mandibular joint* (TMJ), and other problems in the oral cavity.(Esberg et al., 2017; Putu et al., 2018)

Moestopo Jelajah Nusantara (MJN) is the excellence programme of the student senate of the Faculty of Dentistry, Prof. Dr. Moestopo (B) University Jakarta, Indonesia. The purpose of the student activity is to gain experience in providing oral health services, besides that this activity is a form of Community Service as part of the implementation of Higher Education. Students under the supervision of supervisors have carried out social service activities once a year since 2000, in the form of assistance for Dental and Oral Health services in areas of Indonesia that are still lacking in oral health services. The services provided are in the form of oral health counselling starting from the elementary school level to the surrounding community, simple tooth extraction and filling and tartar cleaning (scaling) if the infrastructure is adequate, especially electricity. From the data on oral health services, a study was conducted to determine the profile of indications for tooth extraction based on the sociodemographics of the community in Seram Island, Maluku.

II. METHODS

This study is a retrospective descriptive study with data collection methods using secondary data in patient medical records. The purpose of this study was to obtain an overview of the profile of indications for tooth extraction based on sociodemographic data of patients with tooth extraction in the Moestopo Jelajah Nusantara (MJN) activity, namely in the form of age, gender, the region of the extracted tooth and the diagnosis of the disease.

The study population was all patients who underwent tooth extraction in 8 sub-districts in Seram Island, East Indonesia Maluku, namely Teon Nila Serua, Amalatu, Amahai, West Kairatu, Tehoru, Huamual Belakang, Taniwel and West North Seram. The total sampling of tooth extraction actions was 1112 actions. The implementation time of tooth extraction activities was 13 - 21 May 2024. Ethical approval for the study was issued by the Health Research Ethics Commission of the Faculty of Dentistry, Prof. Dr. Moestopo (B) University Jakarta, with number: 104/KEPK/FKGUPDMB)/VI/2024.

III.RESULTS

The results showed that the indication profile of tooth extraction in Seram Island Maluku based on patient sociodemographics from 1112 tooth extraction actions can be explained in the table below:

Table 1. Distribution of Tooth Extraction Based on Gender

		Number (*n*)	Persentage (%)
Gender	Male	346	31.1%
	Female	766	68.9%
	Total	**1112**	**100.0%**

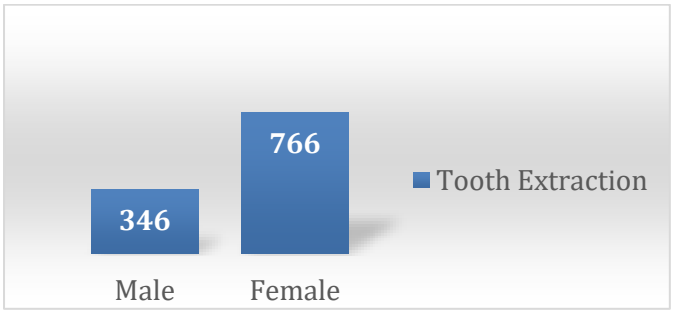

Figure 1. Distribution of Tooth Extraction Based on Gender

Based on Table 1 and Figure 1, it shows that women performed more tooth extractions, namely 766 people (68.9%) compared to men, namely 346 people (31.1%) out of a total of 1112 tooth extractions.

Table 2: Distribution of Tooth Extraction Based on Age

		Number (*n*)	Persentage (%)
Age	5-11 years (Children)	53	4.7%
	12-25 years (Teenagers)	278	25%
	26-45 years (Adults)	525	47.2%
	Above 45 years (Elderly)	256	23%
	Total	**1112**	**100.0%**

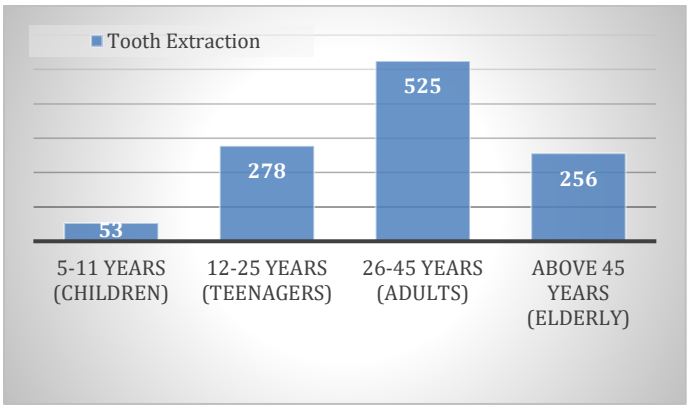

Figure 2. Distribution of Tooth Extraction Based on Age

Based on table 2 and figure 2, it shows that subjects aged 26-45 years in the adult category performed the most tooth extractions, namely 525 people (47.2%), while the least number of tooth extractions were subjects aged 5-11 years as many as 53 people (4.7%) out of a total of 1112 tooth extractions.

Table 3. Distribution of Tooth Extraction Actions by Tooth Region

		Number (*n*)	Persentage (%)
Tooth Region	Upper Front Teeth	145	13.0%
	Lower Front Teeth	57	5.1%
	Upper Premolar Teeth	82	7.4%
	Lower Premolar Teeth	78	7.0%
	Upper Molar Teeth	189	17.0%
	Lower Molar Teeth	561	50.4%
	Total	**1112**	**100.0%**

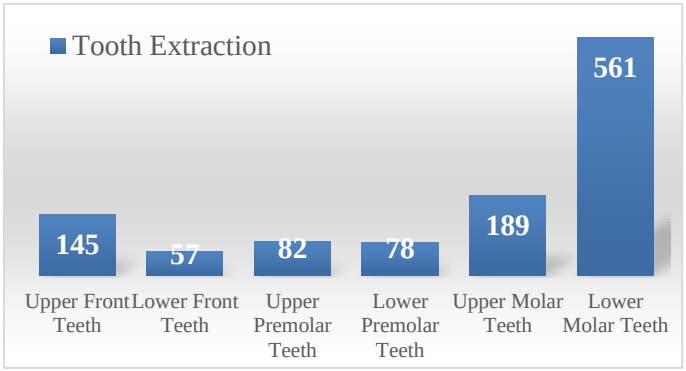

Figure 3. Distribution of Tooth Extraction Actions by Tooth Region

Based on tables 3 and figure 3, it shows that the lower molar tooth region is the most extracted tooth, namely 561 actions (50.4%), followed by the upper molar tooth region as many as 189 actions (17.0%), the upper front tooth region as many as 145 actions (13.0%) and the least performed action is the lower front tooth region, namely 57 actions (5.1%) of a total of 1112 tooth extractions.

Table 4. Distribution of Tooth Extraction Based on Disease Diagnosis

		Number (*n*)	Persentage (%)
Diagnosis	*Gangrene Radix*	622	55.9%
	Gangrene Pulp/Necrosis Pulp	406	36.5%
	Pulpitis Irreversible	38	3.4%
	Chronic Periodontitis	46	4.1%
	Total	**1112**	**100.0%**

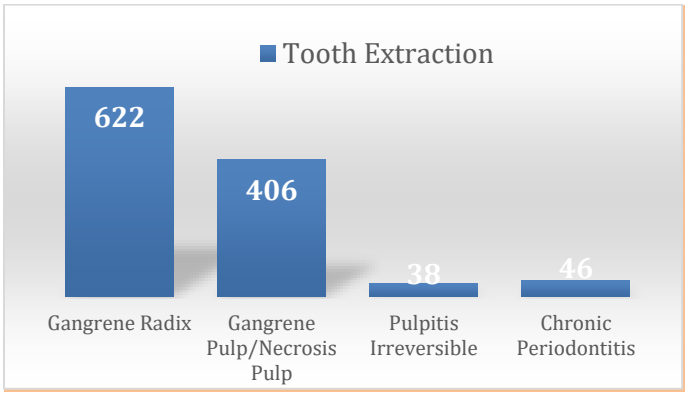

Figure 4. Distribution of Tooth Extraction Based on Disease Diagnosis

Based on table 4 and figure 4, it shows that the most subjects who had tooth extraction had a diagnosis of

gangrene radix, namely 622 patients (55.9%), followed by tooth extraction with a diagnosis of *gangrene pulp* as many as 406 patients (36.5%) and the least was tooth extraction with a diagnosis of *Pulpitis Irreversible*, namely 38 patients (3.4%) out of a total of 1112 tooth extractions.

IV. DISCUSSION

Indication of tooth extraction based on sociodemography is a description of indications for tooth extraction based on demographic and population factors such as age, gender, race, occupation or education. Based on the analysis of the results of the study on the profile of indications for tooth extraction based on the sociodemographics of the community in Seram Island Maluku during the Moestopo Jelajah Nusantara 2024 activity in 8 sub-districts from 1112 dental extractions with a patient age range of 5-84 years, it shows that the group of patients with female gender performed more dental extractions than men (see table 1 and figure 1). Research shows similar results, namely in the study of Sahibzada *et al*, the results of a *cross sectional* study conducted at the Islamabad Teaching Dental Hospital affiliated with Islamabad *Medical & Dental College* Bharakahu, showed that tooth extraction procedures were performed more in women than men (7,420 extractions in women and 5,142 extractions in men from a total of 12555 patients). (Sahibzada et al.,2016.)

Physiologically, women have a higher risk of experiencing dental caries than men, due to hormonal influences that change at certain times such as menstruation, pregnancy and menopause, while these hormonal changes are not experienced by men. For example, during pregnancy women experience hormonal imbalances, causing frequent gum inflammation (*gingivitis pregnancy*), in this condition plaque attachment is easy to occur. During pregnancy, women often ignore oral hygiene, due to the nausea that is often experienced in the first trimester, resulting in a higher risk of dental caries. Factors that cause tooth decay, especially caries, are teeth and saliva, microorganisms, substrates and time. Disadvantages of oral hygiene such as inappropriate brushing, brushing time and selection of toothpaste with flouride can potentially cause tooth decay.(Nur Aini et al., 2018; Sachelarie et al. 2024)

Women consume more carbohydrates and generally eat small amounts but often, while men eat large amounts but with lower frequency. Women often have the habit of consuming sweets or cariogenic foods between meals, especially in girls, which can lead to the risk of dental caries. Women have a lower salivary flow rate and secrete less sIgA (secretory immunoglobulin A) than men. A lower salivary flow rate leads to a higher risk of caries. The eruption time is generally earlier in women's teeth than men's, this is also the cause of the longer duration of the female oral environment to be exposed to bacteria and substrates so that the opportunity for the development of caries will be greater. If dental and oral hygiene is neglected, it will accelerate the process of dental caries. (Kidd & Fejerskov, 2016; Nur Aini et al., 2018)

The profile of indications of tooth extraction in Seram Island Maluku based on age shows that the age group 26-45 years old with the adult category performed the most tooth extractions, followed by the adolescent group (12-25 years old) and the elderly group (above 45 years old), while the least number of tooth extractions were children (5-11 years old) from a total of 1112 tooth extractions (see table 2 and figure 2). This can illustrate that there is still a low level of public understanding of oral health. Based on field analysis and interviews with the local community, service facilities for oral health are still lacking. The number of dentists spread across the sub-district health centre is very small, causing the community to not get maximum service for their oral problems so that tooth decay continues and eventually extractions are carried out.

Low awareness of maintaining oral health from an early age, will cause the increasing age, the indication of tooth extraction will potentially be greater. Based on the profile of the Maluku Provincial Health Office in 2020, as many as 87% of children aged 7-9 years have suffered from caries in their teeth, this will cause the potential for tooth loss when entering adolescence and adulthood to be high if they do not get proper care. (Esther Rehatta & Sintje Corputty, 2023)

The act of tooth extraction is mostly found in the adult group in line with research conducted by Sharif *et al* which states that most of the acts of tooth extraction are in the adult group, namely ages 36-45 years (32.5%) and 26-35 years (28.2%). (Sharif et al., 2020) According to Sahibzada *et al* in their study showed that most extractions (29.7%) were performed in the age group (40-49 years), followed by the age group (30-39), which constituted (29.2%) of the total 1000 extractions, the most frequent cause was dental caries (44.6%). (Sahibzada et al., 2016)

Based on research conducted by Sharif *et al*, it was found that patients aged 36-45 years were the most dominant age for tooth extraction.(Sharif et al., 2020) The same analysis results were found in Alsaegh and Albadrani's research in 2020 which showed that in the age classification of 30-49 years with a percentage of 58.9%, the most teeth were extracted and dental caries was the main reason for the extraction. The most extracted teeth are maxillary posterior teeth, followed by mandibular posterior teeth, then maxillary anterior teeth, and finally mandibular anterior teeth. However, based on the results of existing research, it was found that overall in Indonesia awareness of dentists is still quite low, both in rural and urban areas. Dental caries affects almost the entire population in most countries throughout the world. Interestingly, several countries in Latin America and most industrialized countries show higher *Decay Missing Filled-Teeth* (DMF-T) values than developing countries in Africa and Asia. Dental caries was the main reason for tooth

extraction in the current report. So, to minimize indications of tooth extraction, health promotion to maintain patient oral hygiene in addition to regular visits to the dentist needs to be increased. (Sahibzada et al.,2023)

The profile of indications for tooth extraction on Seram Island, Maluku based on the region or type of tooth extracted shows that the lower molars are the teeth that are most frequently extracted, followed by the upper molars, upper front teeth, upper premolars, lower premolars and the least frequently performed. action is the lower front teeth (see table 3 and figure 3). The results of this study are in line with other research conducted by Sharif et al, based on patient reports at the Faculty of Dentistry, King Khalid University, showing that the posterior teeth most frequently extracted are the mandibular first molars (22.2%), followed by the third molars. maxilla (15.2%). (Sharif et al., 2020) According to Sahibsada et al, there is a large variation in tooth extraction patterns in different countries. Based on research in Saudi, namely Islamabad Dental Hospital, Barakahu, shows that mandibular molars are the teeth most frequently extracted (60%) but maxillary lateral incisors are the least (0.7%). The highest frequency of molar extractions is the mandibular first molar, followed by the maxillary first molar, the mandibular second molar, followed by the maxillary second molar. For anterior teeth, more maxillary anterior teeth are extracted. The percentage of anterior teeth extracted is very high in the age group 50 years and over. (Sahibzada et al.,2016). Alluru et al research stated that the first molars (27.4%) were the dental region where teeth were most frequently extracted, followed by the second molars (25.27%). The lowest known number of extractions involved canines (1.09%). Third molars were reported in 12.08% of cases similar to central incisors. Second premolars were found in 6.59% of cases, followed by first premolars (5.49%) and lateral incisors (3.29%). (Alluru, Andey, et al., 2022) The results of research analysis by Kaura et al show that in general the upper and lower molars are the teeth most frequently extracted with a proportion of 21.85% and 39.07% respectively, covering all age groups, tooth types and gender. This agrees with almost all the literature reviewed by him. (Kaura et al., 2023)

Based on an analysis of the shape and anatomical development of molar teeth, these teeth have quite a lot of pits and fissures and this makes them more susceptible to dental caries. Another reason is that access to hygiene maintenance is more difficult in the posterior area compared to the anterior and the influence of anatomical variations in the posterior teeth. Lower molars are the first teeth to erupt compared to other permanent teeth, so the potential for damage is higher than other dental regions. The teeth that are most rarely extracted are canine teeth because their smooth and prominent clinical crowns and long roots with extensive periodontal attachment make canine teeth more resistant to caries and periodontal disease because access to clean these teeth is easier. (Alluru, Lingamallu, et al., 2022; Kaura et al., 2023)

In general, the causes of tooth extraction are caries, periodontal disease, trauma, periapical disease, orthodontics, and other causes.(Broers et al., 2022). In this study, the profile of indications for tooth extraction on Seram Island, Maluku based on disease diagnosis showed that the majority of tooth extraction procedures had a diagnosis of *Gangrene radix*, then tooth extraction had a diagnosis of *Gangrene Pulp*/*Necrosis Pulp*, then *Chronic periodontitis* and the least was tooth extraction. with a diagnosis of *Pulpitis Irreversible* (see table 4 and figure 4).

Gangrene radix, *Gangrene Pulp*/*Necrosis Pulp*, *Pulpitis Irreversible* is a diagnosis of dental disease which is generally caused by dental caries followed by trauma or fracture of the tooth crown. According to Nayyar et al, most patients consider residual roots to be harmless. Untreated dental caries can result in the loss of the tooth crown and leaving the tooth root. The remaining roots will be susceptible to infection because the dead pulp tissue contains microorganisms. Infection can spread to the periodontal tissue at the apex of the tooth and can cause periapical lesions requiring tooth extraction. (Nayyar et al., 2015) Based on the analysis of the Systematic Review research by Broers et al, it is stated that the indications for tooth extraction for dental and medical reasons reported include other caries with the proportion of all extractions ranging from 36.0% to 55.3%, periodontitis from 24.8% to 38.1 %, trauma from 0.8% to 4.4%, periapical disease from 7.3% to 19.1%, orthodontics from 2.5% to 7.2%, and other reasons from 4.5% to 9, 2%. The proportion of patient requests ranges from 3.6% to 5.9%. (Broers et al., 2022)

Caries and periodontal disease are the main indications for tooth extraction. Sharif et al. research, based on patient reports at the Faculty of Dentistry, King Khalid University, found that dental caries was the main reason for extractions (68.1%), followed by periodontal problems (17.6%) and orthodontic problems (4.8%). (Sharif et al., 2020) According to Sahibsada et al, based on research in Saudi, namely Islamabad Dental Hospital, Barakahu, it was found that caries was the most important reason for tooth extraction, namely 85.3%, followed by periodontal reasons at 7.6% and impaction at 0.5% as the most common cause. Caries was found to be the highest reason for tooth extraction. This disease is considered the most common cause of tooth loss, both in developing and developed countries. (Sahibzada et al.,2016) So based on the analysis of these findings, most of the causes of tooth extraction on Seram Island, Maluku in this study were tooth decay due to caries processes that were not treated so that over time they became porous and left remaining roots (*gangrene radix*) in the oral cavity.

Caries is a disease that causes demineralization of the tooth surface due to acids produced by bacterial metabolism in foods containing sugar or glucose. Caries is a multifactorial

disease caused by interactions between the host, microorganisms, substrate and time. The main factor causing caries is the host, such as cavities, tooth fractures, and saliva. Saliva helps with self-cleaning and maintains the pH of the oral cavity. Dental and oral hygiene is a factor causing caries, because poor oral hygiene (OH) provides a conducive environment for cariogenic bacteria to breed and can increase plaque accumulation. Changes due to the aging process such as decreased saliva secretion can also be a factor in increasing susceptibility to dental and oral problems. Saliva acts as a self-cleaning, antimicrobial and remineralization agent. The role of saliva is very important in the pathogenesis of caries. (Kidd & Fejerskov, 2016; Nur Aini et al., 2018).

The severity of dental caries is also caused by patients delaying or not wanting to undergo treatment, they prefer to take medication to relieve the pain so that the caries process continues and the teeth become porous and only the roots remain. Root residue is extensive caries that cannot be treated, resulting in complete loss of the tooth crown and leaving the root (root residue) or also known as *gangrene radix*. *Gangrene radix* usually has chronic periapical lesions with no symptoms or acute exacerbations due to secondary infections that cause pain. Some of the frequently occurring periapical lesions include periapical granulomas and radicular cysts. (Kartinawanti et al., 2021; Nayyar et al., 2015)

Pulp disease that has the potential to be an indication for tooth extraction is *gangrene pulp*, which is a condition of the tooth with dead pulp tissue (*necrosis pulp*), blood flow is no longer there, and the pulp nerve no longer functions. If the pulp is completely necrotic, the tooth is asymptomatic until symptoms appear as a result of the progression of the disease process into the periradicular tissue. Most *necrosis pulp* occurs due to complications from acute and chronic pulpitis that do not receive good and adequate treatment. Radiographically, if the *necrosis pulp* has not been completely infected, the periapical tissue will appear normal. Clinically, single-rooted teeth usually do not respond to sensitivity tests, however, in multi-rooted teeth, sensitivity tests can sometimes produce positive or negative results depending on the nerves adjacent to which tooth surface is tested. Symptoms of *necrosis pulp* include asymptomatic, visual examination shows a cavity that has involved the pulp and is accompanied by changes in tooth color, objective examination shows percussion (-), palpation (-), vitality (-), on histological examination Necrotic pulp was found and on radiographic examination, a radiolucent area was found in the periapical area. *Pulpitis irreversible* is inflammation of the pulp caused by bacterial invasion that has spread so that the pulp tissue defense system cannot repair and the pulp cannot recover. This *pulpitis irreversible* is a continuation of *pulpitis reversible* that has not been treated. Symptoms of *pulpitis irreversible* include continuous spontaneous pain even without an external cause, pain that really interferes with work, pain that cannot be localized, and prolonged pain if there is an external stimulus such as hot or cold stimulation. (Kartinawanti et al., 2021)

Based on the classification of pulp diseases, treatment of *necrosis pulp* and *pulpitis irreversible* by dentists can be considered based on many factors. Whether the tooth is retained with root canal treatment or tooth extraction must be carefully considered. The most common and generally accepted reason for tooth extraction is caries so severe that it cannot be restored. Whether dental caries is considered irreversible is a decision that must be made between the dentist and patient. The complex treatment issues, time and expense required to maintain severely carious teeth also make extraction treatment an option. (Enur et al.,2012; Putu et al., 2018)

Periodontal diseases such as chronic periodontitis are the cause of tooth extraction due to dental caries. According to Sahibsada et al, tooth extraction due to periodontal disease is mostly found in patients over the age of 45 years. Poor oral hygiene including the build up of plaque, calculus both supragingival and subgingival coupled with age will cause rapid deterioration of the gingiva, especially in the molar region. This is accompanied by bone loss which is cumulative, irreversible, chronic, and will result in tooth loss. (Sahibzada et al.,2016) Periodontal diseases such as chronic periodontitis are the cause of tooth extraction due to dental caries. According to Sahibsada et al, tooth extraction due to periodontal disease is most commonly found in patients over 45 years of age. Poor oral hygiene including the buildup of plaque, calculus both supragingivally and subgingivally coupled with increasing age will cause rapid gingival deterioration, especially in the molar area. This is accompanied by bone loss which is cumulative, irreversible, chronic, and will result in tooth loss. (Broers et al., 2022)

Nearly 5% of reasons for tooth extraction are carried out at the patient's own request, motivated by financial or cultural motives, or psychological reasons such as fear of prolonged dental treatment. This requires better efforts to prevent these diseases and also tooth loss. It is also recommended to increase public awareness to maintain intensive oral hygiene. (Broers et al., 2022) The high number of tooth extraction cases in the adult age group on Seram Island, Maluku is caused by many factors such as lack of education on maintaining dental and oral health, cariogenic diets such as consumption of foods that tend to be sour and sweet, awareness of dental care, tooth loss due to related periodontal disease. age, as well as the increased risk of comorbidities in adults. The main cause of the above problems is the lack of health service facilities, especially dental and oral health, such as there are no dentists providing services at the community health centers. Several sub-district health centers visited during the Moestopo Jelajah Nusantara activities only found 2 dentists from 8 health centers that were locations for social service activities. Based on field findings and physical

examinations, it was found that the risk of comorbidities in adults is very high, such as high blood pressure.

Oral disease is a biological, psychological, and social phenomenon. Community sociodemographics, especially educational and occupational factors, also influence the level of understanding of tooth loss which is more common in people with low education and economic conditions. The level of education can represent a person's level of ability and concern for the information obtained. (Putu et al., 2018) The results of the study explained that the frequency of housewives (IRT) was 58 people (35.6%) with jobs that dominated tooth extraction due to caries. The high proportion of tooth extraction procedures is related to low levels of knowledge and can have an impact on a person's previous education. (Fadilah et al., 2022)

Education and employment factors influence a person's behavior in maintaining oral health, but no data was found in this study. Someone with a higher educational background tends to have a greater opportunity to obtain a type of job with a higher salary or income. Based on the type of work, it can be seen that someone who frequently interacts with other people acquires more knowledge and information compared to someone who doesn't work or just stays at home without interacting with other people. Jobs with an educational background and middle income will consider the nominal price and type of service, while high levels of education and income will prioritize the quality of service and not consider the nominal price determined. Groups with low education and income prefer tooth extraction because the cost of treatment is cheaper than restorative treatment. (Fadilah et al., 2022)

An effective dental and oral health promotion strategy must ensure the availability and access to appropriate dental and oral health services. Governments and non-governmental organizations have a responsibility to improve health and encourage individuals and communities to take responsibility for their oral health. Dentists must play an active role in changing perceptions regarding dental and oral health by carrying out health promotions so that oral health becomes an inseparable part of general health. Health care providers have a social obligation to promote public health through acts of community service, community service, or political action. Based on research results, dental caries is still common in our society and is a threat that often results in tooth decay and even tooth death. Therefore, there is a need for a preventive approach to dental and oral health rather than curative, both through early dental and oral health education and outreach to the public about simple tips for maintaining oral hygiene by teaching them how to brush their teeth correctly. and have knowledge about the causes and risks of dental and oral diseases.

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CONCLUSIONS

Profile of indications for tooth extraction based on socio-demographics of the community on Seram Island, Maluku during the Moestopo Jelajah Nusantara 2024. From the research results it can be concluded that indications for tooth extraction are mostly carried out in the female group (68.9%) in the adult age category, namely 26-45 years (47,2%), the region with the most extractions was the mandibular molar region (50.4%) with a diagnosis of *gangrene radix* (55.9%) caused by dental caries. So the indication for tooth extraction on Seram Island Maluku is dental caries that has experienced *gangrene radix* and is done mostly on adult women and is mostly done on lower jaw molar teeth.

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CONFLIC TO FINTEREST

None declared

ETHICAL APPROVAL:

The study was approved by the Health Research Ethics Commission

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