Trends in the use of Yoga and Naturopathy based lifestyle clinics for the management of Non-communicable diseases (NCDs) in Tamilnadu, South India

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ABSTRACT

Objectives: Prevalence of Non-communicable Diseases (NCDs) are on the increase and there is an urgent need for novel and effective treatment modalities in the management of NCDs. Objective of the current study is to understand the success of one such 'novel' Yoga and Naturopathy based 'Lifestyle clinic' model, executed at various government rural and urban settings in Tamil Nadu, South India. The patient trends and health conditions with which they had visited these Yoga and Naturopathy centers are presented in this article.

Method: We retrospectively analyzed the data abstracted from various government Yoga & Naturopathy centers/Lifestyle clinics in Tamil Nadu, which includes the total number of outpatients, name and frequency of diseases diagnosed and treatments offered.

Results: Total number of outpatients who had approached the centers/Lifestyle clinics between the period of 2015 and 2018 was 8,914,820. There was a positive increase in the trend of the number of patients who visited various Yoga and Naturopathy centers on a year-on-year basis since 2015. Of the patients identified, most patients visited the rural centers- National Rural Health Mission (NRHM) (44%). Patients who had visited other centers like District Headquarters Hospital (DHQHp) and Medical College Hospitals (MCH) were 31% and 25% respectively.

Conclusion: Our study suggests that the Yoga and Naturopathy based 'Lifestyle clinic model' is successful in the community and there is a positive increase in trend among patients for utilizing these government centers. Further analysis of the characteristics of patients getting treated would help future researchers to implement stronger clinical evidence and its implementation on a larger scale.

1. Background

There is a substantial increase in the use of complementary and alternative medicine (CAM) over the past few decades within and outside the mainstream health care system.¹ Several international studies have demonstrated this trend, both in the general population and in different patients groups.^{2–7} Owing to the increase in usage of the traditional CAM therapies, World Health Organisation (WHO) has developed a global strategy, setting-up the benchmarks in clinical practice of traditional & complementary therapies (T&CM).⁸ The primary goals

of which is not just to promote safe and effective use of traditional medicine, but also to harness the potential contributions of traditional medicine and integrate it into healthcare systems, wherever appropriate.⁹ CAM therapies are popularly used as a part of disease management in conjunction with conventional medicine. CAM usage is more driven by values and beliefs, than due to dissatisfaction with biomedicine.¹⁰ Economic and socio-cultural factors greatly influence the use of any type of medicine, which is also applicable to CAM therapies. For instance, in underdeveloped societies where access to biomedical services are not adequate, there is pervasive reliance on

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traditional healers, even in case of serious illness.¹¹ However, in affluent countries, where biomedical services are more readily accessible, CAM is substantially used for disease prevention and health promotion.¹²

Yoga and Naturopathy are popular CAM therapies commonly practiced across the world. In South India, the state of Tamil Nadu came up with a clinical model to curb the rampant prevalence of lifestyle disorders by introducing ‘Yoga & Naturopathy- Lifestyle clinics’ across all 33 districts of the state. Patients here are treated as outpatients for various diseases with Yoga and Naturopathy therapies. Yoga is a way of life,¹³ consisting of moral and self-discipline codes called *yama* and *niyama*, alongside other mind-body practices like asana, pranayama, and meditation. Yoga as a therapy, thus promotes physical, mental and social wellbeing, incorporating health in all aspects as defined by the World Health Organisation (WHO). More specifically, Yoga is found to be effective in the management of many non-communicable psychosomatic disorders.^{14–16} Likewise, Naturopathy consists of therapies using natural elements; Hydrotherapy using water,¹⁷ heliotherapy using sun,¹⁸ mud therapy,¹⁹ chromotherapy using colours,²⁰ magnetotherapy,²¹ manipulative therapy,²² fasting therapy,²³ diet therapy²⁴ (includes plant-based natural supplements), acupuncture, acupressure with reflexology,²⁵ etc. Naturopathy by definition is more than a system of curing aches and pains and is more a ‘way of life’.²⁶ Naturopathy believes in treating the root cause of the disease and not just the symptoms.²⁷ Combination of Yoga therapy and Naturopathy are the best-suited CAM therapy of choice for our specialized ‘Lifestyle clinic’ model meant to curb NCDs. The patients who visit the clinic get guidance and counselling on lifestyle modifications alongside Yoga & Naturopathy treatments. Since the start of these Lifestyle clinics, they have been running successfully in treating patients as well as spreading knowledge and awareness about health & disease among the public. This paper aims to provide an overview of the trend existing over the years among patients approaching these lifestyle clinics and also observe any possible change in the trend.

2. Methods

2.1. Study design

The medical records of patients who had received at least one session of any form of Yoga and Naturopathy treatments at various government wings of Yoga and Naturopathy sectors in Tamil Nadu between 1 January 2015 and 31 December 2018 were retrospectively reviewed.

2.2. Data sources

The information was abstracted from various government Yoga & Naturopathy centers/Lifestyle clinics in Tamilnadu, which includes the total number of outpatients, name, and frequency of diseases diagnosed and treatments offered. Naturopathy and Yoga therapies are provided to patients through various centers/Lifestyle clinics set across Tamilnadu in primary health centers under national rural health mission (NRHM), various district headquarters hospitals (DHQHpl) and Medical college hospitals (MCH), including multi-super specialty hospitals. Total of 177 Yoga and Naturopathy centers are running in the government sector. As per available disease, code patients were classified and treated accordingly.

2.3. Study criteria

Patients who were treated as outpatients at the Yoga and Naturopathy wings in government hospitals were included. The same patient could be duplicated because he or she could have been treated for new pains, discomforts or diagnosis. Therefore, if the same patient was treated for a different diagnosis code, we considered this case to be a new patient.

Figure 1. Number of patients visited.

2.4. Data synthesis

A descriptive statistical analysis was conducted and categorical data are presented as percentage and frequency.

3. Results

The total number of outpatients approached from the period of 2015–2018 was 8,914,820. There was a positive increase in trend which reflects that the patients visited in various Yoga and Naturopathy centers were increasing tremendously since 2015 (Fig. 1). Of the patients identified, most patients visited the NRHM as outpatients (3909549/8914820, 44%). The patients visited in other centers like DHQHpl was 31% (2811044/8914820) and MCH was 25% (2194227/8914820) (Fig. 2). Out of these patients, most frequently (> 50%) visited patients conditions were shown in Fig. 3.

Diabetes was the most common individual health condition among the patients approached in various centers. OP visits with diabetes condition was highest in the urban centers than in the district headquarters or rural centers (84% in MCH, 78% in DHQHpl, and 64% in NRHM). Lumbago was the second commonest individual condition among the patients consulted in MCH (80%). In NRHM centers, Osteoarthritis of Knee (OAK) was the most prevalent (78%) condition than other centers (MCH-62% and DHQHpl - 68%). Hypertension condition was similar among the various centers of Yoga and Naturopathy (MCH-68%, DHQHpl-62%, and NRHM -62%). Obesity (MCH-74%, DHQHpl-67%, and NRHM-60%) and Lumbar spondylosis (MCH-72%, DHQHpl-68%, and NRHM-60%) conditions also reflected a

Figure 2. Number of patients visited at various Yoga & Naturopathy centers.

Figure 3. Percentage of conditions with patients approached Yoga & Naturopathy centers.

Table 1

List of treatments or therapies available in various yoga and naturopathy government settings in Tamilnadu.

S. No	List of treatments/therapies available
1	Yoga therapy
2	Hydrotherapy (water application in various temperature and mode which includes hip bath, spinal bath, steam bath, packs & compress)
3	Mud therapy (with mud/clay)
4	Magnetotherapy
5	Acupuncture/acupressure
6	Diet therapy/Plant based natural supplements
7	Colour therapy
8	Massage (partial parts of the body based on conditions)
9	Fasting therapy
10	Auriculotherapy
11	Reflexology
12	Aromatherapy
13	Lifestyle counselling

high percentage of approach among the various centers. The acid peptic disorder (APD) is the least among the most common condition with patients approached Yoga and Naturopathy centers (MCH-56%, DHQHpl-52%, and NRHM-50%). The list of various Yoga and Naturopathy treatments given to the patients approached with various conditions were listed in Table-1. Facilities available at various centers are shown in Table-2.

4. Discussion

A positive trend with a year-on-year increase in the number of people turning towards the 'Lifestyle clinics' is evident through the available data. The increase in trend mirrors the increase in the prevalence of NCDs.^{28–30} Most patients visited the clinics with musculoskeletal disorders which is in line with previous reports on CAM therapies,^{1,31} followed by metabolic disorders. With an increase in the demand for CAM continues to rise worldwide, health care systems in some countries have already started to integrate CAM therapies into their conventional medical care.³² For instance, several Norwegian public and private hospitals seem to integrate the use of CAM, especially acupuncture, during delivery.³³ In the state of Washington (U.S.A), 86% of hospices offer CAM to their patients.³⁴

Reports from Australia, UK, and USA^{35–37} emphasize the need to improve communication between physicians and patients about their CAM usage; openness and non-judgemental communication are

Table 2

List of instruments/items available in various yoga and naturopathy government settings in Tamilnadu.

S. No	List of Instruments/Items available
1	Agmark Gingelly oil
2	Disposable acupuncture needle (1 inch size)
3	Disposable acupuncture needle (1/2 inch size)
4	Moxa stick
5	Disposable jalaneti pot
6	Disposable eye wash cup
7	Epsom salt
8	Plastic Enema can
9	Surgical absorbable cotton 500 gm roll with surgical spirit – 500 ml
10	Hand sanitizer
11	Infraphil lamp bulb
12	Sterilized mud packs
13	Packs-Chest, legs, Arm, Knee, Abdomen, GH pack, Renal, Full wet sheet pack
14	Facial sauna
15	Acupressure & Reflexology kit
16	Aroma oil- lemon grass
17	Aroma oil- pepper mint
18	Aroma oil- Basil oil
19	Aroma oil- Eucalyptus oil
20	Aroma oil –Sandal wood oil
21	Aroma oil –Camphor oil
22	Aroma oil- Neem oil
23	Aroma oil- Ajwain oil
24	Mustard power
25	Ice bag
26	Hot water bag
27	Thick Jamukkalam (gundu) as Yoga mat
28	Wax
29	Bermuda grass powder
30	Curry leaves powder
31	Wheatgrass powder
32	Indian Gooseberry power
33	Land caltropus powder
34	Holly basil powder
35	Terminalia chebula powder
36	Drumstick powder
37	Fenugreek powder
38	Solanum trilobatum powder
39	Senna auriculata powder
40	Phyllanthusniruri powder
41	Soap oil
42	Gray cloth kada
43	Honey
44	Hydrotherapy equipments- Steam bath cabin, hip bath tub and spinal bath tub.
45	Magnet belt (Head, waist, wrist)

essential to determine the risks of herb-drug interactions and potential complications.⁷ However, Naturopathy is a more safe form of CAM therapy as no drugs or herbal 'combinations' are administered internally. This ensures that there are no risks of adverse 'herb-drug interaction' through Yoga & Naturopathy treatments. Nevertheless, patients were requested to communicate with their physicians and keep them informed of the CAM therapies that they are undergoing at the 'Lifestyle clinics'.

A team of one qualified Yoga & Naturopathy physician, a male therapist, a female therapist and a multipurpose worker is available at every Lifestyle clinics/centers. Evidence-based Yoga and Naturopathy therapies including mud therapy,^{38,39} hydrotherapy,^{40,41} fasting therapy,^{42,43} acupuncture,⁴⁴ reflexology,^{45,46} massage,^{47,48} chromotherapy,^{49–51} magneto therapy^{52,53} and yoga^{13,54} are provided at these lifestyle clinics. Alongside these natural therapies, counselling on lifestyle modifications including diet, physical activity, sleep, and stress management are provided, which are tailor-made based on an individual's lifestyle and practical feasibility in incorporating the prescribed lifestyle modifications in their everyday life. Apart from disease management, increased number of individuals also turn to the Lifestyle

clinics for primary and secondary prevention of diseases. This is of great importance in reducing the disease burden as well as the economic burden it lays upon on a developing country like India.

4.1. Strengths and limitations

Inclusion of data from both rural and urban population is one of the major strengths of the study, as the care-seeking behaviour for NCDs was found to be increased in the rural set-up in our study when compared to the urban population. Increase in trend observed in our lifestyle clinics is positive and encouraging. However, follow up data on the progress of their health conditions would have added more value and it was not possible because of the outpatient population which is one of the limitations of the study.

4.2. Future directions

Attitude towards CAM is becoming more positive across the world, and most health care systems and professionals worldwide wish to include CAM into hospitals and healthcare settings.¹ The positive trend in the usage of CAM therapies could be seen in our 'Lifestyle clinic' model as well. There is a continuous and steady increase in the number of patients visiting Lifestyle clinics. Patient demand is the main reason why hospitals decide to provide a particular type of CAM therapy³² and with increasing demand in our 'Lifestyle clinic' model, we urge that these Lifestyle clinics should be expanded further, serving a much larger population to combat the rampant increase in lifestyle disorders worldwide. Recruitment of suitably qualified and trained healthcare professionals in these lifestyle clinics would greatly help reduce the disease burden to a larger extent, enabling to serve a larger group of people through evidence-based practice. Future studies including data on the effectiveness of the interventions provided at these lifestyle clinics on NCDs would provide us with definitive directions on future implementation of these lifestyle clinics across the globe.

Declaration of competing interest

Nil.

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