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Ethno Medicine Therapy for Oral Health Problem in Hinterland

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Abstract : The focus was on a study of *babalian* in healing oral hygiene problem. Ethnography research with semi-structured depth interview was done for two shamans (*balian*) who live in Paramasan Bawah village. The interview was done to investigate the factors of having the disease, the history of medicinal plants, the way of healing the disease by processing the plants, and how to get the knowledge hereditarily. Medicinal plant specimens were collected, identified and kept at Plant Conservation Center which located in Botanical Garden (LIPI). The collecting and the analyzing data were done based on developmental research sequences by James Spradley. *Babalian* ethno medicine is belonging to the people's personal belief while the ethno medicine therapy for dental and oral health problem consists of *basambur ritual* and herb (*pelungsur*). It was found that 8 out of 13 species families of *pelungsur* commonly used for treating dental and oral health problem. *Basambur ritual* refers to the local wisdom which comes from their philosophy and belief system of their tribes. It also can be related to the belief system induction in predicting positive perception toward thinking system. The last step of *basambur* could become the positive biology response either. Meanwhile, herb (*pelungsur*) was used as traditional medicine and the effect was able to be increased through *basambur* ritual.

Key words : Dental and oral health problem, dental caries, ethno medicine.

Introduction

Statistics Indonesia recorded that in 2010, Indonesian population has 1.340 ethnics. Every ethnic has their own characteristics in deciding the way to manage their lives, dealing with the interaction to their environment social and ethno medicine is included. Indonesia belongs to the mega biodiversity and it places 1,3% of wide surface of earth, yet 17% from all species in all around the world. Moreover, there are so many medical plants that have big potential as raw material of medicine. Most of them can be found either inside or outside of the Indonesian forests and have different characteristic for each. Furthermore, this kind of information is so important to the medicine development because there are many plant extracts found for modern medicine through this approach.¹

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Dayak Paramasan Meratus Ethnic lives at Meratus Mountains, Paramasan sub-district, Banjar District, South Kalimantan, Indonesia. It was 168 km from Martapura (The Capital City from Banjar) and it is needed to pass two districts, Tapin and Hulu Sungai Selatan, to get there. Moreover, Paramasan is settled as very primitive area by The Local Government because of the difficult access area to reach and some considerations (SK Banjar Regent No. 033 in 2009). In addition, most of the people are farmers and gold digger, and in about 90% of them are illiteracy. It is getting worse if we are looking at the fact that the majority of them are categorized as living under the poverty. On the other hand, its width is 560,85 km² and it is located in Maratus Mountains with 3.592 people with the population density is 6 people/km. It is divided into 4 villages, Paramasan Bawah village, Paramasan Atas village, Remo village and Angkipih village.²

The local Government of Banjar district had built a community health care since 2008 and it is located in Paramasan village. Yet, it is still only for the obstetrician and the general ones. The less facility of the health care is not able to change the role of ethno medicine *babalian*. It can be said that they still have strong belief for having *babalian*, a traditional medicine, instead of seeing the doctor to treat their disease.

Babalian ethno medicine is such an interesting phenomenon topic to be studied about. The background of the problem is how *babalian* ethno medicine can heal various diseases including dental and oral health problem. This research is started with finding the further information about *babalian* ethno medicine which involves philosophy and the methodology of treating the disease. They are focused on the ritual and the use of medical plant (herbal) to heal the dental and oral health problem.

Materials and Method

This study is a qualitative research with ethnography approach. Data collection method is done with semi-structured depth interview and active participation. The researcher is directly getting involved in curing the disease. The key respondent is *balian* (the shaman), namely Usron who comes from Munggu Lahung village and another *balian*, Uliansyah, is from Paramasan Bawah village, Paramasan district. The collecting and analyzing the data are done with developmental research sequences methodology by James Spradley.

The research in Paramasan Bawah village was done in January 2017 until July 2017. The researcher did the observation and the semi-structured depth interview to *balian* in giving the treatment. It was done to get the description about following information, such as: disease etiology according to *babalian* ethno medicine, how the process of the treatment is done, how the medical plants play a role in the treatment, the estimation of *balian* about the origin of applying the medical plants and how the knowledge about it could be obtained and inherited. The recording of the interview result is gotten with the respondents' permission. Moreover, the medical plants for treating the dental and oral health problem was collected then identified by Plant Conservation Center at Botanical Garden of Purwodadi-LIPI Lawang, East Java.

Results

Disease and treatment concept

Babalian ethno medicine explains that disease happens because of the relationship between human and the environment is imbalanced. If this disharmony-relation happens, human will accept such poison from *ruh* (the ancient soul) as the reminder, anger or even the punishment over his own attitude.

“It happens because of their own attitude that breaks the rule, so, *ruh* will give him poison and he will get sick of it....” (Balian Uliansyah)

The health concept above refers to the importance of every individual to have attitude which is “*Aruh*” with the entire creature in this universe. *Aruh* comes from the word “*a*” and “*ruh*” which means “(a)” agreement and “(ruh)” all the souls, defines that we need to have good attitude in our daily lives, our lives need to “*aruh*” with full of heart, whole body, family, people around, the environment, ancient soul, and others, especially to the almighty God.

“The ancestors taught us to have an “*aruh*” life in order to be safe and happy.” (Balian Uliansyah).

Balian religion philosophy believes that the environment has a soul (spirit), so does the stone, mountain, river, plant, fire, etc.

“All the things in this universe have soul of each. There is stone soul, water soul, mountain soul, forest soul, etc.” (Balian Uliansyah)

“God creates devil to tempt the human and the devil soul can disturb the human and bring them various disease.” (Balian Uliansyah).

Furthermore, healing the disease can be done by one of the following ways, such as (1) The soul who releases the disease take the poison back and it can be happened by giving apology and “*sesaji*” (ritual offerings) through a healing ceremony. It is done if the patient has already realized what his fault was. (2) The second, there is natural energize that has capability to neutralize the soul disturbance. In line with this, certain medical plant (*pelungsur*) is believed has this kind of energy needed. (3) The last, God’s Help (*swara*). Even though *Balian* believes on the existing ancestor soul, Goddess, and natural *ruh*, among all of these, they also have the same strong believe to the most powerful that creates the entire universe. Besides, they also believe that as the God’s permission, all the poison of souls will be disappear.

Babalian ethno medicine dealing with dental and oral health problem consist of two treatments, *basambur ritual* and *ramuan* (herbs) of medical plants. Medical plant herbs are obtained from wild plants at the forests. It is usually called *pelungsur* that they believe have natural power to absorb or neutralize the disturbance poison. Meanwhile, *basambur ritual* belongs to the short-term *ritual* of giving *mamangan* (mantra) to the patient and the herbs given.

“First of all, spouting the water or fluttering with black fabric and giving the mantra for the severe disease, giving *pelungsur*, but if the disease is not healing yet, it is necessary to have *babalian* ritual to beg to God.” (Balian Usson).

The Role of Medical Plants as the Treatment Component

Based on *babalian* philosophy, God creates plants is for food and detox as well, that is able to neutralize all the natural disturbances on human’s body. This important function places the plants as the central system of *babalian* ethno medicine. Moreover, medical plants have the capability of defeating the toxin that is released by natural souls, so, they can be removed and disappeared.

“*Pelungsur* has destiny to have the ability in removing all the poison that was released by the natural soul.” (Balian Usson)

The process of picking the medical plants from forests need to take the consideration of certain time, in which the best time to pick the plants, is around 12.30 p.m. until 1 p.m. The previous *balian* will spell mantra before picking the plants. It is done to ask God’s permission to pick the plants for the good thing, it is healing the disease. In addition, stating the (*mamang*) mantra is dedicated to *Suwara* and using Banjar arkais language (Ancient banjar language)

Disease Treatment

Dayak Pramasan ethnic is well known toothache as tooth holes, painful, and inflammation. Meanwhile, oral health problem is familiar as mouth ulcer, which is actually belonging to the inflammation of oral mucosa. Dental and oral health problem is usually healed by medical plant around the houses. The plant sometimes is needed only one kind of plant but sometimes using several mixed plants, yet it depends on how severe the patient is.

Balian do the treatments consisting of two steps, preparing *pelungsur* and *basambur ritual*. (1) *Balian* will give one or more herbs *pelungsur*. In some cases, *balian* boils some of medical plants and the patient will be given them in mental container/pottery. After that, strained the boiling water and medical plants and waiting until it is cool. If it is done, *balian* will give mantra as the praying to God. (2) *Basambur* or *batapung tawar* is a simple ritual through casting *mamang* (mantra) to the patient. *Balian* will cast *mamang-mamang* with flattering the black fabric or yellow ones to the patient and blowing either touching the part of sickness. Besides,

basambur is also can be done with casting *mamang* to the water as soaking *pelungsur* if the patient is far or cannot come to *balian* house.

Discussion

Basambur as Coping Mechanism

Babalian ethno medicine describes disease and the causes as personalize belief. Foster and Anderson (1986) explains that personalize assume the illness is causing of the interventions from active agent, which could be supernatural thing (spirit, god), non-human thing (ghost, ancestor soul, ghouls) even human itself (witch or clairvoyant).

If Dayak people get sick, they think that it is life event which responses individually as the situational meaning. Moreover, it also can be said as the certain condition in which the causing of his suffering (depressed physically and mentally) will be able to get the negative perception. Thus, situational meaning of his will become conflict with global meaning and at the end it could be make him distress.^{3,4} Distress can encumber psychology endurance and it will end with depress increasing. In line with this, biology response that has existence as distress response, through HPA line (*Hipothalamus-Pituitary-Adrenal*) of the increasing cortisol level over physiologist level,^{5,6,7} affect the suppression through immunity system.⁷ The increasing of *neutrophil* and the decreasing NK cell, lymphocytes T and B, helper cell, and T depression cell is belonging to the decreasing of NK cell and lymphocytes response towards mitogen stimulation as well.⁸ Even worse, this condition can make the treatment process of the illness is difficult and being obstacle, especially for the infection case.⁴

Basambur ritual denotes local cultural wisdom which is being collective mindset of Dayak ethnics. Giving herbs (*pelungsur*) while *basambur ceremony* means that to help a sick Dayak people to have a process namely coping in which the cognitive process of thinking system zone. Furthermore, the intervention of collective mindset aroused through *basambur* ritual will strengthen his belief system. On the other hand, the output is acceptance, submissiveness and depth realizing. It is the most basic and adaptive process because of the changing is belonging to belief, value, and rule which tends to be effective and powerful to create attitude and behavior either biologist effect.⁴ The end result of coping mechanism is the perception response shifting from distress to eustress, which means the positive stress and could be seen by biologist response (stress response) of improving physiologist cortisol level and immunity system as well.^{4,8}

In addition, medical plants that is usually used for dental caries are *Gudai* (*Cajanus cajan*), *Hiring*, *Sungkai* (*Scleria laevis* Willd), *Kamandrah* (*Cratoxylum tignum*), *Pulantan*. (*Alstonia angustiloba*). According to research finding towards the medical plants are obtained various potential advantages such as: Immunomodulatory.⁹ Anti cancer activity.¹⁰ Antipyretic dan anti-inflammatory.¹¹ Sedative, analgesic and antibacterial activity.¹²

Indeed, medical plants to heal the pain and swelling are: daun kembang ruku (*Ocimum* sp), daun pulut tai (*Wedelia biflora*), akar gelinggang (*Senna alata*), daun racun ayam (*Brucea javanica*), *Pulantan* (*Alstonia angustiloba*), kulit batang badarah pinang (*Myristica maxima*), akar ulin (*Eusideroxylon zwageri*). Likewise, based on the research findings to those medical plants, there are some benefits such as to obstacle the fungicidal, anti-bacteria activity mycobacterium tuberculosis, *M.pyogenes*, *S.aureus*, *E.coli*.¹³ Antioxidant properties and antimicrobial activities,¹⁴ wound-healing, anti-inflammatory.¹⁵ antitumor efficacy lies in induction of apoptosis and decreasing cell proliferation.¹⁶ Free radical scavenging activity.¹⁷

Further, medical plants that is used to heal oral mucosa are: akar kamandrah (*Cratoxylum tignum*), kulit batang badarah pinang (*Myristica maxima*), kulit batang jintungan (*Bischofsia javanica*), kulit kayu miwai (*Saccopetalum houfeedi*). The previous study found that there are some benefits of these plants such as treatment of ulcers, sores, boils, antiulcer, anthelmintic and ant dysenteric activities.¹⁸

Tables : This following table is the list of usual medical plant that is used for treating the dental and oral health problem.

NO	Local Name	Species	Familia	Benefits and Applying
1	Ulin	Eusideroxylon zwageri	Lauraceae	Roots; boiling for toothache; as mouthwash
2	Racun ayam	Brucea javanica	Simaroubaceae	Leaves; toothache; squeezed it
3	Gelinggang	Senna alata	Leguminosae	Roots; toothache; boiled and gargled
4	Gudai	Cajamus cajan	Leguminosae	Roots; folium; toothache; grinded and put in cavity tooth
5	Hiring	Scleria laevis Willd	Cyperaceae	Tuber root; dental caries; chewed, put in cavity tooth
6	Sungkai	Peronema canescens	Verbenaceae	Cortex's sap ; toothache; put it in cavity tooth
7	Pulut Tai	Wedelia biflora	Compositae	Young leaves; toothache; squeezed; put it in the pain tooth
8	Kamandrah	Cratoxylum tignum	Euphorbiaceae	Roots; tootache and mouth ulcer; scrapped and put in cavity tooth
9	Kambang Ruku	Ocimum sp.	Lamiaceae	Leaves; toothache; squeezed and put it in the causing pain
10	Badarah Pinang	Myristica maxima	Myristicaceae	cortex; toothache and oral inflammation; boiled
11	Jintungan	Bischofsia javanica	Euphorbiaceae	cortex; mouth ulcer and chapped lips; crapped and swapped
12	Miwai	Saccopetalum houfeedi	Annonaceae	Cortex lignum; mouth ulcer and oral inflammation ; boiled and drank
13	Pulantan	Alstonia angustiloba	Apocynaceae	Tree's sap; toothache; put it in the causing pain

Conclusion

Babalian ethno medicine is derived from belief system of Dayak Paramasan Meratus Mountains and it inspires treatment technique of theirs. There are two steps of the ethno medicine for dental and oral health problem, *pelungsur* and *basambur*. *Pelungsur* (herbs) refers to traditional medicine and its efficacy is being improved with *basambur ritual* through positive perception of response mechanism that stimulates positive physiologist response.

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