

# World Current Pharmaceutical Research Journal

## THE SCOPE OF INTEGRATIVE MEDICINE IN PRESENT ERA – A LITERARY STUDY

**Dr. Abdul Sukkur M.\***

Ph.D. (Ayurveda) Scholar, CVM University, Anand, Gujarat.

Associate Professor and HOD, Department of Samhita, Siddhanta and Samskritam, Ahalia  
Ayurveda Medical College, Palakkad, Kerala. Pin -678557.

**Article Received: 11 March 2025**

**Article Revised: 01 April 2025**

**Published on: 20 April 2025**

**\*Corresponding Author: Dr. Abdul Sukkur M.**

Ph. D. Ayurveda Scholar and Associate Professor & HOD Ahalia  
Ayurveda Medical College, Palakkad, Kerala. Pin Code - 678557.

**Email id:** [drabdulsukkur@gmail.com](mailto:drabdulsukkur@gmail.com).

### ABSTRACT

**Background:** Health is the right of an individual and health should be in respect of physical, mental social, and spiritual grounds. The Integrative medical approach is helpful in gaining health in all aspects. An integrative approach bridges biomedical sciences with social and behavioral sciences by understanding the linkages between social, behavioral, psychological, and biological factors in health. Also the integration occurs in all steps of the research process: in theory, design, data collection, and analysis. **Aim:** To do a study by collecting all the information related with integrative medicine based on literary sources. **Objective:** To collect the information related to integrative medicine with available literary sources **Materials and Methods:** Being a literary study, all the information regarding integrative medicine has is collected and analyzed from the institutional library. **Results:** The scope of integrative medicine in the present and future is expanding rapidly due to a growing recognition of the importance of a holistic approach to healthcare. Here are some of the key ways in which integrative medicine is likely to evolve and grow **Discussion:** Health is and always has been a core area of population science. Although typically coupled with mortality and aging research, health is a key mechanism in reproduction, family planning, sexual behaviour, birth outcomes, union formation, migration, education, and labour market behaviour and outcomes. **Summary:** To understand health among the young and its implications for future health and well-being across the life course, I advocate for using an approach that bridges biomedical sciences with social and behavioural sciences by bringing

together the disciplinary strengths of each. **Conclusion** This integrative approach continues to capture the key theoretical social, behavioural, psychological, and biological processes represented in the major health issues for the different ages. Putting all the pieces together in an integrative approach will contribute more to science than the sum of its parts; it will advance knowledge about the world around us and change the future for health research.

**KEYWORDS:** integrative approach, population science, behavioural science.

## INTRODUCTION

From years the communicable diseases have been replaced by non-communicable diseases as the leading cause of deaths across the world. Periodically, the communicable disease outbreaks continue to pose a challenge to the public health systems. Change in human behaviors and lifestyles are recognized as risk factors for the public health challenges we face today, which significantly affect wellbeing and quality of life. Healthy lifestyles are critical to not only controlling diseases, but also to promote good health and wellbeing. Modern Medicine has provided evidence-based approaches to lifestyle management, but there are challenges to implementing them effectively. The traditional disciplines such as Ayurveda, Yoga and Meditation are showing promise as complementary approaches to further community wellbeing. A new perspective and a model is proposed by the author called 'Integrative Lifestyle' which is informed by the evidence in the space of modern and traditional approaches to lifestyle management. The article describes the elements of the model, highlights the emerging evidence and implications for public health practice and research. The efforts by Government of India and its collaborators to promote integrative approaches is worthy of emulation and should be backed by sufficient investments into implementation research and population wide scale up for accelerating SDG-3 outcomes related to health and wellbeing.

## Aim

To do a study by collecting all the information related with integrative medicine based on literary sources.

## Objective

To collect the information related to integrative medicine with available literary sources

## MATERIALS AND METHODS

Being a literary study, all the information regarding integrative medicine has is collected and analyzed from the institutional library.

### Review of Literature

#### Definition<sup>[1]</sup>

An important change in the study of health has been a broadening of the definition of *health* for research and programmatic purposes. Within the social science research community in particular, the concept of health has broadened beyond the presence or absence of illness to incorporate the notion of well-being—including social, economic, and psychological well-being.

This broad concept of health has roots in the World Health Organization's 1948 definition of *health*: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"

Health should be considered in the broader context of its contribution to social development and expanded the definition to include the ability to lead a socially and economically productive life.

The broad concept of health is growing knowledge of the integral role that physical and mental health play in the causes and consequences of social and demographic behaviour.

#### Integrative Approach of Health<sup>[2]</sup>

To understand health among the young and its implications for future health and well-being across the life course, I advocate for using an approach that bridges biomedical sciences with social and behavioural sciences by bringing together the disciplinary strengths of each. Biomedical scientists have monopolized the health field and much of the early research on health disparities because health outcomes were primarily disease-focused, with more emphasis on cure than on prevention.

As biomedical scientists began to identify some of the proximate causes of disease, there was a growing recognition of the importance of social and behavioural factors.

The separate spheres of research, social scientists were building an impressive literature on the role of social factors in health. Important findings about the roles of social support, neighbourhood and family disadvantage, education and discrimination on health outcomes.

Health is and always has been a core area of population science. Although typically coupled with mortality and aging research, health is a key mechanism in reproduction, family planning, sexual behaviour, birth outcomes, union formation, migration, education, and labour market behaviour and outcomes.

One of the great strengths of population science is that it draws from diverse areas to solve puzzles of the time. Recently, there has been increasing scholarly interest in the puzzles of health. One indication of this is the increasing number of paper submissions to the Health and Mortality topic in the Call for Papers for the annual Population Association of America (PAA) meetings. Over the past seven years, submissions to Health and Mortality have increased by 50%—the largest growth in submissions across all topics of the PAA.

### **Population Science<sup>[3]</sup>**

A population is defined as a group of individuals of the same species living and interbreeding within a given area. Members of a population often rely on the same resources, are subject to similar environmental constraints, and depend on the availability of other members to persist over time. Scientists study a population by examining how individuals in that population interact with each other and how the population as a whole interacts with its environment. As a tool for objectively studying populations, population ecologists rely on a series of statistical measures, known as demographic parameters, to describe that population. The field of science interested in collecting and analysing these numbers is termed population demographics, also known as demography.

Broadly defined, demography is the study of the characteristics of populations. It provides a mathematical description of how those characteristics change over time. Demographics can include any statistical factors that influence population growth or decline, but several parameters are particularly important: population size, density, age structure, fecundity (birth rates), mortality (death rates), and sex ratio.

**Behavioural Science<sup>[4]</sup>**

Behavioural science, also known as behavioural economics and looks at the subject of human actions. It encapsulates multiple fields of study, including cognitive-neuroscience, psychology and economics as well as the behavioural aspects of biology, law, psychiatry and political science. Behavioural science studies human behaviour, specifically how humans really make decisions in the real-world.

In particular, behavioural science studies the way that emotions, the environment and social factors influence our decisions. Behavioural science is particularly interested in how heuristics, biases and framing can lead us to make “irrational” decisions.

Behavioural science borrows heavily from the methodologies developed in the social sciences, mainly running experiments using randomized control trials that allow us to make causal inferences about specific mechanisms that drive human behaviour. Behavioural scientists run experiments to understand human actions: why people do things, not just observe what they did.

Behavioural science influences better decision making. Even though people can and often do make “irrational” decisions, when it comes to human actions, it turns out there’s a method to the madness of decision making. Because there are “predictable” patterns in our irrationality, once we understand these patterns of human behaviour, we can use them to design environments that help people make better decisions. Applied behavioural science can have a positive influence on decision making, whether it be in the realm of public policy, designing products and marketing, or developing personal habits. Decision making often runs on Autopilot. When studying human behaviour, behavioural scientists have found that humans make 95% of their decisions using mental shortcuts.

**Health markers<sup>[5]</sup>**

Several demographic and social surveys broadened collection of health data, including, for example, the Panel Study of Income Dynamics (PSID), the National Longitudinal Survey of Youth (NLSY79), the Indonesian Family Life Survey (IFLS), the Los Angeles Family and Neighbourhood Survey (L.A.FANS), and at the older ages, the Health and Retirement Study (HRS), the Wisconsin Longitudinal Study (WLS), National Social Life, Health and Aging Project (NSHAP), National Study of Midlife Development in the United States (MIDUS), and the Social Environment and Biomarkers of Aging Study (SEBAS).

And a new study was launched by the name of “Add Health,” or the National Longitudinal Study of Adolescent Health, developed in response to previous studies. To the increasing number of studies with health information, the data collected were more diverse and comprehensive of health status and health behaviours indicating of complexity of the subject. With increasing data on health, funding for health, and embracing a broad definition of health, it was a dramatic growth in research on health disparities. Health disparities refer to gaps in the quality of health and health care across racial, ethnic, and socio-economic groups. The Health Resources and Services Administration defines *health disparities* as “population-specific differences in the presence of disease, health outcomes, or access to health care”. There are now more data on health besides death and there was increasing political awareness of persistent disparities by race, ethnicity, gender, and socioeconomic status as a result. While there has been a long tradition of research documenting sex, race, and socio economic disparities in health care, health, and risk behavior, and certainly within population science, mortality, morbidity, and disability differentials, public attention to health disparities and program support for understanding how to reduce them greatly increased.

### **Health trends<sup>[6]</sup>**

Much of health research focuses on health at the very beginning of life and the end of life, when health and mortality risks are greatest. But recent social, economic, developmental, and epidemiologic changes call for a better understanding of health at the point in life. The Biomedical scientists have monopolized the health field and much of the early research on health disparities because health outcomes were primarily disease-focused, with more emphasis on cure than on prevention. Biomedical scientists start to identify some of the proximate causes of disease, there was a growing recognition of the importance of social and behavioural factors. The biomedical science misses the social, psychological, and behavioural factors that influence diet, and stress. The biological mechanisms that social factors interact with or operate through to affect health.

The known methods offer feasible ways of measuring these biomarkers in large, nonclinical field settings such as Add Health, and we used these methods to greatly expand the biological domain and to obtain objective measures of health status. The analyses of the causes of deaths in the United States indicate that the single greatest opportunity to improve health and reduce premature deaths lies in personal behaviour. Unhealthy behaviours account for a portion of premature deaths. The health trajectories from adolescence into young adulthood

are associated with demographic outcomes and markers of social stratification. It provides descriptive data on the relationships among behavioural trajectories

### **The Scope of Integration<sup>[7]</sup>**

#### **(A) Increasing acceptance by mainstream healthcare**

Integrative medicine is becoming more widely accepted by mainstream healthcare institutions, including hospitals, clinics, and medical schools. As integrative medicine continues to demonstrate its effectiveness in treating a wide range of conditions, it is likely to become even more widely adopted.

#### **(B) Greater emphasis on prevention and wellness**

Integrative medicine places a strong emphasis on prevention and wellness, which is increasingly recognized as a key aspect of healthcare. In the future, we can expect to see more integrative medicine practitioners working with patients to promote healthy lifestyles and prevent disease

#### **(C) Greater use of technology**

Integrative medicine is beginning to leverage technology to deliver more personalized and effective care. This includes the use of digital health tools, such as wearable devices and apps, to monitor patient health and provide real-time feedback and support.

#### **(D) Collaboration among healthcare practitioners**

Integrative medicine emphasizes collaboration among healthcare practitioners from different disciplines, including conventional medicine, complementary and alternative medicine, and mind-body medicine. In the future, we can expect to see more healthcare providers working together in this way to provide more comprehensive and effective care to patients.

#### **(E) Growing consumer demand**

There is a growing demand among consumers for integrative medicine, as more people become interested in natural and holistic approaches to healthcare. This trend is likely to continue in the future, as patients increasingly seek out practitioners who can provide personalized, patient-centred care.

### **Foundations of Integrative Medicine<sup>[8]</sup>**

An integrative approach begins with theory and study design. The purpose of Add Health, as mandated by Communion, was to explore how the social contexts of adolescent life influence

the health and health behaviour of young people. Theory suggested that the social environment becomes especially important during adolescence as young people begin to choose their environments and spend more time outside the family setting. The design of Add Health captured the theoretical sources of environmental influence by measuring key factors in the social contexts of adolescent life, including the family, peer, school, neighbourhood, community, and romantic and sexual relationship. Unique to Add Health as a social and behavioural study is that it captured the social, psychological, and behavioural domains at these multiple levels, and it included the biological domain in its original design. The following sections provide a few illustrations of this integrative design.

(a) Social

Add Health measured social, demographic, economic, and cultural factors of the individual and his and her social environment, including the family, peer, romantic and sexual relationships, school, work, neighbourhood, and government and policy contexts. Reflecting a strength of population science, the Add Health design obtained independent measures of characteristics of friends and peer networks, family, school, neighbourhood, and the larger community by including these clusters as part of the sampling design and not depending on self-reports of the characteristics of these contexts.

(b) Psychological

Add Health captured the emotional, mental, and cognitive dimensions of individuals, and these factors can also be measured at the family, peer, school, and neighbourhood levels. Examples of factors in the psychological domain are personality, temperament, verbal aptitude, affect, learning disabilities, future expectations, positive orientation, self-esteem, and self-efficacy.

(c) Behavioural

Add Health focused on health and attainment behaviours, beginning in adolescence and incorporating adult behaviours as the cohort aged. Coverage includes pro-social, healthy, and health-risk behaviours; educational achievement; and demographic behaviour. Behavioural factors are also measured at multiple contextual levels of the family, school, peer network, and neighbourhood.

#### (d) Biological

Because of the theoretical role that biology plays in health, the Add Health design included the biological domain from the start by embedding a genetic sample of over 3,000 pairs of adolescents with varying degrees of genetic resemblance, including identical and fraternal twins, full siblings, half siblings, cousins, and adolescents growing up in the same household with no biological relationship. Theory specifies that environmental effects, such as parenting or peer and neighbourhood influences, on child outcomes are confounded with genetic effects because parents and children share genes, and there is increasing evidence that genes play a role in the selection of one's social environments (When only the environmental effect is measured, the genetic effect is included in the estimated environmental effect. The embedded genetic sample in Add Health, however, allows researchers to parse out environmental from genetic influence on health outcomes.

In adolescence, we also included standard indicators of physical development and height and weight, from which we have been able to track body mass index and obesity into adulthood. As the Add Health cohort aged, our design continued to incorporate the biological domain that was theoretically relevant to the developmental stage of the cohort, just as we did for factors in the social, psychological, and behavioural domains. At Wave III, when the cohort was aged 18–26, the ages of highest risk for sexually transmitted infections, we collected bio-specimens to test for sexually transmitted infections (STIs) and HIV. To strengthen our genetic design, we collected buccal cell DNA for molecular analysis of genetic and gene-environment interaction effects in health and health behaviour.

At Wave IV, we focused on the major health risks of the cohort at this time: health-risk behaviour, obesity, and stress are the leading causes of present and future disease in persons aged 24–32. Certain biological processes play roles in these diseases, and specific biomarkers can be used to characterize these processes. Known methods offer feasible ways of measuring these biomarkers in large, nonclinical field settings such as Add Health, and we used these methods to greatly expand the biological domain at Wave IV to obtain objective measures of health status. For example, we obtained markers of metabolic function (e.g., waist circumference, cholesterol, and blood sugar), inflammation, immune function, and cardiovascular health (blood pressure and pulse rate). We expanded our DNA collection to the entire sample and collected information about prescription medications.

This integrative approach continues to capture the key theoretical social, behavioural, psychological, and biological processes represented in the major health issues for the ages of the Add Health cohort as they progress into adulthood. Moreover, the integrative approach in theory and design allows for the integration of data to improve measurement—two aspects we care a lot about in population research.

### **Benefits of integrative approach<sup>[9]</sup>**

#### **(i) Integrative approach to lifestyle management**

Both the non-communicable diseases and communicable disease pandemics are influenced by lifestyles and human behaviours. Changing food habits, sedentary and stressful lifestyles, excess use of substances, increase in travel, changing work and family systems as a result of globalization and immoderate urbanization, etc. are some of the risk factors that are implicated

In the context of non-communicable diseases, while efforts are directed toward better control and management of the disease conditions, their prevention through adequate lifestyle modification has not received the same attention until recently. Evidence points toward slow progress in lifestyle change at population level due to many reasons: lack of simple and effective interventions and tools; and lack of models for people engagement and motivation in lifestyle and behaviour change with Lack of provider and health\_systems readiness to deal with lifestyles effectively is yet another critical area to be addressed

In the context of pandemic management, human behaviours and lifestyles are still not a part of the prevention strategy as much as few others such as vaccines and others. Responsible behaviors to arresting human to human transmission once the outbreak has occurred are advocated through interventions such as face mask, isolation, quarantine, etc. However what behaviors and practices potentially give rise to an outbreak, and how they can be prevented from occurring at first place, is not something that is discussed adequately. There is scope for more research in this space so as to avert huge economic losses and damage that is incurred during pandemics.

In this backdrop, the global health community has an opportunity to take a fresh look into lifestyle management in today's context. Lifestyles as a part of health interventions and strategy targeting sustainable health and wellbeing, will need to satisfy the following characteristics:-

Be able to target all dimensions of health and wellbeing (physical, intellectual, emotional, spiritual, and social),

Be able to translate into responsible human behaviors individually and collectively,

Be simple and effective for adoption by the populations

To achieve these needs, the author proposes a new lens to look at lifestyle management through integrating traditional approaches with evidence-based approaches offered by contemporary medicine.

## **(ii) Integrative Health and Wellbeing<sup>[10]</sup>**

Standard definitions of 'Health', 'Wellbeing' and 'Quality of Life' incorporate dimensions beyond just a bio-medical domain. They include both 'objective' and 'subjective' traits which range across physical, mental, emotional, vocational, spiritual, and social dimensions. Lasting health outcomes and quality of life is best achieved when interventions are targeted at all these dimensions. Recognizing the limited impact of biomedical approaches on wellbeing, people have explored traditional approaches and solutions

Complementary medicine, *where a non-mainstream medicine is practiced along with mainstream medicine*, or Alternate medicine, *where non-mainstream medicine substitutes mainstream medicine*, are commonly used terms for a long time now. Data shows that more than 40% of population in the U.S is following one or other of these approaches. When asked for reasons for choosing integrative health, they responded that these approaches are client centric, holistic and offers autonomy to clients. Particularly natural products, meditation, yoga, Ayurveda, Tai-chi, and others are increasingly sought after in this regard. While there have been strong criticisms with regards to scientific validity of these approaches in the past, the scenario is changing today.

Integrative health refers to integrating conventional and non-conventional disciplines in a systematic and scientific way, that will best address the health, wellbeing, and quality of life, and is attracting attention by mainstream care providers, researchers, and the policy

In the space of lifestyle medicine, we have emerging evidence as to how lifestyles can impact both prevention and management of chronic diseases. Ayurveda school of thought has established programs and personalized prescriptions for lifestyles and dietary practices. Yoga and Meditation have attracted attention in the recent past for their effects on physical,

emotional, and spiritual benefits. Together, they form four prongs of 'Integrative Lifestyle', the details of which are discussed in the next section.

Key questions for future research in the space of integrative health and integrative lifestyles.

Clinical Research	Public Health Research
<ul style="list-style-type: none"> <li>• 1. What level and dose of integration can achieve optimal control and thereby reduce the burden on patients of excess administration of therapeutics, diagnostics and out of pocket expenses?</li> <li>• 2. In cases that are not amenable for cure, such as advanced cancers or severe dementia, what is the level of quality of life and wellbeing that can be enhanced through integrative approaches? How can we minimize the burden on care givers and families who attend to them?</li> <li>• 3. Even in the context of pandemics such as covid-19 that is attracting much attention and investments for clinical and vaccine trials, the exploration within the domain of traditional disciplines should invite same level of attention if not more.</li> </ul>	<ul style="list-style-type: none"> <li>• 1. What is the level of effect of various integrated approaches on disease prevention and health promotion with respect to health in general or diseases in particular?</li> <li>• 2. How do we best integrate different disciplines and offer them to populations through the existing primary health infrastructure?</li> <li>• 3. Can implementation research explore the tools, technology and methods to provide integrated health services that are effective, easy to implement and scale up, both within the public and private sector.</li> <li>• 4. Behavioural studies should explore the messages, tools and process to effectively influence individuals and the community to make healthy choices and prioritize prevention services.</li> <li>• 5. What infrastructure and training requirements will facilitate effective provisioning of integrative medicine treatment, health promotion and prevention services.</li> <li>• 6. What are the population level indicators that will best measure the impact of integrative approaches to health, for monitoring and planning purposes?</li> <li>• 7. How do we best integrate prevention and curative services in both public and private sector, without losing on quality and patient centeredness?</li> </ul>

**(iii) Lifestyle as medicine<sup>[11]</sup>**

More than 80% of chronic disease conditions can be prevented through adoption of few healthy practices as part of one's lifestyle. Prevention of four unhealthy practices is the focus of lifestyle medicine: unhealthy diets, inadequate physical activity, tobacco and alcohol use. Whole plant-based foods, leafy vegetables, fruits, and whole grains, while minimizing animal based products and processed foods are recommended WHO recommends 150 min of moderate to intense physical activity per week which can vary with age, gender, and other factors. Evidence also suggests that physical activity should include aerobic exercises as well as activities to improve strength, balance and stretching The effects of tobacco and alcohol on health are well documented and their prevention is an integral part of lifestyle education. In the recent past, managing stress and sleep as well as positive relationships are also recognized as important elements of lifestyle education as advocated by American college of lifestyle medicine.

While lifestyle medicine provides standard interventions, there is also a growing recognition that lifestyle education has to be personalized and contextual . The school of Ayurveda which is one of the oldest schools of medicine, has always laid emphasis on lifestyles and disease prevention through personalized approach. The theory and science of Ayurveda recognizes that each has a unique mind-body constitution that is inherent to the individual, referred to as '*Prakruti*' (meaning: inherent nature). Any deviation from the original constitution (referred as '*Vikruti*'), is what gives rise to a disease process; and this deviation is primarily a result of altered lifestyles and practices that are not conducive to one's original constitution High emphasis is given to staying alert and making changes to food habits, mental and physical activity, sleep pattern, and other aspects of lifestyles in alignment with changes in time, place, and seasons. 'Panchakarma' meaning five practices are the detoxification and body cleansing procedures which are suggested at regular intervals to set right the altered constitution. They have shown to contribute to improved behaviours and practices. In the recent years, there is interest in researching the effects of Ayurveda lifestyle and management on chronic diseases

**(iv) Yoga and Meditation<sup>[12]</sup>**

Yoga and Meditation are increasingly adopted as a way of life by people all over the world in the recent times. It refers to the body of knowledge and practices, which when practiced in a systematic way can facilitate alignment (harmony) between the body, mind, and spirit. Yoga and Meditation are widely researched today to explore their effects on mind and body.

Evidence has indicated their complementary role in regulation of blood pressure, blood sugar, neurocognitive benefits, stress management, emotion, and sleep regulation. Yoga movement is a worldwide phenomenon today and many schools of yoga in India and outside are coming together in a collaborative manner to increase awareness and adoption of this simple age-old practice that has wide range of benefits.

Today, two practices of Meditation amidst others, that is Heartfulness and Mindfulness are adopted by millions of people across the world. Heartfulness meditation is a modified and simplified form of ancient Raja Yoga system, while Mindfulness meditation has its roots in the Vipassana system of meditation. The Mindfulness meditation helps practitioners to relax and become more aware of one's thoughts and actions to achieve self-regulation of mind. The Heartfulness meditation practice helps its practitioners to achieve mindfulness states and goes beyond mindfulness to facilitate opening of deeper states of consciousness. Though the heart-based practices are offered to help practitioners achieve their spiritual objectives, and to become socially responsible beings, the recently conducted studies are also indicating positive effects in managing stress, sleep, physical and psychological wellbeing. Yoga and Meditation practices when adopted as part of one's lifestyle, have potential to expand consciousness and influence behaviours appropriate for sustainable development.

#### **(v) Integrative lifestyle: implications for public health<sup>[13]</sup>**

Today the health systems are more focused on managing illnesses than preventing them. The agenda of disease prevention and health promotion is well articulated in the policies but continue to suffer poor implementation on the ground. However recent initiatives with regards to strengthening prevention agenda and wellbeing is praiseworthy. India's flagship national program 'Ayushman Bharat' is aiming to build over 150,000 health and wellness centers across the country to augment focus on wellbeing. Amongst them, 12,500 centres are dedicated to promoting traditional approaches to wellness and called AYUSH wellness centres that . Several pilot initiatives and recommendations to operationalize wellness initiatives through yoga and other programs are underway . In the west too, high impetus is provided to enhance focus on lifestyles in controlling chronic diseases. American College of Lifestyle Medicine has established fellowships and trainings to strengthen providers' competencies in this direction. While these are good areas to begin with, more efforts are needed in implementation which can result in triggering desired population impact. Policy

may have to recognize few critical areas and address them to facilitate effective implementation on the ground.

The multidimensional nature of integrative lifestyles demands that the doctors, from both conventional and traditional systems, as well as other providers such as nurses and counsellors must come together as a team. Effective trainings will not only improve their skills and capacities, but also will clarify their roles and responsibilities. Clearly defined protocols, standard operating procedures will ensure smooth flow of the clients and effective interactions with the providers. Even in AYUSH clinics as part of Indian public health systems, the role of AYUSH providers in lifestyle change and wellbeing were not adequately emphasized for a long time until recently. However, the scenario is changing and now, there is greater impetus to promote AYUSH practice and research.

Efforts to impact lifestyles and wellbeing will need stakeholders outside of the health systems to play their part, such as the yoga institutions and certified meditation trainers. Local mapping of stakeholders and engaging them formally after defining roles and terms of reference, can have greater impact. Institutions such as Heartfulness Institute, SVYASA, Patanjali Yogapeeth have branches and trainers all over the world. They have active collaboration with the AYUSH ministry, Government of India which may be utilized to give impetus to the 'Wellbeing' agenda. The collaboration with grass root organizations may result in wider reach and impact, that can be through adequate coordination and engagement. Evidence is strongly pointing to the need to motivate and empower communities to sustain healthy behaviours and lifestyles. While people will access health systems at times of need when they are sick, the same is not true for prevention services. People need be highly self-motivated and aware to prioritize prevention services and lifestyle change. Local leaders, village level committees, women, self-help, and youth groups, as well as institutions such as schools and universities, corporations, and residential committees, need to be encouraged and supported to lead the well-being activities locally. Appropriate behavioural change and motivational strategies must be integral part of interventions.

#### **(vi) Integrative health: implications for future research<sup>[14]</sup>**

At a global level, the research in the space of integrative health is inadequate, and there is a dire need to step up investments in this space. In the recent years, there is a steady increase of research in few areas – yoga, meditation, Ayurveda, or Chinese medicine. Most of the existing studies are not of adequate strength, scale, and rigor. Several very

effective treatment regimens have been documented and practiced in Ayurveda for thousands of years, especially for non-communicable diseases and cancers, and they need to be validated critically and brought to the mainstream. The efforts within the Government of India to set up AYUSH Mission to promote research and practice in integrative health through various collaborations deserves appreciation. Memorandum of Understanding (MOU) is signed with foreign countries to promote education, research, and dissemination of AYUSH practices. Studies have shown the potential of local traditional health practices in enhancing self-reliance of the community. Can traditional health practices be effectively integrated within existing primary health care systems? How will that impact population health and wellbeing is an area that needs to be explored further.

Exploration should continue to provide more options to people, while minimizing side effects and costs. Particularly lifestyle change interventions require attention through mixed methods and implementation research approaches to examine their effectiveness as well as feasibility for scale and sustainability. The interventions have to be reviewed as part of existing health systems and public health programs. Specific research questions for both clinical and public health research are listed at the end of the manuscript as an annexure.

More experiments are required to integrate local or native disciplines with the modern medicine. Rigorous controlled and randomized experimental studies should be explored. As a beginning, a systematic documentation of all existing integrative options for current problems we are facing, should be attempted that can be the reference for prioritizing and planning future studies. This is something that every country should make a sincere effort as there are locally, contextually, and culturally available integrative approaches to health and wellbeing. Efforts by the Indian government in bringing Yoga, Ayurveda and Meditation on the forefront through International Yoga events, establishment of All India Institute of Ayurveda, collaboration with ICMR for furthering research, signing of MOUs with foreign countries to promote education and research, establishment of health and wellness centres for accelerating prevention efforts are good examples in recent times. At the same time, there are doubts and skepticism by the practitioners of conventional medicine for lack of sufficient evidence that needs to be carefully examined and addressed. Collaboration with professional bodies and the public for facilitating transmission of right knowledge is important as part of public health efforts to promote greater adoption and sustenance. Collaborative and objective attempts to

undertake high level scientific studies will help to strengthen policy and program implementation.

‘Integrative Lifestyle’ brings together the science and practice of Lifestyle Medicine, Ayurveda, Yoga and Meditation, and seem to have potential to achieve holistic wellbeing. Empowering communities to drive the ‘lifestyle change’ movement, collaboration with widely dispersed wellbeing programs such as those offered by Heartfulness Institute and its collaborators are critical at this juncture to trigger a self-sustaining global ‘Wellbeing’ movement. With few years left to realize the SDGs, global and country level effort should accelerate research, policy, and action toward scaling up integrative approaches to health and wellbeing.

#### **(vii) Integrative Medicine in Education<sup>[15]</sup>**

Integrative medicine is an entirely new (or some would say very old) approach to healing. Most individuals need education regarding how to refer to integrative medicine services and what to expect from them.

Physicians need access to educational materials about the therapies offered at the IMCS. They greatly appreciate having access to journal articles. As awareness of the IMCS grows, the medical director will find himself or herself sidelined for hallway consultations with colleagues who are hesitantly taking a small step of interest for the benefit of their own patients.

Patients need education as well. Many patients come to an IMCS with unrealistic goals of therapy. For example, patients with stage 4 cancer might come expecting complete remission. Insulin-dependent diabetics might hope to stop taking insulin. Severely hypertensive patients might wish to have their illness controlled exclusively with herbs and supplements.

In each of these patient scenarios, patients need to know what integrative medicine can and cannot do. They need hope that something can be done. In many cases, integrative medicine can improve quality of life and may reduce the need, at least in part, for necessary medications. When integrative medicine providers give clear and realistic counseling, it raises the integrity of the IMCS. Patients appreciate this, and so do their physicians. Honest

and patient-centered counsel generates more physician trust. More trust generates more referrals.

Education in an IMCS also extends to health professional students, including medical students, nursing students, and residents in training. Openness to exploring new ideas is often greater in the earlier years of medical training. Some of these students and residents will become inspired to learn more. As one of the most effective ways of changing the medical system is from within, a well-structured educational intervention in integrative medicine can induce significant change over time.

#### **(viii) Integrative Medicine in Mental Health<sup>[16]</sup>**

Integrative medicine has increasingly become recognized as a valid and effective approach to healthcare and is gaining increasing acceptance among both the general population and among allopathic physicians and healthcare delivery systems. The establishment of the National Centre for Complementary and Integrative Health (NCCIH; formerly the National Centre for Complementary and Alternative Medicine exemplifies this trend. In addition, the emergence of integrative medicine departments in leading academic medical centres and the establishment of specialty training and board certification for allopathic physicians in Integrative Medicine, as well as the creation of a Consortium of Academic Health Centres for Integrative Medicine, emphasizes this growth, acceptance and possibly moving from marginal to mainstream.

Despite the steady acceptance of integrative medicine for physical conditions, integrative approaches to mental healthcare have only recently begun to receive more attention (Sarris *et al.*, 2014). However, given the factors described below, IMH is likely to receive increasing attention and application over the next decade.

## **RESULTS**

The scope of integrative medicine in the present and future is expanding rapidly due to a growing recognition of the importance of a holistic approach to healthcare. Here are some of the key ways in which integrative medicine is likely to evolve and grow.

Integrative and Alternative Therapies in Palliative Care<sup>[17]</sup> - Integrative medicine refers to a group of interventions that are used in conjunction with conventional therapies and that emphasize a patient-centred, holistic approach to care of the individual. Initially the term

“complementary and alternative therapy” (CAM) was used, with the distinction being that alternative therapy was substituted for traditional Western medicine. Complementary and integrative medicine (CIM) is generally classified into categories of natural products, including vitamins and herbal supplements, mind-body practices, and complementary approaches, such as Ayurvedic medicine or traditional Chinese medicine.<sup>[1]</sup>

## DISCUSSION

Health is and always has been a core area of population science. Although typically coupled with mortality and aging research, health is a key mechanism in reproduction, family planning, sexual behaviour, birth outcomes, union formation, migration, education, and labour market behaviour and outcomes.

Integrative Medicine: in Pain Management<sup>[18]</sup> - Integrative medicine is a philosophy of care that integrates conventional allopathic medical therapies with modalities not typically included in conventional care and addresses the physical, emotional, and spiritual needs of the patient. This field of medicine is sometimes referred to as complementary medicine or complementary and alternative medicine (CAM). However, these terms refer more precisely to modalities such as acupuncture, meditation, nutritional supplements, and massage, all of which may be included in the integrative medicine “tool box.” In 2005 the Consortium of Academic Health Centres for Integrative Medicine defined integrative medicine as follows:

The practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, health-care professionals and disciplines to achieve optimal health and healing.

The use of complementary medicine modalities is increasing. most commonly used CAM therapies were prayer for the improvement of health, natural products, deep-breathing exercises, meditation, chiropractic care, yoga, massage, and diet-based therapies.

Pain syndromes, such as chronic back pain, appear to be increasing and are associated with significant health care costs. Unresolved pain has a wide-reaching impact in that it affects physical, emotional, and spiritual wellness and has a negative impact on social and occupational functioning. Integrative medicine, which adopts a mind-body approach to

the treatment of pain and uses multiple effective CAM modalities, is well suited to address chronic pain syndromes.

### Summary

To understand health among the young and its implications for future health and well-being across the life course, I advocate for using an approach that bridges biomedical sciences with social and behavioural sciences by bringing together the disciplinary strengths of each.

The integrative medicine encourages more time and effort on disease prevention instead of waiting to treat it once it presents. Chronic disease now accounts for much of our health care costs and also causes significant morbidity and mortality. The incidence of heart disease, diabetes, and cancer could be significantly reduced through better lifestyle choices. Instead, they are occurring in epidemic proportions. The system needs a reallocation of resources. Unfortunately this is a large ship to turn. In the meantime, integrative practitioners can use their broad understanding of the patient to make recommendations that will lead to disease prevention and slow or reverse disease progression.<sup>[19]</sup>

### Take Home Message

Integrative medicine recognizes all of the potential influences on one's health. It is the study of the human ecology that includes the physical and nonphysical factors of how humans interact with their environment. Care is applied through relationships that provide insight into each individual's unique situation and needs.

Evidence and research will continue to help us understand which therapies help the body heal. For patients with prostate cancer, this treatment involves much more than a surgical and pharmaceutical intervention. Our partnership with our male patients will help empower them to seek an understanding of how they can be active participants in their care, resulting in a more successful treatment outcome and quality of life for all involved. So the integrative approach on understanding and planning the treatment will prove beneficial effect for different streams of medical science as a whole.<sup>[20]</sup>

### CONCLUSION

This integrative approach continues to capture the key theoretical social, behavioural, psychological, and biological processes represented in the major health issues for the different ages. Putting all the pieces together in an integrative approach will contribute more

to science than the sum of its parts; it will advance knowledge about the world around us and change the future for health research.

Integrative medicine involves using the best possible treatments from both CAM and allopathic medicine based on the patient's individual needs and condition. This selection should be based on good science and neither rejects conventional medicine nor uncritically accepts alternative practices. It integrates successes from both worlds and is tailored to the patient's needs using the safest, least invasive, most cost-effective approach while incorporating a holistic understanding of the individual.

CAM is not synonymous with integrative medicine. CAM is a collection of therapies, many of which have a similar holistic philosophy. Unfortunately, the Western system views these therapies as tools that are simply added on to the current model, one that attempts to understand healing by studying tools in the toolbox. Integration involves a larger mission that calls for a restoration of the focus on health and healing based on the provider–patient relationship.<sup>[21]</sup>

## ACKNOWLEDGEMENT

I am thankful to my spouse Ramcin, son Laihan, colleagues, teachers, friends and students for the support.

## BIBLIOGRAPHY

1. Kathleen Mullan Harris, An Integrative Approach to Health
2. Kathleen Mullan Harris, An Integrative Approach to Health
3. Kika Tarsi, Ty Tuff, University of Colorado at Boulder, Boulder) © 2012 Nature Education. Citation: Tarsi, K. & Tuff, T. Introduction to Population Demographics. Nature Education Knowledge, 2012; 3(11).
4. Michiel Darjee, Behavioural Science in Optimizely X Optimizely Glossary
5. Kathleen Mullan Harris, An Integrative Approach to Health
6. Kathleen Mullan Harris, An Integrative Approach to Health
7. International Integrative Medicine Platform from the Bio Quantum Academy, Canada
8. Kathleen Mullan Harris, An Integrative Approach to Health
9. Krishnamurthy Jayanna et al, Integrative approach to lifestyle management: Implications for public health research & practice in the context of SDG-3

10. Krishnamurthy Jayanna et al, Integrative approach to lifestyle management: Implications for public health research & practice in the context of SDG-3
11. Krishnamurthy Jayanna et al, Integrative approach to lifestyle management: Implications for public health research & practice in the context of SDG-3
12. Krishnamurthy Jayanna et al, Integrative approach to lifestyle management: Implications for public health research & practice in the context of SDG-3
13. Krishnamurthy Jayanna et al, Integrative approach to lifestyle management: Implications for public health research & practice in the context of SDG-3
14. Krishnamurthy Jayanna et al, Integrative approach to lifestyle management: Implications for public health research & practice in the context of SDG-3
15. Donald W. Novey The Business of Integrative Medicine in Integrative Medicine (Second Edition), 2007
16. J.D. Duffy, A. Chaoul, in Encyclopaedia of Mental Health (Second Edition), 2016
17. Yvette S. Zeng PharmD, Anne L. Hume PharmD, in Evidence-Based Practice of Palliative Medicine Second Edition, 2023
18. Delia Chiaramonte, ... Brian Morrison in Practical Management of Pain (Fifth Edition), 2014
19. David Rakel , Andrew Weil in Integrative Medicine (Fourth Edition), 2018
20. David Rakel , in Clinical Men's Health, 2008
21. David Rakel , Andrew Weil in Integrative Medicine (Fourth Edition), 2018