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Original Research Article (Clinical)

# Morbidity profile of adult outpatients attending traditional medicine health facilities in a district of South India

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ABSTRACT

*Background:* Siddha system is a complementary system of medicine popular in South India. Information on common morbidities for which people seek care in Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) systems and especially in Siddha hospitals is very limited. This knowledge will help in prioritizing diseases and developing standard treatment guidelines.
*Objective(s):* The present study was designed with the aim to describe the morbidity profile of the adult patients attending Siddha Out Patient Department (OPD) at Government Hospitals in Erode district of Tamil Nadu.
*Materials and methods:* A facility-based cross-sectional descriptive study was conducted among adult (15–59 years) patients, who attended Siddha Hospital OPDs during February, 2014. Two block level health facilities were randomly selected from ten block hospitals offering Siddha services in Erode district of Tamil Nadu. Information on socio-demographic characteristics like age, gender and education was captured using a pre-tested proforma. Diagnosis was done by treating Siddha practitioners as per reporting format. Data were single entered and analyzed using EpiData software.
*Results:* Of the total 1786 patients who attended the Siddha OPD, 1720 (96%) completed the interviews. Mean (Standard Deviation) age of participants was 41 (11) years and 913 (53%) were females; 20% had no formal education. Of 1720 participants, arthritis (21%), neuritis (10%), fungal diseases (7%) were the top three morbidities, with arthritis and neuritis being most common morbidities in both males and females.
*Conclusion:* Arthritis, neuritis and fungal diseases were the most common morbidities, for which patients sought care in Siddha hospitals. These morbidities can be considered for preparing standard treatment guidelines under the national programme.


## 1. Introduction

World Health Organization (WHO) recommends mainstreaming of traditional and complementary medicine (T&CM) as it is affordable and culturally acceptable globally, since ancient times [1]. With increase in life expectancy and change in lifestyle, there is an eventual rise in chronic debilitating diseases such as heart disease, cancer, diabetes and mental disorders. Chronic disease patients who need extended years of treatment are concerned about the high costs and adverse effects of Allopathic medicines [1]. Hence, traditional medicinal systems are preferred as they offer low cost and simpler therapies for patients [2,3].

Even in India, there is a resurgence of interest in Indian systems of medicine. Around 15% of sick persons seek treatment from traditional medicinal systems [4]. Under National Health Mission (NHM), T&CM systems are integrated in public healthcare facilities and Department of AYUSH was created under Ministry of Health and Family Welfare (MoHFW) [5]. In 2012, National AYUSH Mission (NAM) was launched with basic objective of promoting AYUSH medical systems through cost-effective AYUSH services, universal access through upgrading AYUSH hospitals and co-location of AYUSH facilities at Primary Health Centres (PHCs), Community Health Centres (CHCs) and District Hospitals (DHs) [6]. Under NAM,

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**Table 1**
Five most common causes of adult outpatients attending Siddha hospitals in Erode district, Tamil Nadu (n = 1720).

| Male N = 807, n (%) | | Female N = 913, n (%) | | Total N = 1720, n (%) | |
|---|---|---|---|---|---|
| Arthritis | 177 (19.4) | Arthritis | 185 (22.9) | Arthritis | 362 (21) |
| Neuritis | 101 (11.1) | Neuritis | 71 (8.8) | Neuritis | 172 (10) |
| Acid Peptic disease | 65 (7.1) | Leucorrhea | 63 (7.8) | Fungal disease | 116 (6.7) |
| Bronchitis | 63 (6.9) | Fungal disease | 53 (6.6) | Bronchitis | 114 (6.6) |
| Fungal disease | 63 (6.9) | Bronchitis | 51 (6.3) | Acid peptic disease | 109 (6.3) |

there is a need to develop common Standard Operating Procedures (SOPs) for providing guidelines for quality healthcare under AYUSH. The common morbidities for which patients seek care in AYUSH systems needs to be identified and prioritized for developing SOPs. But, there is lack of information on morbidity profile of patients who seek care from Siddha system which is part of AYUSH.

Siddha system is widely popular in the state of Tamil Nadu, India. Siddha practitioners are involved in providing health care starting from the PHC level in the state. Siddha system has a wide range of applications in management of diseases of skin, respiratory system, musculoskeletal disorder etc. It also has preventive health measures which include tried and tested methods related to purification of drinking water, food and nutrition [7]. Though Siddha system of medicine is popular in South India, only few studies have been published regarding the morbidity profile of patients seeking care at Siddha hospitals. Studying the morbidity profile of patients at Siddha hospitals will help the planners to improve the provision of specific services. Hence, this study was conducted to describe the socio-demographic and clinical profile of the adult patients attending Siddha OPD at Government Hospitals in Erode district of Tamil Nadu.

## 2. Materials and methods

### 2.1. Study design

A cross-sectional descriptive study was conducted among the outpatients attending Siddha hospitals in Erode district of Tamil Nadu. This study is a part of larger study exploring the morbidity profile of all age groups including children and elderly and assessing the patient satisfaction of services.

### 2.2. Study setting

Erode district is located in the western part of Tamil Nadu, South India with an estimated population of 2,25,9608 as per Census 2011 [8]. Agriculture and cattle rearing were the major occupations. Of the 84 public health facilities in the district, AYUSH services were provided in 50 health facilities. Of these, 37 health facilities offer services of Siddha medicine. AYUSH services are provided in a separate wing in the health facilities offering Allopathic care. Patients can choose their preferred system of medicine and seek care from either AYUSH or Allopathic care providers. Apart from public health system, private health care providers (both qualified and unqualified) also practise Siddha system of medicine.

For the purpose of study, we randomly selected two health facilities (Anthiyur and Bhavani) at block level among ten block hospitals offering Siddha services. Siddha wing in each block hospital is managed by qualified Siddha practitioner (5.5 year Bachelors degree/3 year Masters degree in Siddha medicine) supported by Siddha pharmacist and other general support staff. On an average, 70–90 patients seek care from Siddha OPDs per day at block hospitals.

### 2.3. Study population

All consecutive individuals in the age group 15–59 years, who attended the Siddha OPD in the Siddha hospitals during the month of March, 2014 were eligible for the study.

### 2.4. Ethical approval

The study protocol was reviewed and approved by JIPMER Scientific Advisory Committee and Human Institute Ethics Committee. Administrative approval was obtained from the District Medical Officer (Siddha), Erode district.

### 2.5. Data variables and study tools

Information on socio-demographic characteristics like age, gender, education and clinical profile (diagnosis) using a structured pre-tested proforma was collected. Exit interviews were also conducted. Diagnosis of the participants was extracted from the individual patient's treatment card as recorded by the registered Siddha practitioner. Categorization of the morbidities was done as per the reporting format for Indian Medicine and Homeopathy recommended by Directorate of Indian Medicine and Homeopathy, under the MoHFW, Tamil Nadu. The physicians were trained to write the diagnosis as per the above reporting format.

### 2.6. Data entry and data analysis

Data were single entered and analyzed using EpiData software (version 3.1 for data entry and version 2.2.2.182 for analysis, EpiData association, Odense, Denmark). We used proportions to

**Table 2**
Five most common causes of adult outpatients attending Siddha hospitals across different age groups in Erode district, Tamilnadu (n = 1720).

| 15–29 years N = 309, n (%) | | 30–44 years N = 626, n (%) | | 45–59 years N = 785, n (%) | |
|---|---|---|---|---|---|
| Fungal disease | 38 (12.3) | Arthritis | 86 (13.7) | Arthritis | 249 (31.7) |
| Leucorrhea | 30 (9.7) | Neuritis | 65 (10.4) | Neuritis | 98 (12.5) |
| Sinusitis | 27 (8.7) | Acid peptic disease | 59 (9.4) | Lumbar spondylitis | 45 (5.7) |
| Arthritis | 27 (8.7) | Bronchitis | 56 (8.9) | Bronchitis | 40 (5.1) |
| Bronchitis | 18 (5.8) | Lumbar spondylitis | 39 (6.2) | Fungal disease | 40 (5.1) |

**Table 3**
Five most common causes of adult outpatients attending Siddha hospitals across different education groups in Erode district, Tamilnadu (n = 1720).

| No formal education N = 346 | | Less than High School N = 962, n (%) | | More than High School N = 412, n (%) | |
|---|---|---|---|---|---|
| Arthritis | 104 (30.1) | Arthritis | 217 (22.6) | Arthritis | 41 (10.0) |
| Neuropathy | 49 (14.2) | Neuropathy | 85 (8.8) | Neuropathy | 38 (9.2) |
| Lumbar Spondylitis | 19 (5.5) | Acid peptic disease | 74 (7.7) | Bronchitis | 34 (8.3) |
| Fungal disease | 19 (5.5) | Fungal diseases | 65 (6.8) | Sinusitis | 33 (8.0) |
| Asthma | 18 (5.2) | Bronchitis | 63 (6.5) | Fungal disease | 32 (7.8) |

summarize the morbidity profile stratified by age groups, gender and education groups.

## 3. Results

There were 1786 patients who attended the Siddha OPD during the study period. Of them, 1720 (96%) completed the interviews and were included in the analysis. Mean (SD) age of participants was 41(11%) years and 913 (53%) were females. Among participants, 20% had no formal education and about 60% had education less than high school level. Morbidity profile of study participants and distribution by gender are shown in Table 1. Of 1720 participants, arthritis (21%), neuritis (10%), fungal diseases (7%), bronchitis (7%) and acid peptic diseases (6%) were the top five morbidities. Among both male and female patients, arthritis and neuritis were the most common morbidities. Morbidity profile of study participants stratified by age is shown in Table 2. Among the participants aged between 15 and 29 years, fungal disease was the most common reason for attending OPD, followed by leucorrhea. In age groups of 30–44 years and 45–59 years, arthritis and neuritis were the most common morbidities. Morbidity profile of study participants stratified by education is shown in Table 3. Among the participants who did not have any formal education, lumbar spondylitis was third leading morbidity after arthritis and neuropathy. In the group with participants educated more than high school, bronchitis was the third leading cause of morbidity ranked lower to arthritis and neuropathy.

## 4. Discussion

Our study on morbidity profile at block level health facilities have shown that chronic conditions like arthritis, neuritis, fungal diseases and bronchitis were the most common morbidities among the adult outpatients. In females, additionally, leucorrhea/white discharge was common. Musculo-skeletal conditions like lumbar spondylitis and cervical spondylitis were common in the age group of 45–59 years. The study findings suggest that most of the illness managed by Siddha providers were chronic in nature.

To the best of our knowledge, only one study has reported the morbidity profile of outpatients attending referral Siddha Institute [9]. The study done in referral Siddha Institute in Chennai reported that the most common morbidities for which treatment sought were rheumatology (33%) followed by dermatology (19%), respiratory system (9%) and neurological problems (8%). Our study findings were fairly similar to that of Chennai study. However, the previous study was conducted in a referral Institute of Siddha, where the morbidity profile of patients might be different.

Our study findings have few implications. First, considering that majority of morbidity was chronic conditions and only one Siddha physician managing the health facility, additional technical support staff can be provided to manage these conditions. Second, significant number of female patients visit OPD for gynecological problems like leucorrhea/white discharge and dysmenorrhea, menorrhagia and urinary tract infections. A lady Siddha physician posted in these hospitals (may be weekly once or twice) will provide better services as female patients may seek treatment better in the presence of lady doctors in the hospitals. Third, as there are no standard Siddha treatment guidelines from department of AYUSH for managing common diseases, this profiling will help in prioritizing the conditions [10]. Fourth, knowing the burden of each condition will help in drug procurement and logistics at the hospital.

This is one of the few studies reporting the morbidity profile and first study from a secondary level hospital (block level). The response rate was more than 95%. We used the physician reported diagnosis, which followed the standard guidelines of reporting. There were few limitations. The data collection was done in a particular month of a year and hence seasonal variations of morbidities could not be captured. The study was conducted only at government secondary level hospitals in a selected district and the findings cannot be generalized to the whole state or to the primary care settings.

Reasons for preference of Siddha care can be explored by future qualitative studies. Also, the morbidity profile in primary care settings and in private sector can be studied. Follow-up studies on the response to Siddha treatment can help in establishing the effectiveness of the ancient Indian system of medicine [10].

## 5. Conclusion

In Siddha health facilities, chronic conditions like arthritis and neuritis were the common reasons for which patients seek care. Huge burden of chronic conditions calls for streamlining Siddha care with standard treatment protocols and increase in technical manpower. The exploratory mixed method studies on health seeking pathway of individuals reaching Siddha clinics and follow up studies to establish effectiveness of treatment can help in evidence-based Siddha practice.

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## Conflict of interest

None.

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