



Strengthening Bhutanese Traditional Medicine in healthcare service delivery in Bhutan

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ABSTRACT

Bhutanese Traditional Medicine, known as *Sowa Rigpa*, deeply rooted in the country's cultural and religious heritage, plays a significant role in healthcare service delivery in Bhutan. This commentary explores the evolution and current landscape of *Sowa Rigpa* within the context of the nation's healthcare system. While traditional medicine services have expanded over the years, challenges such as scepticism regarding scientific validity, inadequate infection control measures and concerns about the sustainability of medicinal plants persist. To address these challenges, recommendations, including the integration of modern technology in quality assurance, comprehensive training in infection control, evidence-based practice and conservation efforts for medicinal plants have been adopted. By embracing these strategies, *Sowa Rigpa* can enhance its efficacy, safety and sustainability, ensuring its continued relevance in meeting the healthcare needs of the Bhutanese population while contributing to the global advancement of Traditional Medicine practices.

Keywords: Bhutanese Traditional Medicine; Complementary and Alternative Medicine; *Sowa Rigpa*; Traditional Medicine

INTRODUCTION

Globally, 88% of all countries incorporate traditional medicine into their healthcare systems, utilizing practices such as herbal remedies, acupuncture, yoga, meditation and indigenous therapies [1]. Among the 192 World Health Organization (WHO) member states, 170 have reported the integration of traditional medicine, with nearly half of the population in developed countries embracing these traditional and complementary therapies [2]. Notably, 42% of the population in the United States, 48% in Australia, 70% in Canada and 49% in France regularly engage with traditional and complementary medicine [2]. In moments where allopathic medicine faced challenges, humanity turned to traditional medicine for solutions. A prime example is the case of Chinese scientist Tu Youyou, who, after exhausting conventional avenues in the search for antimalarials to combat chloroquine-resistant malaria, delved into traditional Chinese medical texts. From these texts, Youyou

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derived valuable insights and isolated artemisinin, a breakthrough that ultimately earned her the Nobel Prize in Medicine for her role in saving millions from malaria [3].

Recognizing the invaluable contributions of traditional medicine, the WHO initiated a dedicated traditional medicine program in 1976 [2]. Operating through the Traditional, Complementary and Integrative Medicine Unit, WHO endeavours to “develop standards and benchmarks for the training and practice of different systems of traditional medicine, and for their evidence-based integration in the International Classification of Diseases (ICD)” [2]. The ICD-11 now includes a chapter on traditional medicine, allowing for dual and optional coding, and WHO implemented its second Traditional Medicine Strategy (2014-2023) to establish standards and technical documents aimed at ensuring a safe, qualified and effective integration of traditional and complementary medicine into health systems [2]. Furthermore, the establishment of the WHO Global Traditional Medicine Centre in 2022, with the support of the Government of India, underscores the commitment to advancing evidence-based traditional medicine practices [1]. Additionally, in the 2018 Declaration of Astana on primary health care, traditional medicine is duly recognized for its role in the delivery of primary health care services [2].

Situated between India and China, Bhutan has a population of 0.7 million. The country proudly embraces two distinct forms of traditional medicine: local healing practices found within various community enclaves and the official Bhutanese Traditional Medicine, known as *Sowa Rigpa* [4]. Rooted in the philosophies of Buddhism, Bhutanese Traditional Medicine encompasses a diverse array of therapies, including acupuncture, both invasive and non-invasive treatments, and herbal remedies derived from plants and animals. Bhutan’s healthcare landscape harmoniously integrates modern medical practices with its rich traditional systems. *Sowa Rigpa* was formally integrated into the national healthcare framework in 1967, propelled by the vision of safeguarding the populace’s well-being and fostering the preservation and propagation of traditional medical knowledge [4]. From humble beginnings, exemplified by a solitary traditional medicine dispensary in Dechencholing, Thimphu, in 1968, the traditional medicine unit has since flourished, now co-located alongside hospitals across all 20 districts. In this commentary,

we delve into the pivotal role played by *Sowa Rigpa* in the delivery of healthcare services within Bhutan, elucidating its profound impact on the nation’s holistic healthcare approach.

BHUTANESE TRADITIONAL MEDICINE IN PATIENT CARE IN BHUTAN

The evolution of traditional medicine services in Bhutan reflects a burgeoning demand for holistic healthcare solutions. In 1979, the modest traditional medicine dispensary underwent a significant transformation, culminating in the establishment of the National Indigenous Hospital. Subsequently, in 1999, the Institute of Traditional Medicine Services was inaugurated, a testament to the escalating need for such services [4]. At present, the National Traditional Medicine Hospital stands as a beacon of traditional medical care, serving as the pivotal national referral centre for Traditional Medicine Units stationed in district hospitals. By 2001, a network had been established, with traditional medicine units strategically co-located alongside various regional referral hospitals and district facilities. This facilitated seamless collaboration and patient referrals between modern and traditional medical practitioners [4]. Between 2018 and 2022, the National Traditional Medicine Hospital provided care to a staggering 109,757 patients, addressing an array of ailments ranging from migraine and joint pain to complex neurological conditions [5]. Notably, the hospital’s top ten treated diseases encompass sinusitis, neurological disorders, gastric ailments, ulcers, skin conditions, arthritis, rheumatism, respiratory issues, chronic injuries, and combinations of gastric problems and hypertension [4].

The National Traditional Medicine Hospital offers a diverse array of traditional therapies, including gold and silver needle therapy, bloodletting, medicated oil massages, herbal baths, steam applications, moxibustion, cupping, hot ball compression, affusion and nasal lavage. Additionally, the inpatient department administers purgation and enema therapies. However, it’s essential to note that not all of these therapies are available at the district hospital level. Medications prescribed by the National Traditional Medicine Hospital comprise various herbal compounds formulated into different dosage forms, including tablets, pills, capsules, powders, syrups, medicated oils, ointments and decoctions [6]. This comprehensive approach underscores Bhutan’s com-

mitment to integrating traditional medicine into its healthcare system, catering to the diverse needs of its populace with efficacy and compassion.

At the forefront of traditional healthcare provision in Bhutan are the '*Drungtsho*' or traditional physicians, who receive support from '*sMenpa*' or clinical assistants, as well as therapy aides. These professionals are responsible for overseeing the operations of traditional hospitals and units dispersed throughout the country. Ensuring the continuity and excellence of these practices, the Faculty of Traditional Medicine, under the auspices of the Khesar Gyalpo University of Medical Sciences of Bhutan, shoulders the responsibility of training human resources in traditional medicine and spearheading research endeavours. Notably, many *Drungtshos* pursue postgraduate training abroad mostly in Mongolia and China. [5].

Moreover, Menjong Sorig Pharmaceuticals Corporation Limited plays a pivotal role in the manufacturing and production of traditional medicines. For instance, within the realm of *Sowa Rigpa*, 108 multi-compound prescription medicines are meticulously formulated from mineral ingredients. These medicines have demonstrated efficacy in treating over 135 biomedically defined ailments [6]. This concerted effort underscores Bhutan's commitment to preserving and advancing its traditional medical heritage while embracing modern research and manufacturing techniques to ensure the accessibility and efficacy of these therapies for the populace.

Before the emergence of allopathic medicine in the country, traditional medicine served as the cornerstone of healthcare provision for the Bhutanese populace. Bhutanese Traditional Medicine attributes the aetiology of ailments to various factors encompassing the body, mind, behaviours, unhealthy emotions and fluctuations in climatic conditions [7]. This holistic perspective closely aligns with the WHO's definition of health, which emphasizes not only the absence of disease but also physical, mental and social well-being. In the realm of *Sowa Rigpa*, the ultimate cause of illness is often attributed to the three poisons of the mind, which disrupt the delicate equilibrium among the body's three bodily humours and five elements [7]. Additionally, lifestyle choices, environmental factors, seasonal variations and emotional disturbances are recognized as contributors to these mental poisons, further exacerbating the imbalance of humours and elements [7].

Several factors motivate individuals to seek tradi-

tional medicine services. Herbal remedies, renowned for their minimal side effects, are often viewed as a safer alternative to modern pharmaceuticals. Moreover, the alignment of *Sowa Rigpa* with the principles of Buddhism resonates deeply with many individuals. Furthermore, traditional medicine is celebrated for its patient-centered and holistic approach. For instance, within *Sowa Rigpa*, the assessment of blood pressure involves multiple readings taken over several occasions, complemented by pulse examination, symptom analysis, urine examination and observation of physical appearance. Treatment is then tailored accordingly, utilizing potent traditional remedies [8]. This personalized and comprehensive methodology epitomizes the patient-centric ethos inherent in traditional medical practices.

In Bhutan, palliative care is relatively a new inception, established in 2018 by a group of trained healthcare professionals at Jigme Dorji Wangchuck National Referral Hospital primarily for pain management in cancer patients [9]. Traditional medicine has been integrated into palliative care package in 2020 with services such as relaxation massage, trigger release, cupping, moxibustion, hot compression and acupuncture [10]. As of beginning of 2023, traditional medicine-based palliative care has been established in all district hospitals after training traditional medicine professionals in these hospitals. *Sowa Rigpa* being a culturally compatible system of medicine, holistically caters to broad and inclusive spectrum of biological, psychological, emotional, spiritual, cultural and ecological domain of an individual's state of health. As such, *Sowa Rigpa* is a perfect service package for the customized Bhutanese model of palliative care which requires to be socially, culturally and spiritually appropriate.

CHALLENGES

The burgeoning prominence of allopathic medicine within the country has led to widespread beliefs that *Sowa Rigpa* lacks the scientific rigour necessary for objective disease assessment, codification and classification. A telling statistic from 1983 underscores this shift: while Thimphu General Hospital recorded 75,533 outpatients, the Traditional Hospital in Thimphu handled 81,669 cases [11]. Over time, there has been a noticeable reversal in this trend, with allopathic medicine increasingly favoured as the primary choice, relegating traditional medicine to a supplementary or fallback option. Instances of

rare, albeit unintended, aconite poisoning from traditional remedies reported in Thimphu, resulting in hypotension, bradycardia and reversible conduction defects, further reinforce the scepticism surrounding traditional medicine's scientific validity [12].

Compounding these doubts are certain traditional surgical procedures, such as bloodletting, cupping, gold needle therapy and oil and heat moxibustion, which generate sharps and infectious waste [13]. Although traditional medicine practitioners demonstrate commendable knowledge of infection control and waste management, reflecting the adoption of allopathic standards, the training in these areas during undergraduate and in-service training remains inadequate. Consequently, their understanding of hospital-acquired microorganisms is deficient, exacerbated by the absence of microbiology in their curriculum. This knowledge gap poses potential risks for the spread of infections, although such cases remain undocumented [13]. Moreover, while many facets of traditional medicine hold promise for scientific exploration and evidence-based practice, the research culture within traditional medicine remains nascent.

As the demand for traditional medicine surges, concerns about the sustainability of raw materials intensify. Key ingredients, such as flowers and roots of high-altitude plants like delphinium, meconopsis, and *Domnag Domkbris*, face depletion due to escalating demand. For instance, traditional medicine requirements skyrocketed from seven metric tonnes in 2000 to 30 metric tonnes in 2016, paralleling the expansion of traditional medicine services across the country [14]. As of 2023, with 81 traditional medicine units functioning across the country, the threat to the sustainability of medicinal plants looms large. Addressing these challenges is imperative to ensure the continued viability and effectiveness of traditional medicine in Bhutan.

RECOMMENDATIONS

Bhutanese Traditional Medicine has begun leveraging technological advancements to fortify its foundations. While adhering to traditional methods for identification, collection and manufacturing of herbal plants, modern approaches to quality assurance in manufacturing, storage and distribution of drugs have been integrated [15]. This convergence of traditional wisdom and modern practices presents an opportunity to delve into the pharmaceutical properties of plants and herbs, mitigating potential toxicity

risks associated with traditional medicines. Leveraging modern technology holds promise for enhancing efficacy, potency and safety without compromising authenticity.

Training and education in traditional medicine needs to incorporate basic biomedical sciences as a part of learning. Introducing concepts of basic medical sciences such as, anatomy, physiology, biochemistry, microbiology and pharmacology would potentially benefit in understanding biomedically diagnosed diseases better and offer traditional medicine perspectives solutions. For example, to enhance the knowledge and implementation of infection control and medical waste management among traditional medicine practitioners, proactive measures such as implementing in-service training and inclusive curriculum reforms are paramount. By providing comprehensive training in infection control, waste management and the prevention of hospital-acquired infections, traditional medical practitioners can ensure patient safety and uphold the highest standards of healthcare delivery. These initiatives not only bolster the competence and proficiency of practitioners but also reinforce the integrity and credibility of traditional medicine within the broader healthcare landscape.

In line with WHO policy, Bhutanese Traditional Medicine should endeavour to develop evidence-based guidelines and frameworks that meet international standards of safety, quality and efficacy [2]. This necessitates conducting high-quality research including randomized clinical trials to underpin evidence-based practice. For instance, anecdotal evidence suggests the efficacy of acupuncture in treating migraine headaches within *Sowa Rigpa* [5], while global evidence remains controversial, underscoring the need for rigorous research in large sample sizes to ascertain its effectiveness [16]. Encouragingly, the initiation of the *Bhutan Sorig Journal* by the Faculty of Traditional Medicine signals a positive trajectory towards fostering evidence-based practices within Bhutanese Traditional Medicine. In addition, the Bhutanese Traditional Medicine should collaborate with top-notch international traditional and complementary medicine universities to give unprecedented impetus in research and development in the field of *Sowa Rigpa*.

Efforts to conserve medicinal plants are paramount. Strategies such as in situ conservation, establishing ecosystem-oriented protected areas for nat-

ural reserves, and species-oriented cultivation and domestication of endangered medicinal plant species are crucial [17]. Ex situ conservation methods prove effective in preserving overexploited and endangered medicinal plants [17]. Embracing good agricultural practices and sustainable use solutions is essential. Additionally, adopting biotechnical approaches like micropropagation, synthetic seed technology, and tissue culture can enhance the yield and potency of medicinal plants [17]. Implementing these measures will contribute to sustaining the availability of medicinal plants, safeguarding the integrity of Bhutanese Traditional Medicine for generations to come.

CONCLUSION

Bhutanese Traditional Medicine is an integral component of the national healthcare system, with its presence co-located alongside modern hospitals across the country. Despite the advancements in modern medicine, there is a growing global inclination towards alternative and traditional remedies for various ailments. Recognizing this demand, the World Health Organization has initiated programs to standardize traditional medicine systems worldwide. In light of these developments, Bhutanese Traditional Medicine must leverage modern technology and conduct high-quality research to establish evidence-based practices. By embracing these strategies, it can enhance its efficacy, potency and safety, ensuring it continues to meet the evolving healthcare needs of the population while contributing to the global advancement of traditional medical practices.

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