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# The implementation of mindfulness in healthcare systems: a theoretical analysis

M.M.P. Demarzo, Ph.D., M.D. [a], A. Cebolla, Ph.D. [b,c], J. Garcia-Campayo, M.D., Ph.D. [d,*]

[a] Department of Preventive Medicine, "Mente Aberta" — Brazilian Center for Mindfulness and Health Promotion, Universidade Federal de São Paulo, São Paulo, Brazil
[b] Department of Basic and Clinical Psychology and Psycholobiology, Universitat Jaume I, Castellón, Spain
[c] CIBEROBN Fisiopathology of Obesity and Nutrition, ISCIII, Santiago de Compostela, Spain
[d] Department of Psychiatry, Miguel Servet University Hospital and University of Zaragoza, REDIAPP, Instituto Aragonés de Ciencias de la Salud, Zaragoza, Spain

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ABSTRACT

*Objective:* Evidence regarding the efficacy of mindfulness-based interventions (MBIs) is increasing exponentially; however, there are still challenges to their integration in healthcare systems. Our goal is to provide a conceptual framework that addresses these challenges in order to bring about scholarly dialog and support health managers and practitioners with the implementation of MBIs in healthcare.
*Method:* This is an opinative narrative review based on theoretical and empirical data that address key issues in the implementation of mindfulness in healthcare systems, such as the training of professionals, funding and costs of interventions, cost effectiveness and innovative delivery models.
*Results:* We show that even in the United Kingdom, where mindfulness has a high level of implementation, there is a high variability in the access to MBIs. In addition, we discuss innovative approaches based on "complex interventions," "stepped-care" and "low intensity–high volume" concepts that may prove fruitful in the development and implementation of MBIs in national healthcare systems, particularly in Primary Care.
*Conclusion:* In order to better understand barriers and opportunities for mindfulness implementation in healthcare systems, it is necessary to be aware that MBIs are "complex interventions," which require innovative approaches and delivery models to implement these interventions in a cost-effective and accessible way.


## 1. Introduction

One of the main challenges faced by all types of psychotherapies, including mindfulness-based interventions (MBIs), is the conversion of studies on their efficacy, developed under controlled conditions, to routine clinical practice within national healthcare systems. It has now been more than three decades since MBIs were proposed to improve symptoms of chronic pain, depression and anxiety symptoms among patients and the general population, and exponential evidence-based data have built a scientific foundation for the use of these interventions in healthcare [1]. However, no healthcare system seems to offer suitable and equitable access for MBIs to patients and the general population who could benefit from these interventions. In this opinative narrative review article [2], we provide a conceptual framework for the implementation of MBIs in healthcare systems based on available theoretical and empirical data that address key issues such as the training of professionals, funding and costs of interventions, cost effectiveness and innovative delivery models. We discuss innovative approaches based on "complex interventions," "stepped-care" and "low intensity–high volume" concepts that may prove fruitful in the evolution and implementation of MBIs in national healthcare systems, particularly in Primary Care (PC). This conceptual framework may bring about scholarly dialog [2] and support health managers and practitioners with the implementation of MBIs and others types of psychosocial interventions in healthcare systems.

## 2. Implementing mindfulness in the healthcare system: the case of United Kingdom

Although mindfulness interventions designed for clinical settings were originally developed in the United States (US), and currently there is a widespread interest for them in many countries (mainly in mindfulness-based stress reduction — MBSR — the original program designed by Jon Kabat-Zinn in 1979 at the University of Massachusetts), the United Kingdom (UK) is apparently the most developed country in terms of the formal implementation of MBIs in an integrated national healthcare system [3–5], which involves institutional support in terms of funding and the training of human resources. In the UK, mindfulness-based cognitive therapy (MBCT), applied to patients with a history of major depression who are at risk of relapse, is recommended in clinical guidelines and its implementation in the health system is a priority [3,4]. Despite this recommendation, only a small portion of mental health services in the UK systematically offer MBIs for depression [3,4].

According to Crane and Kuyken [4], who recently evaluated the process of MBCT implementation in the UK, many factors may be considered

* Corresponding author. Servicio de Psiquiatría, Hospital Universitario Miguel Servet, Avda Isabel la Catolica 1, 50009 Zaragoza, Spain. Tel.: +34-976-253621; fax: +34-976-254006.
*E-mail address:* jgarcamp@gmail.com (J. Garcia-Campayo).

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for the correct development and success of this type of intervention. One of the main components involves developing a strategic plan for implementing MBIs in services at national, regional and local levels [4]. The existence of a strategic plan is associated with an increased supply of MBIs, greater support for professionals interested in undergoing training and offering these services, better and more appropriate referrals to mindfulness groups, a better understanding of what mindfulness is and how it benefits patients, the existence of appropriate locations for organizing mindfulness groups and adequate administrative support within healthcare systems [4].

Another fundamental element of this implementation is that of testing these interventions first for professionals, which decreases resistance to and prejudice toward the interventions [4], and thus a considerable number of health services also offer mindfulness training for employees [4]. Other relevant topics raised for the study of Crane and Kuyken [4] are as follows: the majority (60%) of professionals who may refer patients to mindfulness groups do not have sufficient knowledge on MBIs; the existence of an expert within the service increases the chances of success; many centers (62%) do not have spaces suitable for group activities; there is a lack of an administrative structure needed to facilitate mindfulness classes (72%); there is enormous competition with other routine service; there is a lack of resources for training and supervising professionals to teach classes; collaboration between primary care services and universities increases the success of implementation, as does the existence of one or more project leaders who may implement MBIs in services [4].

## 3. PC: the gateway for mindfulness in healthcare systems

PC is the main gateway for patients in a healthcare system and is essential for the proper prevention and management of chronic mental illnesses [6]. The characteristics of PC (equitable access; services close to people's residence; continuous, lifelong, person-centered care; focus on preventive actions and people's health needs) may enhance the accessibility of and adherence (motivation and compliance) to MBIs.

However, there are barriers to the implementation of mindfulness in PC services that must be identified. A key point is that PC professionals have a full schedule of appointments and activities, and it is important that time be set aside to enable these professionals to deliver MBIs as part of a strategic implementation plan. Additionally, there are several actions that may be performed, such as the development of online MBIs, which take less time to implement. There are reports of some experiences with such actions that have yielded interesting results [7]. Another possible strategy would be to simplify interventions, such as by including theoretical aspects and simple mindfulness exercises in health promotion groups that already exist within PC services (for example, physical activity or dietary re-education groups). A final strategy would be to create suitable spaces inside health centers in which to hold mindfulness groups.

**Table 1**
Dimensions of MBIs that define them as "complex interventions"

1. They involve a large number of components and interactions between the different components, both practical (different techniques and mindfulness exercises) and theoretical (different theoretical contents depending on the focus or population of interest).
2. They involve complex changes in conduct and behavior (acceptance, psychological flexibility, compassion) on behalf of participants and professionals.
3. They require coordinated efforts (strategic plan) for implementation among people at various levels of services, including both professionals and managers.
4. They include many different types of potential variables (organic, psychological, use of services, etc.) to evaluate results.
5. They allow great variability in the intervention models (mindfulness-based stress reduction, mindfulness-based cognitive therapy, short programs, etc.).

**Table 2**
Challenges in the development, evaluation and implementation of MBIs as "complex interventions" in healthcare systems

1. There is a need for an appropriate theoretical model that allows for understanding of how the intervention can cause changes in people's health and/or in the use of services and that identifies the weak points in the causal chain to strengthen them. In the case of mindfulness, such a model implies a complex network of knowledge in medical, psychological and social areas, as well as in the evaluation of health services and policies.
2. A lack of results does not necessarily mean that interventions are not effective; rather, there may be failures or barriers in the implementation process (absence of or noncompliance with the strategic plan, nonadherence to practices or programs, etc.). Therefore, evaluations of the process are very important in implementing MBIs.
3. Variability in individual results may be due to the characteristics of healthcare systems. Therefore, an adequate sample size and the use of appropriate methodological designs (cluster samples, for example) are key to decreasing the influence of such factors. It is best to use a range of variables and indicators for processes and results (physiological, psychological, clinical, use of services, etc.) rather than focusing on a few indicators.
4. The requirement of strict compliance with intervention protocols may not be appropriate, as interventions may work more effectively if the ability to adapt to local conditions and healthcare systems exists.

## 4. MBIs are "complex interventions" in healthcare systems

Complex interventions are defined as those comprising several interrelated components. These present a challenge for researchers and managers of health services. The challenges involved in the evaluation of these interventions include the following: difficulties in standardizing designs and modes of application for various existing programs; the influence of ethnocultural and political contexts; organizational, logistical and political difficulties in evaluating an intervention in health services [8,9].

MBIs may be defined as "complex interventions," as they present all of the dimensions (Table 1) of this type of intervention [8,9]. This characteristic implies that the development and evaluation of MBIs in healthcare systems are also complex, and researchers and healthcare managers interested in implementing MBIs in health services must consider this complexity (Tables 2 and 3) [8,9]. The key question to be clarified by researchers, managers and developers of "best practice" policies for mindfulness in health systems is: are MBIs effective and cost-effective in health systems?

Another point concerns how information on results from investigation, evaluations, clinical guidelines and "best practice" guides for MBIs are delivered to opinion makers, professionals, managers, patients and the general population [8,9]. Among scientific publications, there should also be a standard orientation that addresses the characteristics of complex interventions and their evaluations, such as describing in detail the content, the mode of application and the barriers identified in studies on implementation in healthcare systems [10–13].

## 5. Professional qualifications to teach and deliver MBIs

There are three key aspects to ensuring the quality of professional MBI training: (a) the content, method and process of development and training; (b) training standards; and (c) the definition of skills needed to teach mindfulness groups and/or train other instructors [14].

At present, there are still no accepted international standards or professional qualifications with regard to MBI training [5]. However, professional training guidelines for teaching MBIs and training new mindfulness instructors already exist, with the most prominent being those developed by Jon Kabat-Zinn's *Center for Mindfulness*[1] and the *UK Network for Mindfulness-Based Teachers*.[2] These two guidelines differ

[1] http://www.umassmed.edu/cfm/trainingteachers/index.aspx.
[2] www.mindfulnessteachersuk.org.uk.