

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/346714583>

Muyu tribes' local wisdom: complimentary care for limited health access

Article in Eurasian Journal of Biosciences · November 2020

CITATIONS

6

READS

248

3 authors, including:



[Agung Dwi Laksono](#)

Badan Riset dan Inovasi Nasional (National Research and Innovation Agency)

396 PUBLICATIONS 2,469 CITATIONS

[SEE PROFILE](#)



[Ratna Dwi Wulandari](#)

Airlangga University

209 PUBLICATIONS 1,417 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Co author [View project](#)



Reproductive Health [View project](#)



Muyu tribes' local wisdom: complimentary care for limited health access

Agung Dwi Laksono ¹, Yulis Setiya Dewi ², Ratna Dwi Wulandari ^{3*}

¹ National Institute of Health Research and Development, Indonesia Ministry of Health, Jakarta, INDONESIA

² Faculty of Nursing Universitas Airlangga Surabaya, INDONESIA

³ Faculty of Public Health Universitas Airlangga Surabaya, INDONESIA

*Corresponding author: ratna-d-w@fkm.unair.ac.id

Abstract

Muyu is an isolated tribe in Papua Indonesia where they have limited access to health care. They use the traditional methods that they believe can solve many health problems. This study used a qualitative approach to explore Muyu's traditional wisdom. Data was collected using participative observation, in-depth interviews, and document search. The informants was 40 consisted of community figures, religious leaders, tribal leaders, housewives, breadwinners, and teenagers using snowball sampling. Data collection and analysis were conducted concurrently and recruitment was stopped when saturation was reached. Data was analyzed qualitatively. The result found that the healing method performed by the traditional healers of the Muyu tribe consists of communication with spirits through the medium of 'pull hair' by using a stick, using *iwéng* and *kamak* leaves, using clay media wrapped in *Kónawóng* leaves; using the offering medium, using mediators to speaks to spirits. It could be concluded that the traditional treatment of the Muyu tribe included in the category of spiritual treatment. This category is more due to the reasons for the occurrence of a disease often due to the myths and beliefs of the Muyu community.

Keywords: ethnography, ethnomedicine, traditional healer, tribal, spirits, health belief, shaman

Laksono AD, Dewi YS, Wulandari RD (2020) Muyu tribes' local wisdom: complimentary care for limited health access. *Eurasia J Biosci* 14: 5871-5878.

© 2020 Laksono et al.

This is an open-access article distributed under the terms of the Creative Commons Attribution License.

INTRODUCTION

Indonesia is a country with extraordinary diversity. There are at least more than 16 thousand islands and more than 500 ethnic groups spread from Sumatra Province in the west to Papua Province in the east (Central Bureau of Statistics of Indonesia, 2011; Laksono, Wulandari and Soedirham, 2019; Kusri and Laksono, 2020). The many ethnicities enrich the diversity of customs, languages, lifestyles, including local knowledge systems about traditional medicine.

Basic Health Research 2013 conducted by the National Institute of Health Research and Development divides the type of traditional healthcare into four different categories. Traditional health services consist of herbs (health services using herbs, aromatherapy, gurah, homeopathy and spa), skill with tools (acupuncture, chiropractic, cupping, app tape, ceragem, and acupressure), skill without tools (massage, maternal-infant massage, fracture treatment, and reflection), and skills with the mind (hypnotherapy, meditation, prana, and in-person treatment) (National Institute of Health Research and Development of The Indonesia Ministry of Health, 2019). The type of traditional healthcare is slightly different from the traditional category of medicine released by the Ministry

of Health, although it is also divided into four major groups, namely skill, herb, spiritual, and religion (National Institute of Health Research and Development of The Indonesia Ministry of Health, 2019).

The Muyu tribe is one of the tribes in Papua Province, the easternmost province, and borders with Papua New Guinea. According to the Ministry of Health's notes, Papua Province in public health development has always lagged behind other provinces in Indonesia. Papua is always in the bottom three in the Public Health Development Index ranking released by the Ministry of Health (National Institute of Health Research and Development of the Ministry of Health of the Republic of Indonesia, 2010, 2019; National Institute of Health Research and Development, 2014). Meanwhile, previous research reports that took the subject in Papua, also placed Papua as a region that has access to health services (Laksono, Wulandari and Soedirham, 2019; Laksono, Rukmini and Wulandari, 2020), as well as achieving low output performance in the health sector (Kusri and Laksono, 2020).

Received: February 2020

Accepted: March 2020

Printed: November 2020

The availability of health services in Papua is also low. This situation cannot be separated from Papua's extreme geographical conditions. The government has made great efforts to increase the availability of health services in the region. Several programs and policies were made specifically to increase public access to health service facilities, including the flying doctor program, mobile hospital, and Papua Health Insurance (Laksono *et al.*, 2014; Laksono, Soerachman and Angkasawati, 2016). Given the lack of health services in this area, it is also necessary to explore the potential of a local medical system to explore the possibility of its development. Based on the background description, the study aim to describe the Muyu tribe's traditional medicine as complimentary care for limited health access.

SUBJECT AND RESEARCH METHODS

This research was conducted using a qualitative approach. For more than two months in the period, May-June 2014 researchers lived and mingled with the Muyu tribe community in Mindiptana District, Boven Digoel District, Papua. Researchers collect data by participative observation, in-depth interviews, and document search.

The number of participants was 40 consist of community figures, religious leaders, tribal leaders, housewives, breadwinners, and teenagers using snowball sampling. Data were collected through in-depth interviews and participatory observation. Collected data was crosschecked to relevant community members such as other community leaders who have not participated as informant, observation. Data collection and analysis were conducted concurrently and recruitment was stopped when saturation was reached (Kusumawardani *et al.*, 2015).

RESULTS AND DISCUSSION

Muyu tribal communities live mostly in the Eastern part of Boven Digoel Regency bordering and neighboring to Papua New Guinea. Currently, its presence has spread to Merauke, and even to Sorong as a result of rubber plantation projects in the Dutch era. From some districts in the border region, Muyu tribal communities mostly exist in the district of Mindiptana, which is a larger and bustling city in the Dutch era than Tanah Merah, the capital of the current Boven Digoel Regency. For political reasons that some freedom fighters were exiled in Tanah Merah, the territory was eventually made the capital of Boven Digoel (Laksono *et al.*, 2014).

In general, the Mindiptana region, as the largest residence of the Muyu tribe, does not have good access, both access in general and access to health services. Street infrastructure to reach this area from Tanah Merah was severely damaged, lighting was only available 6 hours (18.00-24.00), cable telephone network was unavailable, and cell phone signal was also

absent (according to residents there were only 2 months). There is one Puskesmas (primary health care) and one mobile hospital serving the area. Although physically available health care facilities, but the constraints of transportation access to limit the tribe Muyu to get health services. This is also a trigger familiarity Muyu tribe community with traditional medicine that is an effort to survive in all limitations and eventually evolved into local wisdom from generation to generation. On an everyday basis, people of Muyu are very familiar with beliefs and myths that are believed to be decisive in their values of society. These values are the determinants of Muyu people knowing some types of traditional medicine that are often associated with spirits, gods, magic, and the supernatural world they call *iptèm* (Laksono, Soerachman and Angkasawati, 2016).

There is no specific mention in the Muyu language for traditional healers or shaman, as often people who can cure do not work as traditional healers or shaman, but rather the elderly, whom they call adat customs. The naming of specialties or types of healers based on the type of treatable disease is also not well known in the tradition of traditional Muyu medicine.

Muyu people know some of the methods for treatment commonly practiced by traditional Muyu healers for healing. Noted there are at least five different methods of healing done by the traditional healers of the Muyu tribe. The five methods consist of;

- 1) The first healing method is *Ambokimo Kangge/Kanggaman* (communication with spirits through the medium of 'pull hair' using the stick);
- 2) The second method is *Áneyòdí-wimèm*, using *iwéng* and *kamak* leaves;
- 3) The third method is *Murupkónó*, using clay media wrapped in *Kónawóng* leaves;
- 4) The fourth method using the offering medium;
- 5) The fifth method by the method of *awok ambó*.

All of these traditional healing methods are always associated with the supernatural problem (*iptèm*). Supernatural treatment is commonly done for diseases believed to be caused by a disturbance of the spirits, the spirit of the gods, or the cause of the interference of others.

Healing with media stick to pull hair

This type of treatment is usually done by people who can communicate with gods or spirits believed to dominate certain places. The person is believed to practice healing by talking or communicating, not by casting spells. Therefore, people are believed to be more able to heal when having or know more *dema* believed to be the ruler of certain places. By doing the ritual of pulling the hair of the sick by using the stick while talking call the places that he knew there was his *dema*, "This is what makes sick (place)? This is what makes sick (place)?". When referring to a certain place that is believed to have a *dema*, a stick pulling a broken hair



Fig. 1. Pulling hair with a stick to diagnose the cause of the disease

(broken), then it is believed the cause of the illness is the place *dema*.

Furthermore, the shaman will say, "I know you (*dema*) that make the (name) ill. Can not make any more pain... no sickness of this (name) again... out of this person". Next, the broken hair is cut slightly, then burned, and kissed (*diaromakan*) to the sick. The process of tugging hair in this healing practice is more like an 'anamnesis-diagnosis' process to find the cause of pain in modern medical practice. Further 'chit-chat' and the final process is more a healing process.

Áneyòdí-wímèm (Ginger Leaf Therapy)

Áneyòdí-wímèm is a healing method using leaf medium *iwéng* (lemongrass leaves) and *Halia* or *kamak* (ginger). The fruit of *halia* or *kamak* is believed *Muyu* people as anti-spirit or spirits. How to treat the leaves *iwéng* and *kamak* chewed, then taped and sorted on the parts of the body, especially those felt sick. In certain places that are believed to have the cause of the disease, when the leaves *iwéng* plus *kamak* knead-ordered out the items that make the patient sick. The items that come out are usually arrows, bird nails, broken glass, and other objects.

Murupkònó (Konawong Leaf Therapy)

Murupkònó is a healing service using clay wrapped with *Kónawóng* leaves, a kind of fragrant leaves of the forest. Leaf-clayed clay is then placed on the parts of the body that is sick, attached evenly. At a certain moment, there will be a certain sound tone that indicates the disease has met. Next, the clay clump is opened. Usually will be found foreign objects in the form of eagle/eagle claws, broken glass, nails, dog teeth, or pig teeth. There is a belief that the things that cause the illness suffered.

Sacrificial Offering

The offering is a method using the medium of offerings sacrificially in the form of pets. It can be a dog, a pig, or a white chicken. Ancient times that are commonly used as offerings are pork or sacred pig (a

special pig whose direction of growing feathers is opposite in direction of most pigs). Nowadays with the development of the times, and also more difficult to get a sacred pig, then more often use white chicken as an offering. The use of white chickens in this method of healing because of the white color more as a symbol of holiness.

The healing practice is done by cutting white chickens into offerings. The white blood of the chopped chicken was taken and rubbed on the sick, then rubbed into the walls of the house, doors, windows. Only then can chicken be cooked and eaten. The next process is done "chit-chat" as in other healing processes described earlier. "Do not lovesick again the house, we have this chicken... we dedicate this blood...".

This method is also used for different purposes. Pairs of *Muyu* who want pregnancy can also undergo the same ritual, with the completion of the different endings. Chicken blood is not rubbed into the body, but it is applied to the couple.

Awung Ambo (therapy by medium)

This healing practice is usually done by *Muene nene* (seniors especially grandmother). *Muyu*'s grandmothers act as mediators or mediums for spirits to speak. When the researchers mentioned that the *ambo awung* method was similar to possessed, the informant firmly rejected the title. According to him, the grandmother who was functioning as an intermediary is fully conscious, not in a trance condition. It's just the sound that comes out of his mouth is the voice of others.

The content of the conversation or communication is usually about what the patient is causing the illness, or sometimes it also contains information about who is doing or transmitting the current illness. The communication effort for this "anamnesis-diagnosis" is simultaneously coupled with communication about how the disorder suffered could be cured.

In general, there is no tariff or special rewards for this traditional healing service. The rewards are voluntary given no specific restrictions. Payments can be in the form of money, food, or tobacco. If the sick does not heal, then the consequences of any payment received by the healer should be returned.

Based on the categorization of traditional medicine distribution according to the Ministry of Health (National Institute of Health Research and Development of The Indonesia Ministry of Health, 2019), then the type of traditional medicine that existed in the *Muyu* Tribe as a whole entered the spiritual group. It is different if we categorize the categories based on the categories compiled by the National Institute of Health Research and Development in 2018, it will include traditional treatment services in skill categories with the mind, because although one of the methods is using *iwéng* (ginger) and *kamak* (red ginger) not used as an herb, but rather as an intermediary medium only because it is

believed these materials can drive out the spirits. Information about traditional treatment methods with a model like this is in line with several other tribes in Indonesia which have been informed in several previous studies (Laksono, Wulandari, Soedirham, *et al.*, 2020; Sugianto, Abdullah and Sumarlam, Widodo, 2020; Widayanti *et al.*, 2020).

This is in contrast to some traditional healers in other tribes in Indonesia who tend to have their names for traditional healers. For example in the Balinese and Dayak tribes who call traditional healers or shamans as *baliyan* (Nuraini *et al.*, 2012; Riswati *et al.*, 2012), or the Javanese Tribe that have specific names for each traditional healer with specialization in particular; shaman of *sangkal putung*, i.e traditional healers with specialization of broken bones; shaman *tétak* for traditional healers with a specialization of circumcision; and shaman *bayék* for shamans who used to help with labor or birth attendance. The difficult access to the Muyu tribe community to get modern health service is expected to influence the growth of the traditional health service model in the Mindiptana region. The same reason was found in several studies conducted in several countries. It is mentioned that the limitation of public access is more due to availability factors (Suharmiati, Laksono and Astuti, 2013; Mubasyiroh, Nurhotimah and Laksono, 2016; Karuaihe and Wandschneider, 2018; Song *et al.*, 2019).

Another factor causing the strong access of traditional healers of Muyu is still strong mystical things believed to be the cause of a disease. Similar findings are also found in several indigenous tribes in Indonesia (Laksono, Wulandari, Nantabah, *et al.*, 2020). This is also found in a study in South Africa. Local people believe in epilepsy caused by *amafufunyana* (evil spirits), and those biomedical doctors can not treat the supernatural causes of epilepsy (Keikelame and Swartz, 2015). This fact is further strengthened by the phenomenon of research found in Malaysia which states that the factor of cultural context (belief) also strongly influences the traditional healer's choice as a cure, in addition to limited access due to the availability factor (Muhamad, Merriam and Suhami, 2012). The mythological causes of the disease in the Muyu tribe grew stronger when the original Muyu modern healers also strongly believed in the myth, as well as believing in the modern methods of medicine he acquired in medical school (Laksono and Faizin, 2015).

The Role of Traditional Medicine

In the national policy, the government already has a willingness to integrate traditional medicine in the health service system, although its implementation still felt less. This is in contrast to conditions in Thailand, in rural Thailand, traditional healers still play an important role in the local health care system even though modern medicine is easily accessible. This study shows that

shamans are still considered important for public health and that many people still believe in the healing properties of medicinal plants. In the future, it is expected that traditional Thai medicine will be promoted and will, therefore, help reduce the public health burden nationally (Maneenoon *et al.*, 2015).

In the system of traditional medicine (allopathic) three factors play a role in the treatment, namely emotional, spiritual, and palliative. Emotional and spiritual roles are believed to enhance the effectiveness of biomedical treatment (Merriam and Muhamad, 2013; Laksono, Pranata and Astuti, 2014). Some evidence suggests that shamans can provide effective psychosocial interventions. Their interventions may help to alleviate suffering and promote mild symptoms in common mental disorders such as depression and anxiety. However, little evidence suggests that they altered the course of severe mental illness such as bipolar and psychotic disorders (Nortje *et al.*, 2016). Other studies in the same field found that there is still a need to educate traditional healers about how to recognize different types of mental disorders and make referrals when patients do not respond to their treatment (Mbwayo *et al.*, 2013).

Some studies have found positive evidence of traditional healers, although other studies have found negative practices. One study found that HIV/AIDS-related practices of traditional healers may increase the risk of HIV-infected persons through delayed care, and uninfected persons through razor reuse. Although researchers still recommend integrating traditional treatment services into modern service systems by providing adequate education to these traditional healers (Audet *et al.*, 2012; Lor *et al.*, 2017).

The results of other studies on the treatment of HIV sufferers in South Africa have also reported positive things. Research shows that traditional medicine can be used for prevention and treatment for HIV-positive patients. Shamans are enthusiastic about the possibility of collaborating with biomedical practitioners in the prevention and care of HIV and AIDS patients. This is important as they already serve the health needs of a large percentage of South Africans (George, Chitindingu and Gow, 2013).

Partnership and Integration are needed

Often the services performed by traditional healers are more flexible, following the needs and in keeping with the lifestyles and needs of the community. Their presence enhances people's access to health care and offers an alternative to modern medicine, which often has a limited role, especially in the poor. For that, it is felt necessary to incorporate these traditional healers into modern service systems (Nxumalo *et al.*, 2011; Suwankhong, Liamputtong and Rumbold, 2011). Nevertheless, the choice as an alternative treatment is often opposed by many parties, hence the need to

present traditional medicine as a holistic complementary medicine (Birhan, Giday and Teklehaymanot, 2011; Suwankhong, Liamputtong and Rumbold, 2011; Chebii, Muthee and Kiemo, 2020).

Modern and traditional healers recognize different health legality. Modern healers try to motivate and require traditional healers to meet their standards, while traditional healers face integration difficulties and resist such approaches. This is related to their efforts in preserving their traditions. Their traditional medical practices do not meet the standards required to gain the trust of modern healers (Suwankhong, Liamputtong and Rumbold, 2011).

Another option is to invite traditional healers with a partnership. A study on community-based HIV/AIDS services demonstrated a positive partnership between traditional healers and modern healers. Traditional healers can provide community-based HIV services and are not perceived to impede treatment in the communities they serve, although they complain about the lack of understanding of HIV in the local context of modern healers (Furin, 2011). This complaint is also found in a study of traditional-modern healers in Ghana. There is a high enough expectation that the information collected by researchers, on the plants and traditional methods they use, will result in the affirmation and acknowledgment of their medicinal practices, but they complain that they are not receiving feedback from the research done (Amoah *et al.*, 2014).

While the alternative model of other partnerships is to give the role or involve traditional healers in the phase of education and health promotion (Merriam and Muhamad, 2013). The terms of a partnership are of equal standing, as do the partnership of modern-day healers. This partnership equality strategy is also required by traditional healers in Cape Town-South Africa who support collaboration with modern healers. They highlighted that the strategy should have formal agreements given intellectual property protection, accountability, and respect for their customary knowledge (Keikelame and Swartz, 2015; Audet *et al.*, 2020; Novotna *et al.*, 2020).

Empirical facts in the field and the results of the research indicate that traditional medicine still plays an important role to fill the void or become complementary in the modern biomedical service system. Integrating traditional medicine into health care systems is a positive policy choice. This is in line with research results in Bapedi-South Africa and also in remote rural

Zimbabwe, although further research is still needed to ensure the safety and effectiveness of traditional medicine (Semenya and Potgieter, 2014; Ngarivhume *et al.*, 2015).

Efforts of partnership and standardization of traditional medicine are believed to dismiss worries about the extinction of traditional treatment methods as a cultural treasure treasures of the nation. Such concerns are already taking place in some countries. Traditional medicine has been neglected for reasons of oral history. It is an excuse for not being included in the school curriculum or government policy documents (Mathibela *et al.*, 2015; Joshi *et al.*, 2020; Mkwanzazi, Ndlela and Chimonyo, 2020). It takes the efforts of partnership and integration of traditional medical services to the level of implementation in the field. The willingness of the government as stipulated in the policy at the central level should be able to be followed up on the ground.

Limitation of the study

This study was conducted in a small group and limited to the Muyu Tribe. For more meaningful interpretations of traditional healing, future studies should be conducted with larger samples and involve more beneficial aspects. Furthermore, the interviews should be conducted in a more relaxed environment and have been accompanied by local people who understand their customs and cultures so that participants can express their opinions more freely. The gap that exists between interviewers and participants may affect their opinion and information.

CONCLUSIONS

Based on the results of research and discussion can be concluded that the traditional treatment of Muyu tribe included in the category of spiritual treatment. This category is more due to the reasons for the occurrence of a disease often due to the myths and beliefs of the Muyu community.

ACKNOWLEDGEMENTS

The authors would like to thank the Head of the National Institute of Health Research and Development for facilitating all of these activities. We would also like to thank the Head of the Mindiptana Community Health Center and the Head of the Health Office of Boven Digoel for facilitating the implementation process in the field so that this research can be completed.

REFERENCES

- Amoah, S. K. S. et al. (2014) Herbalists, traditional healers and pharmacists: A view of the tuberculosis in Ghana. *Brazilian Journal of Pharmacognosy* 24: 89–95. <http://dx.doi.org/10.1590/0102-695X2014241405>
- Audet, C. M. et al. (2012) HIV/AIDS-related attitudes and practices among traditional healers in Zambézia Province, Mozambique, *Journal of alternative and complementary medicine* (New York, N.Y.) 18: 1133–1141. <http://dx.doi.org/10.1089/acm.2011.0682>

- Audet, C. M. et al. (2020) Traditional healers use of personal protective equipment: a qualitative study in rural South Africa. *BMC health services research* 20: 655. <http://dx.doi.org/10.1186/s12913-020-05515-9>
- Birhan, W., Giday, M. and Teklehaymanot, T. (2011) The contribution of traditional healers' clinics to public health care system in Addis Ababa, Ethiopia: a cross-sectional study. *Journal of Ethnobiology and Ethnomedicine* 7: 39. <http://dx.doi.org/10.1186/1746-4269-7-39>
- Central Bureau of Statistics of Indonesia (2011) Citizenship, Ethnicity, Religion, and Everyday Language Indonesian Residents. Results of the 2010 Population Census. Jakarta
- Chebii, W. K., Muthee, J. K. and Kiemo, K. (2020) The governance of traditional medicine and herbal remedies in the selected local markets of Western Kenya. *J Ethnobiol Ethnomed* 16: 39. <http://dx.doi.org/10.1186/s13002-020-00389-x>
- Furin, J. (2011) The role of traditional healers in community-based HIV care in rural Lesotho. *Journal of Community Health* 36: 849–856. <http://dx.doi.org/10.1007/s10900-011-9385-3>
- George, G., Chitindingu, E. and Gow, J. (2013) Evaluating traditional healers knowledge and practices related to HIV testing and treatment in South Africa. *BMC International Health and Human Rights* 13: 1. <http://dx.doi.org/10.1186/1472-698X-13-45>
- Joshi, N. et al. (2020) Utilization pattern and indigenous knowledge of wild medicinal plants among three ethnic groups in Makawanpur district, Central Nepal. *Journal of Ethnopharmacology* 262: Article number 113219. <http://dx.doi.org/10.1016/j.jep.2020.113219>
- Karuaihe, S. T. and Wandschneider, P. R. (2018) Limited access to services for the urban poor in Windhoek, Namibia. *Development Southern Africa* 35: 466–479. <http://dx.doi.org/10.1080/0376835X.2018.1475219>
- Keikelame, M. J. and Swartz, L. (2015) "A thing full of stories": Traditional healers' explanations of epilepsy and perspectives on collaboration with biomedical health care in Cape Town. *Transcult Psychiatry* 52: 659–680. <http://dx.doi.org/10.1177/1363461515571626>
- Kusrini, I. and Laksono, A. D. (2020) Regional disparities of stunted toddler in Indonesia. *Indian Journal of Forensic Medicine and Toxicology* 14: 1685–1691
- Kusumawardani, N. et al. (2015) *Qualitative Methods for Health Research (Penelitian Kualitatif di Bidang Kesehatan)*. Yogyakarta: PT Kanisius
- Laksono, A. D. et al. (2014) *Muyu women in exile (Perempuan Muyu dalam Pengasingan)*. Jakarta: Lembaga Penerbitan Balitbangkes. Available at: <https://www.scribd.com/doc/261673624/Perempuan-Muyu-dalam-Pengasingan-Riset-Etnografi-Kesehatan-2014-Boven-Digoel>
- Laksono, A. D., Wulandari, R. D., Nantabah, Z. K., et al. (2020) The Concept of Illness among Ethnic Groups in Indonesia: A Meta-Ethnographic Study. *Systematic Reviews in Pharmacy* 11: 584–591. <http://dx.doi.org/10.31838/srp.2020.9.85>
- Laksono, A. D., Wulandari, R. D., Soedirham, O., et al. (2020) Treatment-Seeking Behavior of Tengger Tribe in Indonesia. *Journal of Critical Reviews* 7: 3946–3952. <http://dx.doi.org/10.31838/jcr.07.19.458>
- Laksono, A. D. and Faizin, K. (2015) Traditions Influence Into Behavior in Health Care; Ethnographic Case Study on Health Workers Muyu Tribe. *Bulletin of Health System Research* 18: 347–354. <http://dx.doi.org/10.22435/hsr.v18i4.4567.347-354>
- Laksono, A. D., Pranata, S. and Astuti, W. D. (2014) *Positioning for Shaman (Positioning Dukun Bayi)*. Yogyakarta: PT Kanisius
- Laksono, A. D., Rukmini, R. and Wulandari, R. D. (2020) Regional disparities in antenatal care utilization in Indonesia. *PLoS ONE* 15: e0224006. <http://dx.doi.org/10.1371/journal.pone.0224006>
- Laksono, A. D., Soerachman, R. and Angkasawati, T. J. (2016) Case Study of Muyu Ethnic's Maternal Health in Mindiptara District-Boven Digoel (Studi Kasus Kesehatan Maternal Suku Muyu di Distrik Mindiptana, Kabupaten Boven Digoel). *Journal of Reproductive Health* 07: 145–155. <http://dx.doi.org/10.22435/kespro.v7i3.4349.145-155>
- Laksono, A. D., Wulandari, R. D. and Soedirham, O. (2019) Regional Disparities of Health Center Utilization in Rural Indonesia. *Malaysian Journal of Public Health Medicine* 19: 1. <http://dx.doi.org/10.37268/mjphm/vol.19/no.1/art.48>
- Lor, M. et al. (2017) Western or Traditional Healers? Understanding Decision Making in the Hmong Population. *Western Journal of Nursing Research* 39: 400–415. <http://dx.doi.org/10.1177/0193945916636484>
- Maneenoon, K. et al. (2015) Ethnomedicinal plants used by traditional healers in Phatthalung Province, Peninsular Thailand. *Journal of ethnobiology and ethnomedicine* 1: 43. <http://dx.doi.org/10.1186/s13002-015-0031-5>

- Mathibela, M. K. et al. (2015) Socio-cultural profile of Bapedi traditional healers as indigenous knowledge custodians and conservation partners in the Blouberg area, Limpopo Province, South Africa. *Journal of ethnobiology and ethnomedicine* 11: 49. <http://dx.doi.org/10.1186/s13002-015-0025-3>
- Mbwayo, a W. et al. (2013) Traditional healers and provision of mental health services in cosmopolitan informal settlements in Nairobi, Kenya. *African journal of psychiatry* 16: 134–40. <http://dx.doi.org/10.4314/ajpsy.v16i2.17>
- Merriam, S. and Muhamad, M. (2013) Roles traditional healers play in cancer treatment in Malaysia: Implications for health promotion and education. *Asian Pacific Journal of Cancer Prevention* 14: 3593–3601. <http://dx.doi.org/10.7314/APJCP.2013.14.6.3593>
- Mkwanazi, M. V., Ndlela, S. Z. and Chimonyo, M. (2020) Utilisation of indigenous knowledge to control ticks in goats: a case of KwaZulu-Natal Province, South Africa. *Tropical Animal Health and Production* 52: 1375–1383. <http://dx.doi.org/10.1007/s11250-019-02145-0>
- Mubasyiroh, R., Nurhotimah, E. and Laksono, A. D. (2016) Health Service Accessibility Index in Indonesia (Indeks Aksesibilitas Pelayanan Kesehatan di Indonesia), in Supriyanto, S., Chalidyanto, D., and Wulandari, R. D. (eds) *Accessibility of Health Services in Indonesia (Aksesibilitas Pelayanan Kesehatan di Indonesia)*. Jogjakarta: PT Kanisius, 21–58
- Muhamad, M., Merriam, S. and Suhami, N. (2012) Why breast cancer patients seek traditional healers. *International journal of breast cancer* 2012: 689168. <http://dx.doi.org/10.1155/2012/689168>
- National Institute of Health Research and Development (2014) *The 2013 Public Health Development Index (Indeks Pembangunan Kesehatan Masyarakat Tahun 2013)*. Jakarta: The Ministry of Health of Indonesia
- National Institute of Health Research and Development of The Indonesia Ministry of Health (2019) *The 2018 Indonesia Basic Health Survey (Riskesdas): National Report*. Jakarta. Available at: http://labmandat.litbang.depkes.go.id/images/download/laporan/RKD/2018/Laporan%7B%5C_%7DNasional%7B%5C_%7DRKD2018%7B%5C_%7DFINAL.pdf
- National Institute of Health Research and Development of the Ministry of Health of the Republic of Indonesia (2010) *The 2007 Indonesian Public Health Development Index*. Jakarta: Indonesian Ministry of Health
- National Institute of Health Research and Development of the Ministry of Health of the Republic of Indonesia (2019) *The 2018 Public Health Development Index*. Jakarta. Available at: <https://www.litbang.kemkes.go.id/buku-ipkm-2018/>
- Ngarivhume, T. et al. (2015) Medicinal plants used by traditional healers for the treatment of malaria in the Chipinge district in Zimbabwe. *Journal of Ethnopharmacology*, 159: 224–237. <http://dx.doi.org/10.1016/j.jep.2014.11.011>
- Nortje, G. et al. (2016) Effectiveness of traditional healers in treating mental disorders: A systematic review. *The Lancet Psychiatry* 154–170. [http://dx.doi.org/10.1016/S2215-0366\(15\)00515-5](http://dx.doi.org/10.1016/S2215-0366(15)00515-5)
- Novotna, B. et al. (2020) Medicinal plants used by “root doctors”, local traditional healers in Bié province, Angola. *Journal of Ethnopharmacology* 260: Article number 112662. <http://dx.doi.org/10.1016/j.jep.2020.112662>
- Nuraini, S. et al. (2012) *The 2012 Mother and Child Health Ethnographic Book Series: Dayak Siang Murung Ethnic, Dirung Bakung Village, Tanah Siang District, Murung Raya District, Central Kalimantan Province (Buku Seri Etnografi Kesehatan Ibu dan Anak 2012: Etnik Dayak Siang Murung)*. Surabaya: Center for Humanities, Health Policy and Community Empowerment. The Indonesia Ministry of Health
- Nxumalo, N. et al. (2011) Utilization of traditional healers in South Africa and costs to patients: findings from a national household survey. *Journal of public health policy* 32: Suppl 1(S1) S124-36. <http://dx.doi.org/10.1057/jphp.2011.26>
- Riswati et al. (2012) *Mother and Child Health Ethnographic Series Book 2012; Ethnic Bali, Banjar Banda, Saba Village, Blahbatuh District, Gianyar Regency, Bali Province*. Jakarta: Pusat Humaniora, Kebijakan Kesehatan dan Pemberdayaan Masyarakat. Available at: <https://www.scribd.com/doc/142695628/Buku-Seri-Etnografi-Kesehatan-Ibu-dan-Anak-2012-Etnik-Bali-Banjar-Banda-Desa-Saba-Kecamatan-Blahbatuh-Kabupaten-Gianyar-Provinsi-Bali>
- Semenya, S. S. and Potgieter, M. J. (2014) Bapedi traditional healers in the Limpopo Province, South Africa: Their socio-cultural profile and traditional healing practice. *Journal of Ethnobiology and Ethnomedicine* 10: 1–12. <http://dx.doi.org/10.1186/1746-4269-10-4>
- Song, S. et al. (2019) Increased inequalities in health resource and access to health care in rural China. *International Journal of Environmental Research and Public Health* 16: Article number 49. <http://dx.doi.org/10.3390/ijerph16010049>

- Sugianto, A., Abdullah, W. and Sumarlam, Widodo, S. T. (2020) Health wisdom in the traditional healing of the panaragan java subethnicity: The case study of warok ponorogo. *Indian Journal of Forensic Medicine and Toxicology* 14: 2337–2341
- Suharmiati, Laksono, A. D. and Astuti, W. D. (2013) Policy Review on Health Services in Primary Health Center in the Border and Remote Area (Review Kebijakan tentang Pelayanan Kesehatan Puskesmas di Daerah Terpencil Perbatasan). *Bulletin of Health System Research* 16: 109–116.
- Suwankhong, D., Liamputtong, P. and Rumbold, B. (2011) Existing roles of traditional healers (mor baan) in Southern Thailand. *Journal of Community Health* 36: 438–445. <http://dx.doi.org/10.1007/s10900-011-9360-z>
- Widayanti, A. W. et al. (2020) Health-seeking behavior of people in Indonesia: A narrative review: *Journal of Epidemiology and Global HealthOpen* 10: 6–15. <http://dx.doi.org/10.2991/jegh.k.200102.001>

www.ejobios.org