

Facilitating Accountable Critical Thinking (FACT): A Perspective from a Novel Facet of Critical Medical Anthropology

R. Vinodh Rajkumar

Medical Anthropologist, Physiotherapist & Gerontologist, Director - Prabhanjeet Vitalityarium,
Rajapalayam-626117, Tamilnadu.

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ABSTRACT

A profession is not just a source to provide occupations to serve people by simply utilizing the knowledge as taught in the curriculum but to serve people with reproducible and verifiable facts. Professionals should be ready to abandon any indoctrinated knowledge if found worthless or harmful when applied. Not only that, the professionals should let the world know about the impracticality or harmfulness of any indoctrinated knowledge, and engage in critical thinking to generate better sustainable alternatives. In medical profession, rendering unbiased evidence-based support to the scientific facts is not possible without experimentations using similar methodologies. Though the greatest achievement of any medical invention (diagnosis, treatment procedure, prophylaxis, public health measure) is its generalizability, the tendency of the health care professionals to generalize a finding of someone or themselves without repeated applications in real-life situations has been an impediment. Critical thinking is the precursor for evidence-based practices in medical profession. It is highly difficult to shape the public health system into an evidence-based noble 'School of Thought' (preferably, nation-specific 'School of Thought') in order to eradicate iatrogenesis, pseudoscience, health inequities, statistical malpractices, quackery, professional degradation etc., for which important 'Health Activism' initiatives incorporating the principles of Salutogenesis, Homeostasis, Lifestyle medicine, Evidence-based practice, Transdisciplinarity and Teamwork, are needed. In fact, health care professionals should possess profound and flawless foundational knowledge

about homeostasis. Anthropologists with any medical degree background could be competent enough to reveal various unexplored facets of critical medical anthropology to support standardization of the medical education and health care practices.

Keywords: Critical Medical Anthropology, Health Activism, Critical Thinking, Salutogenesis, Transdisciplinarity, Homeostasis, Evidence-based Practice, Lifestyle Medicine

INTRODUCTION

Generalization in medical profession should solely depend on invariable facts but due to several reasons, the lack of critical thinking leads to development of faulty evidences or fabricated evidences or unproductive anecdotal evidences. Indoctrination is a large and important issue in (not only moral) education, and it is considered to be one of the capital pedagogical faults.^[1] "Many of we older scientists must accept some degree of culpability for not giving sufficient thought to the problems of science and society. In our headlong and fascinating research for new knowledge we never held up a mirror to our own activities nor reflected seriously on science teaching at all levels. Unthinkingly we have permitted rampant specialization and fragmentation of the curriculum even at school level, and the development of quite artificial subject boundaries. We have allowed the syllabuses to become overloaded with unimportant material and too frequently let examination marks be the reward for passive acceptance

of revealed doctrine”.^[2] Core competence of a genius might be made up of inquisitiveness, intellectual humility, cognitive flexibility and the acumen to counteract cognitive dissonance. “Current educational scenario globally aims at all children passing through the routine education which does not distinguish between students of higher capability and average capacity and treats all as a set of equal, indistinguishable herd. Genius tends to be associated with individuals who have excelled in only one particular field”.^[4] “Intellectual humility has been identified as a character virtue that allows individuals to recognize their own potential fallibility when forming and revising attitudes. Intellectual humility is therefore essential for avoiding confirmation biases when reasoning about evidence and evaluating beliefs. In an era of polarization, fake news, and the wide spread of misinformation, there is a strong public need for an understanding of how citizens can inoculate themselves against deception and inaccurate information. The capacity to critically evaluate information in nonbiased ways requires *intellectual humility*-the understanding of one's limitations and biases when making evidence-based decisions. Intellectual humility allows us to avoid psychological tendencies to overlook evidence and confirm prior beliefs. Identifying and cultivating the cognitive factors shaping intellectual humility may be a key endeavour in building more evidence-based, tolerant, and effective discussions about the contested issues that divide and polarize our societies today”.^[4] “Creative geniuses are more open to what they don't know which allows them to maintain their childlike curiosity and continue to learn. Convergent thinking involves logic and rationality, divergent thinking focuses on imagination and innovation. Creative geniuses have mastered the ability to combine their divergent and convergent thinking skills to continually produce innovative and novel ideas. A true creative genius is marked not only by

their critical thinking skills but also by their ability to ideate and create. Creative geniuses understand that they owe their success not only to their hard work but to the work of those that came before them. This self-awareness allows for highly creative geniuses to be proud of their work without letting the positive feedback eclipse their future work. Creative geniuses may believe themselves to be experts in some fields, they also admit to the naivety of their knowledge in other fields. However, by understanding these limitations, creative geniuses are better able to maintain their natural curiosity for the world around them”.^[5] “Cognitive flexibility enables an individual to work efficiently to disengage from a previous task, reconfigure a new response set, and implement this new response set to the task at hand. Cognitive flexibility is a critical skill that enables individuals to accurately and efficiently respond in the face of changing environments”.^[6] “Cognitive dissonance is a discomfort caused by holding conflicting elements of knowledge. Since new knowledge emerges by modifying previous knowledge, there must always be conflict between the two”.^[7] A serene and sustainable civilization needs large number of individuals with strengthened critical thinking abilities to thwart suppressions. “The medical-political complex tends towards suppression of science to aggrandise and enrich those in power. And, as the powerful become more successful, richer, and further intoxicated with power, the inconvenient truths of science are suppressed. When good science is suppressed, people die. When good science is suppressed by the medical-political complex, people die”.^[8] “The current world needs people with a lot of capabilities such as understanding and using different ways of thinking, research, problem solving, critical thinking and creativity. According to David Kolb's theory, learning is a four-step process that includes concrete experience, reflective

observation, abstract conceptualization and active experimentation”.^[9]

Critical Thinking and its relevance in Medical Education and Public Health

“The ability to analyze and creatively adapt to new situations is at the heart of critical thinking. Solving any problem creatively, offering unique insights for potential solutions, demands the ability to be able to think critically”.^[10] “John Dewey, who more commonly called critical thinking as ‘reflective thinking’, defined it as active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends”.^[11] “Critical thinking is the ability and willingness to assess claims and make objective judgments on the basis of well-supported reasons. It is the ability to look for flaws in arguments and resist claims that have no supporting evidence. It also fosters the ability to be creative and constructive to generate possible explanations for findings, think of implications, and apply new knowledge to a broad range of social and personal problems”.^[12] Problem Based Learning is defined as “an instructional (and curricular) learner-centred approach that empowers learners to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem”.^[13] “The healthcare system is evolving and emphasis should be placed on healthcare professionals to develop creative and critical thinking skills so that they can administer optimal patient care and be able to teach their patients how to think critically. If students in healthcare professions are taught critical thinking early in their programs, they will be able to develop the skill and will be able to utilize same effectively in their practice”.^[14] “Medical students master an enormous body of knowledge, but lack systematic problem-solving ability and effective clinical decision making. Health care is fallible and prone to diagnostic and management errors. Medical academics and

practitioners have raised concerns about the low levels of critical thinking and stress the need for fostering critical thinking among medical practitioners. Higher order thinking has become one of the essential characteristics of future health care professionals and an essential attribute of medical professionalism.^[15] Individual conceptions of critical thinking are multiple and flexible, not predetermined or stable.^[16] Homeostasis

“Homeostasis is an underappreciated and far too often ignored central organizing principle of physiology. Homeostasis is not static and unvarying; it is a dynamic process that can change internal conditions as required to survive external challenges. The health and vitality of the organism can be said to be the end result of homeostatic regulation. Disruption of homeostatic mechanisms is what leads to disease, and effective therapy must be directed toward re-establishing these homeostatic conditions”.^[17] “Essentially all organs and tissues of the body perform functions that help maintain nearly constant conditions in the internal environment. Physiologists call this high level of internal bodily control *homeostasis*. Each cell benefits from homeostasis, and in turn, each cell contributes its share toward the maintenance of homeostasis. This reciprocal interplay provides continuous automaticity of the body until one or more functional systems lose their ability to contribute their share of function. When this happens, all the cells of the body suffer. In disease states, functional balances are often seriously disturbed and homeostasis is impaired. Extreme dysfunction leads to death; moderate dysfunction leads to sickness. Thus, when even as single disturbance reaches a limit, the whole body can no longer live”.^[18]

Evidence-based practice

Anything claimed as evidence without objective analysis hardly fits into the standards of science. Evidence becomes ‘fact’ only if it is quantifiable and reproducible (inter-rater and intra-rater

reliability) by applying a standardized methodology. Even if the whole scientific community endorses an evidence, one professional could prove everyone or any long-standing practice as incorrect, with right questions and experimental reports. In medical field, there have been so many biased and unscientific beliefs that could endanger human life. “Evidence-based practice (EBP) is clinical decision making based on information from three sources: patient values, clinical expertise and knowledge of the best research evidence. Knowledge and use of the best research evidence depends on an effective transfer of knowledge from research to clinical practice”.^[19] “Evidence-based medicine was the first movement in health care that disregarded the paternalistic approach and revolutionized the idea of doing science. The value-based system refers to a personalized care (patient centeredness), where patient’ expectations and needs are included in a holistic approach of medicine that considers physical, mental, and spiritual well-being. Patient’s value may be fully expressed only when patients are the main actors of their care, and this means when they are fully empowered”.^[20] “Value-based medicine is the practice of medicine emphasizing the value received from an intervention. Value is measured by objectively quantifying: 1) the improvement in quality of life and/or 2) the improvement in length of life conferred by an intervention. Evidence-based medicine often measures the improvement gained in length of life, but generally ignores the importance of quality of life improvement or loss. Value-based medicine incorporates the best features of evidence-based medicine and takes evidence-based data to a higher level by incorporating the quality of life perceptions of patients with a disease in concerning the value of an intervention”.^[21] “The fundamental principles of healthcare practices and policies are derived from good quality research. Doctors collectively are a source of vast sums of invaluable information. More and more primary care

physicians should be encouraged to participate in national level research as its results can lead to improve care throughout the country”.^[22] “Huge sums of money are spent annually on research that is seriously flawed through the use of inappropriate designs, unrepresentative samples, small samples, incorrect methods of analysis, and faulty interpretation. Carrying out a sensible study, even on a small scale, is indeed useful, but carrying out an ill designed study in ignorance of scientific principles and getting it published surely teaches several undesirable lessons. We need less research, better research, and research done for the right reasons. Abandoning using the number of publications as a measure of ability would be a start”.^[23] Much of the published medical research is apparently flawed, cannot be replicated and/or has limited or no utility.^[24] Vast majority of social and medical science research aggregates across subjects, but conclusions drawn from aggregated data may be worryingly imprecise. ^[25] “Because every investigator wants to present results in the most exciting way, we all look for the most dramatic, positive findings in our data. When this process goes beyond reasonable interpretation of the facts, it becomes data torturing. The unfortunate result of torturing data is the dissemination of incorrect information to the research community and to patients”.^[26] “Statistical malpractice is an insidious, and indeed prestige-laden and grant-rewarded, activity. Brilliantly clever, but fundamentally wrong-headed, number-crunchers are encouraged to devise inappropriate applications of mathematical methods to health problems. This species of misdirected zealot has so far been immune from criticism. The seeking of algorithms for scientific decision-making is an offence best described as statistical malpractice. Medicine has been deluged with uninterpretable answers generated by heavy statistics operating on big databases of dubious validity”.^[27]

Activism for health

Heather M. Zoller argues that a necessary condition of health activism is that it challenges order and power structures that impede health promotion or otherwise influence health negatively, focusing on improving health conditions and health care policies.^[28] “Health activism is an action on behalf of a cause, action that goes beyond what is conventional or routine in society. It involves a challenge to the existing order whenever it is perceived to lead to a social injustice or inequality. Today, social injustice is killing people on a grand scale and it is timely for health activism to be used as a way forward to improve health during difficult economic and political times. Health activism is essential because it can create the necessary conditions for people to take control over their own lives when others cannot or will not act on their behalf. Health promotion agencies and the practitioners that they employ, professional organisations and researchers can also play an important role. What is clear is that if greedy corporations and complacent governments are not challenged, we will continue to have limited success in improving health”.^[29] “Medicine and politics are inseparable. Don Berwick has pointed out: ‘No scientific doubt exists that, mostly, circumstances outside healthcare nurture or impair health’. He also made a passionate plea for doctors, nurses and their professional organisations to become involved in campaigning on issues such as racial discrimination, women’s equality, human rights, climate change, the criminal justice system, hunger and homelessness. Healers are called to heal. When the fabric of communities on which health depends is torn, then healers are called to mend it. The moral law within insists so”.^[30] “Medics have the opportunity to not only act in the best interests of their individual patients, but also to the benefit of the wider populations, and society, that they serve. BJ Miller, a well-known US palliative care physician, said ‘healthcare was designed with diseases, not people at its centre. Which is to say, of

course, it was badly designed’. The radical expansion of our knowledge of and ability to manage disease has meant that modern medicine, and the doctors who are trained for it, can have tunnel-like vision into pathologies and their potential cures. Exercising ‘social responsibility’ forms an integral part of the job of a doctor. Social activism is a valid, legal and proportionate treatment for the social problems that lead to the diseases that doctors the world over are seeing in their consulting rooms. Yet doctors who take stands on population-level issues are often ignored, or viewed as overly political. Let us be clear: there is nothing political about challenging a system that itself contributes to homelessness, cancers, depression, and a plethora of other diseases. There is nothing political about wanting the best for humanity”.^[31] “As physicians and scientists, we cannot follow politics agenda- we can only trust science, accept uncertainty, and aim for better evidence. This is our real duty. Evidence-based public health is using the best available scientific evidence for decision making but Activism does not work that way: while it can be grounded on scientific evidence, it is genuinely a political activity, linked to conviction, faith, and value; it is honorable and useful but it does not have the credential of science”.^[32] The social determinants of health, while interdependent and complex, are made up of mutable factors that shape the conditions in which one lives, learns, works, plays, worships, and ages as they can be influenced by social, economic, and political processes and policies.^[33]

Lifestyle Medicine

“Lifestyle has changed as time passes. Such changes of lifestyle are closely related with the changes of disease pattern. Physicians see lifestyle as a critical tool for care of patients as well as ordinary people. Rippe stated that the lifestyle medicine involves the integration of lifestyle practices into the modern practice of medicine both to lower the risk factors for chronic disease and/or, if disease is already present, serve as an

adjunct in its therapy. Lifestyle medicine brings together sound, scientific evidence in diverse health-related fields to assist the clinician in the process of not only treating disease, but also promoting good health”.^[34] “Lifestyle medicine is a clinical discipline based on facts (“evidence”) that deals with lifestyle interventions that affect health and quality of life. Motivating someone effectively to change their lifestyle can be highly frustrating and a great challenge, for all types of patients. Lifestyle medicine has shown to be a more cost-effective strategy than the approaches currently used in disease prevention and treatment, particularly chronic pathologies”.^[35] “Increase Physical Activity, Healthful eating, develop strategies to manage stress, Improve sleep, Form and maintain relationships, Avoid tobacco, alcohol and exposures to toxic substances are the six pillars of lifestyle medicine. Social relationships are as important to health as diet, exercise and smoking habits. Humans are social beings-need for social connection is a basic survival urge hardwired into our nervous systems. In fact, the quality of our relationships (social support, spiritual support) may determine whether or not we choose to engage in healthy lifestyle behaviors-the Rosetto effect, a reduced rate of heart disease”.^[36] “Over the past several years, there has been an increased interest in evaluating the benefit of adhering to 'low-risk lifestyle' behaviours and ideal 'cardiovascular health metrics'. Although a healthy lifestyle has repeatedly been shown to improve mortality, the population prevalence of healthy living remains low”.^[37] Lifestyle is the best medicine if applied correctly.^[38] “There is no longer any serious doubt that daily habits and actions profoundly affect both short-term and long-term health and quality of life. The strength of the scientific literature supporting the health impact of daily habits and actions is underscored by their incorporation into virtually every evidence-based clinical guideline. Despite the overwhelming evidence that these practices have a

profound impact on health, the medical community has been slow to respond in addressing these modalities and in encouraging patients to make positive lifestyle changes”.^[39] On Your Mark, Get Set, Go! It’s Time to Elevate All Six Pillars of Lifestyle Medicine.... Starting With Physical Activity!^[40]

Transdisciplinarity

“Transdisciplinary inquiry would be characterized by a common orientation to transcend disciplinary boundaries and an attempt to bring continuity to inquiry and knowledge. Transdisciplinarity emerged in the latter part of the twentieth century in response to a host of concerns about the pitfalls of specialization and the compartmentalization of knowledge. For transdisciplinarians concerned with justice, sustainability, and ending poverty, war, genocide, hunger, or other such wicked problems, theoretical solutions do not suffice, even though they realize that wicked problems by definition may be impossible to solve. Transdisciplinarity today is characterized by its focus on “wicked problems” that need creative solutions, its reliance on stakeholder involvement, and engaged, socially responsible science”.^[41] “Scientific studies are supposed to provide background knowledge, to facilitate the desired transformations towards a sustainable future and to help resolving complex problems that accompany societies in transition. Concepts such as transformative, transdisciplinary or co-creative approaches elucidate the direction in which scientific research strives for its new role”.^[42] “Transdisciplinarity is generally defined by the inclusion of non-academic stakeholders in the process of knowledge production. Transdisciplinarity is a promising notion, but its ability to efficiently address the world’s most pressing issues still requires improvement”.^[43] “Transdisciplinary research is guided by the principle that ‘scientific rigor meets societal relevance’. Societal impact is the end goal of

transdisciplinary research to contribute to the development of society and to challenges facing society. Creating and applying knowledge together with stakeholders can lead to and collaborating to find innovative solutions with more robust and socially desirable outcomes”.^[44] “Transdisciplinarity recognizes the multi-faceted nature of real-world problems, which requires more than one perspective to solve for. Four traits of transdisciplinary research; (i) **Research problems are socially-relevant** (Transdisciplinary research draws problems from the real world and seeks to address issues in the society. In other words, research problem does not just emerge within the academia, but from real life. These characteristic stresses the ethics of transdisciplinarity in that research needs to be first and foremost responsive to the urging matters in our society), (ii) **Transdisciplinary research design transcends disciplines** (Transdisciplinary research goes beyond crossing disciplinary boundaries to seek a unity of knowledge. It integrates different views, literature bodies, and methods of many related disciplines into a common conceptual framework. This characteristic responds to the demand of a new inquiry approach to tackle wicked and multidimensional problems), (iii) **Transdisciplinary research has a participatory element** (because research problems are real-life issues, research efforts should not concern only researchers, but should also involve non-scientist stakeholders, such as users, beneficiaries, policy makers and project implementers, in the research process. It is also advised that different sectors are engaged, such as actors from the government, private sector, and civil society, alongside with scientists and academicians), (iv) **Results of transdisciplinary research are applicable** (transdisciplinarity calls for practicality and applicability of results to solving real-world problems. Implications from the research should inform relevant stakeholders and as well call for further actions. If research

results are only on paper, the research fails to fulfil its ultimate goal of diagnosing and providing solutions to social problems)”.^[45]

High Performance Team (HPT)

“Developing and leading a high-performing team takes vision, time, and management skills. Understanding and managing individual and team expectations is critical”.^[46] Competent and effective leaders are more likely to be respected by their followers as they practice open 2-way communication, share critical information, and freely disclose their perceptions and feelings with the people they work with.^[47] “Team work has shown improvement in performance in many aspects of healthcare in primary health care and public health systems. The teamwork can significantly reduce workloads, increase job satisfaction and retention, improve patient satisfaction and reduce morbidity. The skills of team building play a pivotal role in achieving the goals of the organization. These skills are even more important in health sector both in clinical and public health settings. The most distinguishing characteristic of a team is collective vision towards the accomplishment of goals”.^[48] “Bruce Tuckman’s original team building model started with four stages: forming, storming, norming and performing. The fifth stage was added in the revised model: adjourning. Performing is the fourth stage of the model. In this stage group members start the actual act of negotiation trying to come up with the win-win situation. The actual work of implementation happens in this stage. It is referred to as ‘functional role relatedness’ This is where participants get energized supporting each other trying to win and seal the deal”.^[49] Medical error is largely grounded in poor communication in clinical team settings (between and across teams) which is a symptom of medical culture’s ingrained autocracy.^[50] “A high-performance work team refers to a group of goal-focused individuals with specialized expertise and complementary skills who collaborate, innovate and produce

consistently superior results under the aegis of open communication, clear role expectations and group operating rules, early conflict resolution, and a strong sense of accountability and trust among its members”.[51]

DISCUSSION

Disorders Irreparably Swiftly Epigenetically Attenuate Survival Efficiency (DISEASE) for which Nutrition, Oxygen, Rest, Movement, Abode and Love (NORMAL) are primarily needed to prevent or overcome diseases. It means any disease can worsen rapidly to become fatal if we ignore the key salutary contributions of Nutrition (adequate energy and hydration), Oxygen (ability of the body to uptake and utilize oxygen), Rest (sleep, rejuvenation from physical and mental fatigue), Movement (Activities of Daily Living, Exercises), Abode (shelter) and Love (affection of family members, dearest friends and even unknown persons). “Antonovsky distinctly stated that salutogenesis was not limited by the disciplinary borders of one profession but rather an interdisciplinary approach and a question of bringing coherence between disciplines and realise what connects them through the people’s ability to comprehend the whole situation and the capacity to use the resources available (called as sense of coherence-SOC) to move in a health promoting direction. The key elementals in the salutogenic development are, firstly, the orientation towards problem solving and, secondly, the capacity to use the resources available”.[52] Homeostasis, Evidence-based Practice, Activism for health, Lifestyle medicine, Transdisciplinarity and High performance team can be amalgamated as ‘HEALTH’ to create a paradigm for salutogenic health activism-Figure 1. Salutogenic health activism incorporating ‘HEALTH’ paradigm is strongly needed in the health care system because no disorder in the human body can be underappreciated from the perspective of homeostasis.

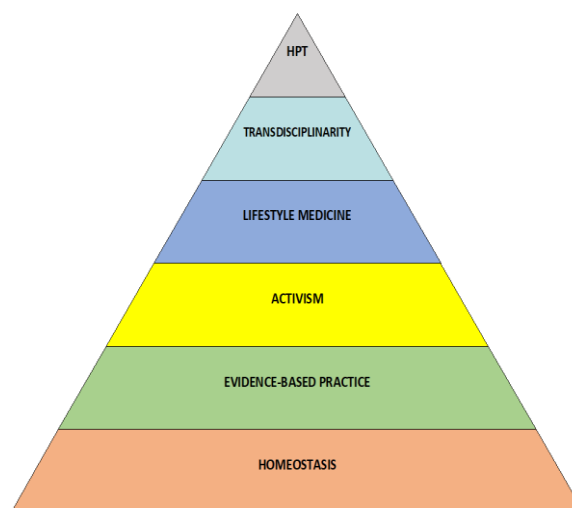


Figure 1: ‘HEALTH’ paradigm

Many challenging scenarios exist in the sphere of clinical practice and public health. “In health care in particular, innovations enable us to treat previously incurable diseases or to make better use of scarce resources. Our innovations help determine whether future generations will still face the same medical problems that we do”.[53] “Scientific objectivity is a property of various aspects of science and it expresses the idea that scientific claims, methods, results-and scientists themselves-are not, or should not be, influenced by particular perspectives, value judgments, community bias or personal interests. Objectivity is often considered to be an ideal for scientific inquiry, a good reason for valuing scientific knowledge, and the basis of the authority of science in society. Although entirely ‘unbiased’ scientific procedures may be impossible, there are many mechanisms scientists can adopt for protecting their reasoning against undesirable forms of bias, e.g., choosing an appropriate method of statistical inference, being transparent about different stages of the research process and avoiding certain questionable research practices”.[54] “Given the potential biases and heuristic flaws inherent with anecdotal evidence, it is difficult to say it has a role to play in modern day medicine. However, anecdotal data might play a role in highlighting rare cases. It is important for us to differentiate the influence of clinical

gestalt in comparison to anecdotal evidence. Clinical gestalt is a highly efficacious tool for physicians who can use it to describe their perception of a patient's ailment. However, it is imperative that the physician recognizes and separates the influence of anecdotal evidence upon their clinical gestalt, as there is the potential for harm when the physician discredits evidence and gestalt to operate based on anecdotes. A heuristic technique can be thought of as a cognitive shortcut to problem solving or, "thinking fast." However, heuristics can produce incorrect answers or assumptions due to cognitive biases. Anecdotal evidence is fraught with these biases. While taking into account our experiences, we must not let anecdotal evidence override evidence-based medicine as the cornerstone of our practice".^[55] Neologisms are fascinating but their impact needs to be appreciated from a realistic perspective to keep one aware of the collateral changes we are importing into common language, particularly in medical practice.^[56] From the view of neologism, homeostasis should be studied clearly and deeply as Homeostaticology and medical professionals should try functioning like a Homeostaticologist. A homeostaticologist can be expected to have profound experiential knowledge about homeostasis and allostasis to remarkably execute his/her duties based on critical thinking (to authenticate/generate reproducible facts and engage in highly beneficial researches/innovations), without solely relying on anecdotal evidences or data from other researchers, and without tolerating pseudoscience and iatrogenic technologies. Critical Medical Anthropology has many known and unknown facets with capabilities to influence and regulate the medical education and health care approaches. "Much of the work done by medical anthropologists is concerned with understanding and responding to pressing health issues and problems around the world as they are influenced and shaped by human social organization, culture and context".^[57]

CONCLUSION

Generalization in medical profession should solely depend on invariable facts but lack of critical thinking leads to development of faulty evidences or fabricated evidences or unproductive anecdotal evidences. Critical thinking is the precursor for evidence-based practices in medical profession. Every detail of homeostasis (central organizing principle of physiology) is quantifiable, but still many medical procedures lack objective measures or fail to objectively measure the homeostatic functions (example, neither natural immunity nor adaptive immunity is objectively measured) and, at the same time, several vague forms of diagnosis, prophylaxis and treatments have been widely accredited, whose iatrogenic effects also remain concealed. Ideally nothing in connection with normal and abnormal functions in human physiology or biomechanics or unhealthy habits or public health mandates or medical procedures should be exempted from substantiation, quantifiable facts and criticisms. Medical profession has scarcely emphasized its researches to understand the physiologic traits and homeostatic competence of healthy individuals, probably led to many flawed fundamentals and indoctrinations. Medical professionals should also render unbiased evidence-based support to the scientific facts, which is not possible without ethical applications and experimentations using similar methodologies. Case studies and salutogenic interventions (based on exercises and healthy diet) to promote health may be far more pivotal than other complicated research trials (based on medicines and vaccines) on large samples of patients and healthy individuals. The greatest achievement of any medical invention (diagnosis, treatment procedure, prophylaxis, public health measure) is its generalizability but the tendency of the medical professionals to generalize a finding of someone or themselves without repeated applications in multiple real-life situations to evaluate its credibility, has

been an impediment. Public health system must become a noble ‘School of Thought’ (preferably, nation-specific ‘School of Thought’) and eradicate iatrogenesis, pseudoscience, health inequities, statistical malpractices, quackery, professional degradation etc., Important ‘Salutogenic Health Activism’ initiatives incorporating the principles of Salutogenesis, Homeostasis, Lifestyle medicine, Evidence-based practice, Transdisciplinarity and Teamwork, are needed from the immediate future. Facilitating Accountable Critical Thinking (FACT) should be given prime importance in medical education and health care system, so that every knowledge is allowed to be disseminated and practiced only if sufficient facts are available. Medical professionals should possess profound knowledge about homeostasis to execute their duties like a Homeostaticologist with immense flair, accountability, intellectual humility and clairvoyance to engage in salutogenic health activism.

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