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ADVANCING PHYSIOTHERAPY IN MENTAL HEALTH: A FRAMEWORK FOR WHOLE-PERSON CARE

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Abstract: The role of physiotherapy in mental health is growing. Mental health is recognized by World Physiotherapy as a specialty area, yet training standards and approaches to care vary across and even within countries. In developing whole-person treatment plans it is important to safely explore and address underlying factors rather than treating specific symptoms as isolated factors. While the biopsychosocial model of health has been around for some time and is considered important to physiotherapy in mental health, it can be understood and deployed in fragmented ways. The more recent movement to advance "psychologically informed practice" is promising and reflects the need for physiotherapy to improve how body, mind, and environment are integrated in clinical care. Physiotherapists working to advance whole-person care in support of mental health may also benefit from recent models of "integrative health". Integrative care aims to approach the biopsychosocial concept in person-centered ways that more fully embrace inseparability between physical/biological, cognitive/emotional, sociocultural, and environmental elements. None of these efforts are without challenge and physiotherapists must be versed in a broad set of whole-person concepts and strategies to safely and effectively address mental health in physiotherapy care. This Perspective presents a novel framework in support of advancing physiotherapy in mental health. The framework presented draws upon transdisciplinary considerations and aims to stimulate creative thought and action towards the shared goal of improved whole-person patient care within a larger frame of public health.

Summary Box

This perspective paper presents a synthesis of scientific, theoretical, and philosophical considerations that converge into an integrative framework for whole-person physiotherapy care in support of mental health promotion. Potential implications linked to this approach range from improvements in person-centered care, enhanced well-being in patient and physiotherapist alike, interpersonal and collectivist-minded relationship building, and advancing the role of physiotherapy in public and environmental health.

Keywords: physiotherapy, mental health, integrative, biopsychosocial, mind-body medicine, whole-person care

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Introduction

Physiotherapy (PT) is seeing growing attention to the biopsychosocial (BPS) and integrative health (IH) models.[1,2] This movement carries potential benefits (e.g. patient satisfaction, confidence in PT care provision or job satisfaction) and is not without criticism, limitations, and challenges (e.g. access to training, discomfort in therapist and/or patient in working with psychological factors, difficulty in changing practice patterns).[1-7] Concurrently there is growing attention to the role of physiotherapy in mental health, an area of practice that typically draws upon the BPS and IH models.[8] While PT in mental health is evolving,[9-11] challenges to transforming what is generally an overly reductionist model of causality and care provision must be addressed. Enhanced approaches capable of supporting whole-person complexity without over assigning causality to any one factor, and that equally supports objectivist and subjective/qualitative lenses, are needed.

Questions around mind/body interdependence have been central to philosophic thought for generations. The biomedical model has been shaped by an arguably simplistic separation of mind (psychological, social, and spiritual dimensions) from body (all things physical/biological). This splitting is so entrenched that many physiotherapists struggle to identify and address psychosocial factors.[12-14] There is need for the development of approaches that explore body, mind, and environment as inseparable and in continuous interplay. Such efforts are challenging in noting stigma around psychological factors contributing to health states and conditions. Patients and clinicians may avoid the topic of mental health due to discomfort.[15,16] Clinicians may be reluctant to broach the subject due to lack of meaningful training/experience, or concern that patients will feel that the significance of their somatic symptoms is being dismissed with the implication that “it’s all in your head”. When practitioners become aware of the role that psychological, environmental, and/or social dynamics play in a patient’s bodily health, these challenges of moral agency (shame, stigma) must be held at the forefront so as to not inadvertently reinforce a sense of weakness or blame.[17] Clinicians can benefit from understanding clinical care that offers experiences that are equally nurturing as empowering. Said another way, addressing core human needs (feeling understood, cared for, safe, capable of navigating challenge) assists in building a “bridge of support” to psychological factors and social determinants of health (SDOH) alongside the care of the physical body. The non-dual concept of “both/and” instead of “either/or” is a frame for both the patient and therapist to successfully move ahead with whole-person care.

This paper presents a working framework for approaching physiotherapy in mental health through the lens of an IH model. The IH model is one of numerous efforts that has emerged to advance the BPS model.[18] These models aim towards more complete accounts of health/healing and do not forego biomedical care needs. Applied to PT, IH embraces a "balanced approach to the 3-legged stool conceptualization of evidence-based medicine—giving each leg (patient preference, clinician expertise, and scientific evidence) appropriate weight."[2] Important elements in applying the IH model to PT for mental health will be explored. These elements include rationale for advancing whole-person care models, the use of mind-body medicine (MBM), attention to SDOH, and a layered model of individualized support based on patient preference and need. Existing research, recommendations, challenges, limitations, and scope of practice considerations are offered in relation to advancing the role of PT in mental health using the IH approach.

Moving Towards an Integrative Framework for Whole-Person Care

The splitting of mind from body presents challenges that need attention for PT to move towards improved whole-person care. This section provides context that underscores rationale for ongoing development of the IH approach. While applicable to the whole of PT practice, such discourse is especially important for physiotherapists specializing in mental health.

"Physical" Therapy and Psychological Dynamics

The development of therapy disciplines such as physio-, psycho-, or occupational has aimed to meet specific health care needs yet has come at the expense of isolating certain aspects of whole-person experience away from other inseparable needs. For example, studies have shown that physiotherapists struggle to identify and deal with psychological factors in chronic pain,[12-14] and yet patients with chronic pain (for example) often experience comorbid anxiety and depression;[19] kinesiophobia and psychological distress are predictors of negative trajectories in patients experiencing pain.[20]

In PT, the concept of "psychologically informed practice" (PIP) has emerged as an attempt to bridge mind and body. PIP also draws upon the BPS concept and continues to be examined with some documented utility alongside challenges in training/clinical implementation.[21] Ultimately these efforts (including the IH model applied to PT in mental health presented here) reflect a collaborative

goal: improve physiotherapists' ability to safely and effectively identify and support whole-person dynamics.

An Integrative Approach to the Biopsychosocial Model

The BPS approach is often interpreted as considering discrete aspects of three separate things: biology, psychology, and sociology. PIP also carries risk to be deployed as a discrete "add-on modality" to a reduced, physically focused approach. From an early definition, the BPS model "systematically considers biological, psychological, and social factors *and their complex interactions* in understanding health, illness, and health care delivery"(emphasis added)[22]. If we consider that psychological, social, cultural, and environmental dimensions are represented in biological states/influence,[23] we begin to move towards a more integrative understanding.

IH encompasses the BPS concept and advocates that care be approached in a more unified way to allow seemingly disparate elements to combine in symbiotic, mutually reinforcing ways to profound effect. As applied to physiotherapy in mental health care, the IH promotes an approach that recognizes and explores a person's integral being by exploring and supporting the relevance of various levels of influence (body, mind, and environment) within the whole of the person's health experience.[2] In doing so, support for the biology of stress is fundamental and tied to vast body of research linking stress to adverse health outcomes.[24] While normal and healthy in context, stress can become toxic when not mitigated naturally through innate biological processes and/or through deliberate self-care efforts.[25] The science of allostatic load (the cumulative burden of chronic stress and life events) underscores the need to address cumulative stress.[26,27] Categories (physical, cognitive/emotional, social, nutritional, existential/spiritual, environmental, etc.) of stress can be explored alongside equal attention to cultivating positive/strength-based inputs that mitigate deleterious effects. The development of a mutual (clinician/patient) understanding of a "stress picture" is followed with identification and deployment of values-aligned strategies for targeted support. Clinical use of the field of mind-body medicine (MBM) can be of great assistance in this regard.

Mind-Body Medicine as Foundational

Toxic stress informs behavioral/mental health challenges equally to physical health (noting these are not mutually exclusive).[28] This section further delineates the biology of toxic stress in relation to the clinical use of MBM to assist in mitigating adverse effects of stress.

Overview of the Science of Mind-Body Medicine

The broad field of MBM is fundamental within IH. MBM explores how "connections and interactions between the brain, mind, body, and behavior can activate psychophysiological changes and a health-promoting potential in the individual—paths towards better health."[29] MBM is informed by growing evidence in psychoneuroimmunology (PNI). PNI has established a scientific foundation for normalizing attention to individual and collective body-mind-environment interactions.[30,31] For example, research demonstrates that our psychology,[32] our previous life experiences of adversity,[33,34] and of interpersonal relationships[35-36] each carry biological correlates. Further, health is deeply informed by the nature and quality of the environments in which we live, work, and play.[37]

MBM research includes close attention to physiological regulation of the central-autonomic nervous system and supports the understanding that overall neurophysiological state/function impacts all other systems in complex, interdependent ways (Figure 1). MBM supports viewing whole-person physiology from the lens that this integrated psychophysiological network functions in interdependence with the environments (natural, built, social, etc.) each person is "bathed" in.[30,36,38,39] At the individual level, if a MBM skill shown to improve self-regulation processes is trained, any resultant positive shift in autonomic function carries potential for other positive system-wide changes (e.g. neuroendocrine function, inflammation, immune system).[40,41] External impacts may include positive influence on behavior, motivation, and social/relational engagement.[36,42] The sum of MBM research suggests potential for enhanced stress resiliency, pain reduction or improved pain management, decreased inflammation, and improved cardiovascular, mental, gastrointestinal, immune, and endocrine functions.[30,40,43,44]

Understanding and supporting these interconnections (through simple, positively framed psychoeducation and the use of MBM within the care plan) assists in normalizing the ways in which cognitive, emotional, social, and ecological factors directly influence health. While the tendency to over-assign causality to any one agent will always be a challenge for clinicians and patients alike, the failure to address these coexisting and causal connections is a longstanding barrier to effective healthcare and overall healing.

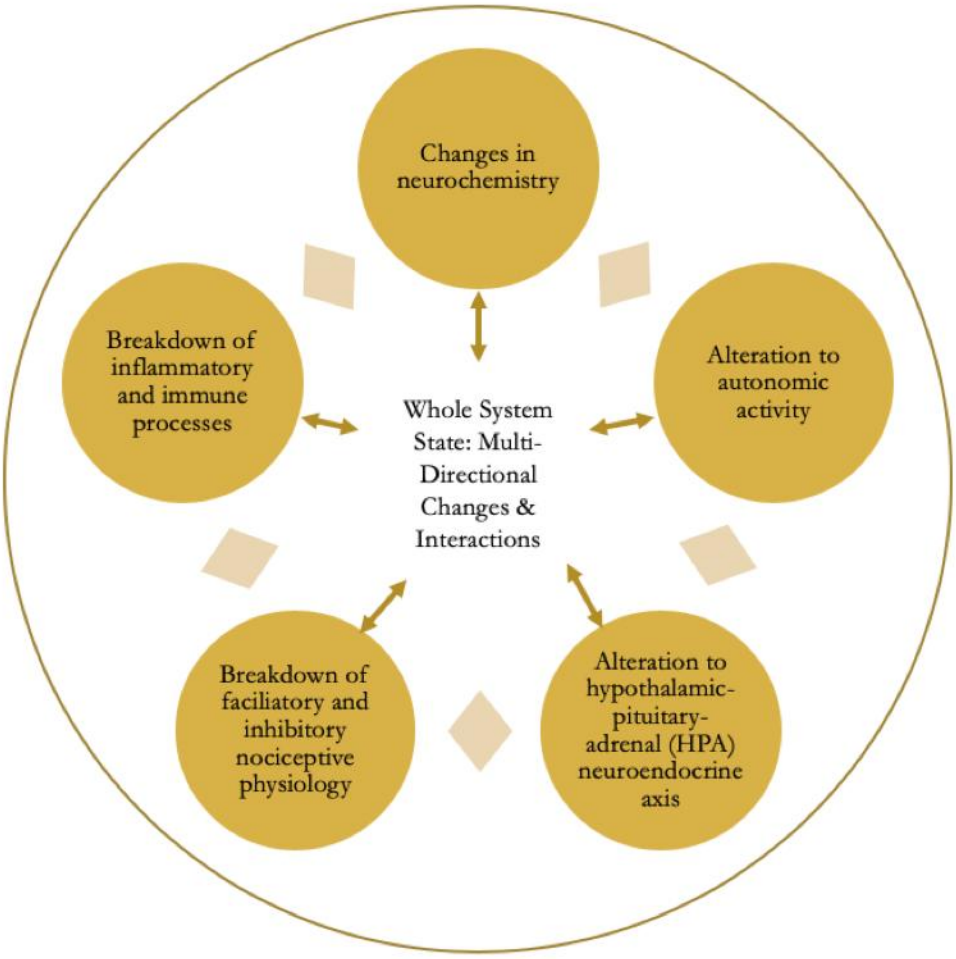

Figure 1: Integral Physiology

Description: All physiological systems are interdependent. Facilitating a shift in one system, such as improving autonomic regulation using mind-body medicine skills training, carries potential for positive shifts across all systems.

A toolkit

MBM includes an array of evidence-supported approaches that carry potential to explore and support the uniqueness of each person's lived experience and life process across time and in relationship to layers of environment. Such exploration must be strength-based by balancing the tendency for negativity bias through acknowledgement of innate wholeness, innate resilience/capacity, and inner/outer resources. MBM provides a "toolkit" that can promote healing processes and/or greater well-being. Table 1 lists example evidence-informed topics that fall under MBM and that can be utilized in clinical care to support whole-person well-being. While outside the scope of this paper to teach clinical delivery or review each subtopic's evidence for specific conditions, reviews of the general mechanisms, benefits, limitations, and risks are growing.[30,45,46]

Mental Imagery	Meditation/Mindfulness	Biofeedback
Body Awareness	Expressive Drawing	Expressive Writing
Creative Arts	Contemplative Movement	Nutrition, Mindful Eating
Body Language, Posture	Cognitive-Behavioral Skills	Family History/Ecomaps
Breath Awareness/Regulation	Personal Spirituality/Meaning	Placebo/Nocebo
Group/Mutual Support	Emotion Awareness/Expression	Touch, Manual Therapies
Self- and Co-regulation Skills	Nature/Ecotherapy	Communication, Prosocial Skills

Table 1: Mind-Body Medicine Topics and Modalities

Description: These topics and clinical tools frequently overlap. For example, body awareness is intricately linked to emotional awareness. If a patient is in a distressed state, a combination of biofeedback, breath regulation, various avenues for self-expression (e.g. verbal expression, writing, drawing), and/or touch-based therapies can support developing greater capacity to feel, regulate, and move through the experience.

Social Determinants of Health and Mind-Body Self-Care in Context

Introduced earlier, it is vital to address collectivist considerations within individualized IH care. SDOH are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes.[47] SDOH includes topics such as the influence of the natural/ecological, social, or built environment (living conditions); racialization/systemic racism; minoritization; ableism and discrimination; economic stability; food access, quality, and security; access to educational, health care, and other resources; and the broader cultural context that informs each person's overall life experience.[38,48] Do we know what our patient's living conditions, work environments, and/or natural/ecological environment and exposures are like? Their socioeconomic status? Their life histories and the impact of their cultural background? The impact of inter-generational/historical patterns of stress?

At first glance, self-care (a core tenet of MBM) can be interpreted as individualistic. In collectivist cultures, self-care may be perceived as egoic, self-indulgent, or unimportant to the whole of the family/community unit.[49-51] Further, if promoted unmindfully, self-care can fail to address the profound relevance of SDOH. In contrast, clinically-oriented MBM navigates self-care in ways that support the deepening of resiliency and positive coping with the discomfort, demand, stress, challenge, or trauma that comes with life and living. In the collectivist frame, these "self" constructs extend into supporting relationships with others (co-regulation, communication, behavior), the outer world (including nature), and virtually any aspect of one's experience.

Coming from the understanding that one's individual sense of health/well-being informs how that person relates not only to oneself, but to their interpersonal relationships and sense of belonging in community, the individualistic and collectivist views align in support of each other. In other words, there is a both/and approach to the topic of self-care. Undoubtedly, personal responsibility plays a role in overall health.[52] However, when health policy, social constructs, and/or clinical care becomes excessively focused on individual actions rather than systemic issues, negative outcomes can be reinforced.[53,54] The study of SDOH in context to personalized mind-body self-care or lifestyle medicine reminds us that the choices people make are 1) often bound by the choices actually available to them and 2) reflect complex internalized dynamics that arise out of individual historical and/or sociocultural determinants that need understanding and

support to increase the possibility of change. While science has validated that personal history contributes to patterns of toxic stress that contribute to ill health,[55] these dynamics were/are not wholly subject to individual choice. Figure 2 expresses how societal conditions (including ecological/environmental factors such as loss of green space or climate change) carry significant influence on threat appraisal processes, and thus the whole of individual and collectivist views of allostatic load.

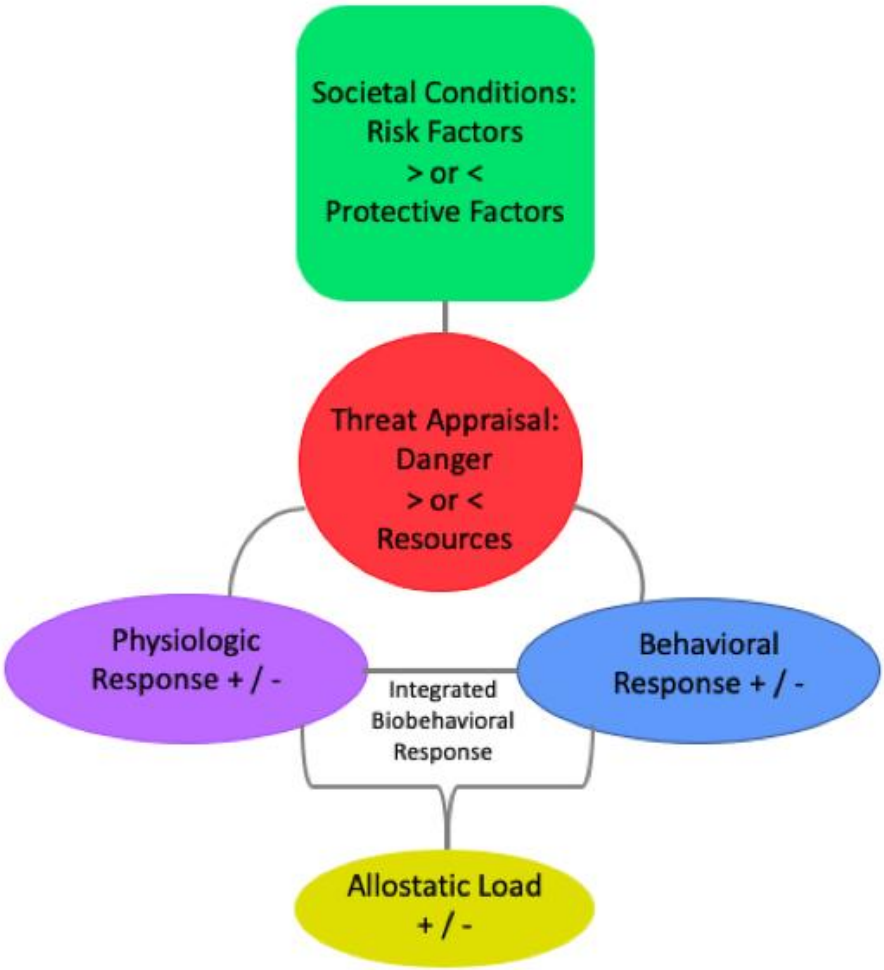

Figure 2: Socioecological Influences on Allostatic Load

Description: Societal and ecological conditions can either diminish or support health by impacting threat appraisal physiology, behavioral patterns, and allostatic load management.

Carefully/safely assessing the sum interactions of individual and systemic limiting vs. protective factors, in collaboration with each patient, yields a care design that can mitigate toxic stress. Putting in place both internal and external resources creates potential for shifts in life course/health trajectory away from a crisis mode of functioning and towards greater well-being.[56,57]

A Layered Framework of Whole-Person Support

Building from the preceding rationale, a layered approach to care is presented. Framed as potentially useful for PT in general, the IH framework described here considers inter-related ingredients that can be addressed to support whole-person PT care:

1. **Strength-based self-referential processes**. This ingredient involves support for building self-awareness across interacting domains (physical/somatic/sensory, cognitive, emotional, social/relational, etc.) over time.[58,59] A critical example is training to better recognize one's overall physiological state. Often persons experiencing distress oscillate between states of hyper/hypoarousal and maladaptive defense ("fight, flight, freeze").[60] Self-awareness is also intimately intertwined with principles of subjectivity and self-expression in health and healing. The concept of a *phenomenological heuristic* implies a stance that explores and supports the embodied, lived experience of each patient in a way that enables people to come to know themselves better and to arrive at their own questions and solutions. This effort requires active listening and space/time for sharing. Excessive focus on objective details (e.g. range of motion, bodily asymmetry) and/or attempts to "fix-it" through procedural modalities may fall out of balance to the importance of subjectivity, narrative medicine, and support for psychosocial factors, especially in context to mental health care.
2. **Functional shifting of physiological state**. This ingredient offers mind-body skills training (e.g. biofeedback, breath regulation, body awareness training, meditation, movement, etc.) that combines with self-awareness (preceding category) to enhance physiological/behavioral self-regulation towards more optimal states.[60] It is useful to consider that the application/development of these first two ingredients (self-awareness and self-regulation) applies equally to *the practitioner*. Experiential learning and self-application carry potential to deepen the therapist's skill and capacity to share and support others, thereby deepening the container of relational attunement. There is

growing inquiry into the connections between behavior, emotion, and physiological state regulation within relationship.[61-63]

3. **Capacity to be present to and learn from discomfort**. Often, unpleasant states are met with reactivity and urgency to fix the state. While MBM promotes improved access to the "relaxation response"[64], the ability to examine patterns of experiential avoidance and their impact on well-being is also highly relevant as part of enhancing awareness promoted in MBM.[65] All states cannot be "fixed", at least not imminently. Thus, this clinical framework includes an ingredient that aims towards the development of enhanced resilience through the concept of "comfort with discomfort."
4. **Principles of salutogenesis and eudaimonia**. The concept of salutogenesis approaches health by recognizing innate wholeness that can be revealed/realized through the application of skills and concepts that are strength-based.[66] Similarly, eudaimonia represents a state or sense of flourishing or well-being that is non-transitory and connected to principles of intentioned living and self-realization.[67] This ingredient includes capacity for exploring the individualized relevance of wisdom-based understandings of human life/experience that are found in all cultures across generations. The concept of personalized psychospiritual integration within IH care does not aim to debate the existence of metaphysical realities, rather aims to advance the pragmatic goal of safely leveraging the possibility of positive interactions between recorded general life wisdom and individual experience, purpose, and meaning. Going further, this category aims towards the mitigation of suffering and/or reduced identification with the nature of suffering.
5. **Tending to the SDOH**. As presented, there is a tendency for health care professionals to focus on personal responsibility with insufficient acknowledgment of SDOH. Patients frequently report a lack of understanding from health care professionals, often feeling blame, stigma, or shame.[68,69] In acknowledging that ill-health states are informed by systemic factors, there is a helpful redistribution of one's sense of causality. In conjunction with a strong therapeutic relationship, this validation supports one's sense of agency. Further, considering a balance of more passive care experiences (e.g. touch and relaxation-based therapies) with more active care components (e.g. exercise/movement, biofeedback) may support this ingredient. David Nicholls suggests that today's more recent interest in personal responsibility, self-care, and active rather than passive therapies diverts attention away from the social determinants that are known to give rise to disease in the first place.[70] In essence, a balance between nurturance and empowerment is the way forward.

Beyond education and validation in patient care, SDOH must be addressed within practice management and community involvement. Resource seeking for patient needs (e.g. support to identify additional services or referrals, community-based programs, etc.) can combine with pro bono work, sliding fee scales, and public health/policy advocacy work.[71,72] Proactively addressing SDOH serves health equity and social justice within PT practice.

The preceding concepts are consistent with and supportive of principles of trauma-informed care (TIC)[73,74], cultural humility,[75-77] and process-based therapy (PBT).[78] These approaches recognize individual complexity and acknowledge that transformation takes time and looks different for each person. These synergistic approaches aim to support the underlying processes that drive psychophysiological challenges and aim to offer a more unifying approach with capacity to bridge different therapy models into customized care for each patient's unique presentation and life context. These efforts require letting go of predictability as well as the ongoing cultivation of capacity to navigate complexity and uncertainty.[79]

Barriers to Implementing Physiotherapy in Mental Health Care

To begin moving beyond recognition of complex factors in our patients' symptoms and outcomes and toward responsible professional embodiment and action, we must recognize barriers to doing so. Keefe, Main, and George[80] suggest systemic change is needed at three levels: professional education, clinical practice and care pathways, and policy. Erb & Ranjbar[81] additionally propose that in relation to narrative medicine (a component of MBM and the IH model), the preceding systemic barriers interact with challenges at the level of the *individual therapist*. These include:

- limited personal/professional **time**
- overcoming **habit/convenience** in one's work
- navigating personal **discomfort** that may arise when one's professional identity or paradigm shifts, and how this relates to the need for **self-application** of mind-body concepts to better deliver the same for others
- **cost/finances**
- holding onto potentially faulty **belief systems**
- accessing quality academic and clinical **training, and**
- receiving adequate professional mentoring/clinical supervision.

Each of the preceding can be approached as interacting barriers that interfere with creating the circumstances requisite to a more comprehensive and relationally focused approach to care.

Scope of Practice

The presence of psychosocial factors are not distinct from does not imply the presence of a mental health condition.[23] Further, there is a general movement in mental health care to look closely at the harm of diagnostically labeling life experience (PTM).[82] When a diagnosed mental health disorder is present, non-stigmatizing support for this aspect of the person's experience is an important part of whole-person PT care.[23]

While subject to geographic locale/legal jurisdiction, sociocultural dynamics/needs, public health considerations, the extent of individualized professional training/mentoring, practice setting, etc., the following working guidelines can be useful when addressing mental health in physiotherapy:

1) Approaching the use of MBM tools/skills (which engage psychological content) through invitation reflects an intersection with TIC principles.[74] Given that physiological correlates to safety such as subduing/mitigating threat appraisal)[83] can be positively influenced through ways of relating/responding when strong emotions or traumatic memories surface, our first aim must be to remain present/caring to where a patient is at in their process, and from an accepting (non-fixing) stance.
2) Physiotherapists typically receive training in mental health conditions and are skilled in describing behaviors that reflect mental health and psychiatric diagnoses. However, the ability of a physiotherapist to independently diagnose a mental health condition is based on practice setting, licensure, practice acts, and other concerns of jurisdiction rather than knowledge and training. Regardless of each practitioner's specific scope, physiotherapists carry substantial potential to recognize, screen, and directly support persons experiencing a wide range of psychosocial factors and states of somatic/mental health comorbidity. It is imperative that physiotherapists have baseline whole-person care competency since psychosocial factors are inseparable from bodily states/physiology.[23]
3) It is important to refrain from analyzing psychological experience/content. Analysis is subject to error and the dynamics of psychological projection; regardless, it can come across as patriarchal,

judgmental, pathologizing, and/or stigmatizing. Providing a safe relational space where psychosocial factors can be gently explored in support of each patient arriving at their own answers/solutions, is encouraged.

4) Steering away from offering specific personal life advice such as, "I think you should leave your spouse" is encouraged as part of PBT. Supportive exploration around psychosocial-oriented resources/options, lifestyle considerations, etc. when sought out by the patient or through invitation, is distinguished from targeted and potentially problematic interference with the individual's own decision-making process around their lived experience.
5) When historical content such as traumatic memories and/or strong emotions arise, it can be helpful to assist patients to avoid regressive states such as may more purposely be created or worked with in psychotherapy settings. This goal is supported by projecting a caring and non-fixing presence, combined with cues to stay connected with the present moment (e.g., "Would it help to sit, notice the body, and breathe together to allow the emotions to move through you?") Supportive refocusing strategies can include allowing adequate time for expression, cues to increase internal or external sensory attention, centering on physical activity/movement, and/or the identification of other immediate needs (e.g., "What would feel supportive right now?")

If the complexity of the presentation is outside one's skill/training/comfort level, this must be confidently recognized and gently disclosed as part of a mutual exploration of whether additional resources are important to include. In this process, and consistent with TIC principles, it is an important consideration to understand that suggesting to someone that they need psychotherapeutic services carries high potential to stigmatize and reinforce shame/blame dynamics, and thus compromise the person's sense of safety. Therefore, if deemed appropriate, a suggested best practice (with due attention to timing and context) would be asking the person whether they feel they could benefit from additional support and if so, to let them know that you are able and willing to help them identify possible resources. By eliciting and supporting individual choice, this approach provides an experience of agency/empowerment.

Conclusion

There is growing need for the PT profession to proactively contribute to the growing worldwide mental health crisis and its intersection with a shortage of services. Designing and advancing training models for physiotherapists to effectively support mental health is an ambitious goal. While no single clinician can meet all needs that present in the clinic, PT can grow in its approach to serving the mental health of all PT patients. The transdisciplinary concepts described in this Perspective reflect working concepts and tools aimed to support this broad goal. Examining PT's role in mental health from public health and stepped care lenses will require ongoing debate, critical studies, mutual learning, research, advocacy, and policy work.

Advancing the IH model as an approach to PT in mental health as presented here aims to be a flexible perspective to contemplate, work with, and improve upon. Persons working in this area are encouraged to share, collaborate, and co-create new avenues in support of quality, person-centered care. It falls upon academia and practicing clinicians alike to study outcomes and refine whole-person and transdisciplinary approaches such as the one described. While advocating for baseline capacity in all physiotherapists to safely integrate and support the psychological, social, cultural, and spiritual domains within the IH model of care, growth in pathways for physiotherapists supporting mental health is critically needed to move ahead into rapidly changing and uncertain times.

Equity, Diversity, and Inclusion Statement

The topics and principles of justice, equity, diversity, and belonging are held in the forefront of the concepts and principles advocated for in this piece. Examples of relevance include repeated acknowledgment of sociocultural and environmental factors on health; including in relation to individual moral agency, and stigmatization. Attention to the broader set of social determinants, including minoritization, racialization, and systemic racism, are named as factors needing careful consideration when working with physiotherapy and mental health. The conceptual framework for care that is described has arisen out of extensive, ongoing work in marginalized, underserved, and collectivist-oriented communities; with direct consideration of principles of cultural humility and strategies to serve social justice.

Conflict of Interest Statements

•Author has not presented any promotional talks to any pharmaceutical companies within the past 12 months.

•Author does not discuss off-label or investigational drug use.

•Author is sole proprietor of a professional consulting business and may receive income from teaching, consulting, and/or professional writing in integrative health/wellness.

•Author is an Independent Scholar: may receive royalties from an academic, peer-reviewed textbook. However, all such royalties are utilized for pro bono and/or sliding fee scale teaching and mentoring in the field of physiotherapy with a focus on addressing mental health, justice, equity, diversity, and inclusion.

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