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Traditional Healing Practices: A Model for Integrative Care in Diabetes Management

Odile Patrick Thalia

Faculty of Biological Sciences Kampala International University Uganda

ABSTRACT

Traditional healing practices (THPs) offer a holistic approach to health that emphasizes spiritual, environmental, and communal balance—elements often overlooked in conventional biomedical models. This paper examines the role of traditional healing in the management of diabetes mellitus (DM), particularly in regions where cultural belief systems and resource constraints influence health behavior. While biomedical strategies remain central in controlling diabetes, evidence suggests that THPs—through the use of medicinal plants, spiritual rituals, and culturally embedded knowledge—support patient self-management, address psychosocial needs, and increase healthcare accessibility. This study synthesizes historical, anthropological, and clinical perspectives to propose a culturally sensitive model of integrative care that harmonizes traditional and modern medical paradigms. Case studies from Africa and North America demonstrate the nuanced negotiations individuals and communities make between indigenous and biomedical approaches. The paper calls for increased scientific validation of traditional remedies and proposes collaboration between traditional healers and healthcare professionals to enhance diabetes outcomes through mutual respect and structured integration.

Keywords: Traditional medicine, diabetes management, integrative care, indigenous knowledge, cultural healing.

INTRODUCTION

Indigenous ways of knowing are usually paradigmatic and holistic, noting the mutual interdependence of humankind and the biophysical environment. Healing is viewed as a manifestation of spirituality in which the human spirit, the environment and the cosmos are all part of a greater whole [1-8]. The awareness of the web of life and the realization of the multiplicity of life forms are essential. Healing takes place through therapeutic ceremonial use of substances such as magic, plants and animal parts [9-14]. The substances induce or serve as symbols of a transpersonal realm, which connects the different dimensions of life. Transformation takes place in this realm through symbols of sound, music, rhythm, dance and ritual object. Healing practice and practitioner are positively charged by their alignment with order and goodness [15-19]. Hermeneutic dialogue, to ascertain subjective meaning within context, is used to facilitate healing relationships. Traditional forms of health care are extremely diverse and shape-shifting, as they are embedded within socio-economic, cultural and ecological systems [20-25]. The traditions and sacredness of such forms of health care are imbued in, and therefore embodied within, ancient herbal knowledge, herbal preparation, practice and educating others. These aspects consist of a multitude of phenomenons that shape and create what could be understood as a very sacred manner of healing and a very sacred profession [26-34].

Understanding Diabetes

Diabetes mellitus (DM) is a chronic health condition marked by hyperglycemia and insufficient insulin supply or action. The aetiology of DM is complex since it includes genetic, social, physical, environmental, and political factors, as well as a person's state of health and common lifestyle [35-43]. DM is globally concerning and affects all regions. Despite the wide availability of options to prevent and control the disease, the prevalence of diabetes and its complications has been on the rise, with inadequate

control of diabetes being a huge concern in many households [44-56]. A significant number of people with DM, particularly in developing countries, tend to explore various treatment options either supplemental to or in replacement of modern medicines [57-64]. Traditional medicines are one of the common approaches to the management of diabetes, based on patients' beliefs, attitudes, and practices, and the guard of herbalists. Traditional healing practices were likely to be a valuable form of healthcare, taking into consideration patients' perspectives in coping and self-management of DM. Regrettably, a scanty number of studies on THPs in the management of diabetes have been carried out globally [65-69]. Diabetes mellitus (DM), a chronic health condition of public concern, is associated with a relative insulin scarcity leading to hyperglycemia. Insulin is a peptide hormone produced by β cells of the pancreas which acts on specific target tissues stimulating exclusive uptake, utilization, and metabolism of carbohydrate, lipid, and protein [70-72]. The aetiology of DM is complicated with a gene-environment interaction. It also includes socioeconomic, behavioural, physical, environmental, nutritional, political, and other contexts of the state of health of an individual [72-83]. A person with DM has a higher risk of cardio- and cerebro- vascular, renal, visual, and nerve disorders. Irrespective of the complexity of the disease, the common underlying pathogenic metabolic abnormalities involve one or more forms of either insulin supply or insulin action [80-86].

Types of Diabetes

Diabetes is a metabolic disease characterized by high blood sugar. There are two main types of diabetes, namely Type 1 diabetes mellitus (T1DM) and Type 2 diabetes mellitus (T2DM). T1DM occurs when the pancreas fails to produce enough insulin due to the autoimmune destruction of the insulin-producing [beta] cells. It is usually diagnosed in children and young adults [1-9]. T2DM is a progressive disorder involving insulin resistance and relative insulin deficiency. It is usually diagnosed in adults and older people, but is increasingly found in children, adolescents, and young adults. Diabetes affects many parts of the body, including the heart, eyes, kidneys, nerves, lungs, skin, and blood vessels [10-21]. People with diabetes are at risk of severe complications that can affect their quality of life. Among individuals with diabetes, diabetes knowledge and practice is important for effective self-management of the disease. Diabetes knowledge refers to what a person knows about diabetes and its management. Diabetes practice refers to the things a person actually does in the process of diabetes self-management [22-27].

Symptoms and Complications

Diabetes is a chronic illness caused by a deficiency of insulin and/or increased resistance in target organs. Insulin, produced by the pancreas, lowers blood glucose by promoting sugar uptake in tissues like muscles and fat. Impaired insulin production may require exogenous insulin therapy [28-37]. Diabetes often presents over time, but can also lead to sudden metabolic issues requiring hospitalization. Symptoms include hyperglycemia, polyuria, polydipsia, polyphagia, nocturia, fatigue, unexplained weight loss, and blurred vision. The glucose renal threshold is around 180 mg/dl, causing glucose to spill into urine, leading to osmotic diuresis, polyuria, and polydipsia [38-43]. The liver produces glucose from glycogen due to cellular glucose starvation, resulting in weight loss and fatigue. Inadequate glucose leads to ketosis, characterized by fatty acid and ketone body production, which can result in acidosis, confusion, lethargy, stupor, and coma. Blurred vision arises from keratitis and lens elasticity loss due to elevated sorbitol levels [44-49]. Diabetes is classified into type 1, type 2, gestational diabetes, and other subtypes. Type 1 diabetes results from autoimmune beta-cell destruction, while type 2 involves progressive beta-cell insulin secretion loss alongside insulin resistance. Gestational diabetes arises in the second or third trimester without overt diabetes. Other types include maturity onset diabetes of the young and insulin-dependent diabetes due to genetic insulin receptor defects, as well as secondary diabetes from pancreatic dysfunction or hormonal excess [50-58].

Current Management Strategies

Diabetes is a chronic disease impacting millions globally, predominantly affecting those in low- and middle-income countries. Type 2 Diabetes Mellitus (T2DM), making up 85-90% of cases, is marked by insulin resistance and a relative insulin deficiency, influenced by genetic and lifestyle factors [59-63]. Effective management emphasizes a healthy lifestyle with exercise and a balanced diet. Evaluation by a physician is crucial in cases of overweight, obesity, sedentary lifestyle, hyperglycemia, or metabolic syndrome [64-68]. Characterized by chronic hyperglycemia and disturbances in carbohydrate, protein, and fat metabolism, untreated diabetes can lead to dehydration, ketoacidosis, shock, coma, and death. Key symptoms include hyperglycemia, glycosuria, polyuria, polydipsia, and weight loss [69-70]. T2DM results from the gradual loss of insulin secretion from pancreatic β-cells amid insulin resistance, with risk factors such as sedentary behavior, high fat and meat intake, low fiber consumption, smoking, and psychosocial stress. The rising diabetes incidence correlates with significant macrovascular and

microvascular complications, notably cardiovascular disease, which is the leading cause of death in these patients. In China, the obesity rate has surged due to rapid economic development and dietary changes favoring increased meat and fat consumption, alongside lower grain and vegetable intake, further exacerbated by rising sugar-sweetened beverage consumption [71-74].

Overview of Traditional Healing Practices

Several studies have previously documented people's description and understanding of diabetes and its management options, and the use of traditional medicine in its management. This provides an overview of 1) participants' knowledge on traditional healing practices in diabetes management; and 2) experiences in utilizing these practices. Empirical research data demonstrated that traditional medicine is common in African countries where diabetes prevalence and incidence is advancing with rapid urbanization and life style changes resulting into large numbers of undiagnosed cases, many complications, and deaths. Humanistic theories coined from this knowledge are now ready to enhance and complement biomedical approaches to diabetic care [75-78]. Traditionally, the onset of diabetes is explained as a consequence of bad nutrition choices, and excess indulgence in laborious activities which disturbs the body's equilibrium leading to excess funny body development/disease. Its description includes swollen abdomen and limbs, frequent urination, itchiness, blindness, tearing, weakness, and excessive hunger. It is reported to have progressive symptoms developing in previously healthy or symptomatic individuals [79-82]. Awareness of diabetes model, shift from traditional pseudo-disease explanation to biomedicine is associated with educational and dietary intervention programs. Professional expectations for readily observed symptoms and rigid time-frames has been met by disillusioned scepticism on the 'invisible' characteristics of diabetes which is possible using laboratory investigations [83-86]. Traditional caretakers, herbalists, family members, fellow patients, booklets, and more are sought for healing and treatment options. These are preceded by at least two symptomatic visits to the physician and tedious wait times and examination processes. It is believed that treatment modalities parallel to season are better, with early diet-based treatment to restore body behaviors first, followed by drugs and devices to de-flavor treatment. The ultimate management for diabetic candidates includes the theoretical approaches of dispensary and forensic preventive and mitigating measures such education and medicine for unfindable and intractable ailments respectively and tabooing and feeling upon restoration of awarded warmth and endurance of self-harm behavior [1-7].

Integrative Care Models

A model for implementing integrative practices in health care agencies that is based on health care planning and evaluation is presented. A case study of an agency currently attempting integration from the conventional medical model into an integrative planning process is highlighted. In some areas of North America there is a growing recognition of the limitations of the conventional medical model. A number of health agencies are initiating a shift in their planning and evaluation processes and structures [8-14]. This neoteric process of health care planning and evaluation, termed "integrative planning," may expand the definition of "health" and may include both conventional and complementary, alternative and traditional healing practices. Integrative care models integrate alternative medicine professionals with conventional medical caregivers [15-19]. A consideration of the various models of integrative health care which exist is explored, their implications for research, and the challenges of integration. Each of these models potentially results in dis-integration, poor quality of care, and potential marginalization of CAM providers. A brief overview of three unique models which are emerging in North America and approaches to their design and implementation is presented. A unique aspect of health care planning for integrative care is the challenge created in coordinating "inter-paradigm" teams. In reaching this goal, a number of criteria assist in the minimization of the challenges of service delivery, team dynamics and organizational policy-making [20-27].

Traditional Healing Practices in Diabetes Management

In managing diabetes, the Abelam cultural practice incorporates the engagement of a practitioner healer (Anan) or a assenting member of the receiving family, either local or otherwise, to double-check the ceremonial pronouncements, decide on how to right any errors, and mediate further in both pre- and post-instruction communication [28-34]. Often seen as an extra effort to reinforce communication during transition through various developmental phases, this practice further embeds healing practices within the community setting, where social values allow them to thrive. Such strategies of integrative care are also seen in the Bantu communities of Africa. In their perceptions and experiences of the management of their diabetes, older Luo people manifest the articulation of Modern Western Metaphysics with Cultural Ethics (fairness and familiality) [35-39]. Regardless of whether they 'believe' in its efficacy or not, they appear to regularly accommodate both forms of understanding in their care for diabetes, as a negotiation

with their knowledges, values, and practices as intertwined with cycles of tradition. In this regard, they think of healing options as an arsenal of better and worse evidence before them; and devise form in their care of the condition, an orchestration, such that they understand it to result in the best outcomes possible for themselves [40-48]. The need for integrative care can be addressed by drawing from cultural examples of how understanding, values, and practices are matched and orchestrated. It might be argued that this recursiveness illustrates an enduring 'traditional' performance [49-53]. However, others who are concerned with the largely Bassanese character of the contemporary understanding and practice of type 2 Diabetes (T2D) healing themselves observe how biomedical care is appropriated and rendered 'traditional' in the sense of coherent with community knowledge. Performative explanations of adherence capture the negotiation of values once they are settled in a community; longevity of investment is perhaps best thought of as a matter of the adhesion to their form [54-59].

Case Studies

Mini-case studies of diabetes healers and their patients highlight effective access to diabetes support. In 2012, Ugandan health authorities launched a free type 2 diabetes clinic for diabetes awareness day. Josef, an elderly barber, discovered the clinic during a health visit. After a glucose test diagnosed him with diabetes, he received only a mosquito net and glucose testing strips, with advice to pay for insulin and metformin. The next day, he began collecting herbs with glucose-lowering properties he had heard about [60-69]. Through his wife's family, he met a local healer who provided honey and salad treatments, which he started daily. Lucinda, a younger nurse, hated eating greens and mocked care providers. A relative brought her to the same clinic due to increased urination, thirst, and fatigue impairing her. The clinic identified a need for glucose strips and insulin. After a failed rescheduling attempt, she registered for an appointment a month later [70-85]. On that date, Josef saw his herbalist but instead of visiting the law office, he sat in an outdoor office. Diagnosing diabetes involved blood glucose levels, but access issues disqualified Julita, who was told there was no meeting location. Meanwhile, Josef received reassurance but no follow-up on his therapeutic measures. On her failed access day, Julita's glucose levels worsened. Josef contemplated skipping unhealthy bakery food, angered and believing Julita shouldn't go out due to her fury over misregulation. Diabetes management can engage many thinkers but would benefit from matching personalities. Meetings with health worker healers provided supportive listening and outdoor encounters rather than traditional office settings. This study presents initial data on diabetes care-seeking. Death remains a profound recognition until the very end, embodying both world-negation and existence [86].

Research and Evidence

Research on the use and efficacy of traditional medicine among diabetics globally is sporadic at best. Most studies surveyed explored perceptions on the usage of traditional medicine without conducting clinical trials, reviews or pharmacological studies to ascertain effectiveness. Some diabetic patients go by word of mouth and use their own research which skews the portrayal of traditional medicine as an effective form of diabetes care. Left with such data gaps, the effectiveness of traditional healing practices in diabetes care remains unknown. A pilot study conducted on three traditional healers in Botswana endorsed this: a woman in South Africa was purportedly cured from need for medication for her diabetes after communicating with a traditional healer [18-23]. No scientific evidence linking these claims to healers was found. This notwithstanding, the outcry to imitate, replicate and build on conventional medicine research to study effectiveness on a broader scale cannot go unnoticed. The ramifications of unreliability are dire if blind faith is put in these practices where 'the cure is worse than the disease'. Caution must be noted as previous studies indicate that some traditional healers alleged the capacity to cure diabetes where weight loss was offered as a quicker route to diabetes control. Unsure of the efficacy of traditional healing practices in diabetes care, metaphors like 'falling into the bush whilst trying to outrun a lion' can be used. Research on the curative powers of traditional medicine, conducted in collaboration with traditional healers and scientists, clarifies where it stands on the spectrum of care. With efforts to research and publish the properties of natural cures in progress, partnering scientists can directly address skepticism, and lend credibility to traditional healers where claims opt to cure [24-27].

Implementation Strategies

Research findings advocate for integrating traditional healing practices with conventional medicine to enhance diabetes management among individuals in Uganda's Western region. The authors suggest these strategies for effective implementation: 1. **Create partnerships between traditional healers and conventional health providers**: Collaborative networks, guided by community leaders, can foster understanding and teamwork, improving diabetes care. Participants expressed a willingness to collaborate but noted potential challenges that must be addressed. Active involvement is crucial for

effective partnerships, considering the community's sociocultural context and the regulatory environment around traditional healing. 2. **Train and educate health providers, traditional healers, and patients**: Effective collaborations rely on mutual respect and a willingness to share power. Education programs can cultivate respect and understanding. Workshops in both medicine modalities would enhance mutual appreciation and help traditional healers inform health providers about cultural health perspectives and management of differences between traditional and biomedical diabetes signs. 3. **Raise diabetes awareness through community-led initiatives**: Enhancing community knowledge of diabetes, its implications, and safe practices is critical. Both conventional providers and traditional healers must collaborate to ensure safe treatment and educate about home remedies to prevent unsafe practices. 4. **Conduct regular evaluations of care quality and safety**: Ongoing assessments of diabetes self-care practices ensure safety and effectiveness. Ideally, evaluations should be joint efforts, with care providers leading the assessment of traditional healing practices while traditional healers evaluate the relevance of conventional care to their patients. Together, they can also assess the model's community-level effectiveness post-implementation [21-24].

Future Directions

This paper highlights the significance of complementary and alternative medicine (CAM) in diabetes management and treatment, using the case of indigenous healing practices in Kenya. Access to agents that are efficacious and culturally acceptable to treat elevated glucose levels should be made available to facilitate seamless patient inclusion in dietary, lifestyle, and exercise management interventions. Future investigatory priorities should encompass botanical agents revealed in the ethnobotanical survey and investigation into the most prominent plants implicated in managing blood glucose levels. Validation of bioactive compounds, active mechanisms, or alternative routes of administration may lead to the discovery of a new standard for diabetes treatment. Concurrent efforts to identify phytochemicals and biological pathways inhibiting or manipulating hyperglycaemia, hypertension, hyperlipidaemia, and excessive weight gain are needed to develop therapies that are understandably more accepted and accessible in rural and disadvantaged populations. Further ethnobotanical surveys should complement findings on plants and non-plant agents employed by cultural custodians in diabetes and risk factor management outside of Kenya. The disclosure of compound families, bioactivity, and mechanisms would expedite herb-screening and mechanistic studies. Efforts to authenticate quoted plants and most-utilized taxa would further enhance indexing priorities to evaluate medicinal activity. Establishing medicinal and aromatic plant seed banks to safeguard biodiversity in traditional agents, plants, or preparations in tandem with planting and husbandry practices are essential. Normalizing investigations into CAM approaches for diabetes and concomitant risk factors would unravel efficacious, agreeable, and accessible therapies that are integrated or meditated on by traditional or modern health care [25-28].

CONCLUSION

Traditional healing practices hold untapped potential in the global response to diabetes, especially in contexts where cultural congruence and resource limitations shape health-seeking behaviors. By recognizing and validating indigenous knowledge systems, healthcare systems can bridge the gap between biomedicine and local healing practices. Integrative models that accommodate traditional beliefs and therapies not only improve patient adherence and trust but also enrich care delivery through a more personalized, holistic lens. Future research must prioritize rigorous evaluation of traditional methods while promoting ethical collaboration between traditional healers and medical professionals. Such integrative efforts promise not only improved clinical outcomes but also the cultural sustainability of healthcare practices in diverse populations.

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