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COMPARISON ON KNOWLEDGE, ATTITUDE AND PRACTICE OF BETEL NUT CHEWING HABIT BETWEEN BLIND AND NORMAL PEOPLE IN YANGON, MYANMAR

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ABSTRACT

Originated from the Southeast Asia region, the betel nut chewing habits prevailed through immigration to other regions such as India, Taiwan, southern China, South Pacific Islands, and even to the Europe. The use of smokeless tobacco as betel nut with tobacco is highly prevalent in Myanmar compared with other countries. The misconception of smokeless tobacco use is less dangerous than tobacco smoking is a big challenge to the tobacco control measures. Then, a cross-sectional study on comparison of knowledge, attitude and practice of betel chewing habit with structured questionnaire to two groups: normal group and blind group (n = 78) in Yangon, Myanmar is conducted. The selection criteria is having a history of taking betel quid regardless of race, sex, marital status in School for the Blind and normal individuals in Yangon region. 87% of male and 12.8% of female gender ranging from age 18 to 35 years participated in the study. The results show that there is no strong significantly difference in knowledge, attitude and practice on betel chewing habit of two groups even though they are different in learning a behavior according to their different physical abilities. However, the study assures that their knowledge on betel quid has been satisfactory and they are still addicting to this habit due to their favorable surrounding environment like betel quid shops, family member users and socialization by friends. Therefore the supply of betel quid ingredients especially tobacco should be regulated strictly by government procedure and specific health promotion plan for disabled person as well as the social support system like behavioral therapy to already addicted one should be promoted.

Keywords: Betel quid chewing, Blind, Smokeless tobacco

1. INTRODUCTION

In recent years, the problem of betel nut chewing is discussed and studied in all over the world. It is a kind of substance abuse problem in the world. According to the Global Epidemiology of areca nut usage, the betel nut is the world fourth substance abuse problem, ranking from smoking, alcohol consumption and caffeine. It was estimated 600 million population of the world is chewing betel nut as their habit. It means about 10% of the world population chew betel nut in some form which may be with tobacco or without tobacco.

Originated from the Southeast Asia, the betel nut chewing habits prevailed through immigration to other regions such as India, Taiwan, southern China, South Pacific Islands, and even to the UK, Europe, North America and northwestern Australia (Gupta, 2002).

In Myanmar, referring to the article on 'Smokeless Tobacco (SLT) Used in Myanmar', the use of smokeless tobacco as betel nut with tobacco is highly prevalent in Myanmar compared with other countries. The misconception of smokeless tobacco (SLT) use is less dangerous than tobacco smoking is a big challenge to the tobacco control measures. This is compounded by the ease of purchase and low prices of SLT products. The use of SLT is deep rooted in Myanmar culture, and there is also wide-spread belief that it is not as dangerous as smoking. SLT use is growing in Myanmar. About 9.8% of the 13-15-year-old school children and 20.8% adults use SLT; it is many-fold higher among men. The use of SLT is prevalent using many different types of tobacco and forms of its use in Myanmar (Kyaing, et al., 2012).

Despite that the literature generally proofed that a strong relationship between oral cancer and betel nut chewing, there are some 2.5 million people or nearly 9% of the population habitually took betel nut. The average age of the male individuals died for the oral cancer is 55 years of old. It was found that 20% of Panjabi in India who chew betel nut has cardiovascular risk factor. Betel nut chewing is concededly a serious and immediate threat to the nationals' health that deserves close and intensive consideration (Kaur and Bains, 2006). According to Khan (2004), their research on knowledge, attitude and practice of betel nut users in Krachi, India have been described their limitation to differently abled person including visually impaired.

Then the knowledge, attitude and practice status on betel chewing habit of Myanmar individuals should be studied to reduce betel chewing related health problems. Although this kind of study was conducted in different South East Asia countries, in Myanmar, the study on betel chewing habit is weak. Conducting the study by comparing the betel chewing habit of normal and visually disable person (blind) will provide important information for intervention in tobacco control program of Myanmar.

2. METHODS

2.1 Participants

The total numbers of 78 participants were selected from the area of Yangon with the criteria of having a history of taking betel quid regardless of race, sex, marital status. Half of the participants (39 participants) are selected from the School for the Blind (Kyi Myin Dine) with the criteria of having a history of taking betel quid and visually impaired. Another half (39 participants) are selected from the area of Yangon with the criteria of having a history of taking betel quid. The main sampling method used is purposive sampling method.

2.2 Instrument

A questionnaire was used as instrument which was developed by the researcher Khan (2013) who conducts the similar research in India. It included 38 items to explore the knowledge, attitude and practice of betel chewing habit of participants. At the start of the questionnaire, it declares that all the information will be used only for research purpose and will keep as confidential.

The questionnaire consists of three sections: knowledge, attitude and practices of betel chewing. In the knowledge section, information concerning potential harmful health complications like mouth cancer, throat cancer, miscarriage, speaking difficulties, tooth diseases, kidney damages, CNS effect and so on. In the attitude section, their attitude towards quitting the betel nut and discourage others from this habit is focused. Lastly, the practice section explores the form, amount, frequency of betel chewing and their daily spending on the betel quid.

2.3 Procedure

The original questionnaire in English is translated to Myanmar version to conduct the research in Burmese individuals in Yangon. The translated questionnaire is tested as a pilot study to three convenience individuals who have betel chewing habit. Then the questionnaire were used to interview face to face with blind individuals in 'the School for the Blind (Kyi Myin Dine) who have experience on betel chewing and visually impaired and got 39 participants. Likewise, this same instrument is used to conduct 39 normal adult individual who have experience on betel chewing in Yangon region with convenience and purposive sampling method. This cross-sectional study was conducted within the period of 4 weeks.

At the start of the data collection, the purpose of the research and verbal consent are declared to participants. The participants are allowed to stop or refuse continue answering the questionnaire during the data collection process.

All the data analysis is done with the statistic software SPSS version 21, frequencies and percentages are computed for categorical responses. Then to compare the two group in the study: normal group and blind group, the chi square test is calculated and significance level is set as p value <0.05.

3. RESULTS

The following tables provide the information of socio-demographic data, knowledge status, attitude status and practice status of the comparison study.

a. Socio-demographic Data (n = 78)

Table 1: Socio-demographic factors of the study population

Socio-demographic Factors	Normal	Blind
Age (years)		
<18	18	0
19-34	19	9
>35	2	30
Sex		
Male	39	29
Female	0	10
Education Level		
No Grade	1	10
Grade 1- 5	7	7
Grade 6-9	14	15
Grade 10-11	12	6
Graduate	5	1
Occupation		
Dependent	7	0
Student	3	17
Worker	21	21
Driver	6	0
Respectful Person	2	1
Marital Status		
Single	7	39
Married	32	0

In the sample, there are 29 males and 10 females from the normal individual group while 39 males and no females with visually impaired or blind group. It is pointing out that men are more prevalent than female in betel chewing habit. In the sample, the participants in blind group are mostly < 35 years and the participants in normal group are mostly > 35 years. Most of the participants in both bind group and normal group are in Grade 6-9. And even the graduate or respectful participants have the habit of bad betel chewing habit.

In normal group, most of them are workers, driver, dependent and some are students and respectful person. In blind group, most of them are worker and student and there is no dependent and driver because they are from blind school and they are incompatible with driving occupation. In the normal group, most of the participants are married while there is no married participant in blind group.

b. Knowledge status of betel nut chewing in normal and blind group

Table 2: Knowledge status of betel nut chewing in normal and blind group

Knowledge Questions	Normal (%)	Blind (%)	Sig level
Does chewing betel nuts have immediate effect?			
Yes	53.8	25.6	<0.05
No	41.1	74.4	<0.01
Don't know	5.1	0	<0.5
Do you think chewing betel nuts cause mouth cancer?			
Yes	30.8	97.4	<0.5
No	69.2	0	<0.01
Don't know	0	2.6	<0.5
Do you think chewing betel nuts cause throat cancer?			
Yes	46.2	74.4	<0.5
No	53.8	25.6	<0.5
Don't know	0	0	>0.5
Do you think consuming a small quantity of betel nuts is dangerous to health?			
Yes	30.8	25.6	>0.5
No	69.2	74.4	>0.5
Don't know	0	0	>0.5
Do you know any advantages of chewing betel nut?			
Yes	48.7	33.3	<0.5
No	51.3	66.7	<0.5
Don't know	0	0	>0.5
Have you ever read any article about betel nut?			
Yes	48.7	79.5	<0.1
No	51.3	20.5	<0.05
Don't know	0	0	>0.5
Do you think chewing of betel nuts can cause chronic urticarial (skin rash)?			
Yes	5.1	10.3	<0.5
No	82.1	79.5	>0.5
Don't know	12.8	10.2	>0.5
Effects of betel nuts chewing on heart			
Stimulate	20.5	53.8	<0.05
Depress	5.1	10.3	<0.5
Don't know	71.8	35.9	<0.05
No effect	2.6	0	<0.5
Chewing betel nut can increase your capacity of work?			
Yes	28.2	33.3	>0.5
No	69.2	66.7	>0.5
Don't know	2.6	0	<0.5
Do you think chewing betel nut can increase your salivation?			
Yes	69.2	69.2	>0.5
No	30.8	25.6	>0.5
Don't know	0	5.2	<0.5

Do you think chewing betel nut can affect pregnancy?			
Yes	48.7	92.3	<0.05
No	43.6	2.6	<0.01
Don't know	7.7	5.1	<0.5
Does chewing betel nuts have any effect on kidney?			
Yes	71.8	97.4	<0.5
No	23.2	2.6	<0.02
Don't know	5.0	0	<0.5

c. Attitude status of betel nut chewing in normal and blind group

Table 3: Attitude status of betel nut chewing in normal and blind group

Attitude Questions	Normal	Blind	Sig level
Do you think chewing betel nut is a good habit?			
Yes	20.5	15.4	>0.5
No	79.5	76.9	>0.5
Don't know	0	7.7	<0.05
Do you think betel nut chewing is addicted?			
Yes	61.5	79.5	<0.1
No	38.5	20.5	<0.5
If you every get a chance, will you try to stop others from chewing betel nut?			
Yes	74.4	87.2	>0.5
No	25.6	12.8	<0.5
Have you ever consult a doctor for any problems you encountered because of betel nut?			
Yes	5.1	7.7	<0.5
No	94.9	92.3	>0.5
Will you try to stop from chewing betel nut?			
Yes	69.2	94.9	<0.5
No	30.8	5.1	<0.01

d. Practice status of betel nut chewing in normal and blind group

Table 4: Practice status of betel nut chewing in normal and blind group

Practice Questions	Normal	Blind	Sig level
How often do you eat betel nut?			
Everyday	76.9	87.1	>0.5
1-6 times/week	7.7	0	<0.05
Once in 2 weeks	10.3	0	<0.5
Once in 3 weeks	2.6	2.6	>0.5
Once in 4 weeks	2.5	10.3	<0.02
How many packets of betel nut package on average do you consume every day?			
1-5	23.1	33.4	<0.5
6-10	15.3	41.0	<0.05
>10	59.0	25.6	<0.05
0	2.6	0	<0.5
What form do you eat betel nut in?			
Betel squid without tobacco	17.9	2.6	<0.05
Betel squid with tobacco	82.1	97.4	<0.1

Betel nut with tobacco	0	0	>0.5
Only betel nut	0	0	>0.5
For how long have you been eating betel nut?			
<12 months	2.6	10.3	<0.5
1-2 years	20.5	20.5	>0.5
3-6 years	15.4	30.8	<0.5
7-10 years	20.5	17.9	>0.5
>10 years	41.0	20.5	<0.5
Does anyone else in your house chew betel nut?			
Yes	63.2	92.3	<0.5
No	36.8	7.7	<0.01
At what age did you start chewing betel nut?			
<10 year	0	20.5	<0.01
10-20 year	20.6	64.1	<0.01
21-40 year	61.5	15.4	<0.01
>40 year	17.9	0	<0.01
How much do you spend on betel nuts product every day?			
<100 kyats	7.7	23.8	<0.5
100 – 500 kyats	23.1	61.5	<0.01
500 – 1000 kyats	38.5	23.1	<0.5
>1000 kyats	30.7	2.6	<0.01
Have you ever chew betel nut in forbidden area?			
Yes	33.3	61.5	<0.1
No	66.7	38.5	<0.1
While chewing, for how long do you keep betel nuts in your mouth?			
<1 min	17.9	7.7	<0.5
1-2 min	23.1	12.8	<0.5
2-5 min	46.2	64.1	<0.5
>5 min	12.8	15.4	>0.5
Do you eventually swallow or spit it out?			
Swallow	10.3	7.7	>0.5
Spit it out	66.6	56.4	>0.5
Sometimes swallow, sometimes spit out	23.1	35.9	<0.5
Do you experience sweating while chewing betel nut?			
Yes	25.6	33.3	>0.5
No	46.2	51.3	>0.5
Never notice	28.2	15.4	<0.5
How often do you brush your teeth?			
Everyday	35.9	2.6	<0.01
Twice a day	64.1	74.3	>0.5
Don't brush	0	0	>0.5
Others	0	23.1	<0.01
At what time of day do you usually consume betel nuts?			
Before meal	2.5	0	<0.5
After meal	38.5	71.8	<0.05
Before sleeping	2.6	7.7	<0.5

After waking up	15.4	2.6	<0.1
No pattern	41.0	17.9	<0.1
How did you come to know of betel nut?			
Friends	48.7	48.7	>0.5
Advertisement	0	0	>0.5
Tradition	7.8	23.1	<0.1
Family	25.6	23.1	>0.5
Others	17.9	5.1	<0.1

4. DISCUSSION

The objective of the study is to compare the knowledge, attitude and practice of betel chewing habit between normal individual and blind individual. According to the learning theory, a behavior is learnt by visual, auditory, kinetics and tactile among them visual is the one important factor. The normal individual will learn a behavior with all channels while the blind individual lacks visual. Then there will have a difference between learning the betel chewing behavior by normal and blind individual. There will have no visual stimulation to consume betel quid in blind individuals.

According to the health education concept, the health knowledge is a basic block to support a strong attitude and which in turn prevent or change the bad habit or behavior. The visually impaired individual will have some weakness in knowledge, attitude and practice than normal adults who get health information from various channel, visual, auditory, kinetics and tactile.

However, from the above study, there is no a strong significant difference in knowledge, attitude and practice on betel chewing habit between normal individual and blind one. Both groups have a relatively same general knowledge, attitude and practice on betel chewing habit.

In addition, they have considerable knowledge about this betel chewing habit on heath. Most of them know betel chewing will lead to mouth, tongue, throat problems, speaking difficulties and pregnancy related problems.

Regarding the attitude response, although most of them have history of trying to quit this habit, they response that they are addicted to this habit. Their attitude towards this habit shows that it is a bad habit and they response that they will try to stop the betel chewing habit of others if they have a chance.

Then, their practice status on betel chewing habit point out that most of them usually get betel quid from shop and spend mostly more than 500 kyats per day for it. Moreover, they usually consume betel quid which contain tobacco and every day. Most of them have surrounding environment in which the betel chewing habit is present and they usually come to know betel quid from their friends. On the other hand, they have good practice of spitting out the betel quid after chewing 2-5 minutes. Although the blind group consume mostly in after meal time, the normal participants answer no pattern mostly.

However, it is clear that the blind individuals consume betel chewing like others although they are not being attracted by visual stimuli. Many betel quid shops around the 'School for the Blind (Kyee Myin Dine) provide a favorable environment for consumers to get it easily.

Another significant finding from the study was many of the respondents who were addicted to the habit had tried to quit the habit but they were still continuing to this bad habit. Most of the blind in the school consume 500-1000 kyats while the normal group consumes > 1000 kyats and it may be related to their income. Then it can be analyzed that low income will lead to low consumption of betel quid and so betel chewing habit may be depend greatly on surrounding factors.

In the face to face interview with the respondents by structured questionnaires, some said betel chewing habit is their traditional culture since ancient Myanmar Kingdom. Then they think it is not a bad habit although it has adverse effect on health.

5. CONCLUSIONS

This cross-sectional study on comparison of knowledge, attitude and practice of betel chewing habit between normal and blind group reveals that there is no strong significant difference between two groups. However, the respondents are addicting to this habit although they know the negative health effect of this habit. Therefore, the supply of the betel quid ingredients especially tobacco production and import should be focused by the government. However, this study has limitation in generalizing the population in Myanmar because it was studied only in Yangon division and the non-probability sampling method (purposive sampling) with small number of participants from one school for Blind is used. Then future well planned nationwide study on betel chewing habit with probability sampling method to infer the status of betel chewing habit in Myanmar is strongly encouraged.

5.1 Recommendation

From the study, it is clear that although both groups have a reasonable good knowledge and attitude of this bad betel chewing habit, they continue betel chewing by spending money and addicting to it. Even the blind individuals who have not been attracted by visual stimuli consume betel quid a lot. Then it is clear that the availability of betel quid in the surrounding environment and learning from friends is the most important factor to stop betel quid chewing.

So, the supply of betel quid products within the country especially tobacco should be banned strictly by the central government policy to reduce the betel quid related diseases especially mouth and tongue cancer. In other countries like European Union, US, Canada, India, the trade of betel quid products are banned by the government regulations, procedures and laws (IARC, 2004). Even in the Papua New Guinea, the betel chewing in government office is strictly banned. The music, movies and other types of media promoting betel nut use should be banned by the government regulations.

Likewise, in the study of knowledge, attitude and practice of betel chewing habit in Karachi, India by Khan (2013), the results also show that the awareness about the betel chewing habit is

satisfactory (good knowledge) but they are not willing to quit it. Then they conclude with a suggestion to the Ministry of Health to curb the production, trade and consumption of betel nut.

In the paper of 'training on the ceasing intention of betel nut addition' by Liu (2011), although the educational program as intervention is helpful in directing the behavior change, the magnitude of the improvement is not satisfactory. Then, additional efforts in enhancing the effectiveness of the programs are badly needed.

There have some barriers to formulate government regulation in Myanmar because this habit is successive from the ancient ancestors through a long history and become a traditional behavior. However, the betel quid composition from the ancient time is different from the present one because the modern civilization modifies the quid with tobacco extract to be more palatable. This tobacco enriched betel quid will gives rise to negative health effect to consumers compared with traditional betel quid only. So, we should focus mainly on regulation of tobacco production in the country and import from other countries. Then, according to economic theory, the black market for banned tobacco products will lead to increase the price of betel quid and will reduce the demand of betel quid users.

At the same time, the regulations on spitting of betel quid fluid in public area like pavement, street, park, hospital and so on also need to be emphasized to be a clean, green and modernized country. This regulation will lead to a barrier for betel quid users (excluded conditioning concept of Ivan Pavlov eg. Restricting chewing betel nut in office) and may lead to reduction of their demand on betel quid and will decrease the betel quid related diseases in Myanmar.

On the other hand, the health promotion on betel chewing habit should be focused not only to normal individuals but also for disable persons. Moreover, strong behavioral change health promotion with visual illustrations of the harmful effects, strong pictorial health warning on the betel nut products, awareness campaigns, media like music and movie that warn to stop betel quid chewing, designing the curriculum of health promotion on betel chewing habit in basic education of the school should be accelerated.

The substitutes for the betel quid like gambier (Malaysia) or gum also should be formulated for the addicted one especially in after meal time. The social support groups should also be established for addicted to betel nut chewing individuals.

5.2 Limitation

Although this study wants to explore the knowledge, attitude and practice of betel chewing habit, the scope of the study is narrow to the Yangon region of Myanmar and neglects some regions which have high betel chewing habit prevalence. Some important variables like intelligent quotient (IQ), age, their past experiences are not controlled during the comparison study. The sample sizes of blind participants are available in limited number because the number of blind individual who consume betel nut is from the 'School for Blind, Kyi Myin Dine'. To interview the blind students

about betel chewing habit in forbidden area of betel quid (School for Blind, Kyi Myin Dine) is a limitation to get a correct response.

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