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Exercising Agency in Medical Decision-Making Processes Conventional and Traditional Medicine - A Case Study of 67ha, Antananarivo-

Sakura Oyama
SIT Graduate Institute - Study Abroad

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Exercising Agency in Medical Decision-Making Processes
Conventional and Traditional Medicine
-A Case Study of 67ha, Antananarivo-

Sakura Oyama
Abstract

The formal integration of traditional and conventional medicine has been touted as a prime method to improve access to quality healthcare in Madagascar. This study draws on interviews with both traditional and conventional medical professionals as well as 100 residents of 67ha, Antananarivo to critically analyze the advantages of each sector in order to understand how integration can be used to strengthen the medical-decision making capacities of marginalized populations. Currently the ability for millions of Malagasy to exercise their freedom of choice in seeking their treatment method of choice is seriously compromised not only by cost and accessibility but by widespread mistrust and misinformation surrounding conventional medicine, caused in large part by the corrupt actions of healthcare professionals, particularly in the public sector where individuals lacking in financial resources are most likely to seek treatment. On the other hand, traditional medicine empowers marginalized populations to take control of their own health with readily accessible resources that can be used with knowledge passed down from their ancestors. Further investment in the regulation and research of traditional medicine is necessary in order to validate traditional medicine in the eyes of conventional healthcare providers, both in Madagascar and abroad. Such efforts need to be implemented in a responsible manner that ensures the conservation of national medicinal plant resources for generations to come.
Acknowledgements

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Definitions

Technical Terms

**Medical Pluralism**: “the employment or more than one medical system or the use of both conventional and complementary and alternative medicine for health and illness” (Wade, Chao, Kronenberg, Cushman, & Kalmuss, 2008)

**Conventional Medicine (CM)**: “a system in which medical doctors and other healthcare professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery. Also called allopathic medicine, biomedicine, mainstream medicine, orthodox medicine, and Western medicine” (NCI. n.d.)

**Traditional Medicine (TM)**: “the sum total of the knowledge, skill, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in prevention, diagnosis, improvement or treatment of physical and mental illness” (WHO, 2013)

Malagasy Terms

**Ariary**: Malagasy currency ($1=3200Ar as of Dec 2015)

**Centre de Santé de Base II**: primary public healthcare facility with at least one doctor on staff

**Fokontany**: smallest administrative unit in local government, headed by a chief designated by the major of the commune

**Institut Malgache de Recherches Appliquées**: A Malagasy institution dedicated to scientific research and commercialization of medicinal plants. In addition to multiple laboratories, the institution also runs an out-patient clinic that offers integrated care.

**Raokandro**: medicinal plant vendors

**Reninjaja**: traditional birth attendants

**Sotramex**: A Malagasy company that specializes in the collection and exportation of plants and plant derivatives for medicinal and cosmetic use

**Tambavy**: medicinal plants

**Tizan**: beverage made from steeping medicinal plants in boiling water
Introduction

Introduction and Relevance

In recent years, improved integration of conventional and traditional medicine, or CM and TM, has come to be part of the dominant discourse in the field of global health. The benefits of traditional medicine as perceived by global health professionals are articulately summarized by the following statement made by WHO Director-General, Dr. Margaret Chan, at the International Conference on Traditional Medicine for South-East Asian Countries in February 2013. “Traditional medicines, of proven quality, safety, and efficacy, contribute to the goal of ensuring that all people have access to care. For many millions of people, herbal medicines, traditional treatments, and traditional practitioners are the main source of health care, and sometimes the only source of care. This is care that is close to homes, accessible and affordable. It is also culturally acceptable and trusted by large numbers of people. The affordability of most traditional medicines makes them all the more attractive at a time of soaring health-care costs and nearly universal austerity. Traditional medicine also stands out as a way of coping with the relentless rise of chronic non-communicable diseases” (World Health Organization, 2013).

Though seemingly benign upon first glance, closer examination of Dr. Chan’s statements raises some potentially serious concerns, as her praise of TM is primarily based not on its absolute virtues but on its high accessibility relative to CM in many developing countries. This sort of rhetoric fails to consider whether marginalized populations are able to exercise real freedom of choice in selecting medical interventions.

It is imperative to ensure that the formal integration of TM into healthcare systems increases the capacity of marginalized populations to exercise informed medical choices.
according to their personal treatment preferences. Without a proper understanding of the many diverse considerations that influence how individuals navigate medical pluralism to access healthcare in impoverished areas is conducted, efforts at integration will only risk further institutionalizing inequalities in access to CM and TM, thus depriving marginalized populations of their medical decision-making capacities. Furthermore, understanding the challenges that these individuals face in accessing quality healthcare can provide valuable insight into common problem areas in need of global attention.

**Statement of Purpose**

The purpose of this case study is to illustrate the diverse factors that influence the decision-making processes employed in accessing healthcare by the inhabitants of 67ha, while providing insight into the broader context of healthcare in Antananarivo. In doing so, I hope to highlight how the inhabitants of 67ha navigate between conventional and traditional systems in seeking care. Furthermore, I seek to elucidate the obstacles faced by the residents of 67ha in accessing quality healthcare, not only with the intention of identifying areas for improvement, but to gain an understanding of the political economy of health in Madagascar.

**Thesis Statement**

The inhabitants of 67ha decide whether to seek conventional or traditional medical treatment by weighing the advantages and risks present in each sector. Many exclusive CM users explain their avoidance of TM by citing its compromised efficacy and safety due to unstandardized dosages. Yet, many TM users counter that precisely these same issues arise in seeking CM treatment due to rampant corruption among healthcare providers. By generating
mistrust in conventional healthcare systems, corruption not only serves as an impediment to the employment of agency in medical decision-making processes but also contributes to the development of poor health practices. Solving these issues will be critical to improving access to and quality of healthcare in Antananarivo.

**Methodology and Ethical Considerations:**

I initially decided to center all of my research in the neighborhood of 67ha because I planned to investigate the challenges faced by migrants in accessing healthcare upon arrival in Antananarivo. 67ha was a logical study site due to its reputation as a cosmopolitan neighborhood, whose residents originate from every region of Madagascar. Though my study topic quickly evolved, 67ha remained a prime location for my research as the diversity of its residents afforded many perspectives from which to investigate my research questions. Centering my efforts in one neighborhood also allowed me to easily survey existing healthcare infrastructure and talk with medical professionals most likely to interact with my study population.

The first week of the study period was dedicated to gathering the opinions of professionals in both the conventional and traditional medical sectors. Semi-structured interviews were conducted with doctors, doctor’s aides, pharmacists, and raokandro, in order to gather professional perceptions surrounding the difficulties faced by the inhabitants of 67ha in accessing healthcare. Specifically, I was interested in learning about healthcare consumption patterns and the extent of competition between the conventional and traditional medical sectors. Interviews were also conducted with scientists at the Institut Malgache de Recherches Appliquées (IMRA) and Sotramex, in order to learn more about scientific research and
commercialization of medicinal plants. Though these institutions are not located in 67ha, the interviews conducted at IMRA and Sotramex were valuable to my study in learning about the reality of current integration efforts in Madagascar.

The next two weeks of the study period were dedicated to conducting interviews with 100 individuals who either reside or work in 67ha. Though I first planned to conduct a comprehensive survey with around 50 informants, it soon became apparent that oral interviews would allow me to gather richer and far more meaningful information in a fraction of the time. At the same time, I also decided to expand my informant base from exclusively migrants to all inhabitants of 67ha, thus slightly changing the focus of my study. I made this decision because I realized that trying to investigate the impacts of migration on healthcare access was far beyond the scope of a four-week project to be conducted solely in Antananarivo. Furthermore, it had become clear that the challenges faced by migrants in accessing healthcare in Antananarivo are essentially shared by all marginalized populations of 67ha, no matter their place of origin or length of residence in the city. These interviews were conducted with the help of a Malagasy translator and mostly conducted with individuals either roaming about or working on the streets of 67ha. Around ten interviews were conducted during domicile visits made possible through the accompaniment of the president of the fokontany of 67ha nord-est. These interviews were much more freeform than the structured interviews conducted on the streets in order to profit from the opportunity to ask in-depth questions that require thoughtful answers.

Before conducting interviews, I obtained oral consent from all informants, presenting myself as a student studying in Madagascar conducting fieldwork in order to further my understanding on public health in Antananarivo. Professional informants were shown a copy of the SIT attestation letter, which further details my involvement with SIT and the institution’s
relationship with the University of Antananarivo. Furthermore, it was made clear that participation in the interview was strictly voluntary. Non-professional informants were kept anonymous, while professional informants were always given the option to remain anonymous if desired. Additionally, professional informants were asked whether it would be possible to take an audio recording of the interview in order to ensure accurate comprehension of their responses.

**Obstacles and Biases:**

I encountered several obstacles during the research process. Early in the study period, I struggled to find a translator with whom I could easily communicate. This led to much frustration as I felt as though my translators were conducting their own interviews while I remained a bystander in my own project. Because my translators were unable to clearly explain my informants’ responses, I lost the opportunity to ask follow-up questions. Thankfully, I was able to record the majority of interviews conducted with these first several translators and later transcribed them with the help of my final translator, Evelyne. During these transcription sessions, it became clear that my well-meaning translators had asked follow-up questions of their own. Unfortunately, the majority of their questions were not related to my study questions. In almost all cases, their further questioning was harmless, and I simply extracted pertinent information from transcriptions while setting aside the rest.

The second major obstacle I encountered was in implementing the survey that I planned to use. Informants often had significant difficulties understanding questions, which undermined the validity of responses and caused the completion of the survey to take significantly longer than expected. Furthermore, the conversations held with these informants as they filled out the survey provided infinitely more profound information than anything that could be captured
through a survey. Thus, as it became obvious that the decision-making process employed by the inhabitants of 67ha in accessing healthcare is too complex for a survey to even remotely accurately capture, I switched tactics to using a combination of both structured and semi-structured oral interviews.

The constant interruptions of interviews conducted during domicile visits by statements from the chef of the fokontany of 67ha nord-est presented a final obstacle, as I did not want my informants’ responses to be influenced by the chef’s ideas. However, it was necessary to continue working with the chef at all costs because he served as the primary gatekeeper to my informants. Thus, I allowed interviews to morph into discussions in which the informant, the chef, Evelyne, and I could all partake, always noting the speaker when taking notes of any significant points that were raised. These discussions allowed the building of rapport with informants, which often allowed me to gather far richer and meaningful data than I had initially expected.

In addition, I recognize that there are inherent biases in my fieldwork. For example, though I interviewed several medical personnel who work in private facilities, I never interviewed professionals who work in public facilities due to a lack of time and the need to obtain special authorization. As many informants were critical of public health professionals, it would have been important to hear their side of the story.

**Background**

**A Brief History of Traditional Medicine in Madagascar**
For most of the island’s history, medicinal plants and traditional healers provided the majority of medical treatment for the population. Malagasy culture has long held that traditional medicine is capable of treating the three separate entities that make up an individual: the body, the soul, and the spirit (Dale, 2013). Popular conceptions surrounding traditional remedies began changing after colonization in 1896, particularly in the Central Highlands where the French started to introduce hospitals and allopathic healthcare and the nation-wide oppression of traditional medicine was most strictly enforced (Dale, 2013). Despite France’s efforts to devalue traditional medicine, its following has remained strong throughout the country, though more notably in rural areas most likely due to both cultural reasons as well as plain necessity.

In 2007, the government of Madagascar became the first African country to legalize the practice of TM and has since begun developing regulations and encouraging research in the field.

**Public Health in Madagascar**

As can be expected in a country where 81.3% of the population’s daily income amounts to less than $1.25 a day and can thus be qualified as living in extreme poverty, health indicators are very poor (World Health Organization, 2014). Average life expectancy is 7 years below the global average at 64 years (World Health Organization, 2015). Madagascar’s under-five mortality rate and maternal mortality rate are well above global averages at 22 deaths per 1000 live births and 240 deaths per 100,000 live births as of 2010 (World Health Organization, 2014). Furthermore, according to surveys of household living conditions, the national incidence of disease has increased from 7.2% in 2005 to 12.4% in 2010 (World Health Organization, 2014). Similar degradations in quality of life can be observed across almost all sectors, and were most likely caused by the collapse of public service delivery systems following the coup d’état of
2009, which resulted in the withdrawal of international recognition for the government of Madagascar and the subsequent discontinuation of all non-humanitarian aid, funds that used to make up a majority of the national budget. Though international aid to Madagascar has recommenced after the election of Héry Rajaonarimampianina as president of the republic in 2014, amelioration of health standards have yet to be observed.

Madagascar’s current healthcare delivery system, like most administrative structure in the country, is divided into the central level, which defines and coordinates national strategies and policies, the regional level, which oversees implementation of national health policy in the regions, and the district level, which provides health services through hospitals and health centers (Sharp & Kruse, 2011). The first level of treatment takes place at Centres de Santé de Base I, staffed by paramedical staff and aides, or Centres de Santé de Base II, staffed by at least one doctor. In 2007, there were 1,139 CSBI and 2,064 CSBII in Madagascar, each serving 10,000 people on average. The second level of treatment takes place at district level hospitals. In 2007, there were 70 CHDI and 52 CHDII across the island, the latter offering emergency surgery, comprehensive obstetrical care, and referral services. The next level includes 20 regional hospitals while the final level of treatment consists of four university hospitals that offer comprehensive national referral services. The 3,347 medical facilities in Madagascar do not come close to meeting the needs of the nation’s rapidly increasing population, which currently numbers around 13 million. Madagascar’s in-patient bed density ranks the third lowest in Africa with only three beds per 10,000 people (Sharp & Kruse, 2011).

Major imbalances exist in the distribution of medical resources across urban and rural areas. Around 28% of doctors in Madagascar serve 75% of the population living in rural areas, while 72% of doctors serve the remaining 25% of the population living in urban areas (Sharp &
In addition, the majority of private medical establishments, which are widely perceived as providing higher quality care to patients and make up 20% of the total number of healthcare facilities in the country according to the Ministry of Health’s 2007 Statistical Survey, are located in urban areas (Sharp & Kruse, 2011). Yet, though these statistics seem to suggest that access to quality healthcare is much easier in cities, it is important to recognize that the benefits of high concentration of medical resources only apply to a privileged and thus limited segment of the urban population.

**Antananarivo and 67ha**

Antananarivo, rose to prominence in the late 17th century when the city was chosen to serve as the seat of the Merina monarchy, which eventually spread its influence throughout the Central Highlands to become one of the most important kingdoms in Madagascar. After officially annexing Madagascar in 1896, the French also administered the island from Antananarivo. Under French occupation, the population of the city grew from 50,000 in the beginning of the 20th century to 200,000 on the eve of independence in 1960. Since then, the city’s population has grown exponentially to its current estimated size of over 2 million. Much of this population growth is the result of a rural exodus involving the continuous migration of villagers to the city in hopes of a better life, as poverty rates are nearly twice as high in rural areas compared to urban areas (van den Heuvel & Evers, 2007). Yet, in the past several decades, urban poverty has increased as migrants continue to flood a city that cannot provide enough employment opportunities for its longtime residents, let alone its often poorly educated new-arrivals. In addition, development of new infrastructure has not kept up with the growing population and the city faces an accumulating number of problems with often serious public
health implications, including increasing informal housing, insufficiencies in electricity and water supplies, and deficiencies in water drainage and garbage collections. These issues are especially acute in the “bas quartiers,” located on the plains in the western side of the city where the poorest Antananarivo inhabitants reside. These areas are prone to chronic flooding during the rainy season, and are inherently unsuited to the construction of permanent human settlements. In fact, until the 20th century, the construction of residential buildings was strictly prohibited on the flood plains, which were reserved for rice cultivation (van den Heuvel & Evers, 2007). Seasonal floods combined with the permanent unsanitary conditions have created a public health nightmare in these neighborhoods, which have unsurprisingly been the site of several of Madagascar’s famous bubonic plague outbreaks.

The neighborhood in which the grand majority of this research was conducted is called 67ha. Both geographically and descriptively, 67ha can be characterized as occupying a unique space between the “bas quartiers” and the “centre-ville.” Formerly an area meant to serve as a commuter neighborhood for students at the University of Antananrivo, publicly constructed apartment buildings abound. In recent years, 67ha has become known as a cosmopolitan area due to the high number of migrants that have chosen to settle in the area. I remember the first that I drove through 67ha with my host family, my father said, “Ici, c’est où les gens disent qu’on peut trouver tous les 18 groupes ethniques de Madagascar.” This large area, which literally encompasses 67ha of land, has been broken up into four fokontanies, the smallest public administrative unit. Most fieldwork for this project took place in two of these fokontanies: 67ha nord-est and 67ha sud. Geographically the largest of the four fokontanies, 67ha sud has a population of over 20,000, while 67ha nord-est has a population of 12,000, both numbers that continue to grow year by year.
Demography of Informants

The following figures illustrate demographics of the 100 inhabitants of 67ha interviewed in this study.
Figure 2: Informant Demographics-Gender

Informant Gender Breakdown

- Male 47%
- Female 53%

Figure 3: Informant Demographics-Age
Informant Age Breakdown

- 50-59: 17%
- 40-49: 21%
- 30-39: 16%
- 18-29: 40%
- >60: 6%

Figure 4: Informant Demographics: Educational Level

Informant Educational Level Breakdown

- Ecole Primaire: 34%
- Collège: 31%
- Lycée: 16%
- Université: 12%
- No Schooling: 7%

Figure 5: Informant Demographics: Monthly Household Revenue


Figure 6: Informant Antananarivo Residence Length Breakdown

Informant Antananarivo Residence Length Breakdown

Traditional versus Conventional Medicine Usage
The following figure shows the sector(s) in which the 100 resident of 67ha interviewed in this study seek healthcare. It is important to note that every informant interviewed utilizes conventional treatments to some extent.

**Figure 7: Traditional versus Conventional Medicine Usage**

**TM/CM Usage**

- Use CM only 56%
- Use TM and CM 44%

**Relationships between Demography and TM Usage**

The following figures show that no significant relationships in any of the demographical information obtained and the utilization of TM can be observed.

**Figure 8: Relationship between Gender and TM-Usage**
Figure 9: Relationship between Age and TM-Usage

Figure 10: Relationship between Educational Level and TM-Usage
Figure 11: Relationship between Wealth and TM-Usage

Figure 12: Relationship between Length of Residence in Antananarivo and TM Usage
Advantages of Traditional Medicine from the Perspective of Traditional Medicine Users

Cost and Accessibility

Cost and accessibility of medical treatments are undeniably large factors in determining whether the inhabitants of 67ha decide to seek conventional or traditional healthcare. CM treatments are usually far more expensive than traditional alternatives. The only exceptions to this rule apply to public servants and employees of large companies that offer free or greatly subsidized healthcare through corporate health insurance policies, a luxury only available to an incredibly limited segment of the population. In fact, only 5% of informants stated that they are beneficiaries of such medical insurance plans. Thus, the great majority of Malagasy must pay for all medical services out of pocket. The poorest segments of the population often seek healthcare at public establishments where consultation fees are waived, but patients must pay for all laboratory analyses and medications. Unfortunately, not one CSBII is located in any of the four
fokontanies in 67ha. The closest CSBII is located in Isotry, which means that 67ha residents seeking to avoid paying consultations fees have to spend 800Ar round-trip on taxi-bé fares in order to access medical care. Thus, most residents of 67ha consult doctors who work at the many private practice offices that can be found throughout the neighborhood.

**Figure 13: Map of Conventional Health Facilities in 67ha**

![Map of Conventional Health Facilities in 67ha](image)

*Note red circles symbolize private health clinics and medical offices while green circles symbolize pharmacies*

Payment policies at private practice offices vary widely, but often depend on whether medications are stocked on site or whether patients are given prescriptions to buy drugs at pharmacies. For example, one office that was visited charges a 5,000Ar consultation fee while another charges an all-inclusive price including both consultation fees and medications of 10,000Ar for adults and 5,000Ar for children. However, private offices usually only stock very basic drugs, and patients requiring more specialized medications are required to visit one of the neighborhood’s three pharmacies, where drug prices can range from 300Ar to 24,400Ar.
according to one pharmacist. The average price of drugs sold in 67ha pharmacies is around 6,000Ar. This means that for the more than one third of all informants whose monthly household income is less than <50,000Ar, buying one drug consumes more than 10% of monthly revenue. Given that most doctors prescribe multiple drugs for their patients, it was to be expected that employees of all three pharmacies in 67ha affirmed that a significant number of customers encounter financial difficulties in filling their prescriptions. Pharmacists can help some of these needy clients find cheaper generic medications to replace brand name prescriptions, yet such substitutions cannot always be found. All pharmacists interviewed recounted multiple memories of customers crying and begging for price reductions.

On the other hand, accessing traditional medicine is usually much cheaper. Medicinal plants can often be bought for several hundred Ariary at one of the dozens of medicinal plant stalls found on street corners across 67ha and a raokandro’s consultation is free.

**Figure 14: A small raokandro stand in 67ha**

![Figure 14: A small raokandro stand in 67ha](image)
Thus, it is not surprising that 0% of TM users stated that traditional treatments are cheaper than conventional treatments.

**Figure 15: Comparison of TM and OM costs as judged by TM users**

Treating method regarded as cheaper by TM users

- TM: 91%
- CM: 0%
- No Difference: 9%

Even most non-TM users admitted that conventional treatments are expensive. Yet, it is often assumed by the West that individuals in developing nations only continue to use TM due to the lack of purchasing power necessary to afford CM treatments. Working off of this presumption, the percentage of individuals in the lowest income bracket should be significantly higher for TM users than non-TM users. Yet only 41% of TM users interviewed in this study stated that they earn less than 50,000Ar per month, compared to 34% for non-TM users. Though several TM-users did explicitly list insufficient financial as the single most important factor in their decision to seek traditional treatments, this meager 7% difference shows that lack of purchasing power is only one piece of the complicated decision-making process employed by 67ha residents in selecting medical treatments. The figure below clearly illustrates that no significant trends can be established between income and TM use.
Efficacy

Perceived efficacy of medical interventions also plays an important role in the decision-making processes employed by the inhabitants of 67ha in selecting medical treatments. 55% of TM users think that TM therapies are equally or more effective compared to conventional treatments.
During interviews, many TM users recounted how TM effectively treated an ailment that previous conventional treatments had failed to cure. For example, one man described how he had been bed-ridden for over a year due to crippling back pain that 400,000Ar worth of western treatments had failed to treat. After realizing that he could potentially spend an infinite sum of money on fruitless treatments, he decided to stop seeking treatments in the conventional medical sector and turned towards TM. For several months, he has been consuming medicinal plants and receiving massages from a traditional practitioner, who only charges 5,000Ar for his services. These treatments have been much more effective in treating his chronic back pain, and he has gradually been able to reclaim his mobility and independence. His only regret is that he wasted so much money on western treatments before finally deciding to give TM a try (personal communication, November 26, 2015). Another man described how a neighbor had encouraged him to consult a traditional practitioner after medications prescribed by a doctor failed to treat his hypertension. After weeks of drinking three cups of tizan everyday, according to the advice of a
raokandro, he was cured. Since this experience, he has become an avid advocate for the use of TM in his neighborhood, because TM proved to be more effective than conventional treatments at a fraction of the price (personal communication, November 17, 2015).

**Safety:**

Often a more important factor than efficacy in the decision to seek traditional therapies is perceived safety. 61% of TM users believe that TM has fewer side effects than western treatments.

**Figure 18: Comparison of TM and OM side effects as judged by TM users**

The most cited explanation for the reduced risk of side effects in using TM centered on the distinction of medicinal plants as natural products and western pharmaceuticals as chemical products. Non-TM users often hold that traditional treatments are not safe because the majority of medicinal plants sold by raokandro have not passed through laboratory analyses to ensure proper dosage. Yet, it is clear that the possibility of harmful side effects from medicinal plants due to non-standardized dosages is not a significant worry for TM users, only 20% of whom believe that CM treatments are safer than traditional therapies.
Many TM users believe that this fear of unwanted effects from dosage problems originates from Westerners who want to convince Malagasy to abandon traditional therapies and adopt Western treatment methods. TM users counter that their ancestors have used TM to stay healthy for generations without encountering such problems. One man explained,

“We don't think that, because we have never dosed but we use it always with effectiveness always without any side effects because it is occidental medicine that explains that there are…tambavy has undesirable effects and is bad for health…When women give birth in the countryside, it is who we call the reninjaja, old women who practice midwifery, they take care of the mothers who have just given birth. But all of the plants that they use have never been dosed but they are all effective. But after the delivery, all of the beverages that we drink are tambavy, medicinal plants. After one day, the first day of delivery, it’s this plant that must be used. After one week, it’s this plant. All of that is a traditional practice. Even if the woman delivered in a hospital, in the maternity ward, after three or four days and she leaves the hospital, the doctors, the midwifes of the hospital do not follow up with her. It is the traditional practice that does this. Everywhere, it is generalized where we come from. Sometimes there are problems after, post-delivery, sometimes, but we never think that it’s the cause. Because we think that for generations and generations, we have used it, like this, but we have never encountered undesirable effects. Thus, if now there are things that do not go well, it is due to another…we think that the cause is another sickness…another incomprehensible,
inexplicable cause. We never think to blame (the utilization of medicinal plants)” ¹ (personal communication, November 14, 2015).

Mistrust and Misinformation in the Conventional Healthcare Delivery Systems

Corruption among Conventional Doctors

However, though it far more pleasant to claim that most Malagasy use TM by choice, the data demonstrates otherwise as 59% of TM users think that CM treatment is either more effective, associated with a decreased risk of side effects, or safer. As previously discussed, financial reasons cannot totally explain reluctant use of TM as the economic profile of non-TM users and TM users is fairly similar. A range of socio-economic statuses is represented in both groups. The biggest factor pushing individuals who have the means to afford conventional medical treatment to seek TM seems to be a deep mistrust in the Malagasy healthcare delivery system. Disillusionment with conventional healthcare services is present within both the non-TM

¹ Original Quotation: « On ne pense pas ça, parce que on n’a jamais dosé mais on utilise toujours mais avec l’efficacité toujours sans passé aux effets secondaires parce que c’est la médecine occidentale qui explique qu’il y a…le tambav a des effets et nuisibles à la santé…Quand les femmes ont accouché à la campagne, ce sont ce qu’on appelle la reninjaja, des vieilles femmes qui pratiquent la sage-femme, qui soignent les mères qui viennent d’accoucher. Mais toutes les plantes qu’elles utilisent n’étaient jamais dosé mais toutes efficaces. Mais après l’accouchement, c’est toutes les boissons qu’on boit sont des tambavy, des plantes médicinales. Après un jour, le premier jour d’accouchement, c’est telle plant qu’il faut utiliser. Après une semaine, c’est telle plante. Tous ça, c’est une pratique traditionnelle. Même si la femme a accouché à l’hôpital, à la maternité, après trois ou quatre jours, et elle sort d’hôpital, les médecins, les sages-femmes d’hôpital ne font plus la suivie. C’est la pratique traditionnelle qui le fait. Partout, c’est généralisé chez nous. Quelque fois il y a des problèmes après, post-accouchement, quelquefois, mais on ne pense jamais à l’utilisation de tambavy mais ce sont des autres maladies qui sont, qu’on pense c’est à cause de. Puisque on pense que depuis depuis des générations, on a utilisé ça, comme ça, mais jamais on a constaté des effets indésirables. Donc si maintenant il y a des choses qui ne sont pas bien, c’est à cause d’une autre…on pense que c’est à cause d’une autre maladie….une autre cause incompréhensible, inexplicable. On n’a pense jamais à (l’utilisation de plantes médicinales). »
user and TM user cohorts. Yet, 77% of TM users agree with the statement, “some medical professionals are corrupt,” compared to 62% of non-TM users.

**Figure 20: Relationship between Percentage of Corruption and TM Usage**

This 15% difference shows that TM users are more likely to think that corruption is present in the conventional healthcare delivery system.

According to informants, this corruption manifests itself in a variety of ways. For example, 16 of the 100 informants stated that the quality and price of services at public medical facilities, including both hospitals and CSBs, depends on the patient’s wealth. One man described how he was left with no option but to change his own intravenous injection solution at a public hospital because the doctors never showed up. He is sure that his ragged appearance caused this neglect, as the medical personnel were not interested in serving a patient who would not be able to help them make some additional profits (personal communication, November 25,
2015). Another man described the particularly frightening experience of a cousin, in whose body a surgeon left medical waste, because the family was not willing to pay him extra money under the table.

"I have a cousin who was operated in a public hospital. But because we had not given a lot of money, he left thread...insoluble thread. Thus, the sickness got worse and worse and we had to go to a specialized private clinic, Lutheran for example. The American Lutheran Hospital of Manambato, by our home in the south. And after having executed the second operation, surgical operation, we stated that he had left in the...in the interior of our cousin, big threads, fat...waste...the things that we took out, that was what had aggravated the sickness. So it's like that, because we had not given enough money. It’s like that, moral degradation” (personal communication, November 14, 2015).

One informant explained that many midwives at public hospitals can be so verbally abusive to patients that many women bribe their doctors so that they will be assigned a kinder midwife (personal communication, November 24, 2015). Other informants described how some medical personnel at public establishments demand the payment of a consultation fee, either directly or indirectly, by refusing to see the patient or purposefully degrading their service quality to those who are unable to pay, even though consultation services are supposed to be free-of-charge.

Even a doctor at a private health facility recounted how she was forced to feed the appetite of corrupt medical personnel while trying to help her mother seek treatment for her broken arm at a public hospital. After being left in the waiting room for over 24 hours, she secretly gave a doctor some money so that her mother could finally be seen (personal communication, November 18, 2015).

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2 Original Quotation: « J’ai ma cousine qui était opérée dans une établissement hospitalière publique. Mais puisqu’on n’a pas donné trop d’argent, il a laissé des files...des files indissolubles. Donc la maladie s’aggravait, s’aggravait, et on est recours, on a eu recours aller a une clinique privée spécialisée, luthérien par exemple. Hôpital luthérien américaine de Manambato, chez nous dans le sud. Et après avoir effectué la deuxième opération, opération chirurgicale, on a constaté qu’il a laissé dans le...à l’intérieur de notre cousine des grands file, des gros...des déchets...des choses qu’on a enlevé, c’est ça qu’il a aggravé la maladie. Donc c’est ça, donc puisqu’on n’a pas donné assez d’argent. C’est comme ça la dégradation morale »
According to some informants, covert money exchanges are not always necessary for corruption to take place. Doctors are known to advise and occasionally even force patients to undergo unnecessary risky procedures in order to make money. For example, one informant stated described how a doctor at a public hospital deliberately prolonged his daughter’s labor. Thus, what should have been a natural and problem-free birth was transformed into a nightmare needing a caesarian section (personal communication, November 19, 2015). Other examples of corruption manifest themselves more discreetly in the form of medical professionals neglecting safe medical procedures in order to save time and maximize money. One informant described how the efficacy of conventional medical treatments is often compromised by the fact that doctors only care about treating the sickness without considering the patient as a whole. While this allows doctors to save time and thus increase the number of consultations that can be conducted in a day, this also means that doctors often neglect important medical procedures such as asking patients about allergies or current medications. He explains,

“The problem is that often, the doctors just know the sickness. The questions posed just concentrate on the sickness and not on the patient. And sometimes, that creates problems because there are patients who cannot tolerate certain medications. Because the questions posed my doctors are not deep enough and he prescribes medications that are counter-indicated. For example, for antibiotics, there are individuals who are allergic to penicillin. But, a doctor who has not posed good questions and who has not understood this aspect prescribes penicillin. And the result is shock” (personal communication, November 14, 2015).3

3 Original Quotation: « La problème, c’est que souvent, le médecins sait juste la maladie. Les questions posées se concentrent juste sur la maladie et pas sur la malade. Et quelquefois, ça pose des problèmes, parce qu’il y a des malades qui ne supportent pas certains médicaments. Puisque les questions posées par le médecin ne sont pas assez profondes et il prescrit un médicament contre-indiqué. Par exemple, dans des antibiotiques, il y a des personnes qui ne supportent pas la pénicilline. Et pourtant, un médecin qui n’a pas bien posé des questions et qui n’a pas compris cet aspect là prescrit la pénicilline. Et voilà, qu’il y a une choque »
He also explains that both vertical and horizontal communication between medical personnel is deplorable, putting the patient in danger.

“Practices in hospitals are not harmonious. For example, a doctor sees that he has recommended something. He, he is going to leave after. There is no communication between him and the man who will replace him. Thus, the one who arrives will recommend another thing. And that is the risk that we take when we are admitted into the hospital. No functional harmony really exists” (personal communication, November 14, 2015).4

Such issues are less common in private hospitals where doctors are capable of and are perhaps more importantly, expected to devote more time to each patient. However, again, these often very expensive institutions are not accessible for large sections of the population.

Though one has to be careful of cause-and-effect relationships, it is reasonable to hypothesize that individuals who believe in the existence of corruption in the Malagasy healthcare system are more likely to resort to TM as a protection-mechanism. Tired of being taken advantage of in conventional healthcare facilities, these individuals have turned towards TM in order to exert as much control over their healthcare as possible.

**Explaining Corruption in Public Conventional Healthcare Facilities**

The high prevalence of corruption in public facilities as compared to their private counterparts can be explained by the physician employment system in Madagascar. Individuals who work in the public sector are given significantly lower salaries than those in the private sector but as public servants, qualify for various services, the most attractive being the generous pensions granted upon retirement. Thus, the public sector is able to remain competitive with the

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4 Original Quotation: « La pratique dans le milieu hospitalier n’est pas harmonieuse. Voilà par exemple un médecin regarde qui avait recommandé quelque chose. Lui, il va partir après. Il n’y a pas de passation entre lui et celui qui va le remplacer. Donc l’autre qui arrive recommande autre chose. Et c’est le risque qu’on prend quand on est admit à l’hôpital. Il n’y a pas vraiment d’harmonisation fonctionnelle »
private sector in recruiting personnel. Yet, once employed, many doctors working in public facilities become dissatisfied with their small paycheck as their colleagues working in private institutions start building villas and sending their children to the best private schools in the city. Too impatient to wait until retirement to start enjoying the advantages of being a public servant, some of these individuals begin to partake in petty corruption, offering higher quality services to patients willing to give them some money under the table. Corruption in public hospitals is motivated by several additional factors, as doctors who work in these facilities are usually very qualified professors whose specialized knowledge and skills are highly desired by private institutions. Accordingly, profiting from the lack of proper oversight by superiors, these individuals often only work at public hospitals in the mornings and spend their afternoons working in private clinics, where they easily make three or four times more money. Some individuals even go on to spend their evenings treating patients in private practice offices, the most lucrative gig of all. In addition, the position of ward or hospital director is in practice, essentially a political appointment, often acquired through bribes involving millions of Ariary. Thus, these individuals are very eager to ensure that their expensive public servant positions bring more than prestige and are well worth the primary investment.

**Corruption in Conventional Medication Distribution Systems**

This corruption is also heavily present in the distribution of pharmaceutical products. Some informants believe that pharmacists often quote a higher price than listed and pocket the difference. A specific scenario that was recounted by several informants is one in which pharmacists tell customers that they will have to pay an exorbitantly high price for a medication because remaining stock is very limited. If the pharmacists think that a customer will not be able to pay the desired price, they will say that the medication is no longer available so that all
products can be sold at the maximum possible price. Informants believe that this corruption is implemented through the joint efforts of pharmacists and the doctors who write the prescriptions. Over a quarter of all informants stated that they believe doctors write prescriptions that are unnecessary. Several informants described scenarios in which doctors continued to prescribe medications to patients who were clearly very close to death. One woman detailed the story of a late colleague who was taken to a public hospital after passing out at work one day. Family members were prohibited from seeing her and received no information about her condition for two days. On the third day, her family was told that she had died and was given a bill of 400,000Ar for all of the medications that they supposedly gave her. Her family had no way of knowing whether she had actually been given these medications, and in fact, are very certain that she did not since they received no medication bills on the first two days of hospitalization. This means that doctors gave 400,000Ar worth of medications to her within the last several hours of her life (personal communication, November 5, 2015). Another informant recounted how doctors actually tried to make her pay for medications that they prescribed for her husband after his death (personal communication, November 21, 2015). Eleven informants detailed how doctors change their minds about which drugs are appropriate for a given patient multiple times. For example, a patient will buy a box of one medication only to be told that it is necessary to switch to another medication before even coming close to finishing the first. Sometimes, this process takes place within a single afternoon. During the second consultation, it is common for the doctor to take away the unfinished box of the previously prescribed drug even though it should be the patient’s to keep. Informants add that doctors usually say that they have a needy patient that is in dire need of the drug in another room in order to justify their actions. Yet, informants know that in reality, doctors are simply keeping the drug in their offices to sell either to vendors in the black market
or to their own patients. Informants explain that they do not dare try to stop the doctor from taking away their medications because they are afraid of future malpractice or neglect. Several informants, including a son of a doctor, revealed that occasionally, the first drug is completely unrelated to the patient’s illness. The doctor prescribed the drug simply because he was told by a pharmacist that a buyer needed to be found since it was about to expire (personal communication, November 25, 2015). Understanding the dangers of consuming inappropriate drugs and keeping at laughably bare minimum of the patient’s best interest at mind, these doctors wisely tell patients to stop taking the drug within hours and take the unfinished box away.

**Providing Healthcare in a Resource-Poor Context**

For many of these anecdotes, it is necessary to give the medical personnel in question a benefit of the doubt. It is important to understand that in a country seriously lacking in medical technology infrastructure, laboratory analyses are often skipped due to a simple matter of practicality. When available, analyses take time and are often unaffordable for patients. Doctors are thus forced to use more experimental methods, having patients switch from medication to medication as they try to identify an effective treatment without being sure of the cause of the illness. This could be a legitimate explanation for the experiences that informants recounted involving doctors continuously changing their minds about the appropriateness of a given prescription. Even if this were the case, medical personnel should be informing their patients about treatment strategies and taking the time to thoughtfully explain the medications listed in prescriptions to avoid such misinterpretations. However, in most cases, it is impossible to give the benefit of the doubt to medical personnel in the anecdotes shared by informants, as the corrupt motivations of these professionals are painfully clear.

**Effects of Corruption in the Conventional Healthcare System**
This rampant corruption is concerning for many reasons. First, the poor quality of services within the conventional healthcare delivery system forces Malagasy, even those who would rather use conventional therapies, to maximize their dependence on TM. Thus, corruption in the conventional healthcare facilities prevents people from exercising their freedom to seek their treatment method of choice.

There are also plenty of secondary consequences of corruption. For example, corruption among medical personnel encourages non-adherence to doctors’ orders. Some of this non-adherence is involuntary, as patients are unable to afford the seemingly never-ending list of medications newly prescribed by the doctor during each consultation. Patients end up spending their limited funds on unnecessary and inappropriate medications prescribed by the doctors at the beginning of the treatment regimen and become unable to afford the effective medications prescribed during later visits. Yet, in many cases, non-adherence is an example of active disobedience by patients who try to protect themselves from doctors who clearly do not have their best interests at heart. For example, several informants stated that they know that doctors prescribe unnecessary medications because even when they do not consume all of the medications prescribed, they are cured. For these informants, deciding for themselves which medications are necessary is a way to avoid unwanted side effects that result from consuming either too many and/or inappropriate medications. However, the obvious issue is that these individuals lack the knowledge necessary to distinguish between inappropriate and appropriate medications, and are thus unqualified to serve as their own doctors, however corrupt the real doctors may be. In many cases, patients may be unintentionally harming their health. For example, more than 10% of informants emphasized the importance of stopping consumption of medications after their symptoms have disappeared even if they were told to continue taking the
medicine for a longer period of time. Wrongly or rightly, these individuals believe that doctors always prescribe too many doses of drugs in order to make a profit. Thus, they stop treatment as soon as results have been achieved as a protection-mechanism in order to avoid perceived complications from taking unnecessary drugs. In some cases, these patients may be making a smart decision. Yet, some medications, particularly antibiotics need to be consumed until the end of the treatment period no matter whether the symptoms resolve or not. Non-adherence can create antibiotic resistant strains of bacteria, threatening the future efficacy of the drug not only for the individual but also for the world. Though it is unknown whether all of the informants that admitted to non-adherence were referring to the consumption of antibiotics, it is reasonable to assume that many were, given the fact that Antananarivo is a city where poor sanitary conditions cause an abundance of bacterial infections, and antibiotics are thus, one of the most highly prescribed types of medications. In fact, one informant did explicitly refer to antibiotics in describing the measures that he takes in order to avoid side effects that can arise from the consumption of western pharmaceuticals. He stated that though it is necessary to take antibiotics for a minimum of four days, he only takes them for a maximum of three days in order to prevent stomach problems (personal communication, November 21, 2015). Thus, in trying to protect themselves from the corruption of medical personnel, individuals such as this man are unknowingly putting not only their own but the whole world’s health at risk.

Pharmacists, professionals who should be the most aware of the risks of antibiotic misuse, encourage this inappropriate use of antibiotics. For example, the director of one pharmacy explained that medications are put into categories depending on their effects, and those in categories I and II are only allowed to be sold to customers with prescriptions. Antibiotics are included in these restricted categories. Pharmacies found to be selling medications in categories I
and II to customers with prescriptions can be fined. Yet, since only 30% of customers come to pharmacy with a prescription, she finds that it is often necessary to sell some of the more widely used medications in categories I and II, including first-line antibiotics, to customers who do not have prescriptions in order to ensure that the pharmacy makes a satisfactory profit. She also adds that many customers do not have enough money to pay for the consultation fees of a doctor who can prescribe them the necessary medications (personal communication, November 14, 2015). However, no matter the motives, as a pharmacist, she should understand that there are incredibly large risks associated with antibiotic misuse. She should not encourage the further normalization of the idea that antibiotics can be treated as over-the-counter drugs, a perception that is unfortunately common among Malagasy as evidenced by the many informants who stated that they usually just auto-medicate using first-line antibiotics such as moxycyline and only consult a doctor when symptoms worsen.

**Recent Developments in Traditional Medicine in Madagascar**

**Charlatanism in the City**

Chronic urban poverty and lack of legitimate employment opportunities in Antananarivo have contributed to the spread of immoral moneymaking in almost all sectors, including TM. Dr. Randrianirina Mamy Julien, a scientist who works in one of IMRA’s Laboratories of Experimental Pharmacology, estimated that currently approximately 10% of raokandro in Antananarivo are in fact charlatans. He explained that since the tradipractitioner profession is usually passed down through maternal or paternal lineages, unqualified individuals do not dare attempt to practice TM in rural areas where villagers would be quick to uncover the real identity of a charlatan. Furthermore, the profession does not attract many individuals in rural areas,
where most tradipractitioners are still paid in kind, not in cash. However, the anonymity provided by the great population of Antananarivo, and of course, its cash economy, allows the existence of charlatans in the TM sector. He goes on to describe how just as in any other sector of the informal market, in which most Antananarivo inhabitants are employed, if there is a successful raokandro on the street one day, there will be three raokandro there the next day (personal communication, November 12, 2015). Informants have also noticed signs of charlatanism in the TM sector, evidenced by the seemingly constant development of new TM products in recent years. An example of such products is the plant that is said to cure 150 sicknesses, the advertisement for which can be heard throughout speakers in 67ha’s market everyday. In fact, the increase of charlatans in the TM sector has actually caused some individuals to stop seeking traditional treatments. One man explained that now, in Antananarivo, there are so many tizan vendors that one cannot distinguish between the charlatans and the real tradipractitioners. One can never be sure whether a vendor has actually created his tizan using real tambavy or not (personal communication, November 25, 2015). Thus, many TM-users stated that they prefer to prepare their own tizan with tambavy bought at the raokandro, in order to protect themselves from charlatanism. For the same reasons, one informant described his desire to buy unpackaged tambavy.

“Without being packaged, in the natural state, most of the time, it is always in the natural state. We always trust its appearance because we see it, and it is…we know directly and we understand because all of the medicinal plants…they are all known and we ask, ‘Is there talapetraka?’ And we recognize talapetraka and if he gives something else, if it is packaged, we can no longer trust it” (personal communication, November 14, 2015).5

5 Original Quotation: « Sans être emballé, à l’état naturel, à la plupart de temps, c’est toujours à l’état naturel. On a toujours confiance en son état parce que on le voit, et c’est…directement on sait et on comprend puisque c’est toutes les plantes médicinales, c’est…ce sont tous connus et on demande est-ce qu’il y a talapetraka. Et on connaît la talapetraka et si il donne autre chose, si c’est emballé on n’a plus confiance. »
Integration through Regulation

Regulatory laws must be created in order to protect Malagasy from the negative efforts of the rapid commercialization of TM. The government of Madagascar has already made solid progress in these efforts after becoming the first African country to officially legalize the practice of TM in 2007. It has created several professional associations in order to organize and regulate the activities of the four major types of traditional medical practitioners: tradipractitioners who just use plants, massage therapists who primarily use massaging techniques but sometimes in combination with plants, birth attendants, and sorcerers who use divination. In order to become members of these associations, practitioners in the village must be recognized by the council of local elders. The objectives of these associations are to augment their status by increasing the confidence of the people, to provide mutual insurance through annual fees, and to bring practitioners together for periodic reunions. These reunions seek to universalize the practice of traditional medicine, a profession that is usually inherited through family lines and thus practiced without formal training. Through these gatherings, the state can start to create a traditional medicine curriculum. However, recruiting association members is difficult in the city because there are no elders councils to notify the ministry that an individual is a legitimate practitioner (M.J. Randrianirina, personal communication, November 12, 2015). Thus, the lack of communal cohesion in the city creates obstacles in recruitment of legitimate practitioners in an environment where certification is the most necessary due to the elevated rate of charlatanism.

Integration through Research

Research on TM is being conducted at several institutions, notably at L’Institut Malgaches de Recherches Appliquées in the private sector and the Centre National d’Application des Recherches Pharmaceutiques in the public sector. Dr. Albert Rakoto Ratsimamanga, one of
the fathers of the traditional medicine revolution, founded IMRA in 1957 with the mission of using Madagascar’s natural resources to improve the social and health standards of Malagasy people. In order to fulfill this objective, scientists at IMRA use empirical research methods to investigate the chemical properties of medicinal plants. Those that are found to be effective and appropriate for human use are then developed into affordable medications. The whole process begins with IMRA researchers descending into villages in order to identify medicinal plants through discussions with local traditional healers and study the utilization of these plants by local people. Then, in the Laboratoire de Pharmacologie Experimentale, the active molecule, in other words, the chemical with the medicinal property, is identified and extracted from the plant. There are four such labs at IMRA, each specializing in certain ailments. Toxicity tests are then conducted in order to identify side effects and create proper dosage regulations. Plants that are found effective in treating illnesses at non-toxic levels are then developed into phytomedicines at the Laboratoire de Production. However, the entire transformation process is very limited and most phytomedicines maintain a high level or resemblance to the primary plant material. This means that although IMRA’s phytomedicines cannot be sold on an international level, they are much more affordable to the average Malagasy than drugs developed by foreign pharmaceutical companies (M.J. Randrianirina, personal communication, November 12, 2015).

Essentially all informants stated that institutions such as IMRA are conducting vital research necessary to examine the scientific rationale behind medicinal plants and legitimize TM in Madagascar. One informant explained that these efforts to validate TM are imperative because TM provides a way for marginalized people with little access to conventional healthcare to take control of their own health using knowledge that has been passed down from their ancestors across countless generations. Thus, for Malagasy, TM is not just a treatment method, but also a
tool through which both self-empowerment and independence can be established (personal communication, November 21, 2015). Yet, for many individuals the limited research being conducted is not nearly enough. One informant described how he has a friend who was diagnosed with cancer eight years ago who attributes his survival to cucumin, corosol, and dietary management. He explained that not one of his acquaintances that have opted for chemotherapy after being diagnosed with cancer have been able to live for so long. Thus, he firmly believes that doctors should take traditional medicine more seriously instead of automatically refusing to even consider its use on account of it not being scientific enough. He adds that in fact, it is the doctors who are not being scientific by not trying to understand how traditional medicine works (personal communication, November 10, 2015).

**Framing Traditional Medicine in the Political Economy**

From the perspective of many Malagasy, much of the ultimate blame for the difficulties Madagascar faces in revalorizing traditional medicine lies on the West. For example, an employee of an NGO that provides treatment to individuals with STIs, including HIV/AIDS, explained how he has heard that a traditional healer claims to have discovered medicinal plants capable of treating AIDS. However, scientists refuse to even consider researching the validity of this healer’s propositions, just as they refuse to research the many medicinal plants that he knows to be more effective in treating STIs than western drugs. He is frustrated by the fact that he is unable to advise his patients to try these traditional medical methods, since their organization is funded by the WHO, and is thus limited to the utilization of WHO-endorsed treatment methods. He explains that the fact that Madagascar must continue to accept the demands of Western donors is simply a continuation of the West’s soft power domination of Madagascar. For him, Malagasy not being able to use the plants that grow on their soil to heal themselves, is just
another manifestation of the West preventing Malagasy from profiting from their own resources. He says, “On a tous mais les hommes n’ont rien.” He feels that nothing has changed from the period of colonization as the French continue to rob Malagasy of their own culture and agency (personal communication, November 13, 2015). Multiple informants echoed similar ideas. One informant stated that Western medicine is all about money, while traditional medicine has fewer side effects, is cheaper, and more effective. He believes that the West is just trying to stop Madagascar from using its ancient traditional medicine techniques because it wants to make a profit from its own medical practices under the guise of pursuing its global health objectives, which are more often than not developed without any effort to learn about local people’s own medical priorities (personal communication, November 14, 2015). These hypotheses regarding the selfish underlying goal of Western health organizations are supported by first-hand experience with corruption of medical personnel in health facilities.

Thus, most people believe that using research to valorize TM, a healthcare system that allows particularly marginalized individuals to exercise more control in ensuring their health, is necessary in order to force the international community to accept its efficacy and safety so that Malagasy can start taking full benefit of their country’s resources. Yet, many recognize that research on TM could be a double-edged sword because the validation of TM could cause the West to start extracting medicinal plants from Madagascar. Instead of empowering marginalized populations, research could rob them of the only kind of medical treatment accessible to them. Thus, research on TM creates a conflict between medical independence from the West and the exploitation of traditional pharmacopeia by the West. In fact, this conflict is already beginning to arise as the pace of research on TM in Madagascar picks up speed through the work of institutions like IMRA. A scientist at SOTRAMEX, a company that exports medicinal plants to
Europe and North America admitted that overexploitation is a legitimate and large concern, because medicinal plants must be extracted from their natural environment and cannot be domesticated, as the medicinal properties of many plants disappear once brought into cultivation. Though a complete scientific explanation of this unfortunate fact does not yet exist, a popular hypothesis surrounds the loss of wild inter-plant interactions upon cultivation. Yet, he admits that no significant measures are being taken in order to prevent overexploitation of medicinal plants in Madagascar (personal communication, November 12, 2015). Particularly in the face of agriculture expansion and climate change, proper management of medicinal plant resources in Madagascar will be imperative in order to ensure the continued accessibility of TM for future generations.

**Suggestions**

In order to ensure that Malagasy are able to exercise as much control as possible in their medical decision making processes, several crucial steps need to be taken. Within the CM sector, accessibility of safe and affordable healthcare must be significantly expanded. This means, first and foremost, the actions of corrupt healthcare providers that force marginalized populations to make potentially fatal choices between affordability and safety must be curbed. With the understanding that much of this corruption takes place in the public sector, the government must begin offering competitive salaries to medical personnel employed in public health facilities in order to ensure the recruitment of qualified individuals dedicated to providing the best treatments for their patients. Given the government’s almost complete lack of funds, aid agencies need to commit to providing block aid to Madagascar’s health sector that can be used to help cover this increase in administrative costs.
This measure requires concurrent implementation of reporting structures that ensure funds reach their intended beneficiaries. Aid agencies can also distribute in-kind aid to support existing healthcare infrastructure since the limited stock of medical supplies, including drugs, also creates significant opportunities for corruption in the public sector. Aid agencies need to start focusing their investments in strengthening and supporting public healthcare delivery systems in order to encourage eventual self-sufficiency and ensure the sustainability of their efforts.

Improving quality of care in the conventional sector also requires adoption of “humanized care” practices by medical personnel. Adoption of “humanized care,” or medical care in which patients are treated with respect and involved as much as possible in the medical decision-making process is necessary in order to decrease misuse of conventional therapies by misinformed individuals (. Efforts to encourage adoption of “humanized care” is actually underway by JICA, the Japanese national aid agency, at the Maternal and Infant Health Center in CHU Androvo, located in Mahajanga. Since CHU Androvo is one of only two public teaching hospitals, JICA’s efforts to shape the future of healthcare in Madagascar through the instillation of the importance of “humanized care” in Malagasy medical students is significant. This kind of effort needs to be adopted by more aid agencies and adopted into the national medical school curriculum.

It is also imperative to mandate basic coursework on TM in the national medical school curriculum. Though conventional medical personnel may never actually practice TM themselves, it is important for them to understand that many Malagasy use TM concurrently with CM. Doctors need to be aware of the possibility of adverse reactions between medicinal plants and conventional pharmaceutical products. It will also be useful for doctors to be able to recommend
cheaper traditional therapies as an alternative to conventional treatments for patients lacking in financial means.

Within the TM sector, further regulation is necessary in order to protect people living in urban areas from increasing charlatanism among traditional medical practitioners. In order to properly regulate the TM sector in Antananarivo, more practical and efficient recruitment methods for the existing professional associations must be implemented. One idea would be to use the national TM curriculum that is already in the process of being formulated by the Ministry of Health to create a standardized examination that can be used to identify qualified individuals. Further investment in research that seeks to identify the exact chemical mechanisms behind the efficacy of medicinal plants is also important in order to standardize safe dosages as well as to ensure that individuals living in impoverished areas spend their limited resources on the most effective treatments. However, research must go in hand in hand with conservation efforts in order to prevent the overexploitation of medicinal plants from Madagascar and ensure that TM remains accessible and affordable to those who need it most.

Conclusion

The medical decision-making capacities of vulnerable populations in Madagascar are seriously compromised by widespread mistrust and misinformation surrounding conventional medicine, caused in large part by the corrupt actions of healthcare professionals, particularly in the public sector where individuals lacking in financial resources are most likely to seek treatment. This prevents marginalized populations from exercising their freedom to seek their treatment method of choice, as the poor quality of services within the conventional healthcare delivery system forces even those who would rather use conventional therapies to maximize their
dependence on TM. Corruption also encourages dangerous misuse of conventional therapies by patients who deliberately disobey their medical orders in an effort to protect themselves from dishonest doctors. On the other hand, TM has been trusted as effective and safe by many Malagasy for generations. Furthermore, TM empowers marginalized populations to take control of their own health with readily accessible resources that can be used with knowledge passed down from their ancestors. Improved integration of the traditional and conventional medical sectors could increase accessibility to quality healthcare for millions of Malagasy. This means that further investment in the regulation and research is necessary in order to validate traditional medicine in the eyes of conventional healthcare providers, both in Madagascar and abroad. Such efforts need to be implemented in a responsible manner that ensures the conservation of national medicinal plant resources for generations to come.
Appendix: Figures

Figure 21: Complete Survey Results
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注: 各列の意味は以下のように解釈可能です。

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"キャリ"は常に"No"と記載されている。
Bibliography


