Aligning Yoga With Its Evolving Role in Health Care: Comments on Yoga Practice, Policy, Research

Avinash R. Patwardhan¹

Abstract
Evidence is accumulating that suggests that yoga has beneficial effects in mitigating the impact of certain diseases. As a result, efforts are being made to medicalize yoga and use it within integrative medicine as a therapy. However, there are substantial shortcomings in the practice, policy, and research of yoga that undermine its optimal use. Yoga as a modality functions within a context. Therefore, it is important to occasionally step back and examine the entirety of the context from a high vantage to assess whether the tactical and programmatic endeavors are aligned with the strategic intended purpose. This commentary discusses a few policy issues relevant to some key stakeholders. It suggests that yoga therapists need to calibrate their model of yoga by reducing emphasis on postures and increasing it on meditation and breathing exercises while catering to clients with chronic conditions. It recommends that yoga research should be more critical in evaluating yoga’s fundamental tenets and use reductionist approach to do so. It proposes that autonomous regulators should extricate injury prone postures from the body of yoga practice for regulatory purposes, rather than regulate yoga summarily. It is suggested that payers should pay for yoga. However, they should use payment model as it is used for vaccination, instead of paying as it is done for physiotherapy. It concludes that yoga can help, but before it can help it needs help itself, and the various stakeholders need to reflect on the big picture so that they can collaborate on these improvements.

Keywords
yoga, yoga therapy, yoga research, medicalized yoga, yoga policy, yoga postures, yoga regulation, yoga payers, public health

Introduction
Research suggests that yoga is becoming increasingly popular worldwide and its use is on the rise.¹ Evidence is also accumulating at an increasing pace that suggests that yoga has beneficial effects in mitigating the impact of certain diseases, including cancers.²⁻⁶ As a result, efforts are being made to medicalize yoga and use it within integrative medicine as a therapy. However, there are substantial shortcomings in the practice, policy, and research of yoga that undermine its optimal use. In 2016, I authored 6 scholarly publications on yoga to elucidate some of those fault lines.⁸⁻¹³ The theme was to examine the current state of yoga from a public health perspective, specifically in the United States.

In one of those articles, I demonstrated that between 2002 and 2012, despite an overall increase in the use of yoga in the United States, adherence to yoga failed to increase between 2002 and 2012, actually worsening in 2007, and the overall use of yoga for specific health problems declined in that period, including for back pain as a specific example.⁹ This presents a perplexing conundrum. Many proposed strategic revisions in the second part of this article are influenced by these findings.

In another article, I highlighted the large disparities in the use of yoga.¹¹ For example, in 2012, 24.1% of US men 18 years or older had at least 1 chronic condition¹⁴ and yet only 28% of yoga users were men.¹⁵ Also, though 41% of the poor suffered some chronic condition,¹⁶ only 19.8% among yoga users were poor people (had an income of <$20 000 per annum).¹⁵

Still another article discussed the numerous challenges and issues facing yoga research.¹² The essential conclusion was that despite its volume, scope, and depth, research did not optimally inform the major stakeholders (such as yoga
users, instructors, or payers) with concrete actionable practical solutions to the problems they are trying to solve.

Yoga as a modality, like any other in health care, functions within a context. While working in silos or researching in depth certain specific areas within yoga has value, it is equally important to occasionally step back and examine the entirety of the context from a high vantage to assess whether the tactical and programmatic endeavors are aligned with the strategic intended purpose. In the following sections I will discuss a few policy issues relevant to some key stakeholders through the above lens.

Yoga Therapists

Data suggest that today’s typical long-term yoga practitioner is a young non-Hispanic white female who has college education, a good health status, and a high income. This prototype person makes up 72% of the total yoga clientele. The practice of performing numerous intricate postures, continuously challenging the gymnastic prowess, and culminating in an aesthetically pleasing and spiritually uplifting experience happens to serve this demographic well.

However, the utility of postures in advancing health is dubious. So far, perhaps the healthy user bias has managed to mask the marginal utility of postures. As the landscape of applied yoga changes, the characteristics of a typical client of medicalized yoga are going to be radically different from the current prototype. This will make it imperative that a new model of yoga is developed wherein postures take a back seat or even disappear from the gamut, not to mention, even in the case of arthritis. I conjecture that a simple experiment can demonstrate that a major part of yoga’s benefit emanates from its breathing exercise and meditation components and that their absence can render yoga postures in the case of arthritis no better than the corresponding physical therapy exercises.

Yoga Researchers

The current yoga research gives a sense that most of the research community is a big advocacy group for the contemporary market-defined yoga. Research articles that elucidate adverse effects of yoga propose stricter monitoring and better education of yoga teachers. However, they do not ask the direct questions such as the following: Was the particular posture that increased the risk of adverse effect worth doing? Did it add value in proportion to its risk? Could a safer and easier posture provide similar cost effective benefit? There is, of course, abundant criticality in research but it appears to be following the Chomsky rule:

The smart way to keep people passive and obedient is to strictly limit the spectrum of acceptable opinion, but allow very lively debate within that spectrum—even encourage the more critical and dissident views. That gives people the sense that there’s free thinking going on, while all the time the presuppositions of the system are being reinforced by the limits put on the range of the debate.

Discussions appear to be restricted to the operational-implementation inadequacies while the fundamental principles or tenets of yoga seem to be off limits for debate. An occasional negative paper on yoga’s efficacy suggests that there is a file drawer problem. Unbeknownst to the well-intentioned scholars, this lopsided portrait of yoga might actually be undermining its credibility.

Another issue creating huge inefficiencies in yoga research is the reluctance of scholars to embrace a reductionist approach toward the study of yoga. Component analysis along the lines of Harrigan’s work has the potential to arrive at a reasonable practical definition and a prototype universal model of yoga at a cheaper cost than using expensive randomized clinical trials. Furthermore, scholars might want to be aware that the huge magnitude of confounders (after all, yoga as a way of life covers everything) is always going to outsize the expanse of their large-sample randomized designs, however clever the designs are.

Regulators

One of the primary justifications to regulate yoga is to protect clients from the risks of injuries ensuing from yoga practice or therapy as a result of inadequate training and expertise of the yoga therapists or teachers. There is evidence that yoga is a relatively safe practice. Furthermore, a 2013 article noted that headstand, shoulder stand, lotus position, and forceful breathing were the most common causes for the injuries related to yoga. As stated previously, postures might not be essential to the success of yoga therapy. Therefore, the idea of regulating the entire yoga field for the sake of a handful of postures is overkill. It might be more cost-effective and efficient to remove these risky techniques from standard yoga practice and incorporate them into the corpus of physical therapy where they can be properly regulated. In this way, the main body of yoga will be spared unnecessary regulation.

Another contentious argument related to regulating yoga concerns spirituality. Some have suggested that yoga can be miscegenated with specific faith systems. Discussion needs to take place that will clarify whether there is any kind of conflict warranting a solution.

Payers

Attempts are being made to convince payers (insurers) to pay for yoga. There are signs of consideration but overall payers are reluctant to pay for yoga. There are many reasons behind this phenomenon and their discussion is out of
the scope of this article. However, one way to resolve this impasse might be for the payers to adopt a model more akin to paying for vaccinations as opposed to paying for physiotherapy or psychotherapy. In this model the insurances would pay for the initial education of yoga and then pay at a lower rate for fixed interval (say half yearly or annual) booster training sessions. This model would increase access and affordability of yoga without imposing a heavy burden on the payers.

Conclusion

Modern research has sufficiently established that yoga has utility in health. However, and at the same time, there are inefficiencies that are dampening its utility. Currently we live in stressful and tumultuous times, and though yoga is not a panacea, it has the potential to serve as a catalyst. Yoga can help, but before it can help it needs help itself. The various stakeholders need to reflect and see the big picture so that they can collaborate on these improvements.

In former times, coal miners carried a caged canary with them into the underground mines. Being highly sensitive to the poisonous gases in the mines, a canary’s survival meant survival for the miners and prosperity for everyone above the ground. On the other hand, its distress or death was a harbinger of trouble for everyone. If our current social-political-economic milieu can be seen as the metaphorical coal mine, then perhaps yoga is one of the canaries.

Acknowledgments

I wish to thank Swati Patwardhan, my wife, for serving as a soundboard, a reviewer, and a proofreader throughout the development of this article. I also wish to thank Chris Massey for proofreading and correcting grammar and language errors. The research presented in this article is that of the author and does not reflect the official position or policy of his employer.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

1. Clarke TC, Black LI, Stussman BJ, Barnes PM, Nahin RL. Trends in the use of complementary health approaches among adults: United States, 2002-2012. Natl Health Stat Rep. 2015;(79):1-16.
2. Youkhanana S, Dean CM, Wolff M, Sherrington C, Tiedemann A. Yoga-based exercise improves balance and mobility in people aged 60 and over: a systematic review and meta-analysis. Age Ageing. 2016;45:21-29.
3. Pascoe MC, Bauer IE. A systematic review of randomised control trials on the effects of yoga on stress measures and mood. J Psychiatr Res. 2015;68:270-282.
4. Polsgrove MJ, Eggleston BM, Lockyer RJ. Impact of 10-weeks of yoga practice on flexibility and balance of college athletes. Int J Yoga. 2016;9:27-34.
5. Hagins M, Rundle A. Yoga improves academic performance in urban high school students compared to physical education: a randomized controlled trial. Mind, Brain Educ. 2016;10:105-116. doi:10.1111/mbe.12107.
6. Ornish D, Weidner G, Fair WR, et al. Intensive lifestyle changes may affect the progression of prostate cancer. J Urol. 2005;174:1065-1070.
7. Fischer-White T, Taylor AG. Credentialing and policy update for yoga teachers and yoga therapists: implications for yoga research and yoga therapy research. J Yoga Phys Ther. 2016;6:e121.
8. Patwardhan AR. Prevalence trends analysis of retrospective cross-sectional data: use of yoga for specific health conditions and corresponding providers referral. SAGE Res Methods Cases. 2017. doi: http://dx.doi.org/10.4135/9781526423955
9. Patwardhan AR, Lloyd LW. Decline in the use of medicalized yoga between 2002 and 2012 while the overall yoga use increased in the United States: a conundrum. J Evid Based Complement Altern Med. 2017. doi: https://doi.org/10.1177/2156587216689183
10. Patwardhan AR. Developing a small theory of treatment of yoga. J Yoga Physiother. 2016;1(2):55555.
11. Patwardhan AR. Disparities in the use of yoga: an opportunity for yoga tourism industry to make a triple impact. J Tourism Hospit. 2016;5:4. doi:10.4172/2167-0269.1000235.
12. Patwardhan AR. Yoga research and public health: is research aligned with the stakeholders’ needs? [published online August 11, 2016]. J Prim Care Community Health. doi:10.1177/2150131916689182.
13. Patwardhan AR. Is the integration of yoga with psychotherapy compatible? What are the risks? J Psychol Psychother. 2016;6:3. doi:10.4172/2161-0487.1000261.
14. Ward BW, Schiller JS, Goodman RA. Multiple chronic conditions among US adults: a 2012 update. Prev Chronic Dis. 2014;11:E62. doi:10.5888/pcd11.130389.
15. Cramer H, Ward L, Steel A, Lauche R, Dobos G, Zhang Y. Prevalence, patterns, and predictors of yoga use: results of a US nationally representative survey. Am J Prev Med. 2016;50:230-235.
16. Anderson G, Horvath J. The growing burden of chronic disease in America. Public Health Rep. 2004;119:263-270.
17. Ross A, Thomas S. The health benefits of yoga and exercise: a review of comparison studies. J Altern Complement Med. 2010;16:3-12.
18. Clay CC, Lloyd LK, Walker JL, Sharp KR, Pankey RB. The metabolic cost of hatha yoga. J Strength Cond Res. 2005;19:604-610.
19. Boehele DD, Porcari JP, Greany J, Udermann B, Johanson D, Foster C. The physiological effects of 8 weeks of yoga training. J Cardiopulm Rehabil Prev. 2005;25:290.
20. Hagins M, Moore W, Rundle A. Does practicing hatha yoga satisfy recommendations for intensity of physical activity which improves and maintains health and cardiovascular fitness? BMC Complement Altern Med. 2007;7:1.
21. Beutler E, Beltrami FG, Boutellier U, Spengler CM. Effect of regular yoga practice on respiratory regulation and exercise performance. *PLoS One*. 2016;11:e0153159.

22. Shrank WH, Patrick AR, Brookhart MA. Healthy user and related biases in observational studies of preventive interventions: a primer for physicians. *J Gen Intern Med*. 2011;26:546-550.

23. Swain TA, McGwin G. Yoga-related injuries in the United States from 2001 to 2014. *Orthop J Sports Med*. 2016;4(11):2325967116671703.

24. Elwy AR, Groessl EJ, Eisen SV, et al. A systematic scoping review of yoga intervention components and study quality. *Am J Prev Med*. 2014;47:220-232.

25. Park CL, Groessl E, Maiya M, et al. Comparison groups in yoga research: a systematic review and critical evaluation of the literature. *Complement Ther Med*. 2014;22:920-929.

26. Chomsky N, Barsamian D. *The Common Good*. Berkeley, CA: Odonian; 1998.

27. Wolff M, Sundquist K, Larsson Lönn S, Midlöv P. Impact of yoga on blood pressure and quality of life in patients with hypertension—a controlled trial in primary care, matched for systolic blood pressure. *BMC Cardiovasc Disord*. 2013;13:111.

28. Harrigan JM. A component analysis of yoga: the effects of diaphragmatic breathing and stretching postures on anxiety, personality and somatic/behavioral complaints. *Diss Abstr Int*. 1981;42(4A):1489.

29. Cramer H, Ward L, Saper R, Fishbein D, Dobos G, Lauche R. The safety of yoga: a systematic review and meta-analysis of randomized controlled trials. *Am J Epidemiol*. 2015;182:281-293.

30. Cramer H, Krucoff C, Dobos G. Adverse events associated with yoga: a systematic review of published case reports and case series. *PLoS One*. 2013;8:e75515.

31. Brown C. *The Healing Gods: Complementary and Alternative Medicine in Christian America*. New York, NY: Oxford University Press; 2013.

32. Elgelid S. Insurance reimbursement: what it might mean for the profession of yoga therapy. *Int J Yoga Ther*. 2001;11:99-102.

**Author Biography**

**Avinash R. Patwardhan** is a modern medicine–trained physician who spent equal amount of time out of 39 years divided between active medical practice and research in public health and health system delivery. In addition, author knows Sanskrit, the language of yoga (scriptures), and having grown in India, has studied yoga philosophy and immersed in its practice for almost half a century.