ORIGINAL ARTICLE

Oral Health Beliefs, Perceptions and Utilisation of Oral Health Care Services among the Indigenous People (*Orang Asli*) in Pahang, Malaysia: A Qualitative Study

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ABSTRACT

Introduction: *Orang Asli* refers to the indigenous people of Peninsular Malaysia, representing 0.6% of the Malaysian population. Vast inequality was observed regarding oral health beliefs, behaviour, and utilisation of oral health services between the *Orang Asli* and non-*Orang Asli*. The aim of the study was to explore the oral health beliefs, perceptions, and oral health service utilization behaviour among *Orang Asli* in the district of Bera, Pahang, Malaysia. **Methods:** *Orang Asli*'s oral health beliefs and perceptions of oral healthcare service were ascertained through four FGDs. Nineteen participants from Bera's semi-urban and rural *Orang Asli* communities were convened. Emerging themes from the qualitative data were analyzed using thematic analysis. **Results**: *Orang Asli* believed that oral health is essential for an individual's function and aesthetics. They are also aware that inadequate oral hygiene care will result in tooth decay and gum disease. Most of the *Orang Asli* that chewed betel nuts believed that limestone paste could cause oral cancer. The main barriers to *Orang Asli* accessing oral healthcare services were time constraints and distance to the nearby clinic. **Conclusion:** The *Orang Asli* believed oral health care is essential in ensuring a healthy oral condition. Despite their generational belief towards traditional healers and medication, *Orang Asli* in Bera had a perceived positive acceptance towards oral healthcare services.
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Keywords: Oral health beliefs, oral health care services, oral health perception, indigenous people, *Orang Asli*

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INTRODUCTION

Indigenous people, or *Orang Asli*, are the oldest minority inhabitants of Peninsular Malaysia, representing 0.6% of the Malaysian population. The Malaysian Department of *Orang Asli* Affairs (DOAAM) reported around 178,197 *Orang Asli* lived in peninsular Malaysia (1). Most of the *Orang Asli* populated the state of Pahang and Perak rainforest, which constituted around 70 per cent of the entire *Orang Asli* population. In the state of Pahang, the majority of the *Orang Asli* population consisted of the ethnic group of Proto-Malays (55%), followed by Senoi (43.6%) and the Negrito ethnic (1.4%). Most of the *Orang Asli* in Bera, a district in the state of Pahang, are from the Semelai sub-ethnic group (Proto-Malay ethnic group), with 96.13%. The remaining population of *Orang Asli* Bera was from the sub-ethnic Jakun (3.87%) (1,2).

Previous local studies classified the *Orang Asli* as disadvantaged and marginalised group of minorities, with almost 77% living beneath the poverty line (3,4). In addition, according to the Malaysian Ministry of Education, only 30% of the *Orang Asli* completed their secondary school education which was less than half of the 72% of the rest of the Malaysian population (5). In terms of the *Orang Asli*'s source of income for their livelihood, a local study in the state of Terengganu found that most of the *Orang Asli* in Kenyir had an individual monthly income of less than RM500, with the majority of them were self-employed, collecting forest produce. The Kenyir *Orang Asli* mostly only completed their primary school-level education (6).

In terms of their general health, due to the modernisation that influenced the lifestyle of the *Orang Asli*, the trends of conventional infectious diseases have shifted

to non-communicable diseases such as obesity and cardiovascular-related illness (8). With regards to the oral health disease burden of the *Orang Asli*, it was reported that 67% had dental caries while 66% of them had periodontitis (7).

In addition, according to the Ministry of Health (MOH), in 2019, the oral health status of the *Orang Asli* shows 18.16% had dental caries, and 6.27% had periodontal problems. Regarding their oral health service utilisation pattern, almost 30% had received dental restoration, 5.31% had prophylaxis treatment, and 5% had their permanent teeth extracted (8).

To provide context, Bera is one of the eleven districts located in central Pahang. The majority (96.13%) of the *Orang Asli* in Bera are from the Semelai sub-ethnic group (Proto-Malay ethnic group). The remaining minority were from the Jakun sub-ethnic (3.87%) (9). The population of the Semelai tribe can be found mostly at Tasik Bera, Sungai Bera, Sungai Teriang, Paya Besar and Paya Badak. They also can be found at the state border between Pahang and the state of Negeri Sembilan. Most of the *Orang Asli* in Bera lived within the palm plantation areas and worked as oil palm workers or rubber tappers. Due to the Malaysian Government Resettlement Programme of *Orang Asli* villages in Bera, the remote villages were grouped to provide better access to public facilities and the neighbouring town.. Collectively, there were a total of 36 *Orang Asli* villages in Bera (10).

To the best of the author's knowledge, minimal research has been conducted recently that explores *Orang Asli*'s current beliefs and perceptions concurrent with the country's rapid development in recent years. Furthermore, no qualitative studies have been done regarding *Orang Asli*'s oral-health-related behaviour concerning oral health problems (11). Thus, this study explores the current oral health beliefs, perceptions, and utilisation of oral health care services among the indigenous (*Orang Asli*) in Bera, Malaysia.

MATERIALS AND METHODS

Ethical clearance

Ethical approval was obtained from the Research Ethics Committee, Faculty of Dentistry, Universiti Teknologi MARA (UiTM) (ID FRC/01/2022 (HE/8/13)). The conduct of the research was also given clearance by the Malaysian Department of *Orang Asli* Affairs (DOAAM).

Study design and setting

This is a qualitative study with a phenomenology design that focused on the participants' subjective experiences and interpretations of their beliefs and perceptions. The researcher convened four FGDs among a group of Semelai-sub-ethnic *Orang Asli*. Two localities of *Orang Asli* villages in Bera District, namely Bapak Village (rural) and Bukit Gemuruh Village (sub-urban), were chosen. FGD uses open-ended questions to explore the 'how' and 'why' of a particular issue, which then progresses to an in-depth understanding of the context's culture from the study participant's point of view (12,13). The FGD method has been widely used in healthcare studies such as medicine and nursing and, more recently, in dentistry, especially in the use of a guided group discussion format (14). FGD also elicits perceptions, ideas, opinions and thoughts about specific areas of concern, providing rich data from multiple perspectives. Furthermore, FGD offers an additional layer of understanding where quantitative probing would not be possible (15).

Study population and sample

The study sample included consented *Orang Asli* adults aged 18 years old and above, able to communicate in Bahasa Melayu or Semelai language and permanent residents of the village. The snowball sampling method was implemented in selecting the participants with the help of the head of the village (known as Tok Batin) and an officer from the DOAAM.

A total of 19 participants fulfilled the inclusion criteria participated in the FGD. Ten participants were from the sub-urban area (Bukit Gemuruh Village), and nine were from the rural area (Bapak Village). The participants were divided into two groups based on the localities of the participants and further divided according to age group; 18-45 years old and 46 years old and above. Each focus group consisted of 4 to 5 participants (12) and one interpreter (Fig. 1). The researcher divided the FGD group according to the participants' age to ensure the process of eliciting ideas among the participants were not interrupted. The senior participants within the *Orang Asli* community were appropriately placed among the participants of a similar age group to avoid any domination by the older group in the discussion among the younger participants.

Data collection tools and validation process

The FGD semi-structured interview guide were developed based on the literature review of previous studies. The interview guide was constructed before being validated by the expert panel, consisting of two dental public health professionals and one special care dentistry consultant (16). The experts have given the comment on the relevance, clarity, simplicity and ambiguity of the questions through the use of the Content Validity Index (CVI). The Malay version of the interview guide had also been verified to have attained conceptual and item equivalence with the original English version by a fluent expert in both languages. The interview guide consisted of two domains with eleven open-ended questions inclusive of probing questions to explore the views regarding the oral health beliefs, perceptions, and utilisation of the oral health care services among the *Orang Asli*. Face validation was done with a certified translator and the Tok Batin

for the appropriate time, length of the FGD, and the suitability of the questions to be asked to the participants (17). The participants' demographic details, including age, gender, marital status, level of education, and occupation, were collected using a written form before the FGD commenced.

During the FGD, the Semelai language was translated by an independent translator who was proficient in both Bahasa Melayu and Semelai languages for the written consent forms. However, the main language during the FGD is the Malay language. If some terms in the Semelai language are used, the translator will translate the terms into Malay for transcription. All of the participants can generally converse in Malay, with some words spoken in Semelai language.

Focus Group Discussion Protocol

Three individuals facilitated each FGD group; a facilitator (the researcher), a note taker and an assistant who monitored the technical aspects of the session, namely the audio recording and seating arrangement and ensured that the sessions were uninterrupted.

Before each session, the facilitator explained the purpose of the study, the ground rules, and the steps involved. The consent forms are distributed prior to every session. The assertions throughout the group discussion were recorded using two digital audio recorders, which aided with the analysis and verbatim transcriptions. The note-taker assisted with the FGD sessions and recorded the field notes. All of the sessions lasted for a duration of an hour (17).

Data management and analysis

The main investigator and an independent transcriber transcribed the interviews into data files and analysed the transcripts using Nvivo Plus 12™ software. The translation process of the verbatim from Malay to the English language was done by a certified translator who is fluent in both Malay and English language. The inductive method and thematic content analysis were utilised for data analysis. The inductive method analyses data using little to no predetermined theory, structure, or framework and derives the structure or analysis from the data itself (18,19).

The rigour of the research findings

In order to ensure the rigour of the findings of this research, the triangulation approach was achieved using different data sources and the investigator's triangulation approach (20).

In this research, the researcher and another two colleagues were appointed to independently analyse the findings before collating the information. Member-checking method was employed whereby the summaries of findings were presented back to the key participants to determine whether they were accurate reflections of their experience.

RESULTS

Demographic characteristics of participants

Nineteen *Orang Asli* Semelai (OAS) consisted of nine males and ten females involved in the FGD. Ten participants were aged 18 to 45 years, and sixteen were married. Twelve participants had secondary school qualifications, while two had no formal education (Table I).

Table I: Demographic characteristics of participants (*n*=19)

Characteristic	n	%
Gender		
Male	9	47
Female	10	53
Age (years)		
18 to 45	10	53
46 years and above	9	47
Marital Status		
Single	3	16
Married	16	84
Education		
No formal education	2	11
Primary school	4	21
Secondary school	12	63
University	1	5
Occupation		
Rubber Tapper	8	42
Self employed	2	11
Gardener	2	11
Retiree	1	5
Operation Assistant	1	5
School Attendant	1	5
Businessman	1	5
Housewife	2	11
Unemployed	1	5
Language		
Able to speak Malay	19	100
Unable to speak Malay	0	0

There were four main themes, eight themes and twenty-two associated subthemes that were identified based on the FGDs. The thematic analysis revealed these emerging themes; self-evaluation of oral health, the importance of good oral health, oral health knowledge, dental pain management, oral health habits, beliefs on areca nut, limestone paste and smoking on health and oral health, perception of oral health care services and barriers to obtaining the oral health care services (Table II).

Self-Evaluation of Oral Health

In terms of the emerging subthemes regarding self-evaluation of their oral health, the OAS expressed that they were both satisfied and concerned about their current oral health condition.

Satisfactory oral health

The OAS indicates that they were satisfied and felt good about their oral health.

No problem at all. I have never experienced any dental problems since child. No fillings have ever been done

Table II: Main themes, emerging themes and subthemes from the FGD

Main Themes	Themes	Subthemes
Perceived oral health	**Self-evaluation of oral health**	Satisfactory
		Poor condition
	Importance of good oral health	Impact of oral health on functions
		Impact of oral health on aesthetics
	Oral health knowledge	Improper oral hygiene care will cause dental problems
		A sugary diet will cause tooth decay
		Knowledge of other oral diseases
Oral health practice	**Dental pain management**	Self-medicate before seeking the dentist
		Practicing traditional and modern medicine
	Oral health habits	Areca nut chewing
		Toothbrushing with fluoridated toothpaste
		Regular dental checkup
Oral health beliefs	**Belief on areca nut, limestone paste and smoking on health and oral health**	Areca nut has side effects on health and oral health
		Limestone paste causes oral cancer
		Smoking and areca nut chewing cause oral cancer
Utilisation of oral health care services	**Perception of oral health care services**	Positive acceptance of the dentist's visit
		Positive acceptance towards dental treatment
		Agreement on seeking dental treatment
		Perception of not needing dental treatment
	Barriers in obtaining oral health care services	Distance to the nearby clinic
		Fear towards dental pain and dental treatment
		Time constraint

(P07, FGD 1, female, sub-urban)

I have good teeth condition because I take a toothbrush every time I shower. (P17, FGD 4, female, rural)

Poor condition oral health

However, there were some OAS who expressed their concern about their poor oral health condition.

Sometimes it can be problematic if you don't take care of it. I have of a lot of damaged teeth, smelly breath and pain. (P13, FGD 3, male, rural)

I have experienced tooth extraction due to a decayed tooth. I'm not feeling okay with my teeth as there are in poor condition. (P08, FGD 2, female, sub-urban)

Importance of Good Oral Health

Subsequently, they continued the discussion with the importance of good oral health. The FGD participants emphasised that they were primarily concerned about these two aspects below:

Impact of good oral health on functions

Most of the OAS agreed on the importance of having good health as it is important for mastication and the feeling of discomfort with oral diseases.

It's difficult with missing teeth. The pain not only involves the teeth but can linger up to the head. During eating, the food debris can be easily passed through the gap of missing teeth. (P01, FGD 1, male, sub-urban)

Yes, very important. It's hard to chew. If I wear dentures, it doesn't feel the same as real teeth (P02, FGD 1, male, sub-urban)

Impact of good oral health on aesthetics

Without hesitation, the OAS also were concerned about their appearance and having good oral health played the central part in appearing confident in the community.

… I feel that I look hideous with missing teeth. Oral health care is important. (P04, FGD 2, female, sub-urban)

… It is crucial for self-confidence as we interact with the community. There are some people wearing braces to have nice teeth. (P19, FGD 4, female, rural)

Oral Health Knowledge

The majority of the OAS, shared their opinions on the cause of oral health problems that could arise from their own experience. They also gained basic knowledge of oral health care from the oral health promotion programs they had attended.

Improper oral hygiene care cause dental problems

The OAS concurred that improper oral hygiene care, such as toothbrushing, will cause various dental problems.

…dental problems can occur if there is a lack of toothbrushing, and I feel discomfort if I skip the toothbrushing. (P10, FGD 2, female,sub-urban)

Due to improper toothbrushing because of not having toothpaste and toothbrush. There is gum bleeding present. (P16, FGD 4, female, rural)

A sugary diet causes tooth decay

The OAS also added they believed that tooth decay is caused by consuming a sugary diet.

Lack of toothbrushing will cause decayed teeth. The tooth can also decay by consuming sweet foods and cold food like ice cubes. (P04, FGD 1, female, sub-urban)

Tooth decay will occur by eating lots of sweet foods and if we skip toothbrushing after a meal. (P11, FGD 3, male, rural)

Dental problem experiences

The discussion continued as they shared their opinion regarding oral health problems, which are decayed teeth, gum bleeding and mouth ulcers.

There is gum swelling and got a salty taste for an unknown reason. (P15, FGD 4, female, rural)

…it is essential because it can cause bad breath and toothache with poor dental care. For example, the ulcer can cause discomfort and difficulty while eating. (P16, FGD 4, female, rural)

Dental Pain Management

The OAS shared various methods for managing dental pain or oral health problems they had experienced.

Self-medicate before seeking a dentist

Most of the OAS practised self-medicate when they had dental pain. They will get any painkillers, pills or related medicine that is available at the nearby pharmacy or convenience store. Until the pain or dental problems persist, then they will seek treatment from the dentist.

Before going to the clinic, I take medicine first, like Panadol. (P03, FGD 1, female, sub-urban)

It is important to remove the pain, so I will gargle with warm salt water and brush my teeth. If still not working, I will go and see the dentist to get the painkillers. (P15, FGD 4, female, rural)

Practising traditional and modern medicine

Some of the OAS still practice traditional medicine as passed down by their ancestors for generations. Previously, they used to seek medication from traditional healers, but the healers are difficult to find nowadays. They also rinse their mouth with warm salt water to reduce toothache or any discomfort. In addition, the participants also believed that modern medicine would be successful as a treatment.

..Get the painkillers pills from the dentist. (P08, FGD 2, female, sub-urban)

I will always gargle with salt water. In previous times, there was no clinic available. Therefore we used the hedgehog thorn to poke the pain area in the mouth. This method is still being used nowadays. Only there are limited hedgehogs that can be found. It is known to be a painkiller. I will seek help from a shaman. However, I will see the dentist if the pain persists. It is hard to find a shaman nowadays. (P01, FGD 1, male, sub-urban)

I used a spell to eliminate the pain, get the healing water from the shaman, and whoever could heal the pain. Sometimes, I use the steaming method using the seed of eggplant. (P16, FGD 4, female, rural)

Oral Health Habits

Overall, the OAS reported similar oral habits as they practised the same oral health care routine by toothbrushing with fluoridated toothpaste. They also have a strong habit that was accustomed to them from generation to generation, which is the areca nut chewing.

Areca nut chewing

All the participants stated that areca nut chewing is part of their culture, and they served the areca nut and betel leaf to the guests who came to visit their house.

Yes, it causes cancer. I watched a video from Nas Daily and found out about the banning areca nuts because of high addiction. However, areca nut chewing is part of our culture. (P09, FGD 2, female, sub-urban)

Toothbrushing with fluoridated toothpaste

Most of the OAS practised oral hygiene care with toothbrushing and fluoridated toothpaste as they were known as basic care for oral health.

I'm using the soft bristle toothbrush to avoid damaging the gum. I will change my toothbrush after 2-3 months. I've been using toothpaste for teeth whitening. I also use Colgate toothpaste because the television advertisement convinced me regarding the benefit of fluoride for teeth strength. (P11, FGD 3, male, rural)

Regular dental check-ups

Some of the OAS regularly did dental examinations at a nearby clinic.

I brush my teeth using toothpaste with fluoride and do a regular dental checkup every six months. (P09, FGD 2, female, sub-urban)

Beliefs on Areca Nut, Limestone Paste and Effects of Smoking on Oral Health

Continuing the discussion on their oral habit of areca nut chewing, they shared opinions on their beliefs on the effects of areca nut, limestone and smoking on oral health.

Areca Nut has side effects on oral health

The areca nut was believed to cause red staining, a feeling of discomfort in the mouth and caused pain in the oral cavity if consumed in high amounts. More side effects of areca nut chewing on oral health as quoted from them:

The taste of areca nut is bitter. It can cause red staining to the teeth. Also, it can cause damage to the teeth. The elderly also likes to eat the areca nut and feel discomfort in the throat area. (P04, FGD 1, female, sub-urban)

Chewing areca nut and betel leaf can cause irritations at the side of the inner cheeks and between the gum. I'm no longer chewing the areca nut because of discomfort in the cheek area and persistent pain for a week. (P16, FGD 4, female, rural)

Limestone paste causes mouth cancer

OAS also believe that limestone is the leading cause of mouth cancer, not areca nut.

There is no problem with the areca nut and the betel leaf. The culprit is limestone. The material in the limestone might be sensitive to some people. Consuming the limestone paste can cause swollen gum, and the limestone used to be produced using natural products such as the shell. The ingredient of modern limestone paste might have chemical materials and can cause cancer. (P02, FGD 1, male, sub-urban)

Smoking and areca nut chewing cause mouth cancer

Most participants were in agreement that smoking and areca nut chewing could cause mouth cancer, as quoted below:

Yes, I'm aware that smoking can cause cancer, but I can't stop the habit because I am already addicted. (P17, FGD 4, female, rural)

Yes, I've seen a person that took betel leaf and areca nut every day and has mouth cancer. However, the Orang Asli still continues the habit due to addiction. (P18, FGD 4, female, rural)

Perception of oral health care service

All participants positively welcome dentists to come to their village to deliver treatments to the community.

Positive acceptance towards dentist's visit

The majority of participants were welcome the dentists to come to their village as it was convenient for them to save time to travel to the dental clinic.

I encourage the dentists to come for the treatments because it is convenient for the villagers, and they like when an outreach program is held in the village. The villagers don't have to travel to get the treatment at the clinic. Not everyone is privileged to come by car. (P19, FGD 4, female, rural)

Positive acceptance towards dental treatments

The participants were open to any treatment needs which benefitted their oral health.

I have no problem getting the treatment. There are no more villagers practising traditional medicine. I will get the treatment at the Dental Clinic in Padang Luas. (P01, FGD 1, male, sub-urban)

I will go straightaway and go see the dentist. I will get myself painkillers medication if I undergo a teeth extraction. It is okay for me to have the filling treatment. Better to have professional advice from the dentist as they know which medicine might cause any harm or allergies which can be avoided. (P06, FGD 2, male, sub-urban)

Agreement on seeking dental treatment

Without hesitation, they would always agree to attend to dental clinic, regardless of whether it is government or private dental clinic.

I will go to the clinic to consult on my dental problems. If I need filling treatment, I will agree to proceed. (P10, FGD 2, female, sub-urban)

I only receive dental treatment when I need to, and I'm a regular dental attendee for a dental check up. I also attend a private dental clinic. (P11, FGD 3, male, rural)

Perception of not needing dental treatment

They believed they did not need dental treatment as they had never experienced any dental pain.

I'm not sure because I never came to the clinic, and I don't need to go. (P07, FGD 2, female, sub-urban)

I will get the treatment only when I have to. (P12, P13, P14, FGD 3, male, rural)

Barriers to Obtaining Oral Health Care Services

At the end of the discussion, OAS shared the opinion of the main challenges and barriers in receiving oral health care services.

Distance to a nearby clinic

They protested that the nearby dental clinic was far from their home and felt that it was better to have proper transportation than riding a motorcycle.

It was challenging to go to the clinic when I was sick because I felt tired. The distance from the house to the clinic is quite far; sometimes, I will ask somebody for help to send me to the clinic. (P01, FGD 1, male, sub-urban)

Logistics problems were due to the distance from the clinic, even though there was a new clinic in Tembangau nearby. It is best if the dentist can come more often to the village for the Orang Asli's convenience; not everyone can afford to have a car. (P11, FGD 3, male, rural)

Fear towards dental pain and treatment

The fear towards pain was often a challenge for them to seek dental treatment at the clinic.

My main challenge would be the fear of pain while receiving dental treatment. (P03, FGD 1, female, sub-urban)

I have no problem visiting the dental clinic because it is only nearby. As for the challenge, I fear the pain caused by the treatment. (P02, FGD 1, male, sub-urban)

Time constraint

Due to their busy daily activity at work =, they had limited time to come to the dental clinic and get treatment.

No free time due to work (rubber tapping), and I need to fetch the children from school in the afternoon. I need to take leave if I attend the clinic. (P15, P16, FGD 4, female rural)

I'm too lazy to deal with clinic procedures as the government clinic due to long waiting time and can't follow our own time. (P19, FGD 4, female, rural)

DISCUSSION

Perceived Oral Health

The majority of participants responded that they had satisfactory dental health. However, this self-evaluation may not accurately reflect the state of one's dental health and the extent of treatment needs. The incidence of poor self-evaluation of oral health was reported to be 37% in a 2017 study from Australia on access, literacy, and behavioural correlates of poor self-rated oral health among an Indigenous South Australian community. Sociodemographic characteristics like age and access problems like delaying visiting the dentist due to the cost or not knowing how to make an emergency appointment were also associated with poor oral health by the individual (23). This study found that most participants knew the importance of good oral health. This high importance given to oral health is consistent with previous studies that show Indigenous communities are concerned about oral health. The participants' understanding of oral health's effects and those of oral disease, as well as the presence of other competing health issues and family responsibilities, were demonstrated to affect the relevance of oral health in the community (23).

Oral Health Practice

The majority of the *Orang Asli* Semelai used self-medication in their initial attempts to deal with the dental pain (25). They will purchase any painkiller pills or similar medications offered at the nearby pharmacy or convenience store. Self-medication seems practical because it is the fastest way to relieve pain which is supported with research by Saub et al in 2001 (11). They only visited a dentist for treatment if the discomfort or dental issues persisted. As for modern medicine, the participants believed that modern medicine would help relieve the pain and reduce the swelling in their mouths. Some OAS continue to practise the traditional medicine they learned from their ancestors and believe it is sustainable for many generations. For instance, to relieve a toothache or any mouth discomfort, they gargle with warm salt water and seek the remedy from the traditional healers, although it was hard to find then.

They also believed the areca nut was used to strengthen teeth and used "sesebeh leaf" as an anaesthetic substance. Because there were no clinics back then, people used hedgehog thorns to puncture the painful areas in their mouths and gargled them with salt water. The hedgehog thorn method is still practised presently as it is well known for its ability to relieve pain. Furthermore, to obtain the healing water, they also ask the shaman for assistance. If the pain persists, they will consider a visit to a dentist. They also used the steaming technique, which they believed might eliminate the germs from the tooth cavity and relieve discomfort. These practices were used across generations as reported by the study by Kadir and Yassin in 1996 (25).

Oral Health Habits

Most *Orang Asli* Semelai stated that they actively chew areca nuts. It is a cultural practice of hospitality to present the guest with areca nuts, betel quid and limestone paste. Most of them planted the areca nut plant within their home compound. They started eating areca nuts at an early age. Sometimes, people will trade with each other for areca nuts if there are none left. Moreover, they further claimed that the areca nut could induce intoxication and euphoria. Due to its rigid structure, they also claimed that the areca nut could strengthen their teeth. It was difficult for them to stop this habit as they were already addicted. It is correlated with other research that found most *Orang Asli* children had experienced chewing betel nuts at least once daily. When children first started chewing betel nuts, research has shown that they did so by copying their parents, grandparents, and other community members (26).

Many OAS practised toothbrushing with fluoridated toothpaste as their oral hygiene routine. They believed that improper and lack of toothbrushing could cause tooth decay and other dental problems. A participant used mouthwash as an aid method in oral hygiene care. They claimed to know about fluoride but lack of information on its benefit. Toothbrushing seems very easy for the participants to practice in their oral care routine (25).

The Beliefs on Areca Nut, Limestone Paste and Smoking to Oral Health

OAS believes that areca nut chewing affects oral health. They asserted that areca nut chewing could cause red staining to the teeth surfaces and cause irritation to the inner cheeks. The participants also agreed that areca nuts could cause discomfort to the throat as they experienced the same symptoms as their ancestors.

Most of them believed that smoking habits and areca nuts could cause mouth cancer. They obtained knowledge regarding the side effects of smoking and areca nuts through an oral health promotion program by the government outreach dental team. It is known that oral cancer is at increased risk due to betel nut chewing alone, regardless of cigarette use. A study in India has proven the relative risk rises when smoking, drinking, and betel quid are combined (27,18).

Some participants, however, stated a contrasting idea of cancer caused by areca nut. They strongly believed that mouth cancer was caused by consuming the limestone paste even though they were aware that areca nut has side effects of mouth cancer. They hold up their belief as their ancestors consumed the areca nut for a lifetime without getting any complications. They claimed that the current limestone paste contains chemical ingredients that can irritate the mouth. Unlike during their ancestors' time, they have not consumed the limestone paste but make their own paste from snail shells (*Pomacea spp.*).

The Utilisation of Oral Health Care Services

Many OAS accepted the dentists' visits to their community to deliver the treatments. They even encouraged the dental team to visit their village so they would not have to drive since most of them did not have a car. In addition, receiving the therapies is not problematic for them. The suburban participants no longer practise traditional medicine as it was more convenient to visit the nearest clinic, which was just approximately ten kilometres from their locality. As a result, if they felt pain, participants were instructed to visit the clinic and see the dentist. They agreed to receive fillings or any other dental procedures. They felt that seeking professional advice from a dentist was preferable since they were qualified to prescribe the medication and could help avoid adverse effects like allergies. Similarly, in Australia, dentists were rarely seen for preventative care and check-ups. Instead, dental treatment was typically only sought out in cases of extreme discomfort or necessity (23, 29).

Barriers to Obtaining the Oral Health Care Services

The majority of the OAS claimed the main reasons not to visit the dental clinic were the fear of pain and treatments. A small number of participants have no problems attending the clinic, but the fear of receiving the treatment could be overwhelming. Most of them respond that fear of pain prevents them from receiving dental treatment from a dental clinic, similarly reported in a study by Tan et al where fear is the most reported barrier preventing Indigenous people from receiving effective medical care (30).

The association between dental fear and less frequent dental visiting may lead to the perception of accessing the health services as a problem that will ultimately lead to increased social and functional impairment of a community (26).

Another factor that can be a barrier is the distance to the nearby clinic. The participants from the rural area had more trouble as their village is located far from the dental clinic as reported in another study by Masron et al (4). Occasionally they needed assistance from their neighbours to send them to the clinic. They hoped the dentist or dental outreach team could come to their village for treatments instead (25).

Another main challenge for the OAS to utilise oral health care services was the time constraint as they were occupied with daily routine. Most of them work as rubber tappers and need to fetch the children from school. The participants claimed it was troublesome to take leave if they wanted to come to the dental clinic. Furthermore, they would feel reluctant to get an appointment with the government dental clinic due to the long waiting time.

This study has several limitations. FGD is prone to elicit a certain type of socially acceptable opinion. In the FGD with the older *Orang Asli*, some participants might be more influential in the community than others. This diversity might lead to the researcher having less control over the type of data generated, as FGD demands a highly trained moderator. In addition, the translation process throughout the FGD exposed the data to the risk of language misunderstanding and misinterpretation.

Recommendations

There are several implications that can be made based on findings of this research. There are promising insights that indicate the current efforts by the government was on track, such as the awareness on basic oral health issues and specifically issues pertaining to the practice of areca nut chewing and limestone paste consumption. However, future works should be directed towards developing an appropriate mitigation programme that will be culturally accepted in reducing the habits of areca nut chewing. This is because, as mentioned by the *Orang Asli*, betel nut chewing is the cultural pride of the *Orang Asli*. Furthermore, as with the rest of the Malaysian population, the *Orang Asli* population should be included in the awareness programme that aimed to promote preventative visits. This is because in the long run, preventative dental check-ups will have a sustainable effect both to the *Orang Asli* community and the government that funded the oral health care service. In the clinic setting, the *Orang Asli* perception of not needing dental treatment should be addressed and the value of early dental check-up should always be reiterated by the dental officers.

Another recommendation that can implicate oral health care delivery based on the findings of the study is that the Ministry of Health can consider the current operation hours of selected primary dental clinics, particularly those which are relevant to the *Orang Asli* population. Apart from the geographical distance, its availability often did not coincide with the *Orang Asli*'s free time to seek dental treatment. It is proposed that after-office operation hours can be offered to this community. This could be done on alternate weekends or a specific date that can be arranged to reduce the barrier to obtain oral health care service among the *Orang Asli* population. In addition, the existing mobile dental team could be reinforced with additional human resources and appropriate technologies. With regards to the fear towards dental pain and dental treatment, efforts should be made to convey the information about dental treatment and procedures in a way that gets across the *Orang Asli* population clearly and effectively. This can be done with the multi-agency collaboration with the *Orang Asli* Department pertaining to the Language use, the oral health education material that are inclusive and the healthcare personnel that are fluent in the diverse *Orang Asli* sociocultural background. In order to reduce the oral health inequalities among *Orang Asli*, additional fundings and financial support from the government could benefit the oral health care personnel to embark in specific indigenous research and training.

CONCLUSION

Overall, the *Orang Asli* in Bera valued good oral health and appreciated the oral health knowledge in obtaining a well-being health as a whole. The majority of *Orang Asli* had high perception on the severity, importance and benefits of oral health. They also have favourable compliance for oral health promotional programs. The findings also implied most of the *Orang Asli* were open to modern oral healthcare to improve their oral health conditions.

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REFERENCES

1. Malaysia Jabatan Kemajuan Orang Asli. Senarai Kampung Orang Asli di Seluruh Malaysia Beserta Kepadatan Penduduk (Internet). Dataset Publishers Jabatan Kemajuan Orang Asli (JAKOA). 2018 (cited 2021 Dec 14). Available from: https://www.data.gov.my/data/ms_MY/organization/jabatan-kemajuan-orang-asli-jakoa?organization=Jabatan+Kemajuan+Orang+Asli+%28JAKOA%29
2. Azeelah AN, Zafarina Z. Population data for 15 autosomal STR loci in Orang Asli subgroups of Peninsular Malaysia. International Journal of Legal Medicine. 2021 Oct 4;136(547–549). doi: 10.1007/s00414-021-02718-5
3. Mohd Noor MA. Advancing the Orang Asli through Malaysia's clusters of excellence policy. Journal of International and Comparative Education. 2012. doi: 10.14425/00.45.76
4. Masron T, Masami F, Ismail N. Orang Asli in Peninsular Malaysia: population, spatial distribution and socio-economic condition. J Ritsumeikan Soc Sci Humanit. 2013 Jan;6:75-115.
5. Ministry of Education. Malaysian Education Blueprint 2013-2025: Executive Summary. Malaysia: MOE; 2013.
6. Ismail R, Gopalasamy RC, Saputra J, Puteh N. Impacts of a colonial policy legacy on Indigenous livelihoods in Peninsular Malaysia. Journal of Southwest Jiaotong University. 2019;54(5). doi: 10.35741/issn.0258-2724.54.5.18
7. Othman WMN, Ithnin M, Wan Abdul Aziz WNA, Wan Ali WNS, Ramli H. Oral Health-Related Quality of Life of Adult Orang Asli in Jelebu, Malaysia: A Cross-Sectional Study. Journal of International Social and Preventive Community Dentistry. 2021 Jan 30;11(1)(33-40). doi:10.4103/jispcd.JISPCD-336-20
8. Ministry of Health Malaysia, Oral Health Program. Oral Health Care Services (Internet). Official Portal of Oral Health Program Ministry of Health Malaysia. 2019 (cited 2021 Dec 16). Available from: https://ohd.moh.gov.my/index.php/en/#
9. Jabatan Kemajuan Orang Asli. Sub-Ethnic Orang Asli (Internet). Laman Web Rasmi Jabatan Kemajuan Orang Asli. 2022 (cited 2021 Dec). Available from: https://www.jakoa.gov.my/orang-asli/suku-kaum/
10. Bera District Council. Bera Background (Internet). Official Portal of Bera District Council (MDB). 2015 (cited 2021 Dec 16). Available from: http://www.mdbera.gov.my/en/visitors/bera-background
11. Saub R, Jaafar N. A dental-anthropological study of health and illness behaviour among Orang Asli of the Semai Tribe: the perspective of traditional healers. Medical Journal Malaysia. 2001 Nov;56(4)(401-7).
12. Teherani A, Martimianakis T, Stenfors-Hayes T, Wadhwa A, Varpio L. Choosing a Qualitative Research Approach. Journal of Graduate Medical Education (Internet). 2015 Dec;7(4):669–70. doi:10.4300/JGME-D-15-00414.1
13. Nyumba T, Wilson K, Derrick CJ, Mukherjee N. The Use of Focus Group Discussion methodology: Insights from Two Decades of Application in Conservation. Geneletti D, editor. Methods in Ecology and Evolution (Internet). 2018 Jan 11;9(1):20–32. doi:10.1111/2041-210X.12860
14 Ab Mumin N, Yusof ZY, Marhazlinda J, Obaidellah U. Motivators and barriers to oral hygiene self-care among adolescents in Malaysia: A qualitative study. International journal of dental hygiene. 2022 Nov;20(4):678-88. doi: 10.1111/idh.12556
15. Edmunds S, Brown G. Doing qualitative research in dentistry and dental education. European Journal of Dental Education. 2012 May;16(2):110-7. doi: 10.1111/j.1600-0579.2011.00734.x
16 Krueger R. Designing and Conducting Focus Group Interviews (Internet). 2002. Available from: https://www.eiu.edu/ihec/Krueger-FocusGroupInterviews.pdf
17. Krichauff S, Hedges J, Jamieson L. "There's a Wall There—And That Wall Is Higher from Our Side": Drawing on Qualitative Interviews to Improve Indigenous Australians' Experiences of Dental Health Services. International Journal of Environmental Research and Public Health. 2020 Sep 7;17(18):6496. doi:10.3390/ijerph17186496
18. Fereday J, Muir-Cochrane E. Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. International Journal of Qualitative Methods. 2006 Mar;5(1):80–92. doi:10.1177/160940690600500107
19. Braun V, Clarke V. Using Thematic Analysis in Psychology. Qualitative Research in Psychology. 2006;3(2):77–101. doi: 10.1191/1478088706qp063oa

20. Arora A, McNab MA, Lewis MW, Hilton G, Blinkhorn AS, Schwarz E. 'I can't relate it to teeth': a qualitative approach to evaluate oral health education materials for preschool children in New South Wales, Australia. International journal of paediatric dentistry. 2012 Jul;22(4):302-9. doi: 10.1111/j.1365-263X.2011.01195.x
21. Zhang S, Lo ECM, Chu C. Traditional oral health beliefs and practices of Bulang people in Yunnan, China. Journal of Investigative and Clinical Dentistry. 2017 Jul 7;9(1). doi: 10.1111/jicd.12281
22. Dorai Kannan S. The oral health hygiene data among the paliyan and pulayan tribes in India. Bioinformation. 2020 Dec 31;16(12):1113–20. doi:10.6026/973206300161113
23. Tynan A, Walker D, Tucker T, Fisher B, Fisher T. Factors influencing the perceived importance of oral health within a rural Aboriginal and Torres Strait Islander community in Australia. BMC Public Health. 2020 Apr 17;20(1). doi:10.1186/s12889-020-08673-x
24. Saha A, Marma KKS, Rashid A, Tarannum N, Das S, Chowdhury T, et al. Risk factors associated with self-medication among the indigenous communities of Chittagong Hill Tracts, Bangladesh. Pegoraro C, editor. PLOS ONE. 2022 Jun 13;17(6):e0269622. doi:10.1371/journal.pone.0269622
25. Kadir RA, Yassin AT. Experience of dental caries among aboriginal children in Selangor, Malaysia. The Journal of Nihon University School of Dentistry. 1990;32(4)(275-280). doi: 10.2334/josnusd1959.32.275
26. Zamros Y, Rianti S, Nor M, Lily S. Oral Health Knowledge, Attitudes and Practices Of 11-12 Year Old Orang Asli Children In Cameron Highland, Malaysia. The Southeast Asian Journal of Tropical Medicine and Public Health. 2018 Sep 1;49(5). doi:10.13140/RG.2.2.23970.48328
27. Auluck A, Hislop G, Poh C, Zhang L, Rosin M. Areca nut and betel quid chewing among South Asian immigrants to Western countries and its implications for oral cancer screening. Rural and Remote Health. 2009 May 14;9(2)(1118). doi: 10.22605/RRH1118
28. Weatherall TJ, Conigrave KM, Conigrave JH, Lee KSK. What is the prevalence of current alcohol dependence, and how is it measured for Indigenous people in Australia, New Zealand, Canada and the United States of America? A systematic review. Addiction Science & Clinical Practice. 2020 Sep 17;15(1). doi:10.1186/s13722-020-00205-7
29. Durey A, McAullay D, Gibson B, Slack-Smith L. Aboriginal Health Worker perceptions of oral health: a qualitative study in Perth, Western Australia. International Journal for Equity in Health. 2016 Jan 12;15(1). doi: 10.1186/s12939-016-0299-7
30. Tan YR, Tan EH, Jawahir S, Mohd Hanafiah AN, Mohd Yunos MH. Demographic and socioeconomic inequalities in oral healthcare utilisation in Malaysia: evidence from a national survey. BMC Oral Health. 2021 Jan 19;21(1). doi:10.1186/s12903-020-01388-w