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Peer Review

Review of: "Mindfulness in the Brazilian National Health System (SUS): Why Training Instructors Is Not Expensive but Strategic and Cost-Effective"

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Training is not treatment. And assumptions require explication and empirical support

First, let me say (write) that I have long been and continue to be an advocate for the use of psychological interventions, which in my view includes mindfulness-based interventions, to resolve and even prevent a wide range of problems in public health and more (American Psychological Association Presidential Task Force on Evidence-Based Practice, 2006; Sava et al., 2009; Yates, 1984). From what I have seen in the past 50-odd years of work in this field, I believe the potential is almost as vast as it is unrealized.

I also have long written that costs, as well as nonmonetary and monetary outcomes, are essential to measure carefully and to evaluate comprehensively for evidence-based policies, so that we may optimally allocate our limited societal resources for maximum public good (e.g., Hornack & Yates, 2023; McCutchan et al., 2022; Persaud & Yates, 2023; Wasil et al., 2021; Yates, 1994, 2020, 2023).

It is from this firmly positive position that I review Dr. Demarzo's paper, *Mindfulness in the Brazilian National Health System (SUS): Why Training Instructors Is Not Expensive but Strategic and Cost-Effective.*

It is possible that I have overlooked or have major misunderstandings of the Brazilian health care provision system. If so, my profound apologies to Dr. Demarzo and our readers. However, as I see it, I regret to note that potentially significant costs may have been omitted from estimations of the costs of Mindfulness-Based Interventions for the purpose of comparing costs to effects on the health and related expenses of the people of Brazil. Also, major assumptions seem to have been made in the MBI cost estimates that need justification from the research literature. I would be happy to elaborate on these

doi.org/10.32388/DCSQWW

points in a longer format; for a review, however, I hope the following bulleted points will do or will be a start.

Treatment Sessions, in addition to Training

- Outcomes for better mental and physical health of a country's population are unlikely to result from training alone, even of a sufficiently large cohort of providers. Trainees themselves would likely benefit, of course, as it is natural to apply newly learned methods to one's own behaviors, thoughts, and feelings.
    - However, those providers ("instructors") would need to meet virtually or face-to-face with groups and individuals in the population for that population to benefit from Mindfulness-Based Interventions (MBIs).
    - From a public health perspective, and a broader societal perspective, these intervention meetings inevitably add at least two substantial streams of monetary expenditures: payment to providers for their time and expertise, and loss of income or other opportunity costs for recipients of MBIs … unless trainees subsequently provide their services as unpaid volunteers, which seems unlikely, or MBI can be delivered in an instant, which seems impossible.
    - For face-to-face meetings, further expenditures for facilities and transportation of recipients to training sessions would be needed.

Additional Costs of Training and MBI Delivery

- When one thinks of creating a concrete budget for just training in MBI, additional costs likely for a national-level training effort would likely include:
    - recruitment and advertising of MBI training opportunities, as potential trainees in a country as large as Brazil are unlikely to learn of and commit to training without learning of the training opportunity and being motivated to participate,
    - facilities or virtual platforms for training, along with training materials (e.g., manuals) and equipment (audio-visual displays, for example, unless the devices trainees bring to training are sufficient),
    - transportation of trainees to and from training sites, or assistance to procure and maintain required devices and internet or other communications services for virtual training,
    - testing and, potentially, certification of trainees as having attained basic required competencies to deliver MBIs,

- supervision of trainees' delivery of MBIs, given that a variety of major mental health issues will likely arise for clients as part of MBI (although this could be nullified if supported by research findings showing MBI raises no issues, and by waiver of psychological licensure and liability concerns),
- additional training, on a near-continual basis, to maintain anticipated positive effects on public health by replacing those MBI trainees who can be expected to cease providing MBI due to illness, age, or burnout, and
- "booster" training sessions for most trainees to maintain fidelity to MBI procedures, to reduce the "drift" that seems inevitable for any structured intervention, such as the continuing education commonly required of licensed mental health care providers.

Assumptions Needing Verification from Research

- The essay rests on a foundation of assumptions, some of which are made explicit here as questions on which research literature can be brought to bear, but which might be asked in research on the population for which MBI training would be provided:
  - Are the positive effects of MBI on measures of public health enduring, or do they dissipate at successive follow-ups over the years following MBIs?
  - Do positive effects of MBI generalize from the initial area of focus to others in health and beyond, as is stated in the later passages of the essay?
  - When comparing costs of MBI training to costs of psychotherapeutic drugs, do we not need to …
    - assess whether MBIs are acceptable to the same types and numbers of potential recipients as psychopharmacological drugs are accepted, given that some genders and cultures may be less receptive to time-consuming and potentially embarrassing or even stigmatizing psychological interventions than to quickly and privately self-administering a pill?
    - discover, in clinical research, whether the *effectiveness* of MBI and the *effectiveness* of those drugs is equivalent (or that the effectiveness of MBI is superior in magnitude, generalizability to other problems, or both)?
    - add costs of providing MBIs, including provider pay, as noted above? … and can we assume that MBI training is needed one-time in its provision, not needing occasional retraining or at least recertification?
  - Is not the development of MBI providers (their training) more akin to post-investigation set-up of pill manufacturing systems? … with the sessions in which MBI is provided to recipients more like

the pills self-delivered to clients?

Well, I'll stop now so that I may reduce the errors I may well have made, courtesy of my likely overlooking of important points in the essay and more. It is possible that the author intended that MBI training would be provided only to persons already providing mental or physical health services, and that those practitioners would substitute MBI for some or most of the interventions they provided previously. In that case, the costs of providing MBI to the citizenry would not be additional, although most of the other costs noted above would still need to be added to estimates of MBI training costs. Also, in this instance, it would be important to focus on research that lets us document the hoped-for *increment* in intervention effects on health measures, and to compare this margin of effectiveness against the increment in costs.

In sum, I welcome dialogue so that I might better understand, and aid, the provision of MBI to address the significant health concerns, and limited health care resources, that we face throughout our world.

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Declarations

Potential competing interests: No potential competing interests to declare.