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Abstract

This paper examines how the strengths of both allopathic and traditional medical systems are harnessed in integrated health care systems – a system which “consciously targets and harnesses people’s links with biodiversity for health care reasons” (Quansah, personal communication, July 1, 2013). It uses examples of integrated health care in Madagascar to prove that integrated health care systems offers health care in an affordable and accessible manner, while also promoting cultural sustainability and conservation of biodiversity. By recognizing and establishing integrated health care systems throughout the world, global health disparities can be addressed and various health goals can be accomplished.

Introduction

Achieving Global Health Objectives

In September of 2000, all 191 United Nations member states signed The United Nations Millennium Declaration. In doing so, the United Nations agreed upon eight Millennium Development Goals (MDGs) to accomplish by the year 2015. These goals include eradicating extreme poverty and hunger; achieving universal primary education; promoting gender equality
and empowering women; reducing child mortality; improving maternal health; fighting against HIV/AIDS, malaria, and other diseases; ensuring environmental sustainability; and developing a global partnership for development (World Health Organization, 2013). With only two years left to achieve these goals, the UN must work quickly to develop innovative methods of addressing these global health issues. Many of these health objectives can be reached through the implementation of integrated health care systems, which incorporate affordable and culturally viable traditional medical practices with allopathic health care strategies. The creation of an integrated health care system is especially necessary in countries like Madagascar, where the population possesses a strong commitment and connection to the natural health remedies that traditional medicine offers. The creation of a health care system that incorporates both traditional and allopathic health practices can lead to further discoveries of new medical treatments, the conservation of biodiversity, improvements upon both traditional and allopathic remedies, and ultimately, a higher achievement of satisfying the goal of any health care system – providing exceptional health care to all.

The Development of Early Medicine

Early medical practices developed to satisfy primitive man's curiosity surrounding the mysterious causes of pain, illness, and death. It emerged with a strong connection to religion and spiritual beliefs. Throughout the prehistoric world, humans attributed harmful occurrences, including death and disease, to demons, while advantageous incidents, such as cured illnesses, were the work of kindly divinities. As a result of these popular beliefs, priests served as doctors in temples and sanctuaries of the gods by attempting to cure common illnesses (Margotta, 2005, p.8). Prehistoric humans discovered that herbs in their diet significantly impacted their health. This awareness led to the development of many medicinal treatments and theories. Through
chance observation, trial and error, and dreams and visions, man learned how to ease pain and counter infections with herb and plant remedies, the most common of which was honey. Early man also discovered how to mend broken limbs. Carefully dictated prayers and rituals always accompanied these newly found treatments and cures as a means of appeasing the gods (Dawson, 2003, p.4). Today, many regions of the world practice a form of medicine that has drastically transformed from its early roots. However, there are still communities that use medical practices similar to that of early humans – one that is closely tied to nature and spirituality. Today, these medical practices are referred to as traditional medicine.

The History of Health Care in Madagascar

According to the World Health Organization, traditional medicine is defined as “the sum total of knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures that are used to maintain health, as well as to prevent, diagnose, improve or treat physical and mental illnesses” (World Health Organization, 2013). In Madagascar, the Malagasy people have a long history of traditional medicine practices. Prior to its colonization by France in 1896, the Malagasy people practiced traditional medicine without external influences. The Merina, who inhabit the central highlands, practiced traditional medicine based upon the belief that humans are fragile and require power for life and work. This power can be attained through the use of plants, which represent a superior being. Traditional medical practices were closely tied to Malagasy religion, which is divided into three levels: Zanahary (God), Razana (ancestors), and the living, including nature (Raharinjanahary, personal communication, June 19, 2013). Health care remained in the hands of specialists who were born with the ability to heal. However, this health care structure transformed greatly due to French colonization.
Between French colonization in 1896 and the creation of the first independent republic in 1958, Madagascar’s health care system changed drastically. Following colonization, the Colonial Act was implemented to govern Malagasy society. The Act included an agreement in which France provided Madagascar with infrastructure, including military and financial support, education, technology, hospitals, and modern medicine in exchange for exports of raw materials from Madagascar. Through this agreement, France forced Madagascar to adopt allopathic medicine, which is defined as “the system of medical practice which treats disease by the use of remedies which produce effects different from those produced by the disease under treatment” (MedicineNet, 2013). As modern hospitals and allopathic training facilities were established in Madagascar, traditional healers gradually lost their high status, and were forced to practice illegally. This created a large schism between urban areas, where Christianity and modern medicine dominated, and rural areas, where traditional medicine and religion flourished. The rural areas of Madagascar became impoverished areas where allopathic medicine and education were unaffordable, thus fostering the belief that those who inhabit rural areas live an inferior lifestyle (Raharinjanahary, personal communication, June 19, 2013). Many of these problems have persisted through Madagascar’s independence.

Since the creation of the first independent republic in 1958, Madagascar has made many attempts to reform its health care system. However, the country still remains dependent on foreign aid. Since a supposed coup d’état in 2009, Madagascar’s government has gone unrecognized by the international community and all foreign aid to the country has been suspended. Aid used to account for 70% of the nation’s economy (P. Andry, personal communication, June, 6 2013). In response to the absence of donor support, the Malagasy government made drastic cuts to its budget for social services. For example, health care
expenditure fell by 30 percent in 2010 and by 50 percent from 2011 to 2012 (IRIN, 2012). As a result of these budget cuts, many community health centers have been closed. According to statistics gathered by UNICEF, “214 health centers had closed by January 2011, in most cases due to a lack of health workers” (IRIN, 2012). In rural areas, health workers often do not receive a steady salary so many have migrated to urban areas where jobs in the private sector offer greater economic security. With the drastic cuts in health care funds, Madagascar must reform its health care system to ensure the health of its population does not suffer. By creating a health care system that integrates allopathic and traditional health care practices, Madagascar could address its health care problems in a culturally acceptable and affordable manner.

**Methodology**

To gather the information necessary for this paper, interviews were conducted, lectures listened to, and scholarly articles studied. I interviewed numerous traditional healers who live in the rural village, Andasibe in Madagascar. These traditional healers included traditional birth attendants (reninjaza) (Figure 1), a traditional pediatric healer, and a general traditional healer. The professionals interviewed spoke in French or Malagasy. The information they shared was translated into English, so it is possible that some meaning in their statements was lost. Also interviewed was a general physician who works at the rural hospital (CSB II) in Andasibe. My research included a visit to C.N.A.R.P. (Centre Nationale d’Application de Recherche Pharmaceutique), a pharmaceutical research facility in Madagascar, where the director of the organization was interviewed. The topics of the lectures ranged from the history of traditional...
medicine in Madagascar, the rationalization of the uses of medicinal plants, biodiversity, traditional pharmacology, Madagascar health policy, integrated health care systems, and maternal mortality. In order to gather more background information on integrated health care, health care systems, and medical definitions and statistics, scholarly sources were perused.

**Results**

**Integrated Health Care in Andasibe, Madagascar**

During the research conducted, it was found that the cooperation between allopathic and traditional health care systems provides populations with health care options that are more affordable, accessible, and of higher quality. In the rural village of Andasibe, Madagascar the traditional healers work with the allopathic medical system to ensure that everyone in the community has access to affordable and effective health care. The rural CSB II hospital in Andasibe is staffed by one doctor, two midwives, and one nurse. The allopathic doctor, Dr. Rakotondrasana (Figure 2), often calls upon the reninjaza (traditional birth attendants), Helen and Denisse, to assist with deliveries at the hospital. Dr. Rakotondrasana acknowledged that without the services of the reninjaza, the maternal health care in the surrounding communities would suffer (Rakotondrasana, personal communication, July 5, 2013). The reninjaza in Andasibe provide vital prenatal services, which help to reduce infant and maternal mortality. One of the most significant services provided is the prenatal massages that the reninjaza performs in order to reposition an infant that is in the wrong position prior to birth. These massages lower the incidence of cesarean sections (Rakotondrasana, personal communication, July 5, 2013). When

![Figure 2: Dr. Rakotondrasana explains how he works with traditional healers in Andasibe.](image-url)
the renjaza encounters a patient with pregnancy complications they are unable to treat, the patient is sent to the hospital (Razanamalala, personal communication, July 1, 2013). Through the mutual respect of each other’s practices, the allopathic practitioner and traditional healers in Andasibe work together to provide the surrounding community with essential health care options.

**Other Examples of Integrated Health in Madagascar**

Integrated health care has also been observed in a pilot clinic in northwest Madagascar as well as in Malagasy pharmaceutical companies. A pilot program at the ‘Clinique de Manongarivo’ in northwest Madagascar observed that integrated health care systems result in “not only making appropriate health care services available to the people, [but] also [in bringing] in economic, biological, and cultural diversity conservation gains” (Quansah, 2005, p. 71). The clinic, which was established in 1993, “functioned with a multi-disciplined team divided into a Field Team (made up of traditional medical practitioner, modern medical doctors, ethnobotanists and local healers) and a Laboratory Team (comprised mainly of chemists and pharmacologists)” (Quansah, 2005, p. 69). The health care offered by the ‘Clinique de Manongarivo’ proved integrated health care systems can to be “economically affordable, accessible, available, effective, efficient and culturally acceptable” (Quansah 2005, p. 71). Additionally, Malagasy pharmaceutical laboratories, such as C.N.A.R.P. (Centre Nationale d’Application de Recherche Pharmaceutique), work with traditional healers to maximize the benefits of medicinal plants and conserve their use. C.N.A.R.P. establishes relationships with communities in Madagascar and works with traditional healers to identify and collect medicinal plants for research and conservation purposes (Ratsimbason, personal communication, June 28, 2013). By forming a
relationship with traditional healers, traditional and allopathic medical systems are cooperating to achieve the goal of providing Malagasy people with affordable health care.

Discussion

Strengths of Traditional Medicine

Traditional medicine is a means of harnessing the power of nature to provide affordable health care, while supporting and strengthening cultural tradition (A. Tolotra, personal communication, June 18, 2013). In Madagascar, traditional medicine has a particularly strong presence, as evidenced by the 70% of Malagasy patients who rely on traditional medicine today (Raharinjanahary, personal communication, June 19, 2013). Malagasy traditional health practices emphasize and reinforce human’s connection with nature. For example, the Merina developed traditional medicine based upon the belief that humans are fragile and need power for life and work. For to the Merina, this power can be attained through the use of plants, which represent a superior being. The use of plants for medicinal purposes is particularly effective in Madagascar due to the diversity of flora and fauna. In Madagascar, there are over 12,000 plant species, including 150 that are used in traditional medicine (Raharinjanahary, personal communication, June 19, 2013). Traditional medicine harnesses the potential of plant material in an economically accessible manner, while also ensuring the continuation of cultural beliefs. However, it does not do so without limitations.

Weaknesses of Traditional Medicine

The practice of traditional medicine has some weaknesses, including the dissemination of medicinal knowledge, an absence of rules and regulations, fake medications and healers, and false diagnoses. In Madagascar, traditional healers spread their knowledge of medicinal treatments orally to the next generation of healers. It is believed that traditional healers must be
born with the gift of healing. Therefore, not everyone can possess traditional medical knowledge (Raharinjanahary, personal communication, June 19, 2013). By passing on information orally, traditional medical knowledge is incapable of spreading to all Malagasy people. Traditional medical information is easily lost due to the retention of knowledge by a few selected healers (A. Tolotra, personal communication, June 18, 2013). Oral tradition also makes it difficult to verify the validity of the information that is passed on. The inability to confirm the accuracy of information proves especially dangerous in the practice of traditional medicine due to the lack of rules and regulations and the existence of fake traditional healers. Fake healers do not have the inherited gift of healing that legitimate traditional healers must possess. Therefore, if patients go to a false traditional healer, the treatment will prove ineffective (A. Tolotra, personal communication, June 25, 2013). Among both fake healers and real traditional healers, false diagnoses are common because diseases can manifest in many different ways. When a false diagnosis is made, the patient receives the wrong medications, which can have a devastating effect on the patient’s health (Raharinjanahary, personal communication, June 19, 2013). Some of these problems can be addressed through the use of allopathic medicine.

**Strengths of Allopathic Medicine**

Allopathic medicine has led to the development of prevention and treatment strategies to address a variety of illnesses, including some that were previously considered terminal. These prevention and treatment strategies have undergone significant scientific testing and experimentation. Due to its firm commitment to the scientific method and strict system of rules and regulations, allopathic medicine generates predictable results. Additionally, allopathic medicine provides surgical options that traditional health care cannot offer. Despite its strong association with the scientific method, allopathic medicine also possesses numerous weaknesses.
Weaknesses of Allopathic Medicine

Allopathic medical systems possess some weaknesses, especially when implemented in the global south. These weaknesses include a lack of economic availability, the large cost of researching and developing pharmaceutical medications, and the development of resistance to pharmaceutical products (A.Tolotra, personal communication, June 25, 2013). Allopathic medicine largely relies on pharmaceutically developed products. A quarter of these pharmaceutical products are based in natural products, such as the medicinal plants used by traditional healers (A. Tolotra, Personal Communication, June, 25, 2013). Pharmaceutical products often offer a highly processed form of traditional remedies at a much higher cost. Southern nations are unable to compete with larger pharmaceutical companies due to the large costs associated with researching and developing medications. Additionally, the overuse of these pharmaceutical products can lead to the development of drug-resistant strains of a pathogen. For example, drug-resistant strains of Tuberculosis pathogens pose a great threat to the entire world as the disease continues to spread. Due to its dependence on pharmaceutically developed products, allopathic medicine is unable to provide adequate health care on its own, especially in the global south.

Strengths of Integrated Health Care Systems

Integrated health care systems combine “resources (human and material) of different medical systems of an area in a complementary manner” (Quansah, 2005, p. 67). By providing health care in a way that combines allopathic and traditional medical systems, communities address issues concerning health, the economy, cultural diversity, and biodiversity conservation. The implementation of integrated health care systems addresses the health care needs of a community by evaluating the proper treatment for each unique illness. For some illnesses, the
patient may benefit from harnessing the medicinal properties of plants rather than relying on allopathic pharmaceutical products. In the cases in which traditional practices fail to treat an illness, allopathic treatments can step in. The cooperation between traditional and allopathic medical systems provides patients with numerous treatment options. Traditional medical treatments are more affordable than pharmaceutically produced products because medicinal plants are often free, or “at worst 5 to 10 times less expensive than the pharmaceutical product” (Quansah, 2005, p. 71). This increased affordability contributes to the improved access to health care that integrated health care systems provide.

With greater affordability comes superior availability and access to health care. Accessibility is defined as “the relationship between a set of obstacles to seek and obtain care (‘resistance’) and the corresponding ability of the population to overcome obstacles (‘power of utilization’)” (United Nations Research Institute for Social Development, 2007, p.5). Resistance to health care access includes “ecological, financial and organizational components [while] the power of the population is understood as time, transportation, financial resources and the capacity to deal with the organization” (United Nations Research Institute for Social Development, 2007, p.5). Integrated health care systems address each of these barriers to health care access by providing culturally viable and affordable health care, which utilizes local resources. The use of medicinal plants, when available, enables patients to afford necessary pharmaceutical treatments for other illnesses. Additionally, by combining the use of traditional and allopathic medicine, cultural and biological diversity are sustained. Because an integrated health care system “reinforces the life-saving value of plants through their uses for health reasons, it makes it easier to evoke peoples’ willingness to take up their responsibilities to help conserve local biodiversity” (Quansah, 2005, p. 71). In communities that adopt integrated health
care systems, medicinal plants become a vital part of daily life. As the bond strengthens between a community and its biodiversity, the community’s sense of obligation to protect biodiversity also intensifies. By formally recognizing and establishing integrated health care systems, the Malagasy government could improve the nation’s health and economy, while promoting cultural sustainability and biodiversity conservation. With the implementation of integrated health care systems, patients are offered the fundamental ability to choose between various health care options. These highly accessible options fulfill the goal of integrated health care, which is to provide “health of all, health for all” (Quansah, personal communication, July 1, 2013).

**Conclusion**

**Integrated Health Care Systems: A Holistic Approach to Medicine**

Addressing the issues associated with health care implementation and access requires an understanding of the complex interactions between culture, policy, economics, the environment, and the natural sciences. Integrated health care systems take all of these factors into account by using a holistic approach to meet health care needs. Today, health care professionals are increasingly advocating for interdisciplinary approaches to medicine. For example, an article explaining Europe’s recent efforts to increase interdisciplinary health education argued that medical professionals now recognize that “addressing public health goes beyond microbes and pathogens… to factors like socioeconomic status and politics” (Novak, 2013). Integrated health care systems take the other factors, like socioeconomic status, into account by providing effective and affordable health care. The creation of integrated health care systems throughout the world can address global health issues and disparities by providing holistic services that encourage the complete physical, mental, and social well being of each patient.

The attempts of Western countries to establish allopathic medical systems throughout the developing world have failed to provide universal affordable and accessible health care. On the
other hand, the cooperative health programs in Madagascar serve as evidence that integrated health care systems can be successfully implemented. The political will must be generated to create integrated health care systems. As long as goals of medical corporations and health providers remain focused on profit, all progress will be halted. Rather, the objective must be to provide equitable health care to all in order for growth to occur and the United Nation’s Millennium Development Goals to be achieved.


