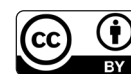


SHORT COMMUNICATION



Demographic and disease profile of patients availing Traditional Medicine services in Bhutan: a cross-sectional study

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ABSTRACT

Introduction: The study was conducted in 2019 and 2020 across 19 Traditional Medicine Units in Bhutan with the objective to assess the socio-demographic characteristics and disease patterns of patients seeking Traditional Medicine services.

Method: This was a cross-sectional study and structured questionnaires were used for the interview. Data was gathered from 19 Traditional Medicine Units affiliated with 20-bedded hospitals. Disease diagnoses were recorded as per the Bhutan TM Disease Code.

Results: A total of 1541 patients voluntarily participated in the survey. Of these, 950 (61.65%) were new patients, 946 were females (61.39%), 1514 (98.31%) were Bhutanese and 26 (1.69%) were non-Bhutanese. The majority of service recipients were farmers 873 (56.76%). The maximum visitors were from the eastern region (700, 45.43%) and the least was from the southern part of the country (88, 5.71%). The age range of participants spanned from 15 to 106 years, with a mean age of 43.75 (± 16.32) years. Among the 56 different diseases documented during the survey, the highest prevalence was observed for *tsakar* (neurological disorder): 271 (16.76%), followed by *phoney* (gastrointestinal disorder): 180 (16.76%) and *yama gosin* (sinusitis): 139 (8.60%).

Conclusion: The usage of Traditional Medicine is popular among all ages of Bhutanese citizens and international visitors. *Tsakar* and *phoney* disorders were the most common conditions requiring medical intervention.

Keywords: Alternative Medicine; Complementary Therapies; Healthcare Policy; Health Services; Nervous System Diseases

INTRODUCTION

The World Health Organization defines traditional medicine as “The total sum of knowledge, skills and practices based on the theories, beliefs, and experiences indigenous to different cultures” [1]. Traditional Medicine (TM) also includes health practices, knowledge, and beliefs that use natural substances like plants, animals, and minerals along with spiritual therapies [2]. In Bhutan, TM is known as *Sowa Rigpa*, which comprises medical aspects of traditional knowledge developed over generations in various societies before the era of modern medicine [3]. There has been renewed attention and interest in the use of

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TM globally as an alternative option for many disease conditions. In many developing countries, TM is an integral part of healthcare services and has remained highly popular [4].

Sowa Rigpa principles are based on spiritual approach with a systematic examination and therapy including invasive and non-invasive means [5]. *Sowa Rigpa* has been practiced in Bhutan for centuries and was officially integrated into the modern healthcare system in 1968, under the royal command of His Majesty the Druk Gyalpo Jigme Dorji Wangchuck [6]. The Constitution of Bhutan mandates that the state shall provide free access to basic public health services in both modern and traditional medicines [7]. TM services are available in every health centre in the country. As of 2023, there are 81 TM units and 195 TM professionals to deliver the services.

In the last five years, more than five hundred thousand patients have availed TM services for various ailments in the country [8]. However, there were no data to assess the disease profile and demographic characteristics of the patients who availed the services. Hence, this study aimed to establish baseline data on the demographic characteristics and disease profile of individuals receiving TM services in the country. This set of information is essential to strategize a comprehensive national-level data system and enhance the delivery of TM services.

METHODS

Study design

This was a cross-sectional study conducted in 2019 and 2020. This method involved the collection of data at a single point in time from a diverse sample of participants to assess socio-demographic characteristics and disease profiles within the context of TM services in Bhutan.

Study setting

The health system in the country adopts a holistic approach to primary healthcare, prioritizing disease prevention, health promotion, and the delivery of quality treatment services through an integration of modern and traditional methods to meet the needs of the Bhutanese citizens. The healthcare service delivery is organized into a three-tiered system, starting from Out Reach Clinics and Primary Healthcare Centres at the primary level, District Hospitals at the secondary level, and Regional Referral Hospitals and the National Referral Hospital at the tertiary level

[7]. Presently, the healthcare infrastructure comprises three referral hospitals, 28 district hospitals (which includes the National Traditional Medicine Hospital), 23 ten-bedded hospitals, 186 Primary Healthcare Centres, 28 sub-posts, 562 outreach clinics, and 81 TM Units that are integrated into modern health centres [9]. The study was conducted in the TM Units in 19 district hospitals.

Study population and sampling

All patients aged ≥ 15 years availing TM services during the data collection period were selected for this study. A purposive sampling method was used and no formal sample size was calculated. To deter participants from duplicate entries, a distinctive identity verification system was introduced throughout the process of data collection and entry.

Data collection method

A self-designed survey questionnaire in English was constructed for the purpose of this study. The questionnaire was pre-tested in Gidakom Hospital, Thimphu, after which revisions were made to improve the readability and clarity. The questionnaire contained sociodemographic profile and disease diagnosis at the end of consultation with a TM practitioner. The data were collected by the respective 19 TM practitioners on a paper-based pro forma.

Data entry and analysis

The data were entered in EpiData Entry 3.1 and analysed in EpiData Analysis 2.2.2.183 (EpiData Association, Odense, Denmark). Categorical variables are summarized as frequencies and percentages and continuous variables are summarized as mean and standard deviation.

Ethics considerations

Ethics approval was obtained from the Research Ethics Board of Health via letter No. REBH/Approval/2017/095 dated 1 March 2018. Administrative approval was obtained from the Policy and Planning Division, Ministry of Health, and the respective hospital administrators. Informed consent was taken from the individual participants to allow data extraction.

RESULTS

There were 1541 participants, of which 946 (61.39%) were females. The mean age of the participants was

43.57 (\pm SD 16.32) years. The youngest patient who availed services was 15 years and the oldest was a 106-year-old female from Mewang Gewog, Thimphu. The majority of the participants (379, 24.59%) were in the age group of 15 – 34 years. There were 873 (76.7%) farmers and most of them were from the eastern part of the country (700, 45.43%). Among the participants, 1514 individuals (98.31%) were Bhutanese, while 26 (1.96%) were non-Bhutanese. Additionally, 950 (61.65%) of the patients were newly diagnosed cases. The details of the sociodemographic characteristics of patients availing TM services is shown in [Table 1](#).

The study recorded 56 different types of diseases. The most common disease conditions were *tsakar* (neurological disorder) reported in 271 patients (16.76%), followed by *phoney* (gastrointestinal disorder) reported in 180 patients (11.13%), *yamagosin* (sinusitis) reported in 139 patients (8.60%) *thraglung* (high blood pressure) reported in 144 patients (7.05%), and *drumbu* (rheumatoid arthritis) reported in 112 patients (6.93%). The details of the frequencies of top ten common diseases are shown in [Table 2](#).

DISCUSSION

The use of TM services remains popular across all age groups throughout the districts. In this sample, there were more number of female patients and farmers who availed TM services. The number of females availing TM service was comparatively higher than, which corresponds to the data published in Annual Health Bulletin 2021 [10]. There were also a few non-Bhutanese patients who availed the services.

People’s belief that TM is preferred only by older citizens is debunked by current findings. The study revealed that only a quarter of patients seeking TM services in the country were within the age range of 15 to 34 years. Similarly, the prevailing belief that only religious practitioners prefer TM services is also refuted, as only (6.44%) of patients were recorded as religious practitioners in the survey.

The most common diseases were *tsakar* and *phoney*. Common disease conditions treated at Ayurvedic hospitals in India include respiratory, neuromuscular, digestive and circulatory disorders [11]. These conditions were also reflected as top 10 diseases in the Annual Health Bulletin 2020 and 2021, compiled by the Ministry of Health.

Table 1. Sociodemographic profile of patients who availed Traditional Medicine services across 19 TM Units in Bhutan, 2019 – 2020

Patient Characteristics	n	(%)
Sex		
Male	595	(38.61)
Female	946	(61.39)
Age (years)		
15 – 34	379	(24.59)
35 – 44	353	(22.91)
45 – 54	324	(21.03)
55 – 64	210	(13.63)
65 and above	275	(17.85)
Case status		
New case	950	(61.65)
Old case	590	(38.29)
Occupation		
Civil servant	164	(10.66)
Private/Business	236	(15.34)
Farmer	873	(56.76)
Student	118	(7.67)
Religious Practitioners	99	(6.44)
Armed Forces	48	(3.12)
Ethnicity		
Ngalong (Western)	499	(32.38)
Sharchokpa (Eastern)	700	(45.43)
Lhotshampa (Southern)	88	(5.71)
Centre Region (Central)	230	(14.93)
Others	24	(1.56)
Education level		
Cannot read and write	635	(41.23)
Non-Formal Education	126	(8.18)
Monastic education	143	(9.29)
Class PP to VI	160	(10.39)
Class VII to XII	334	(21.69)
Diploma	44	(2.86)
Degree	82	(5.32)
Masters and above	16	(1.4)

Limitations

The COVID-19 pandemic has had a significant impact on the ability of TM professionals to gather sufficient data. Hence, our findings may not be adequate to generalize to the overall population.

CONCLUSION

Traditional Medicine services remain popular among patients from various sociodemographic backgrounds including some non-Bhutanese patients.

Table 2. Top 10 diseases recorded among patients who availed Traditional Medicine services across 19 TM Units in Bhutan, 2019 – 2020

Bhutan Traditional Medicine Disease Code	Disease Name	n	(%)
ཨོཾ ༠༠	ཚ་དཀར་གྱི་ནད། Neurological disorder	271	(16.76)
ཅམ ༠༠	ཕོ་ནད། Gastrointestinal disorders	180	(11.13)
རྟག ༠༤	ཡ་མ་མགོ་སྲིན། Sinusitis	139	(8.60)
ཅཀ ༠༣	ཐུག་གི་སླིང་གཟེང། High blood pressure	114	(7.05)
ཨབ ༠༠	གླུ་ཐུའི་ནད། Rheumatoid arthritis	112	(6.93)
རྟག ༠༠	མགོ་ནད། Head disease	110	(6.80)
ཅཅ ༠༠	མཁལ་ནད། Kidney disease	108	(6.68)
ཀྀྀ ༠༠	རྩུ་ནད། rLung disorder	98	(6.06)
ཨཾ ༠༠	པགས་ནད། Skin disease	97	(6.00)
ཅལ ༠༠	རྩོ་བའི་ནད། Lung disease	42	(2.60)

The majority of the participants who availed the services were farmers, with the highest number being from the eastern region of the nation. The finding also indicated that *tsakar*, *phoney*, *yama gosin*, *thrag lung* and *drumbu* are the most common disorders.

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Declarations

Ethics approval was obtained from the Research Ethics Board of Health via letter No. REBH/Approval/2017/095 dated 1 March 2018 Administrative approval was obtained from the Policy and Planning Division, Ministry of Health and the respective hospital administrators. Informed consent was taken from the individual participants to allow data extraction.

Consent for publication

Not applicable

Competing interests

Not applicable

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Availability of data materials

All public sources of data have been cited in this article.

Author contributions

Conceptualization, methodology, investigation, resources, visualization, writing – initial draft, writing – review & editing: JS, DW, KC, TC, TD, ND, KC, P

Software, validation, data curation, formal analysis, supervision, project administration: JS

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