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Original Research Article

Which Plant can be used as a Medicinal Plant? The Decision-Finding Process of Minangkabau Healers

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Abstract

Many ethnomedical researchers describe medicinal plants and the way they are used. In this research, the authors look at how a traditional healer can find a proper medical treatment. The decision-finding is influenced by the ideas of the local cultures regarding the treatment. In qualitative research, various healers were observed and interviewed. It was discovered that different elements influenced the decision-finding process like reference materials, experience and intuition. Furthermore, there are certain peculiar ways how to categorize a plant and decide whether the treatment needs a combination of plants or can be used without other medicinal plants. The healers are embedded in their environment. Therefore, certain concepts and cognitive patterns are essential for both the culture and the traditional medicine.

Keywords: Dukun; Life-World; Medicinal Plants; Minangkabau.

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1. INTRODUCTION

1.1 Introductory Words

Many research papers mention medicinal healing plants and their properties. However, not many researchers ask why the healers choose a particular plant and what influences the decision-finding process. This research article wants to focus on such questions and illustrate the different ways how to decide on appropriate healing plants and healing methods.

This article describes how traditional healers of the Minangkabau society find a helpful treatment method. The interior of West Sumatra is the home of the Minangkabau society. It is a society that is well-known for the co-existence of a matrilineal and Islamic way of life. This fact also influences the traditional healing system. Therefore, there are both Islamic and traditional healers (*dukun*). Both types of healers use plants in their healing methods. Nonetheless, there are healing methods that do not use plants during the healing process. It might be possible that a mere recitation of Quranic verses is considered to be sufficient. Furthermore, it is necessary to know that medicinal plants can be used differently. Some plants

might be taken orally, while others will be applied externally.

The researchers look at the life-world. This concept was formulated by Alfred Schutz and Thomas Luckmann (1974). The life-world surrounds every individual, and this has an effect on the way how he or she 'interprets' the world. The Minangkabau healers are no exception. They grow up in a society that integrates the local understanding that the 'unfolding nature is a teacher' (*alam terkembang jadi guru*) (Navis, 2015). For the Minangkabau people, this central idea influences how they perceive the environment.

The research objectives of this article are the following:

- a) To detect the reason why a healer uses a certain healing plant or healing method.
- b) To describe the way how a healer could come to his or her prescription.

1.2 The Minangkabau Healers

There are different types of healers in a local Minangkabau village community. The Minangkabau society is an Islamic society. So, it is not surprising that many healers refer to Islamic healing methods based on

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the Quran and the narrations of the Prophet Muhammad (hadith). In the research setting, most of these healers were men. The reason is that Islamic scholars like the imam, or other representatives were male. However, there are also healers who integrated a pre-Islamic concept into the healing system. These healers are called dukun. There are different types of dukun. Some of these healers are general practitioners, while others are specialists. Nevertheless, the major characteristic of the dukun is that they integrated the so-called folk belief system like the belief in different ghosts.

2. LITERATURE REVIEW

The literature review will help to get a first overview of the traditional Minangkabau healing system. There are some interesting publications during the colonial period. Particularly the works of Kleiweg de Zwaan (1912) and Kreemer (1908) must be highlighted. Both publications describe the concept of local healers, and Kleiweg de Zwaan considers even a greater context. There are fascinating comparisons with other healing traditions.

In order to understand, why the healers decide in a specific way, it is important to understand the cognitive disposition. The work of Heider (2006, 2011) is of utmost importance as he includes local categories in the field of folk psychology. The particular value of his work is that Heider considers the local understanding. For example, the idea that the unfolding nature is a teacher (Navis, 2015) or that certain numbers are of importance.

The structuralist Leiden school discovered that there is a cognitive pattern that is widespread in Indonesia. It can be called a 4-5 pattern. It is described by P.E. de Josselin de Jong (1977). There are four elements plus one more element that form the 4-5 pattern. The important contribution of that approach was that a more generalized picture appeared that helped to compare healing systems of different cultures. Another cross-regional work about medical systems was written by Jaspan (1969). He compared different medical systems in Southeast Asia and detected that there are similar patterns. For example, the folk belief that there are ghosts that influence the well-being of a person is widespread in the region.

Amongst recent literature, there are some articles that should be mentioned. Lajtai (2003) is one of the few authors who looks into the Minangkabau *dukun*. The Minangkabau medical system from a broader perspective was illustrated by Stark (2019). However, both authors do not look into the decision-finding process.

There is not much literature available that discusses the healing plants of the Minangkabau society. Nonetheless, some authors mention well-known medicinal plants like the four healing plants that

are called Tawa nan ampek and comprise the following plants: Si Dingin (Bot. Bryophyllum Calycinum), Si Kumpai (Bot. Panicum Auritum), Si Karaw, and Si Tawa (Bot. Costus Speciosus). Tas'ady, Fanany et al., (2013) stress the importance of these healing plants Stark, Fatan Hamamah Yahaya et al., (2016) mention that these four healing plants are used to treat a supernatural illness that is called keteguran. However, it is used in the treatment of measles too. The authors also explain how the healing plants are used: three leaves of each plant are taken and put into a pot of water. After that, the healer uses the branch of the Saliguri plant (Bot. Sida Rhombifolia), dips it in the pot and sprinkles the water at the back of the patients. Two main points regarding classification can be detected: Some healing plants are used on the outer part of the body, while other healing plants will be consumed.

For this research, the publication of Zainal Arifin et al., (2018) is valuable. In their article, the authors make a classification by considering the ideas of Claude Levi-Strauss. Furthermore, the authors focus on the four healing plants of *Tawa nan ampek* and state that each plant has a different function. Si Tawa is the antidote, and Si Kumpai is the destroyer. Both medicinal plants should eliminate the reason that caused the medical disorder. Si Dingin serves as a neutralizer. It is considered to have a cooling function, and therefore, it can neutralize the healing of the medical complaint. Si Karaw has the function of being a defender. If the medical disorder is 'destroyed' and 'neutralized', it is necessary to protect the patient. The work of the authors is fascinating and gives an understanding from the perspective of the local healers. The article also shows that the four healing plants of Tawa nan ampek are crucial.

3. RESEARCH METHOD

This research was conducted qualitatively. It consisted of some field stays. The traditional healers were observed, and open-ended interviews were conducted. The informants were traditional healers in one village community. Here it must be mentioned that there were different types of healers. Some healers followed a more Islamic approach. They relied on the healing method of the Quran and the narrations of Prophet Muhammad. Other healers integrated healing methods that originated from a pre-Islamic period. Such overlapping of different ideas in the field of healing methods was described by Winstedt (2007).

The topic of traditional medicine was quite sensitive as there were topics that were considered to be against Islamic values. Therefore, the researchers promised to protect the informants by using pseudonyms. Moreover, this research reports on healing methods and the decision-finding process in general.

It must be emphasized that this research was no ethnobotanical research. Even though there are

botanical terms the main focus was the way how the traditional healers could detect which plant is the most suitable. Therefore, the local understanding and the local plant names were the major interest.

This research looks into the way how traditional healers could find the correct treatment. The researchers chose the concept of the life-world, which was formulated by Alfred Schutz and Thomas Luckmann (1974). A person's surroundings determine how to act and interpret the situation. Furthermore, there is a spatial and temporal dimension. In the case of healing, it could mean that due to time, new medical knowledge entered the village. Some healers travelled to other villages or talked to people with a biomedical background. For example, there is a local illness that is called keteguran, which refers to a disturbance by invisible entities. However, some healers used a biomedical term (in this case: typhus). So, the social situation influences the way how to interpret the current situation. The traditional healers had no ideas about modern biomedical concepts in the past. However, this situation changed as the government built up many regional health care centers.

4. RESULTS

In this chapter, the researchers intend to look into cognitive patterns that help people to determine in which category the plant falls and how it can be used in a healing process. It is also looked what elements help in the decision-finding process.

4.1 The Decision-Finding Methods

In this chapter, the different types how traditional Minangkabau healers can find a proper treatment method are outlined.

4.1.1 Referring to Books

For the Islamic healers, the Quran and other books of Islamic scholars were used as reference books. An example can illustrate this. Many people of the village work in the rice fields or the nearby jungle and so it is not surprising that some people might come into contact with poisonous animals like centipedes or snakes. One of the Islamic healers who was well-versed in the narrations of Prophet Muhammad told me the following *hadith*:

Some of the companions of the Prophet came across a tribe amongst the tribes of the Arabs, and that tribe did not entertain them. While they were in that state, the chief of that tribe was bitten by a snake (or stung by a scorpion). They said, (to the companions of the Prophet), "Have you got any medicine with you or anybody who can treat with *Ruqya?*" The Prophet's companions said, "You refuse to entertain us, so we will not treat (your chief) unless you pay us for it." So they agreed to pay them a flock of sheep. One of them (the Prophet's companions) started reciting *Surat-al-Fatiha* and gathering his saliva and spitting it (at the snake-bite). The patient got cured and his people presented the

sheep to them, but they said, "We will not take it unless we ask the Prophet (whether it is lawful)." When they asked him, he smiled and said, "How do you know that *Surat-al-Fatiha* is a Ruqya? Take it (flock of sheep) and assign a share for me." (Bukhari Hadith 5736, taken from https://sunnah.com/bukhari/76/50-65, retrieved 18/05/2022)

The Islamic scholar used this narration to recite the first *Surah* of the Quran over a person who was exposed to poison. However, it should be emphasized that the traditional healers (*dukun*) had their own notebooks (see Plate 1).



Plate 1: The Notebooks of a traditional Healer

The notebooks can serve as a reference. Often the healers face similar cases, and so they memorize the treatment methods. However, sometimes the healers have to refer to their notebooks. If, for example, a patient ate something poisonous. The healer might recite the names of the 30 chapters of the Quran on water or coconut oil (*santan*). The patient drinks that water, and it is expected that he or she will vomit so that the poisonous substance leaves the body.

There is another traditional book called *Tajul Muluk* (Crown of Kings), and it is popular amongst some of the *dukun*. This book is a kind of reference. Winstedt describes this book:

There is a book called the Crown of Kings, of which several editions have been printed in Egypt and at Mecca. It is on sale at most native bookshops in the Peninsula. Its author was an Achinese, prominent in the war against the Dutch, Shaikh 'Abbas, who died in 1895. The book is especially interesting because, like "the majority of Muslim philosophers and authors of bibliographical and encyclopaedic works," the compiler "keeping to the classification of the sciences given by the Aristotelians, considers astrology as one of the seven or nine branches of the natural sciences, placing it with medicine, physiognomy, alchemy, interpretation of dreams, and so on." The work is not free from Malay and Indian influence. There are given, for example, five divisions of a five-day cycle, presided over by Siva the Supreme Lord, Siva the Destroyer, Sri, Brahma, and Vishnu! Still, the treatise is a fair example of what Islam has taught the Malay to regard as science, and it is, in effect, a repertory of his latest magical lore (Winstedt, 2007, p. 124).

The book *Tajul Muluk* consists actually of two major parts. One part discusses the constitution of the world, and another part describes some symptoms on how to detect a medical disorder and treat it. Sometimes the book refers to physiognomy or dreams and comes to a conclusion. Interestingly, the possession of the book

itself impressed a number of locals. There are mysterious narrations that are reported about this book.

4.1.2 Intuition

Some healers emphasize that they get a kind of intuition or a specific feeling. Such a feeling can be related to dreams. Sometimes the healers dream about certain plants, and then they will look for the plant and integrate it into the treatment method. Sometimes the healers have to find out the location of the disorder. Afterwards, they decide which treatment method might be promising. For example, the patient lies down. After that, the healer recites the first *Surah* of the Quran. All the words have a specific esoteric meaning (related to medical disorders) (see Table 1).

Table 1: Surah al Fatiha and its esoteric Meaning

| Transliteration | Esoteric Meaning |
|---------------------------|--|
| Bismillahirrahman irrahim | Not mentioned |
| Alhamdu | Body (tubuh) |
| lillaahi | Liver (hati) |
| rabbil | Soul (nyawa) |
| 'aalameen | Secret (rahasia) |
| ar-Rahmaan | Light (cahaya) |
| ir-Raheem | Skin (kulit) |
| Maliki | Not mentioned |
| yawmid | Flesh (daging) |
| deen | Not mentioned |
| iyyaka | Head (kepala) |
| na'budu | Not mentioned |
| wa iyyaka | really in the head (benar dalam kepala) |
| nasta'een | Not mentioned |
| ihdinas | Nose (hidung) |
| siraatal mustaqeem | Not mentioned |
| siraat(al) | Lungs (rabu) |
| (al)lazeena | Gall (hempedu) |
| an'amta | Back (punggung) |
| ʻalaihim | Not mentioned |
| ghayril | Bones (tulang) |
| maghdoobi | really in the bones (benar dalam tulang) |
| ʻalaihim | Not mentioned |
| wa lad-daalleen | Congregation of the whole body for healing all diseases |
| | (Perhimpunan sekalian tubuh menyembuhkan sekalian penyakit |

The healer moves the hand above the patient and recites the *Surah al Fatiha*. In an esoteric understanding, he or she is connected with the teacher and the angel *Jibril* (Gabriel). Suddenly a feeling arises at a specific part of the recitation. Now, the healer can confine the treatment method as the healing method is not the same in all parts of the body.

Another way how to get a particular feeling is related to the retreat of the Sufis. Such a retreat lasts for 40 days in which the people sit in small partitions in one prayer house (*surau*). In general, the participants of a retreat are not allowed to leave the small area of the prayer room. He or she should eat, pray and read Islamic books. Furthermore, it is expected to utter

certain formulas of remembrance (*dhikr*). Consequently, some of the participants get a new 'view' and feeling that can also affect the way of healing. The Sufi might become a kind of informal healer who can be asked by the patients. In such a case, he or she has some intuition that allows prescribing medicinal plants.

4.1.3 Experience

Experience is the most widespread type of knowledge. In general, the healers studied with other healers over a long period of time. One of the healers told in the interview sessions that he studied traditional healing for more than ten years. During this period, he followed the teacher whenever he visited a patient. However, most of the time, the patients go to the house

of the healers. The healers listen to the complaints. After that, the healer tries to figure out whether the medical disorder is supernatural or natural. Experience will help during the process. For example, there was the case of a young lady who suddenly behaved strangely. She began to talk to herself and suddenly cried or laughed. She did not take care of her appearance. All these symptoms indicated that it was most likely supernatural. Therefore, the healer had to inquire indepth. The parents told the background that she had more than one boyfriend at the same time and that it is possible that one of the boys wanted to take revenge and practiced *sijundai*, which is a well-known local type of sorcery.

The experience of the healer helps to make a correct diagnosis. It must be added that the biomedical experts could not make such a diagnosis. Worsley outlines the major differences between Western and non-Western medical systems:

Nevertheless, Western medicine is considered to be ineffective a wide range of physical illnesses and especially useless in dealing with psychosomatic problems ranging from heartbreak (not heartburn) to witchcraft (Worsley, 1982, p. 335).

The fact that is mentioned in the citation shows that people consult a traditional healer if they suspect that the medical disorder has a supernatural background. The traditional healers are part of the lifeworld of the village community. It must be mentioned that for many people the existence of ghosts or sorcery is evident. Therefore, the people rely on the experience of the traditional healers in handling such illnesses.

4.1.4 Jin

A specific way how to find a correct healing method is that the information originates from *jin*. In the Islamic understanding, *jin* belong to the world of the unseen. These entities were created out of fire and are able to enter a human body. Some healers are visited by the *jin*, and then they enter their body. In the case of the research setting, this type of healer lies on the ground and is covered by a white blanket (Stark, 2019) (Plate 2). The healer is in an altered state of consciousness and talks. The surrounding patients report their health problems, and the healer/*jin* prescribes a particular form of treatment. The researchers asked one of these healers about treatment methods, and the answer was that she could not remember what happens in the altered state of consciousness.



Plate 2: The Healer is below the white Blanket

Plate 2 shows the 'mysterious' resemblance of healers who use the help of a *jin*. In addition, the healer uses a language that differs from the 'usual' language. For example, a female healer speaks with a voice that resembles a male person. The patients cannot see the healer as the *jin* are from the world of the unseen.

4.2 Categorization of Plants

In this chapter, the researchers want to look at how the categorization of medicinal plants determines the decision-finding process. In the following chapter, the researchers will look at the categorization from different perspectives.

4.2.1 Wild versus domesticated

It is possible to look at plants from different angles. The healers differentiate between plants that are wild and domesticated plants. The main healing plants are Tawa nan ampek. These are four (ampek) plants and comprise Si Dingin (Bot. Bryophyllum Calycinum), Si Tawa (Bot. Costus Speciosus), Sikaraw, and Sikumpai (Bot. Panicum Auritum). These four plants belong to the domesticated sphere and are usually planted in the nearby gardens of the healers or the matrilineage. Furthermore, it is striking that there is the usage of the prefix Si, which makes the plants more 'personal.' The prefix Si can be used if the person talks about another person. Somehow the plants appear like a companion. However, not only do the plants of Tawa nan ampek have that prefix. There are other plants too. For example, the plant Si jerek (Plate 3).



Plate 3: Si jerek

It is remarkable that *Si Jerek* has a similar usage like the plants of *Tawa nan ampek*. It can be added to the four healing plants to treat measles. Plate 1 also shows that the plant is domesticated near the houses of the village community.

The researchers asked the healers what the peculiar features of plants with the prefix Si are, and the answer was that these are plants with many sprouts. So, we have two pairs of opposition: Plants can be domesticated or wild, and plants can have many or few sprouts.

4.2.2 The medicinal plants are applied internally or externally

Regarding the treatment, other features must be considered. Some plants will not be taken orally. The *Tawa nan ampek* are a good example. The healers take three leaves of each plant and put them into water. After that, the branch of the *Saliguri* plant will be dipped into the water with the medicinal plants, and the water will be sprinkled on the back of the patient body. On the other side, there are healing plants that will be consumed orally. For example, the leaves of *Hempedu Tanah* (Bot. *Andrographispa Niculata*) will be put in a warm glass of tea and then drunk by the patients. It is used for treating Malaria.

Sometimes the treating plants are combined with other healing plants in order to increase the effectiveness. It is often the case to treat medical disorders that are considered to originate from supernatural elements like sorcery or invisible entities. In treating such diseases, the healers have the possibility to use a stronger level if the first level is ineffective. Usually, there are three levels. An example should illustrate that: A person can be possessed by an evil entity. So the healers will use the leaves of kaffir lime, *Jari Angau* (Bot. *Acorus Calamus*), and the *Rosam* plant.

4.2.3. Cognitive Peculiarities

In Minangkabau, there are pattern numbers. If a medical disorder requires a combination of different levels and the possibility to use a stronger treatment, there are general features. In general, there are three to four healing plants that are used. Sometimes there are three parts of each plant on each level. This is remarkable as it shows that there is a tendency to categorize things by using the numbers 'three' and 'four'. Klaus Heider remarks about the number 'four': For Minangkabau, four is the dominant pattern number. That means there is a strong tendency to sort things into four categories, or to give four explanations for something (Heider, 2011, p. 54).

It can be said that the number four is dominant and related to other elements of the Minangkabau society. There are four types of customary regulations, four different dignitaries who represent a matriclan in the meeting hall, there are four ways how traditional speech is differentiated and so on. It can be said that the usage of four is something that fits the way the Minangkabau classify the environment and way of life. However, not only the number four is a pattern number. The number three must also be considered:

But it must also be noted that three is a sort of secondary pattern number. There are sets of three's that act as pattern numbers: for example, the Minangkabau heartland is considered to be in three parts, and each part or *luhak*, has three well-known attributes (Heider, 2011, p. 55).

Heider mentions that there are three original regions (*luhak*). These are the regions of Agam, Limapuluh Koto and Tanah Datar. The healing plants of *Tawa nan ampek* are central because all different types of healers use them in their healing methods. Some healers are Islamic scholars, and some healers have a more traditional approach. Both types integrated *Tawa nan ampek*. There are four healing plants, and there is the possibility to use other treatment levels if the medical disorder is severe. Altogether there are three levels. So, it can be seen that the cognitive pattern numbers play a role in the traditional healing system of West Sumatra.

4.2.4 Different Categories of Medicinal Plants

After considering the cognitive peculiarities, it is necessary to look at the categories in Figure 1. It resembles a folk taxonomy, but there are differences. Nonetheless, the terminology will be upheld.

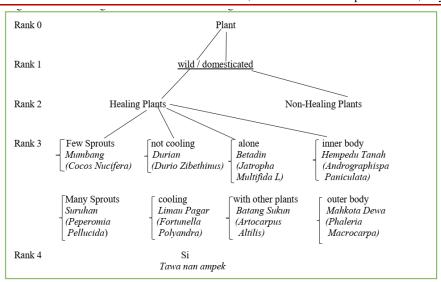


Figure 1: Plant Categories in Traditional Minangkabau Medicine

In the chapters before, some general features regarding the plant classification were outlined. This chapter will be more concise so that the folk classification will be clearer. The researchers decided to follow the terminology of folk taxonomies, even if it is not a folk taxonomy in the conventional sense. In folk taxonomies, rank 0 is the most general form, like plant or animal. D'Andrade mentions that in many cultures there is no rank 0 (D'Andrade, 2003, p, 94). However, that does not mean that they do not distinguish. For example, they might talk about life-forms in general at rank 0.

The generics form the second level. The people can differentiate a bush or tree. Folk taxonomies are often different from biological or botanical taxonomies. The next levels are the so-called specifics. People differentiate between different types of trees or other plants.

Figure 1 shows that Rank 0 and Rank 1 are general by simply dividing plants. Rank 2 shows that there are plants that can be used as healing plants and other plants that serve another purpose. They can be domesticated or wild. Rank 3 is more detailed and looks at particular features. These features are interrelated to medical disorders. Some disorders are more severe and require a treatment that offers the possibility to use a treatment level that is stronger and more effective. Rank 3 does not look like a typical folk taxonomy. However, the mentioned features can be combined. An example should illustrate that: In Figure 1, the plant Betadin (Plate 4) is a plant that is used as a single medicinal plant without combination. It is used to treat wounds. The latex of the plant is collected and put on the wound. So, we can say that *Betadin* is used for the outer body.



Plate 4: Betadin (Jatropha Multifida L)

Many combinations are possible, but the healers use the mentioned features as a kind of landmark that helps them to narrow the medicinal plants that can be used for a specific treatment.

Rank 4 is special. The mentioned features that are mentioned in the second row of rank 3 (many sprouts, cooling, in combination with other plants, and used at the outer body) are applicable to the four healing plants of *Tawa nan ampek*. This astonishing fact shows their unique features.

4.3 The Life-World and the Decision-Finding Process

The researchers looked at the decision-finding process of traditional Minangkabau healers from two perspectives: 1) It was looked at it from the viewpoint of the healers and what kind of possibilities were available, like the reference of books or intuition, 2) It was looked from the medicinal plants and the different categories.

The traditional healers are part of the Minangkabau world. There are certain cognitive

patterns that play an important role in the life of people. Particularly number 4 and number 3 are recurrent numbers. Without going into much detail, it is interesting to look at some examples. There are four elements of custom. Furthermore, the body consists of four elements (air, water, fire and earth), there are four original matriclans and so on. Therefore, it is not surprising that the number 4 is of importance. Number 3 is an important number as well: There are three traditional Minangkabau regions, and there were three kings in the past. If the medical disorder is severe, the healers have the opportunity 'to move to the next level'. Often there are three levels. Moreover, folk beliefs are important. There is a famous local type of sorcery which is called *sijundai*. There is also a warning of unseen entities that affect the health of a person. The local healers have their culture-specific ways of treatment.

5. CONCLUSION

In this research paper, the way how traditional healers can find a promising treatment was outlined. It was discovered that the healers relied on their experience and reference notes or books. Furthermore, some healers had special abilities and could get a kind of intuition or ask *jin* for help. However, the life-world and the environment are also influential. The four healing plants *tawa nan ampek* uses plants with the prefix *si*. Therefore, such plants can be considered as a kind of companion.

There is a simple way how to classify plants. Major binary dichotomies help to get different combinations which include different characteristics. For example, if a medical disorder is considered to be hot, then it makes sense to look for plants that are cooling. The healer might also check whether the plants should be consumed orally or applied to the outer body. In such a case, the healer knows what can be used. Sometimes a combination of different medicinal plants could be more effective. The categorization is not a static scheme, but it is a flexible method that helps to find appropriate plants.

Finally, it was also discovered that there are cognitive patterns that are embedded in the local way how to categorize things. The numbers 3 and 4 are to be mentioned. Many healing combinations comprise four healing plants and have the opportunity to get a stronger form of treatment in another level. Often there are three levels. The traditional Minangkabau healing system is part of the culture, and so it is not surprising that local categories were integrated into the medical system.

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