

DENTAL HEALTH BELIEFS AND ATTITUDES OF A GROUP OF REHABILITATED SELANGOR PROTO-MALAYS (TEMUAN TRIBE) IN MALAYSIA¹

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This is a study to identify the beliefs on oral health and attitudes towards dentistry of a sample of the rehabilitated Temuan tribe in Selangor, Malaysia. An open-ended, structured questionnaire survey was conducted on a group of 164 Temuan adults. The relationships between their beliefs, attitudes and the environment and the implications on oral health and dentistry are discussed.

INTRODUCTION

Malaysia is known for its many aboriginal tribes, both in Peninsular and East Malaysia. The last census of 1986 indicated that there were about 69,000 aborigines, known as the Orang Asli, in Peninsular Malaysia comprising of three major groups: the Negritos located in the northern states, the Senois living in the inland parts of the peninsula, and the Proto-Malays in the southern half of the peninsula (Figure 1).

The major group of the aborigines in Selangor, one of the 14 Malaysian states, is the Proto-Malays. A majority of them have been rehabilitated into new villages located in the hilly region of the state. The villages are only semi-isolated and have access to outside stores. However, due to financial constraints their diet has remained primarily tapioca, fish and various jungle fruits. More recently, the men work in quarries and tin mines as labourers in an effort to increase their household income (Imin 1981).

Although they have been rehabilitated, the majority chose to retain their cultural values and practices. In so doing, each village usually has a hereditary headman cum medicine man known as the "Tok Batin" who performs rituals to counteract diseases said to be caused by evil spirits. More comprehensive reviews of their lifestyle and beliefs may be found in the works by Evans(1923), William-Hunts (1952) and Dunn (1968).

Despite of the fact that the Proto-Malays have long existed in the jungles of Malaysia, few studies on the health status of adults have been documented

(Kinzie et al 1966; Mohd Sham et al 1987; Abdul-Kadir and Adnan 1989). More importantly, no study on the dental health status of the adult population has ever been reported. This study aims to fill this gap. More specifically, it seeks to obtain an overview of the aborigines' beliefs on oral health, then oral hygiene practices, and their attitudes towards modern dental services. For the study, the Proto-Malays in Selangor were selected. A specific understanding of the aborigines' oral health beliefs and attitudes are essential for future planning and presentation of acceptable and appropriate dental health services for them.

MATERIALS AND METHOD

Five randomly selected villages of the Proto-Malay tribe participated in this questionnaire survey. The Proto-Malays were specifically selected because they form the majority of the tribes in Selangor. The distribution of the survey sample is presented in Table 1.

In general, each village housed between 20 to 40 households with a median of 5 occupants per house. An open-ended, structured questionnaire was prepared and pretested prior to the actual implementation of the survey. After consulting the Research Officer of the Department of Orang Asli Affairs (JHEOA), it was decided that a questionnaire-interview survey would be carried out so as to achieve maximum cooperation and understanding. Because the number of households in each village was generally small, it was decided that all households in each village selected would be included in the sample. In addition, all adults above the age of consent (18 years old) were included in the survey. However, due to time and personnel constraints, only large villages with at least 20 houses were visited.

Actual participation, however, was on a voluntary basis. At least two adults, if not all, above the age of 18 years old in each household were interviewed whenever possible. The interviews were conducted from house to house with the help of two Orang Asli interpreters from JHEOA. The interpreters were briefed earlier on the format of the questions. Each interview lasted between 20 to 30 minutes.

The questionnaire was designed to gauge the participants' knowledge concerning toothache, bleeding gums, common oral hygiene procedures employed and attitudes towards modern dental services, all of which will give indications towards their general health status, dental care habits and factors relating to accessibilities and utilization of existing services. All answers were

recorded in the questionnaire. Analysis was done using an IBM microcomputer and the SPSS-PC statistical package.

To reduce fear, suspicion and anxiety, no clinical examination was conducted at this stage. Instead, a clinical screening of schoolchildren was carried out in the nearby Orang Asli primary school. The results of the clinical screening are reported elsewhere (Rahimah and Ahmad 1989; 1990).

RESULTS

In all, a total of 164 Proto-Malay adults (constituting 78% response rate) comprising of 41.5% males and 58.5% females responded to the interview. The mean age for the males and females respondents was 33.5 and 36.9 years respectively (Table 1).

Response concerning toothache experienced by the sample is shown in Table 2. At least 61% of those interviewed admitted having toothache. Of these, 22% stated that the last felt pain occurred at least within the last 12 months. Toothache was found to be associated with increasing age at a significant level of $p = 0.05$.

In response to a question concerning treatment sought for the first time, only a handful (4.2%) implied going to their medicine man for advice, the rest either attempted self treatment (31.7%), or left the tooth alone until the pain subsided (31.7%). Another 32.3% who had toothache requested JHEOA employees to send them to the Gombak Aborigines Hospital for treatment by the dentists. Of those who attempted self-treatment, 31.7% stated using methods and materials passed down from their forefathers.

To gauge the severity of dental caries occurrence and the amount of dental treatment needs of this community, the sample were questioned concerning types of treatment received at the hospital. The majority were not given any restorative treatment (72.5%). Of those who had treatment, the majority had tooth extractions (23.2%). Restorative treatment provided were limited to silver or white fillings (4.3%).²

Opinions as to why they thought a toothache occurred was also sought during the interview. Interestingly, 56.8% stated they suspected it was the work of "worms". Of these, 7.9% specifically mentioned the word "bacteria". Others felt it was the work of the spirits (1.8%), or thought it was due to too much sugar (8.5%), while 32.9% answered they had no opinion or did not know.

Response relating to periodontal disease experience of the sample interviewed is shown in Table 3. About 28% responded positively to the question concerning bleeding gum experience. When posed with the question of "...usual management to bleeding gums", 88.5% stated leaving the condition alone. A significant proportion sought advice from the medicine man, or concocted their own traditional medicine. Only 1.2% with the condition ever bothered to seek treatment from the dentists at the hospital. Of those who left the condition alone, about 82% stated they did not consider the condition to be dangerous as it comes and goes. The remaining had no opinion on the question.

Opinions regarding possible causative factor of bleeding gums were also sought. The majority (86.7%) stated they did not know why their gum bled. However, 6.7% of the sample interviewed thought it was due to root exposure and tooth abrasion. Almost equal proportion (6.4% combined) related the condition to wound infection, other body diseases, worms and superstitions.

Answering the question whether they had experienced loose tooth or teeth that came out by themselves, 20.7% responded positively. "Self-out tooth" was found to be significantly related to age at $p=0.0001$.

A set of questions relating to sugar consumption was also prepared. Of the 164 adults interviewed, 95.1% stated they use sugar in drinks or food whenever available and affordable. Females were found to be consuming sugar more often than the males at $p = 0.05$. In terms of total amount used, 42.7% reported using half to a teaspoonful, 31.3% used between 2 to 3 teaspoonfuls, 21.1% stated they used more than 3 teaspoonfuls each time.

DISCUSSION

It should be noted that because of the specific nature of the study sample, findings from this study cannot be said to be representative of the other aboriginal tribes in Malaysia. Instead, the findings is only representative of the Proto-Malays in Selangor.

Perhaps we should note why the Proto-Malays were chosen. When the JHEOA Research Officer was first approached, the investigators were cautioned that in spite of likeness in physical appearance, one tribe is different from another in terms of language and culture. In addition, a large proportion of the adult population speak very little Bahasa Malaysia although they may understand what is being said. It was wiser thus to study each tribe

separately. Because Kuala Lumpur is the investigators' base and both investigators have very little experience with aboriginal groups, it was agreed that the first survey will be conducted on the nearest and largest tribe within easy reach.

It is interesting to observe that although the Proto-Malays have been rehabilitated into new villages with basic amenities provided by the government, in general they still choose to retain their semi-primitive lifestyle and practices. For instance, during the fruit and hunting season, the majority of them, together with their families, will go back into the jungle for several weeks. Perhaps recognizing their preferences and out of respect for them, the government has relocated them at the base of mountains and at foothills close to the jungle. An understanding of their preferences is useful in interpreting the findings of this study.

Because no clinical examination has been carried out it is difficult to make any conclusive remarks concerning the prevalence of dental caries (decay) among the members of this tribe. In this study, an indirect approach is taken by asking about toothache experience. If it may be assumed that toothache is equivalent to dental decay, then it is reasonable to state that the disease is prevalent. However, it is difficult to estimate the actual figure.

Findings from this study highlights several interesting characteristics of the orang asli groups that may be useful for planning dental care programmes. First, unless the tribe decided to retain their semi-primitive lifestyle and practices where sugar intake is minimal or occasional, the estimated low to moderate caries prevalence can be expected to change in future to be similar to that observed in Australian aborigines (Barrett and Williamson 1972). The possibility of such an occurrence is higher as more of the tribe's menfolk left their villages to work to increase their income and purchasing power and as sugar availability becomes widespread. Sugar especially sucrose and poor cleansing habits have been shown to be directly related to dental caries formation (Newbrun, 1986). The risk also increases with increasing frequency and amount of sugar consumed (Newbrun 1986). Even at present when sugar is considered a luxury, it is being consumed in large amounts (2 teaspoons or more per serving).

Through the years, the Orang Aslis had evolved a pattern of beliefs concerning health and disease (Williamson-Hunt 1952; Bolton 1968; Foong-San 1972). Thus it is not surprising to find that a small proportion of them believed in superstitions that the disease was the work of magical powers and had resorted to visiting their medicine-man for advice to cure their toothache

or bleeding gums. Of particular interest was the worm theory in caries (decay) etiology which was prevalent among the Temuan tribe (Table 2). "Worms" in western dental literature was a 19th century caries etiological concept relating to a "worm" boring out the tooth from the inside (Newbrun 1986). The fact that it existed in this era and in a group different from western culture should be of interest to Malaysian anthropologists.

Although modernisation process through rehabilitation programmes are progressing very slowly, such efforts are bearing fruit particularly in dental health. The fact that 7% of them mentioned specifically the word "bacteria", a modern concept in dental caries etiology, suggests the importance of the role played by the Malaysian government through its formal agency, JHEOA in providing modern medical and dental facilities to the aborigines (Bolton 1968). Apparently, the Orang Aslis had learned the use of these facilities and at the same time acquired some of the "new" ideas about health and sickness.

A major concern to the dental profession is perhaps the response concerning periodontal health. Periodontal diseases affect both the young and old. However the disease is known to be highly prevalent among older people and it gets worse with age (Loe 1983;Page 1986). This study found that 85% of those who reported bleeding gums chose to leave the condition alone. Additionally, it is also noted that about 8.5% of them either sought medicine-man or used traditional medicine for treatment. The implication from this finding is that knowledge concerning periodontal disease is generally lacking among the Orang Aslis. The finding is also substantiated by the fact that 86.7% of them had no idea what caused their gums to bleed. These findings should be of real concern since 20.7% of those interviewed further experienced the ultimate "self-out tooth" suggesting, though not conclusively, that tooth exfoliation occurred due to destructive periodontal disease.

Another aspect of concern is the finding that 72% of those who had complained of toothache and brought to the dentists at the aborigines hospital did not receive treatment. It is not certain why no treatment was given. Perhaps the "ache" was not directly caused by dental caries but related to periodontal problems. However, it cannot be ruled out that the patients refused treatment because they were anxious and scared of the dental facilities especially the dental drill. Whatever the reasons may be, these findings appear to suggest that the dental profession must develop a more effective strategy to cater to the needs of the aborigines. The existing system of static public clinics which depend on voluntary visits by patients is perhaps unsuitable to a group of people with so much fear, anxiety, uncertainties and superstitions. Perhaps a better choice would be the concept of a mobile squad

or a moving clinic on four-wheelers which is currently used in school dental services. Such a clinic is not constrained by immobility and thus it can provide more frequent exposure of the services to the Orang Aslis.

The findings from this study, though subjective in nature, also seem to suggest that preventive rather than curative measures are more appropriate. In addition, implementation of a dental health education should be given top priority so as to introduce and facilitate the adoption of new ideas, practices in dentistry, as well as the development of rapport between the dental health workers and the Orang Aslis. The latter is important since the acceptance of new ideas and modern dental services is likely to occur when the level of consumer awareness towards the profession, confidence in the health worker and the dental programme itself increases. To achieve the above, new programmes and approaches of primary health care utilizing the Orang Asli themselves should be given due consideration.

Perhaps a more important finding from this study is the realization that professional proficiency alone is not sufficient to ensure the profession's success in dental care management of this population. A certain level of sensitivity and understanding of the lifestyle and social behavioural knowledge on health and health practices are necessary and these should be nurtured among students undergoing dental training. Second, all agencies involved in the rehabilitation programmes must also work as a team so as to better understand the needs of this population. Perhaps the general concept of modernization has to be modified to make it less repulsive and detrimental to the group. The primary objective is to provide a more suitable and better quality of life for the Orang Aslis.

It is recognized that this study has several flaws such as the small size of the sample and the lack of clinical examination. Thus the findings and opinions from this study may not be considered conclusive. However, the experience gathered in this study should be useful for other surveys in the future.

TABLE 1. Distribution of study sample

Respondents	N (%)	Age in years (S.D.)
Male	68 (41.5)	36.9 (13.9)
Female	96 (58.5)	33.5 (13.3)
All	164 (100)	34.9 (13.6)

TABLE 2. Respondent's profile on "toothache" experience (N = 164)

Characteristics	Response rate (%)
1. Ever experience toothache?	
Yes	61
No	39
2. Last felt pain	
past 12 months	22
more than 12 months	78
3. Treatment received from ?	
Medicine man	4.2
Dentists	32.3
Self-treatment	31.7
No treatment	31.7
4. Treatment type received from dentists	
Extractions	23.3
Fillings	4.3
None	72.5
5. Opinion on caries etiology	
Magic	1.5
Worms	56.8
Sugar	8.5
Don't know	32.9

TABLE 3. Respondents' periodontal health profile N = 164)

Characterisitics	Response rate (%)
1. Bleeding gum experience	
Yes	28.0
No	72.0
2. Usual management of bleeding gums	
See dentist	1.2
See medicine man	4.3
Salt water rinsing	1.8
Traditional medicine	4.2
Left alone	88.5
3. Opinion on etiology	
Worm	1.2
Superstitons	1.8
Tooth abrasion	6.7
Wound infection	1.6
Related to other diseases	1.8
Don't know	86.7
4. Have tooth ever "self-extracted" ?	
Yes	20.7
No	79.3

TABLE 4. Sugar consumption of the Temuan tribe (N = 164)

Characteristics	Response rate (%)
1. Use sugar in drinks or food ?	
Yes	95.1*
No	4.9
2. Amount usually used per serving	
half to a teaspoon	42.7
two to three teaspoons	31.3
More than 3 teaspoons	21.1
None	4.9

NOTES

¹ Amalgam (silver) is widely used as posterior fillings in government dental clinics while white fillings which can mean either silicates or to a limited extent, composite restorative materials is widely used.

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FIGURE 1

THE DISTRIBUTION AND LOCATION OF THE ORANG ASLI
GROUPS IN PENINSULAR MALAYSIA

