

Reviews

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Raising burden of non-communicable diseases: importance of integrating Yoga and Naturopathy at primary care level

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Abstract: Primary health care is a vital component in health care delivery. Non-communicable diseases (NCD's) are rising like a major threat to human survival, which is expected to account for 75% of the total mortality by 2030. Lifestyle and behavioural changes are reckoned as the way ahead. Yoga and Naturopathy, a drugless system of medicine has intersecting paradigms which addresses all planes of health effectively. Yoga and Naturopathy through its holistic approach educate and make the people responsible for their own health. It has shown its efficacy in alleviating and preventing various NCD's. A systematic approach should be initiated, which can channelize the integration of Yoga and Naturopathy at the primary care level considering its cost-effectiveness and efficacy over NCD's.

Keywords: health education; NCDs, naturopathic medicine; patient centered approach; primary health care.

Introduction

Health is not an individual entity as we approach in current scenario. As defined by World Health Organization (WHO) it's a broader spectrum of factors which mutually embrace each other and shape the life of an individual and his surrounding community. We need to discuss more about the raising disease burden, irrespective of the multi-faceted national programs and other heterogeneous preventive measures. In earlier decades communicable diseases were

a threat to human existence which has now shifted towards non-communicable diseases (NCD's) which accounts to almost 60% of the total mortality in the world [1]. This drastic shift in disease patterns are due to our single centred approach towards health where we just consider human as a physical entity made up of anatomical integrity and physiological excellence. When approaching a disease we should have wisdom of looking beyond the body and drugs available. A holistic and individualized care with a focus on staying healthy, where primary and secondary prevention plays a major role is important in managing NCD's, as this ensures all the planes of health has been attended properly. Yoga and Naturopathy provides such holistic and individualized care to an individual where the former heals the mind and spirit, whereas the later is a system of medicine which uses in body's innate capacity to cure diseases and treats the human body as a complete unit. The ultimate aim of Yoga and Naturopathy is to promote the inherent power within the human body and to accelerate self-healing capacity [2].

Primary health care (PHC) in India

India though, a fastest growing economy the very essential components of PHC such as promotion of food supply, proper nutrition, safe water and basic sanitation and provision for quality health information concerning the prevailing health problems is largely ignored [3]. India follows three tier PHC model in rural areas, which includes sub centres, primary health centres and community health centres [4] whereas in urban region it is catered through dispensaries, hospitals and medical colleges besides the private sector health care providers, who are the major stakeholders in health care delivery. When primary care is accessed via busy state-run outpatient departments there is often little time for the physician to investigate causes behind a patient's condition, and these factors can adversely affect patient outcomes [5]. Irrespective of this the goal of "Health for All" still eludes the public health

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experts more so in developing countries like India. The concept of social determinants of health evidently underlines the existence of key illness factors beyond the conventional boundaries of primary care [6]. Therefore health interventions must go beyond stethoscope and medicines and adopt a holistic approach to address health and related issues [7].

Patient centred approach in PHC set-ups

Patient-centred care is a quality which includes personal, professional, and organizational relationships. Thus, efforts to promote patient-centred care should consider patient-centeredness of patients (and their families), clinicians, and health systems [8, 9]. Patient-centred care is prominently positioned on the political agenda, but our measures are not yet up to the challenge of ensuring that it is happening [10]. Recent systematic review suggests that there are promising evidences to implement patient centred approach as it improves patient satisfaction and perceived quality of care [11]. However, currently there are lot of bottlenecks like non-availability of sufficient health care personals, drugs, poor infrastructure and increasing disease burden pose as a challenge in delivering patient centred approach at the PHC level. Currently our PHC works on screening, diagnosing and dispensing medicines. Additionally there are National awareness programs created by the union government to address various communicable and non-communicable diseases. However all these programs are largely community centred and not individual centred. Due to the various hurdles, the duration a doctor spends with his patient in consultations; explanation about the disease, treatment, investigations has been considerably less at primary care level [12].

Yoga and Naturopathy in PHC delivery

PHC is a vital component as it can contribute to a greater extent in reduction of lifestyle related morbidity and mortality. However this can be only achieved by adapting a proactive intervention rather than adapting reactive approach. The time spend with a patient and understanding him as a whole entity and not mere symptoms can prevent many catastrophic health hazards which he or she is likely to encounter in his/her lifespan. Yoga and

Naturopathy is a distinct type of primary care medicine that blends age-old healing traditions with scientific advances and current research. It is guided by a unique set of principles that recognize the body's innate healing capacity, emphasize disease prevention, and encourage individual responsibility to obtain optimal health [13]. In India, Yoga and Naturopathy is one of the official systems of Indian medicine under Ministry of AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa-Rigpa and Homoeopathy), Government of India [14]. Yoga and Naturopathy is an ideal system for prevention and management of metabolic risk factors which are the major cause for deaths due to NCD's. The modalities used like Diet, fasting therapy behavioural counselling, lifestyle management and stress management along with natural therapies like Hydrotherapy, Mud therapy, heliotherapy, Manipulative therapies, chromotherapy, magnetotherapy and Yoga help in addressing risk factors. Many of the underlying principles of Naturopathic medicine are analogous to the underlying principles and activities of public health, specifically in areas such as health promotion, prevention, patient education, and proactive rather than reactive approaches to disease management and treatment [15].

Naturopathic prescriptions for health are mostly dependent on promoting healthy behaviours. Unlike conventional health care practices where the physician's focus is on addressing the symptoms, Naturopathy physicians focus on addressing the root cause of the condition. Therefore, by promoting healthy behaviours in an individual by series of counselling sessions and imparting education on Naturopathy can be helpful in implementing behavioural change interventions at an individual level. Typical consultation with a Naturopathy physician is usually long with more detailed patient assessment. In a survey conducted by world Naturopathic Federation, it is seen that over 82% of first visits are at least 1 h in length. Fifty-two percent of follow-up visits are 30–45 min and 28% are 45 min–1 h in length [16]. This approach is the need of the hour, in our hastened effort to bring down the NCD related morbidity and mortality. Moreover we are social beings, we have an inborn tendency to imitate and adapt behaviours from our surroundings. We are shaped or rather our thoughts are shaped based on what we see and perceive from the society. Therefore, to create a change in an individual it is important to change the surrounding environment how other people think, perceive and act [17]. Consequently, to bring a change in clinical outcomes it is important to understand the potential barriers and promoters for implementing change which is possible only through individual centric approach as in Yoga and Naturopathy. Goals of naturopathic medicine parallel those of family medicine in providing and

maintaining the well-being of both the patient and the health care system as a whole [13].

Evidence based Yoga and Naturopathy

Naturopath's focus is on using "salutogenetic resources" (scholarly orientation focussing attention on the study of the origins of health in contrary to look in to the origins of disease) and adapting sustainable lifestyle modifications. A cross sectional study by Kennedy et al. on complementary medical health services in a Canadian naturopathic teaching clinic found that the primary motivators for patient visits were obtaining health education, health prevention and help with chronic health conditions [18]. Bradley et al. reported in their study on adjunctive naturopathic care for type 2 diabetes, that there were significant improvements in patient reported outcomes at 6 months of Naturopathic intervention in diet, physical activity, mood, self-efficacy and motivation to change lifestyle [19]. A retrospective analysis by Bradley et al. on Naturopathic medicine and type 2 diabetes inferred that Naturopathic physicians prescribe comprehensive therapeutic lifestyle change recommendations supported by a high level of evidence 100 percent received dietary counselling, 69 percent were taught stress reduction techniques, and 94 percent were prescribed exercise [20]. Bairy S et al. in a recent prospective cohort study has reported that adjunct Naturopathy and Yoga can improve glycaemic control as well as reduce the overall need for anti-diabetes medications [21]. A systematic review by Oberg et al. on estimated effects of whole-system Naturopathic medicine in select chronic disease conditions found that there were significant changes seen in primary clinical outcomes [22]. A randomized controlled trial (RCT) on naturopathic medicine has reported that the addition of naturopathic care to enhanced usual care may reduce the risk of cardiovascular disease among those at high risk [23].

A naturopathic approach to cardio-vascular disease (CVD) primary prevention significantly reduced CVD risk over usual care plus biometric screening and reduced costs to society and employers as reported by Hermen PM et al. [24]. A quasi experimental study by Murthy et al. on role of Naturopathy and Yoga treatment in the management of hypertension stated that after starting non-pharmacological approach of Naturopathy and Yoga, systolic blood pressure (SBP) came down from mean of 139.6–129.6 and diastolic blood pressure (DBP) came down from 91.2–86.1 [25]. Naturopathy and Yoga in combination have reported to

reduce obesity and related risk factors like lipid profile, blood pressure etc.[26] Naturopathy and Yoga has shown significant improvement in respiratory variables in bronchial asthma patients [27]. Innes KE et al. suggested Yoga to reduce insulin resistance (IRS) related risk factors for CVD, may improve clinical outcomes, and may aid in the management of CVD and other IRS-related conditions [28]. Further Naturopathy and yoga based lifestyle intervention has also been reported to reduce the risk of CVD [29].

Yoga and Naturopathy aid in weight loss along with reduction in body mass index, lipid profile, free fat mass as reported by Shetty et al. [30]. A RCT on abdominal obese women suggested yoga to be a safe intervention which helps in reducing anthropometric and self-reported variables of obesity [31]. Besides this naturopathy modalities like fasting has been reported to produce statistically significant health outcomes in metabolic syndrome [32]. Many reviews also reckon the beneficial effects of yoga and naturopathy in preventing as well as managing metabolic syndrome and associated co-morbidities [33]. Naturopathy and yoga plays a significant role in mitigation and prevention of cancers. Primary prevention through improving the lifestyle and behavioural as well as environmental interventions are been suggested as the only way ahead to reduce the burden of cancers [34]. Considering the multi-modular factors responsible for cancers Naturopathy and Yoga can help in addressing these modifiable factors by behavioural and lifestyle interventions. Extensive evidence are available for modalities like fasting and diet, sun bath, hydrotherapy, acupuncture and yoga therapy in prevention of cancers and its associated side effects. These effects can be hypothesized as the effect of Yoga and Naturopathy interventions on gut-bacterial symbiosis, circadian rhythm and thereby enhancing immunity [35, 36].

Anrankalle DV in their review opines that naturopathy and yoga protocol such as correcting the lifestyle, implementing therapeutic fasting followed by diet modifications and using modalities like hydrotherapy, mud therapy, massage, physiotherapy, yoga and exercise therapy can be beneficial for population at large with musculoskeletal disorders [37]. A review further recommends ancillary effects of yoga on rheumatic diseases like osteoarthritis, fibromyalgia syndrome and rheumatoid arthritis [38]. Further Rao YC et al. and Sathyapratha TN et al. reported the efficacy of Yoga and Naturopathy interventions to improve the lung functions in bronchial asthma patients [27, 39].

Studies also have reported beneficial effects of Yoga and Naturopathy modalities on neurological and psychological variables. A cross sectional survey by Shinto et al. on outcome measure on perceived effectiveness of

naturopathic treatments on multiple sclerosis (MS) found that after 6 month intervention Naturopathic medicine combined with usual care for MS showed a trend in improvement in the general health subscale of the short form health survey-36 (SF-36) on timed walk, and neurologic impairment [40].

A RCT by Cooley et al. on Naturopathic care (NC) for anxiety found that a significant decrease in anxiety levels in the NC group over the psychotherapy group (PT). Significant improvements in secondary quality of life measures were also observed in the NC group as compared to PT [41]. An observational study by Sarris et al. on Naturopathic medicine for treating self-reported depression and anxiety reported that naturopathic medicine will be beneficial in improving mood and reducing anxiety [42].

While these evidences suggests the potential role of Naturopathy and Yoga in addressing the burden of NCD's, further application of whole system research designs will

help to evaluate the efficacy and safety of naturopathic medicine as it is actually practiced [43] in real time scenario will give more insights on its mechanistic. Figure 1 explains a possible mechanism by which naturopathy and yoga can induce potential health benefits in NCD's.

The way ahead

One of the goals of WHO First Ministerial Conference on Healthy Lifestyles and Non-communicable Disease Control aimed at promoting multi-sectoral actions to reduce the level of exposure of individuals and populations to the common modifiable risk factors for NCDs, while strengthening the capacity of individuals and populations to make healthier choices and follow lifestyle patterns that foster good health [44]. NCDs require long-term care that should be proactive, patient centred,

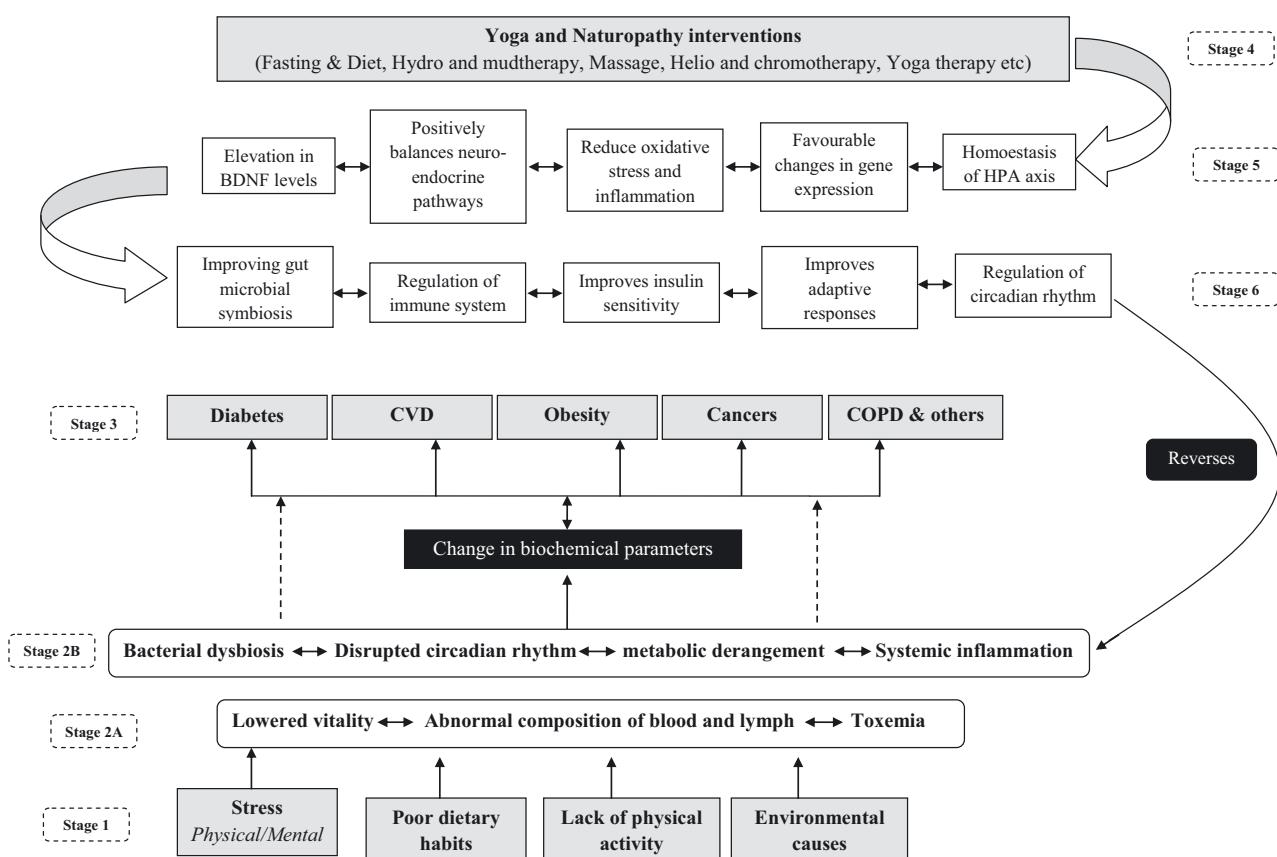


Figure 1: Causation and Possible mechanisms of Yoga and Naturopathy interventions in prevention and management of NCD's [48–77]. *Stage 1–3: Causation; Stage-1: Risk Factors; Stage-2A: Naturopathic understanding of causation; Stage-2B: Conventional understanding of causation; Stage-3: NCD's. Stage 4–6: Possible Mechanism; Stage-4: Naturopathy and yoga interventions; Stage-5: Biochemical changes; Stage-6: Physiological changes BDNF-Brain-derived neurotrophic factor; HPA-Hypothalamic Pituitary adrenal axis; CVD-Cardiovascular diseases; COPD- Chronic Obstructive Pulmonary Diseases.*

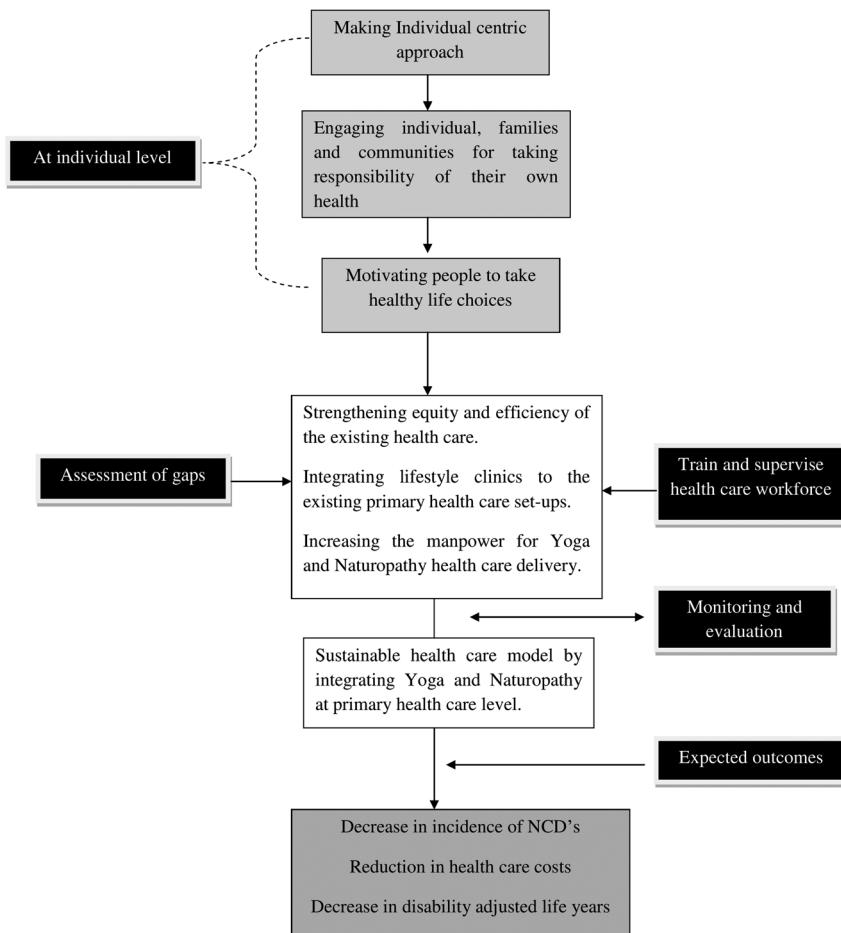


Figure 2: Framework for implementation of yoga and Naturopathy in primary health care.

community based and sustainable. Such care can be delivered equitably only through health systems based on primary health care [45]. There are substantial areas of overlap between Yoga-Naturopathy and public health, which include a focus on health rather than disease, a preventive approach, and an emphasis on health promotion and health education. Public health can look to Naturopathy for answers to the emergence of chronic disease through natural therapies, many of which can take the role of primordial and primary prevention of several diseases [46]. There should be proper systems which can channelize the integration of Yoga and Naturopathy at the primary care level considering its cost effectiveness [47] and efficacy in alleviating and preventing NCD's. The aforesaid cost effectiveness can be achieved by implementing Yoga and Naturopathy in the PHC by government unlike the current scenario, where the major stake holders are private parties which has considerably reduced the accessibility for low-socio economic strata of the society. Naturopathy and Yoga can be further advanced to the society by training the grass root health workers. Besides this Yoga and Naturopathy

physician can train the individual towards self health reliance by taking the responsibility of their own health in their hand (Figure 2).

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