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A Physiotherapy That Inhabits Time: Between Doing and Being Reflections for a More Human, Conscious, and Present Practice

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Journal of Physiotherapy in Mental Health

EDITORIAL

A Physiotherapy That Inhabits Time: Between Doing and Being Reflections for a More Human, Conscious, and Present Practice

María Eugenia de León

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We live in a world where everything is urgent. Doing, creating, moving forward, never stopping… To the point where productivity has become the contemporary religion. Rest has been pathologized and is now viewed as a privilege, a waste of time, and a luxury that not everyone can afford, not even those of us who work in healthcare.

The system and society measure value by what is useful, fast, and visible. It's an accelerated society that demands results and considers anything unproductive as inefficient. And in this rhythm — mainly economic, but also symbolic — we've inherited a way of understanding health: a "state" achieved by doing more, moving more, accomplishing more, occupying all our time, our body, and our thoughts. Because only by "doing" and being "productive" are we seen as healthy.

Without realizing it, even through discourses that aim to be holistic, we've reduced health to constant activity — a pattern even replicated by those of us who claim to have a more human, broader, and sensitive perspective.

If we are health professionals, not disease professionals, we should ask ourselves: Do all people really need to become more active and less sedentary? What if what they need is not activation, but rest? What if health is not built through movement, but through pause?

This is not a praise of sedentary lifestyles. It's not a call to stop moving. Instead, it's an invitation to ask ourselves, with clinical and ethical honesty, what does this person in front of me truly need? Is what I propose as treatment emerging from their needs or from my urgency to intervene? If I stop to listen to the person in front of me, truly, is it a waste of time?

We've confused intervention with action. And physiotherapy with constant occupation of the body. I firmly believe that we urgently need to see rest, stopping, and pausing as part of health — that rest is not the opposite of movement, but another form of movement. That stopping can also be therapeutic. That staying still, in silence, can be just as transformative and effective as a structured exercise session.

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As physiotherapists, we routinely ask how much someone walks, how many hours they work, whether they exercise, and if they're "active"; however, we rarely ask if they rest, if they sleep peacefully, or if they have time for themselves to reflect or pause. We seldom validate the right not to be able, not to perform, not to be "fit."

We have self-proclaimed ourselves "experts in the body and movement," but the most crucial question is: whose body? Because bodily experiences are not neutral — they are filled with subjectivity, history, memory, emotion, trauma, and silence. There is no universal body or a single way to move, so how could we be experts in someone else's body and movement? Perhaps we can only become experts in our own.

Thus, our role may not be to be experts in others' bodies, but to accompany people in becoming experts in themselves. To help them recognize their limits, possibilities, desires, and unique rhythms. To build, from the body, a relationship of genuine self-awareness. And that's only possible if we stop listening, observing without haste, and asking without assuming.

Have we confused active physiotherapy with "hyperoccupation"? Since we claim to empower people and implement active health interventions, but... who sets the goals? Who proposes the exercises? Who sets the pace, tone, load, and objectives? How much listening exists in our practice? How much space do we give to what this person wants, can, or needs today?

A truly active physiotherapy is one in which the person is the protagonist, not merely a compliant participant.

Promoting health is not just about mobilizing and encouraging people to be "more active." It is also about legitimizing fatigue, allowing silence, and recognizing that contemplation is therapeutic too. That doing for the sake of doing does not always heal, and sometimes, just sometimes, the most transformative thing is to be able to say: "It's okay to stop," "It's okay to rest."

This is not about replacing doing with rest as the new universal recipe. It's about knowing when *not doing* is also *doing*. And this includes us, healthcare professionals, permitting ourselves to pause, to question, and to review our interventions, logic, and assumptions. To confront our own need for control, for protagonism, and our urge to fill every therapeutic space with action.

Because stopping is not passivity: stopping is presence.

And if there's one thing I'm convinced of, it's that accompanying people humanely requires not just knowledge, but awareness. An awareness cultivated in stillness, in respect, in deep listening — one that doesn't fear clinical silence, but embraces it as a space for connection where both people can be nourished.

Maybe it's time to remember that even in physiotherapy, we can inhabit rest as a health practice. Because in a world that never stops, pausing is revolutionary. And in a health system that demands so much, giving people back the right to rest is also care.

I hope that all readers who come to this journal will find in its pages an opportunity to pause, supported by the words and reflections of those who, through their work, demonstrate their deep commitment to life and others.

May authors find here not only motivation to produce more and better research in mental health, but also a space that connects them with the greatness, strength, and inner calm that dwells within each of them.

And may the team that makes this great endeavor possible also recognize themselves as a living part of this act of care. May our work never cloud our purpose.

To those of you who make this publication possible, my deepest gratitude.

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Editorial

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Journal of Physiotherapy in Mental Health

Editorial

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It is with great satisfaction that we present the second edition of the Journal of Physiotherapy in Mental Health, an important initiative in disseminating knowledge and strengthening our field.

Working in Mental Health initially means recognizing that we live in a complex, diverse, and fast-paced society, which demands a great deal of mental—and, of course, physical—flexibility, as adapting to new situations and realities is a constant.

Incredible technological advances, alarming climate changes, socioeconomic inequalities, global conflicts... All of these shape the reality we face and that we perceive through our bodies. How do our bodies react to this reality?

Considering that everyone has the right to health, we urgently need care and approaches that consider the human being in their essence and entirety.

This journal represents a collective commitment to promoting integral health on a global scale, based on the strength of science, international collaboration, and the transformative power of inclusion.

Open access ensures that the knowledge produced is available to everyone, without financial or institutional barriers. This model not only democratizes information but also broadens the impact of scientific production, reaching students, professionals, institutions, and communities around the world. Science only advances when it is shared, and open access is a fundamental pillar of this mission.

The diversity of perspectives brought by the collaboration of authors, reviewers, and readers from different countries makes this publication an indispensable reference. The global gathering enables an exchange of experiences and knowledge that transcends borders, enriching our understanding of the interactions between physiotherapy and mental health. From the realities of developing countries to contributions from international centers of excellence, everyone has something valuable to offer in strengthening our field.

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It is also worth highlighting the meeting of generations. The journal has a committee of students and early-career professionals and is positioned as a space where experienced researchers, renowned professors, and young physiotherapists dialogue and build together. This intergenerational exchange strengthens the legacy of physiotherapy in mental health and fosters innovation, inspiring new approaches and encouraging the enthusiasm of future leaders in the field.

This commitment to early professional development is a bet on the future, ensuring that upcoming generations participate in building a responsible scientific field.

The journal's editorial policy is also aligned with the values of equity, diversity, and inclusion. There is a conscious effort to ensure that all voices—regardless of gender, ethnic origin, sexual orientation, religious belief, or socioeconomic condition—are represented and valued. This commitment is not only ethical but essential to producing science that is truly relevant and comprehensive.

We invite you, dear reader, to explore this edition with the same enthusiasm we had in preparing it. We hope that the articles presented here will inspire, challenge, and promote deep reflection.

More than a publication, this journal is a meeting point, where each one of us can contribute to the advancement of Physiotherapy in Mental Health and the wellbeing of the communities we serve. We know how much acceptance, inclusion, respect, and collaboration make a difference in building a better world.

We thank all authors, reviewers, readers, and associated institutions for being part of this journey!

Let us continue together, collaborating, innovating, and building a healthier and more inclusive future.

Wishing you a pleasant reading!

A warm hug from Brazil,

Carla Oda Moreno

ORIGINAL RESEARCH

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The Relationship Between Physical Function and Psychological Symptoms in Parkinson's: A Survey of UK-Based Physiotherapists

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ORIGINAL

The Relationship Between Physical Function and Psychological Symptoms in Parkinson's: A Survey of UK-Based Physiotherapists

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Abstract: People with Parkinson's Disease (PwP) often experience both motor and non-motor symptoms, including psychological symptoms such as anxiety and depression. However, the relationship between these symptoms and the perspectives of physiotherapists are not well understood. This study describes current approaches to physiotherapy assessment and onward referrals for psychological symptoms. We explore the views of physiotherapists based in the United Kingdom (UK) around the potential interaction between physical function and psychological symptoms in PwP. **Design:** Cross-sectional using an anonymous online survey, ensuring confidentiality and voluntary participation. Data are reported as descriptive statistics. **Participants:** UK-based physiotherapists recruited by convenience and purposive sampling. **Results:** 125 UK-based physiotherapists completed the survey, with questions focusing on their work with PwP, mental health training/experience, outcome measures used, symptom interactions, treatments, and onward referrals. Most reported extensive clinical experience and greater use of outcome measures to assess physical function than psychological symptoms. Whilst altered physical function was often reported to be recognised before psychological symptoms, a direct link between the two was widely acknowledged, notably including symptoms of anxiety and depression. Barriers to onward referrals for psychological symptoms were commonly reported. Conclusions: UK-based physiotherapists recognise a relationship between physical function and psychological symptoms in Parkinson's. However, psychological symptoms are under-assessed in clinical practice, and barriers to onward referral exist. Efforts should be made to improve assessment of psychological symptoms by physiotherapists and address barriers to onward referrals. Enhancing physiotherapists assessment of psychological symptoms and overcoming barriers to onward referrals is essential to provide comprehensive care for PwP.

Summary Box

- *First study exploring physiotherapist practice and perspective on the interaction between physical function and psychological symptoms for people with Parkinson's.*
- *Understanding on the role of physiotherapists in identifying and initiating onward referrals for psychological symptoms identified.*
- *Despite 92% of physiotherapists reporting a perceived relationship between physical function and psychological symptoms in PD, 64% report barriers to onward referrals aimed at addressing psychological symptoms.*
- *The most common measure of physical function reportedly used within clinical practice was the Timed-Up-and-Go, with the most common psychological outcome being the Hospital Anxiety and Depression Scale.*

Keywords: Parkinson's disease, neurodegenerative diseases, symptom interaction, mental health, physiotherapy, survey

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Introduction

Parkinson's disease (PD) is a complex neurodegenerative disorder characterised by a wide range of motor and non-motor symptoms.[1] In addition to the well-recognised motor symptoms such as tremor, rigidity, and bradykinesia, PD can significantly impact an individual's mental health and wellbeing.[2] People with Parkinson's (PwP) present with higher incidences of mental health problems compared to the general population, with up to 40% experiencing depression[3] or anxiety[4], contrary to the 17% experienced in the general population.[5]

Evidence shows that PwP feel that anxiety may amplify their motor symptoms[6-7], including increasing the incidences of freezing of gait.[8] Several studies suggested that as anxiety increases, so does the severity of motor symptoms as assessed by the Unified Parkinson's Disease Rating Scale (UPDRS)[9-12], however this relationship is yet to be confirmed in more specific measures of physical function such as balance and mobility, or considering other psychological symptoms associated with PD.[13-14]

From our survey of PwP and carers[15], we found that responders were likely to perceive a bi-directional interaction between physical and psychological symptoms, with this largely influenced by an individual's previous experiences. Physiotherapists, with their frequent and direct contact with PD patients, are well-positioned to assess both physical function and psychological symptoms and comment on their perceived relationship between them. However, the perspectives of physiotherapists, who play a crucial role in the management of PD, have not been extensively explored.

Although NICE guidelines for other neurological conditions (e.g. Multiple Sclerosis) provide specific recommendations for regular cognitive, emotional, or mental health screening[16-17] this is not the case for PD.[18] Specifically, there is reference to generic guidance for adults with chronic problems and that access to allied health professionals should be involved (e.g. physiotherapists). However, physiotherapists not only are lacking training in recognising and assessing these symptoms[19-21], but report reduced confidence and are uncertain regarding their boundaries of their profession's scope when dealing with mental health problems.[22-26]

Despite the inclusion of various clinical assessment tools within the European Physiotherapy Guideline for Parkinson's Disease[27], there is a noticeable absence of recommendations regarding the inclusion of

measures to assess psychological symptoms or guidance for the use of self-report instruments within these guidelines. Self-report tools can empower patients by allowing them to express their experiences and perceptions regarding their symptoms and overall health status.[28] Furthermore, incorporating psychological assessments as part of a biopsychosocial model[29] recognises the complex interplay between biological, psychological, and social factors in understanding a patient's overall health. By evaluating psychological aspects, such as mood, cognition, and social support, alongside motor symptoms and/or physical function, clinicians may develop more comprehensive treatment plans that address the full spectrum of challenges faced by PwP. To our knowledge, no studies have considered how these guidelines are implemented within clinical physiotherapy practice, and current practices related to awareness and assessment of psychological symptoms.

This study aimed to examine whether UK-based physiotherapists perceive an interaction between physical function and psychological symptoms in PD patients. Objectives included the investigation the outcome measures commonly used to assess physical function and psychological presentation, treatments considered beneficial, and any barriers to onward referrals following the identification of psychological symptoms.

Methods

Study Design

An online cross-sectional survey was administered using Qualtrics (https://www.qualtrics.com). Proposed guidelines for reporting results of e-surveys[30] were followed to address accepted concerns about the representativeness and validity of web-based surveys (Appendix 1). Ethical approval was gained by the School of Science, Technology and Health Research Ethics Committee at York St John University (ETH2223-0030). Responses were collected from May 2023 to May 2024.

Survey Design and Development

The survey was informed by a systematic review[31] and a patient and public involvement group organised via Parkinson's UK and led by the first author. The survey was pilot tested by a group of physiotherapists working with PwP to assess face and content validity. Subsequent changes included collecting information about percentage of an individual's clinical caseload that involved PD and requesting further details

regarding barriers to onward referrals for psychological input. The survey was designed to take approximately 20 minutes to complete.

The anonymous survey comprised of five sections: 1) demographics (e.g. respondents' work setting, work experience by years working with PwP, percentage of caseload relating to PD, and previous mental health workplace experience); 2) questions exploring assessments routinely used within clinical practice for PwP; 3) perspectives on the relationship between physical function and psychological symptoms in PD; 4) views regarding onward referrals following the identification of psychological symptoms; and 5) treatments perceived to be beneficial for physical function and psychological symptoms (Appendix 2).

Sample and Recruitment

The target population was physiotherapists working across all specialisms in the UK. Recruitment was not limited to neurological services due to the potential for PwP to access a range of physiotherapy services.[32] Respondents were recruited using convenience and purposive sampling followed on with snowballing. To ensure that the survey reached the target population, it was shared via the digital channels of the Parkinson's Excellence Network Exercise Hub, a network of clinicians that work with PwP, and promoted via social media (X). Promotion to clinicians working with PwP (Appendices 3 and 4) was also disseminated via the Chartered Society of Physiotherapy Professional Networks for Physiotherapists working with Older People (AGILE) and Mental Health (CPMH). Further promotion was completed via Parkinson's UK Research Interest groups, iCSP forums, and within a presentation at the CSP Conference in 2023.[33]

To access the survey, respondents used the link provided to access a webpage providing an overview of the survey. Respondents were informed that their responses were anonymous, and Qualtrics settings were used to ensure that respondents only completed the survey once from the same device. Prior to starting the survey, respondents were required to click a box to confirm that they met the eligibility criteria and consented to completing the survey. The Participant Information Sheet was available to be downloaded as a PDF (Appendix 5).

Data Analysis

Descriptive statistics are presented as mean and standard deviation. Likert-type questions were treated as ordinal data, and responses are presented as n (%). Since all respondents were UK-based physiotherapists, all responses were treated as a single group (n = 125). Data were analysed using Microsoft Excel (Version 2308).

Results

Respondent Characteristics

From the 154 responses received, 125 were completed in full (completion rate of 81.2%) and were included in our analysis. Partially completed responses were excluded from our analysis. Respondent characteristics are presented in Table 1.

Outcome Measures Used

Respondents were asked to identify which measures of physical function and psychological symptoms they commonly used within clinical practice. A pre-populated list for both categories was provided in which respondents were able to select as many responses as were relevant to their own practice. In addition to the pre-populated lists, respondents were able to add up to five additional 'other' outcome measures to assess physical function and psychological symptom categories using free-text fields.

The average number of measures of physical function reported by physiotherapists was 3.94 (SD = 2.28). Overall, the three most common measures of physical function reported to be used regularly within clinical practice when assessing PwP were: 1) Timed-Up-and-Go (TUG)[34] (83.2%), 2) Berg Balance Scale (BBS)[35] (70.4%), and 3) 10 metre timed walk[36] (33.6%). Outcomes reported as 'other' included: Tragus to wall test[37], Tinetti Balance Test[38], and Grip strength.[39]

Table 1. Respondent demographics

Demographic Item		Physiotherapist Responses	
		n	%
Total Respondents		125	n/a
Age			
	18-29	28	*22.4%*
	30-39	41	*32.8%*
	40-49	21	*16.8%*
	50-59	27	*21.6%*
	60-69	8	*6.4%*
	70 or older	0	*0.0%*
Gender			
	Male	23	*18.4%*
	Female	102	*81.6%*
	Other	0	*0.0%*
Ethnicity			
	White: English/Welsh/Scottish/Northern Irish/British	111	*88.8%*
	White: Irish	3	*2.4%*
	White: Any other White background	3	*2.4%*
	Asian or Asian British: Indian	3	*2.4%*
	Black or Black British: African	1	*0.8%*
	Black or Black British: Caribbean	1	*0.8%*
	Mixed: White and Black Caribbean	1	*0.8%*
	Mixed: White and Black African	1	*0.8%*
	Arab	1	*0.8%*
	Other	0	*0.0%*
Workplace			
	Emergency Care	2	*1.6%*
	Inpatient (Acute)	27	*21.6%*
	Inpatient (Rehabilitation)	9	*7.2%*
	Outpatient	35	*28.0%*
	Community	45	*36.0%*
	Primary Care	1	*0.8%*
	Non-Clinical	1	*0.8%*
	Other	5	*4.0%*
Specialism			
	Cardiorespiratory	6	*4.8%*
	Domiciliary Services	12	*9.6%*
	Frailty Services	15	*12.0%*
	Learning Disabilities	1	*0.8%*
	Mental Health	12	*9.6%*
	Musculoskeletal Services	10	*8.0%*
	Neurology	45	*36.0%*
	Occupational Health	0	*0.0%*
	Oncology and Palliative Care	0	*0.0%*
	Paediatrics	0	*0.0%*
	Pelvic Obstetric or Gynaecological Services	2	*1.6%*
	Trauma and Orthopaedics	2	*1.6%*
	Rheumatology	1	*0.8%*
	Vascular Care	0	*0.0%*
	Research	1	*0.8%*
	Prefer not to say	0	*0.0%*
	Other	18	*14.4%*
Years post-qualification working with Parkinson's			
	Less than 1 year	10	*8.0%*
	1 - 3 years	13	*10.4%*
	3 - 5 years	10	*8.0%*
	5 - 10 years	31	*24.8%*
	10 - 20 years	35	*28.0%*
	20 - 30 years	19	*15.2%*
	Over 30 years	6	*4.8%*
	Prefer not to say	1	*0.8%*
Percentage of caseload working with Parkinson's			
	Mean (SD)	28.41 (24.59)	
	Range	0 – 100	
Previous training/experience working with individuals with mental health conditions?			
	Yes	71	*56.8%*
	No	54	*43.2%*
Number of years working in mental health (if applicable)			
	Less than 1 year	9	*13.0%*
	1 - 3 years	8	*11.6%*
	3 - 5 years	16	*23.2%*
	5 - 10 years	15	*21.7%*
	10 - 20 years	13	*18.8%*
	20 - 30 years	6	*8.7%*
	Over 30 years	2	*2.9%*
	Prefer not to say	0	*0.0%*

The average number of psychological outcomes reported by physiotherapists was 1.42 (SD = 1.27). The three most common psychological outcome measures reported to be used regularly within clinical practice when assessing PwP were the: 1) Hospital Anxiety and Depression Scale (HADS)[40] (28.0%), 2) EQ-5D[41] (21.6%), and 3) Parkinson's Disease Questionnaire (PDQ-39)[42] (20.0%). Other reported outcomes included: TOMS[43] and Self-assessment Parkinson's Disease Disability Scale.[44] Measures of physical function and psychological symptoms used in clinical practice are presented in Table 2.

Table 2. Outcomes used within clinical practice

Physical Function	Physiotherapist Responses		Psychological Symptoms	Physiotherapist Responses	
	N	%		N	%
Timed-Up-and-Go (TUG)	104	*83.20%*	Hospital Anxiety and Depression Scale (HADS)	35	*28.00%*
Berg Balance Scale (BBS)	88	*70.40%*	EQ5D	27	*21.60%*
10 metre timed walk	42	*33.60%*	The Parkinson's Disease Questionnaire (PDQ-39)	25	*20.00%*
Five times sit-to-stand (FTSTS)	40	*32.00%*	Patient Health Questionnaire (PHQ-9)	15	*12.00%*
Lindop Parkinson's Physiotherapy Assessment Scale (LPAS)	37	*29.60%*	Geriatric Depression Scale (GDS)	14	*11.20%*
The Parkinson's Disease Questionnaire (PDQ-39)	26	*20.80%*	Generalised Anxiety Disorder Assessment (GAD-7)	11	*8.80%*
Mini-BESTest	21	*16.80%*	Non motor symptoms questionnaire (NMSQ)	10	*8.00%*
6-minute timed walk	19	*15.20%*	MDS Unified Parkinson's Disease Rating Scale (MDS-UPDRS)	7	*5.60%*
Functional Gait Assessment (FGA)	18	*14.40%*	Beck Depression Inventory-II (BDI-II)	3	*2.40%*
Dynamic Gait Index (DGI)	12	*9.60%*	PIMS (Parkinson's Impact Scale)	3	*2.40%*
Push and Release	10	*8.00%*	Parkinson's Anxiety Scale (PAS)	2	*1.60%*
Rapid Turns	7	*5.60%*	Hamilton Depression Rating Scale (HAM-D)	1	*0.80%*
MDS Unified Parkinson's Disease Rating Scale (MDS-UPDRS)	6	*4.80%*	Impulsive and compulsive behaviour in Parkinson's: monitoring and information tool	0	*0.00%*
Modified Parkinson's Assessment Scale (MPAS)	4	*3.20%*	Beck Anxiety Inventory (BAI)	0	*0.00%*
Modified Bradykinesia Rating Scale (MBRS)	2	*1.60%*	State Trait Anxiety Inventory (STAI)	0	*0.00%*
Other	57	*45.60%*	Other	24	*19.20%*
Total	***493***		**Total**	***177***	

Symptoms and Interactions

Most physiotherapists completing the survey reported first recognising altered physical function in PwP (73.6%). A further 20.0% reported this concurrently with the development of psychological symptoms, with 4.8% reporting psychological symptoms first, and 4.0% being unsure. Despite this, 92.0% reported perceiving a relationship between physical function and psychological symptoms to exist. Depression

(82.4%), anxiety (73.6%), and apathy (47.2%) were perceived as the most likely psychological symptoms to change in response altered physical function, and this relationship was recognised throughout all stages of PD.

Of the physiotherapists who completed this survey, 98.4% 'Strongly Agree' or 'Agree' that PwP and their caregivers should consider physical function and psychological symptoms together, while 96.8% expressed the same opinion regarding healthcare professionals. The rate of assessment of psychological symptoms by physiotherapists is 35.9% of the reported use of outcomes to assess physical function. Table 3 shows details of physiotherapist reported perceived symptom interactions.

Table 3. Symptoms and interactions

Symptoms and Interactions		Physiotherapist Responses (n=125)	
Physical or psychological symptoms first			
	Physical	92	*73.6%*
	Psychological	6	*4.8%*
	Both together	25	*20.0%*
	Prefer not to say	0	*0.0%*
	Unsure	5	*4.0%*
Relationship between physical and psychological symptoms			
	Yes	115	*92.0%*
	No	0	*0.0%*
	Unsure	10	*8.0%*
	Prefer not to say	0	*0.0%*
Stage(s) relationship evident			
	Pre-diagnosis	44	*35.2%*
	Early stages	83	*66.4%*
	Mid-stage	81	*64.8%*
	Late-stage	73	*58.4%*
	End of life	32	*25.6%*
	Dementia	36	*28.8%*
	Other	9	*7.2%*
	Prefer not to say	0	*0.0%*
Psychological symptoms changing most in response to physical symptoms			
	Depression	103	*82.4%*
	Anxiety	92	*73.6%*
	Hallucinations	29	*23.2%*
	Delusions	9	*7.2%*
	Apathy	59	*47.2%*
	Impulsivity or compulsive behaviours	31	*24.8%*
	Memory problems	61	*48.8%*
	Dementia	30	*24.0%*
	Other	6	*4.8%*
	Prefer not to say	0	*0.0%*
To what extent should physical/psychological symptoms be considered together by PwP/carers			
	Strongly Agree	107	*85.6%*
	Agree	16	*12.8%*
	Neither agree nor disagree	2	*1.6%*
	Disagree	0	*0.0%*
	Strongly Disagree	0	*0.0%*
To what extent do you feel physical/psychological symptoms should be considered together by healthcare professionals			
	Strongly Agree	107	*85.6%*
	Agree	14	*11.2%*
	Neither agree nor disagree	3	*2.4%*
	Disagree	0	*0.0%*
	Strongly Disagree	0	*0.0%*

Onward Referrals

Although the most common referrals were made to support groups (82.4%), Psychology (79.2%) and GP services (65.6%), 64.0% of the respondents' identified barriers in doing so. Commonly noted barriers included waiting times to access services, patient willingness to accept referrals, lack of availability and awareness of services, criteria to access services, and an unwillingness of some services to accept referrals from physiotherapist directly. Table 4 shows details of onward referrals reported to be made by physiotherapists following the identification of psychological symptoms.

Table 4. Onward Referrals/Signposting

Onward Referrals/Signposting	Physiotherapist Responses (n=125)	
Onward referrals/signposting to address psychological symptoms		
Occupational Therapy	60	*48.0%*
Speech and Language Therapy	23	*18.4%*
Other physiotherapy colleague(s)	22	*17.6%*
Psychology	99	*79.2%*
General Practitioner	82	*65.6%*
Neurologist	70	*56.0%*
Exercise Groups	66	*52.8%*
Charities	61	*48.8%*
Support Groups	103	*82.4%*
Friends/Family	50	*40.0%*
None	0	*0.0%*
Unsure	2	*1.6%*
Prefer not to say	0	*0.0%*
Other	18	*14.4%*
Barriers to onward referrals aimed at addressing psychological symptoms		
Yes	80	*64.0%*
No	26	*20.8%*
Don't Know	18	*14.4%*
Prefer not to say	1	*0.8%*

Treatments

To improve physical function, physiotherapist respondents identified the three most effective treatments as exercise (99.2%), physiotherapy (98.4%), and medication (95.2%). For psychological symptoms the three identified treatments by physiotherapy respondents were exercise (92.8%), psychology (86.4%) and mindfulness (84.8%).

Exercise is commonly cited as being beneficial for both physical functioning and psychological symptoms[45-49], and is of major importance given the high reported incidence and impact of physical function and psychological symptoms on function and quality of life.[31,50-51]

Table 5 displays details of treatments perceived by physiotherapists to be beneficial for physical function and or psychological symptoms.

Table 5. Treatments

Treatments	Physiotherapist Responses (n=125)	
Beneficial Treatments for Physical Function:		
Medication	119	*95.2%*
Exercise	124	*99.2%*
Mindfulness	76	*60.8%*
Physiotherapy	123	*98.4%*
Occupational Therapy	104	*83.2%*
Speech and Language Therapy	81	*64.8%*
Psychology	64	*51.2%*
Psychotherapy	35	*28.0%*
Counselling	56	*44.8%*
Complementary Therapies	52	*41.6%*
Not applicable	0	*0.0%*
Other	4	*3.2%*
Beneficial Treatments for Psychological Symptoms:		
Medication	102	*81.6%*
Exercise	116	*92.8%*
Mindfulness	106	*84.8%*
Physiotherapy	89	*71.2%*
Occupational Therapy	87	*69.6%*
Speech and Language Therapy	65	*52.0%*
Psychology	108	*86.4%*
Psychotherapy	73	*58.4%*
Counselling	101	*80.8%*
Complementary Therapies	78	*62.4%*
Not applicable	0	*0.0%*
Other	5	*4.0%*

Discussion

This online survey aimed to examine whether UK-based physiotherapists perceive an interaction between physical function and psychological symptoms. Respondents generally appear to perceive an interaction between physical function and psychological symptoms in Parkinson's and are well-placed to also identify psychological symptoms. Despite this, there is a lack of assessment for psychological symptoms in physiotherapists clinical practice, and there are obstacles to making further referrals when problems are recognised.

Using standardised, validated outcome measures is an explicit requirement of the CSP's Quality Assurance Standards.[52] In 2011, the National Parkinson's Audit[53-54] identified the Berg Balance Scale, Timed-Up-and-Go (TUG), and 10-minute timed walk to be the most common outcome measures used in physiotherapy. Our results also support such findings. Specifically, outcomes reported in our survey tended to focus predominantly on clinician-assessed measures of gait and balance alongside measures of Parkinson's

specific symptoms and patient reported outcomes. Interestingly the MDS-UPDRS was reportedly used by only 4.8% of physiotherapists (n=6), indicating that its use within clinical physiotherapy settings is limited. This may be due to factors such as its long completion time (30 minutes)[55], and the broad range of symptoms assessed.[56] Therefore, physiotherapists may perceive it to be as not clinically relevant.

Although the National Parkinson's Audit[53-54] did not distinguish between physical and psychological outcomes, the results demonstrate a clear focus on the assessment of physical function. Our survey was not only an update of the above audit, but it was also able to capture the specific use of measures to assess physical function and psychological symptoms by physiotherapists working with PwP. UK physiotherapists reported using outcome measures to assess physical function 2.8 times more than psychological measures, indicating a missed opportunity to identify psychological symptoms and initiate onward referrals to help with addressing these symptoms. This imbalance in care suggests that physiotherapists treating PwP may prioritise physical rehabilitation over holistic approaches, neglecting the significant psychological distress often experienced. Previous research indicates that physiotherapists are typically poor at identifying psychosocial factors[57], in conflict with the biopsychosocial model of care.[29] McGrath et al.[58] highlighted that while physiotherapists recognise the importance of assessing psychological symptoms in their patients, there is a significant need for clearer guidance and structured approaches to effectively identify and manage psychological distress, particularly as many physiotherapists feel uncertain about their role in this area.

From the responses received, physiotherapists appear to rely on clinician-assessed measures to evaluate physical function, which offer limited insight into an individual's perceived functional ability in comparison to combining with self-reported measures.[59] Previous research has suggested that that while clinician assessments of physical function correlated well with performance measures, patient self-reports were more strongly associated with psychological and social factors, such as fear of falling and depression, highlighting the complementary value of both approaches for a comprehensive understanding of physical function.[60]

The European Physiotherapy Guideline for Parkinson's Disease prioritises the use of clinician-assessed measures, with the majority of recommended outcome measures not considering patient self-reported function, and no guidance related to the assessment of psychological symptoms.[27] The inclusion of patient-reported measures is justified by evidence not only in PwP[61], but also stroke patients[62], in which discrepancies between clinician versus patient-reported measures were identified and linked to the presence

of psychological symptoms. This research highlights the mind-body connection[63], suggesting that integrating physical and psychological assessments in physiotherapy can enhance practice across various conditions. Addressing psychological outcomes may improve symptom identification and onward referrals across diverse therapeutic settings.

Notably, the majority of our UK-based physiotherapist respondents recognised the potential interaction between physical function and psychological symptoms at all stages of PD. To our knowledge, this is the first study to examine this, and builds upon our previous work with PwP and carers.[15] Considering the reported high prevalence of psychological symptoms in PD[3-4,64], it is reasonable to expect symptoms such as depression, anxiety, and apathy to fluctuate in response to changes in physical functioning. Indeed, we found this expectation was shared by respondents, who reported that from their perspective, depression (82.4%), anxiety (73.6%) and apathy (47.2%) were the most likely psychological symptoms to change in relation to physical function. One explanation for this may be that such psychological symptoms may alter when there are changes in an individual's quality of life and disability. Previous research suggests psychological symptoms worsen as a result of life challenges including loss of independence and changes in social roles, with individuals withdrawing from activities they once enjoyed.[65-66]

Although our findings suggest that physiotherapists recognise the importance of assessing physical function and psychological symptoms together this does not appear to translate into routine clinical practice. Previous work in this area suggests that non-motor symptoms of Parkinson's, including psychological symptoms, are given less attention by clinicians irrespective of the fact that such neglect may substantially increase the cost of care.[67] This may be due to a lack of awareness of the importance of psychological symptoms, confidence in assessing, and confusion around individual responsibilities by clinicians, and/or a result of time pressures within clinical services.[68]

We found that our respondent physiotherapists reported making referrals to onward services to address the psychological symptoms they identified and therefore showed some awareness of such onward referral options. Despite this awareness, 64% reported barriers when making those onwards referrals whereas only 21% reported no barriers at all, with the remainder unsure or preferring not to say. The most common reported barriers included waiting times for accessing services, patient unwillingness to be referred, lack of availability and awareness of local services, criteria to access services, and an unwillingness of services to

accept referrals from physiotherapist directly. Such barriers have been documented in previous research[69-71] NICE guidelines for PwP simply refer to existing generic guidelines on depression in adults with chronic health problems recommending access to allied health professionals (e.g., physiotherapists, PD nurse specialist)[18], rather than offering specific guidance may contribute to these barriers. This is a contrast to other neurological conditions such as Multiple Sclerosis, where guidelines include specific recommendations for regular cognitive, emotional or mental health screening.[16-17]

Our respondents identified exercise, physiotherapy, and medication as the most effective treatments to improve physical function, while psychology, mindfulness, and exercise were seen as the most helpful for psychological symptoms. Research supports these views, showing that regular physical activity improves physical function, quality of life, and mental health in PwP.[72-73] Physiotherapy complements exercise by targeting balance and mobility, reducing the risk of falls and promoting independence.[74] Medication, particularly levodopa, is essential for managing key motor symptoms like tremors, stiffness, and slow movement.[75] For psychological symptoms, Cognitive Behavioural Therapy (CBT) has been proven to reduce anxiety and depression by improving coping skills and emotional resilience.[76] Mindfulness practices help alleviate stress and improve emotional regulation.[66] Additionally, exercise benefits both body and mind by lowering depression and anxiety rates, boosting mood, and enhancing cognitive function in PwP.[77]

Given that many physiotherapy interventions focus predominantly on movement and exercise, it is reasonable to expect these to impact on an individual's psychological presentation as well as physical functioning[78], reinforced by views from PwP and carers who report exercise to be one of the most effective treatments for both physical and psychological symptoms.[15] Our recent systematic review[31] highlighted that within many clinical research studies, information relating to both physical function and psychological symptoms is commonly collected together, but is under-utilised from a research perspective. To this end, routine assessment within clinical practice has the potential to allow the monitoring of psychological symptoms to initiate (or retract) onward referrals made to address psychological symptoms. Involving physiotherapists in this process may help to identify psychological symptoms, reduce unnecessary costs and onward referrals, improve patient wellbeing, and promote exercise as an evidence-based treatment for mental health issues in PwP.

Strengths and Limitations

Whilst efforts were made to minimise limitations, these should be acknowledged. Firstly, our findings may not be generalisable outside of the UK or transferrable to other professional groups. Secondly, participants completing the online survey may have self-selected based on their interest in the topic, which could result in a sample that is not fully representative of the broader population and may influence the findings. Thirdly, it was not possible to collate information about the reported frequency of outcome measures used and onward referrals made within practice, which impacts on our ability to make inferences regarding the ease of assessing treatment efficacy.

To our knowledge, this is the first study to explore the perspectives of UK-based physiotherapists, which provides a direct account of how these issues are viewed by providers of clinical care. Given the immense variety of clinical settings covered by physiotherapists in the UK, this research provides an insight not previously available and offers a platform for further investigation.

Recommendations

The integration of psychological assessment into clinical physiotherapy practice has the potential to improve patient care. We recommend the development of clinical pathways that include opportunities for symptom screening and onward referrals for psychological support. Physiotherapists, as integral members of multidisciplinary clinical teams, are well-positioned to participate in these pathways; however, they require clear guidance on assessing psychological symptoms. We also recommend that physiotherapists utilise both therapist-assessed and self-reported measures of physical function, as any discrepancies between these assessments may indicate the need to evaluate psychological symptoms. Given the potential lack of awareness regarding the importance of psychological symptoms, as well as clinicians' confidence in their assessment abilities and confusion about individual responsibilities, exacerbated by time pressures within clinical services, it is essential to address the disconnect between clinician perceptions and actual practice.[68] Therefore, we advocate for updated guidelines that provide explicit recommendations regarding the roles of clinicians, particularly physiotherapists, in identifying, referring, and/or treating psychological symptoms.

Conclusion

The findings from this research highlight the need for a more integrated approach to physiotherapy in managing PD, particularly regarding the interplay between physical function and psychological symptoms. Our survey results indicate a recognition among UK-based physiotherapists of the interaction between these symptom groups, yet there remains a substantial gap in clinical physiotherapy practice where psychological assessments are concerned. Despite an awareness of the psychological challenges faced by patients, barriers such as referral difficulties and a lack of specific guidelines hinder effective intervention.

To enhance patient care, we recommend that physiotherapists adopt a dual assessment strategy that includes both clinician-assessed and self-reported measures of physical function and psychological symptoms. This approach aligns with emerging evidence on the mind-body connection and promotes a holistic understanding of patient needs. We advocate for updated clinical guidelines alongside improved education and training opportunities to provide clear directives on the role of physiotherapists in identifying and addressing psychological symptoms. By addressing these gaps and developing existing care pathways, we can improve patient outcomes, facilitate timely referrals to mental health services, and ultimately enhance the quality of life for individuals living with PD. This research serves as a step toward advocating for necessary changes in clinical practice and policy to better support both the physical and mental health of patients.

Ethical Approval

The protocol for this study received local ethics approval from the School of Science, Technology and Health Research Ethics Committee at York St John University on 10/05/2023 (Ethics reference: ETH2223-0030).

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Equity, Diversity, and Inclusion Statement

We are committed to ensuring equality, diversity, and inclusion in this research. This commitment was applied throughout the research process as follows:

Research Team: The research team reflects a diversity of backgrounds, including professional experience, race/ethnicity and gender.

Study Population: This study utilised an existing dataset. We acknowledge that the original data collection may have had its own limitations regarding the representation of diverse populations. However, for the purposes of this analysis, we included all available data without exclusion based on age, gender, ethnicity, socioeconomic status, or geographic location. This approach ensured that the analysis was as inclusive as possible, given the constraints of the dataset.

Research Methodology: The research methodology involved the analysis of an existing dataset. The original data collection methods may have influenced the data available for analysis. We employed rigorous statistical methods to ensure the data was analysed objectively and without introducing bias.

Analysis and Interpretation of Results: Any limitations in the generalisability of our findings due to potential underrepresentation in the original data are acknowledged and discussed within the manuscript. We interpreted the results in the context of existing literature, paying particular attention to how the findings may differentially impact various populations.

We believe that this work contributes to a more equitable understanding of this topic by analysing the data in an inclusive manner, and we acknowledge the limitations of the original data collection process.

Declaration of Competing Interest

None declared.

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APPENDICES

Supplementary Material

Supplemental material associated with this article will be made available here.

- Appendix 1 - CHERRIES guidelines
- Appendix 2 – Survey questions
- Appendix 3 – Promotional flyer
- Appendix 4 – Promotional email
- Appendix 5 – Participant information sheet

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Validation of the Jefferson Scale of Physician Empathy in Health Science Students at Universidad Andrés Bello, Concepción-Talcahuano

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ORIGINAL

Validation of the Jefferson Scale of Physician Empathy in Health Science Students at Universidad Andrés Bello, Concepción-Talcahuano

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Abstract: Prior to the development of the Jefferson Scale of Physician Empathy (JSPE), no psychometric instrument had been specifically designed to assess empathy within the context of patient care. Although some tools existed to measure empathy in the general population, they lacked content specificity and contextual relevance for the healthcare framework. Despite being previously applied in Chile, the JSPE has not been validated for use among non-medical healthcare students, rendering the results obtained through such applications potentially unreliable. **Objectives:** To validate the Jefferson Scale of Physician Empathy (Health Professions Student version, HPS) among non-medical health science students at Universidad Andrés Bello. **Materials and Methods:** A cross-sectional study was conducted, using a stratified random sample of 212 students. Factorial analyses and statistical tests were applied, including the Kaiser-Meyer-Olkin (KMO) measure, Bartlett's test of sphericity, ordinal alpha coefficient, and non-parametric tests (Wilcoxon-Mann-Whitney and Kruskal-Wallis). **Results:** The results demonstrated strong validity and internal consistency of the JSPE-HPS. Exploratory factor analysis identified three principal components. A general trend of declining empathy levels was observed as students progressed through their academic programs. No statistically significant differences in overall empathy scores were found between male and female students. **Conclusions:** The JSPE-HPS is a valid and reliable instrument for measuring empathy among non-medical health science students in Chile. Its validation constitutes a significant contribution, as it enables the targeted assessment of a core competency in the clinical-patient relationship, thereby supporting improvements in higher education training within the health sector.

Summary Box

- *This study validates the Jefferson Scale of Physician Empathy (Health Professions Student version, HPS) among non-medical health science students in Chile, confirming its reliability and contextual relevance. Three core dimensions of empathy were identified: perspective-taking, compassionate care, and the ability to step into the patient's shoes.*
- *Validating this scale enables accurate assessment of empathy, supporting the development of targeted educational strategies for enhancing this particular competency. Given the observed decline in empathy throughout academic training, its integration into curricula is essential. Strengthening empathy in health education may positively influence the quality of care and the clinician-patient relationship.*

Keywords: empathy, medical education, validity, reliability, clinician-patient relationship.

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Introduction

Empathy is commonly defined as the ability to understand another individual's experiences by seeing the world from their perspective[1]—whether expressed verbally (e.g., "I can see you're feeling unwell") or non-verbally (e.g., through facial expressions that match the patient's condition). Empathy is a critical component of the relationship between healthcare professionals and patients. Despite widespread acknowledgement of its importance, empathy remains an underexplored area in health education.[2]

From a practical perspective, empathy warrants greater emphasis on job performance, interpersonal communication, and teamwork. This is especially relevant in the context of health professionals who, in addition to acquiring theoretical knowledge and technical skills within their discipline, must also demonstrate a sufficient degree of empathy to understand their patients. Consequently, health science students should develop this cognitive and emotional competence as part of both theoretical and practical training.[3] The cultivation of empathy should therefore be recognized as an essential element within the curriculum for healthcare providers.

Research in this field has shown that the presence of empathy in healthcare professionals improves patient satisfaction[4], enhances diagnostic and treatment capabilities[5], and even reduces patient stress levels.[6] The clinical-patient interaction involves a complex set of skills; it is common for health science students to observe their instructors and gather around the patient's examination table to learn practical techniques such as patient interviewing, physical examination, and case analysis.[7]

This highlights the importance of investigating empathy further-- examining how it evolves throughout professional training, and how it may relate to other health disciplines. Such inquiry can help to identify the factors that foster empathy and guide the creation of strategies to promote its development. Various experts have argued that technological advancements in patient care have shifted focus away from the individual experiencing illness, reducing them to a pathology or damaged organ or system. On this note, empathy—along with active listening and meaningful dialogue—has been marginalized.[8] A vital element of humanitarian healthcare is the process of subjective interconnection between patient and physician, in which empathy serves as the essential facilitator.[9] According to Oseguera Rodríguez[10], the most significant qualities that promote humanism in patient care are affection, support, respect, and solidarity.

Perales[11] argues that the global call to emphasize ethical and humanistic dimensions in 21st-century medical education is based not only on repeated observations of inappropriate professional behaviors among practicing clinicians but also on persistent inequities within healthcare systems, where patients' rights are frequently violated. Consequently, medical education aspires to achieve three core outcomes: a) cognitive development —transmitting the knowledge of how, when, and why to perform medical procedures; b) technical skills—teaching students how to perform them correctly; and c) professional attitudes and behaviors—fostering appropriate contact in clinical practice. However, when it comes to attitudes and professional behaviors, more than instructor modeling is required: time, space, and suitable conditions are essential for forming a specific emotional connection between teacher and student.[12] Without this foundational condition, the potential for instructors to model professional behavior becomes uncertain.

Empathy is an essential competency expected from the earliest stages of healthcare professional training. These individuals play a crucial role in the health–illness process, affecting not only patient and family outcomes but also the overall cost-efficiency of healthcare systems. However, the teaching-learning process continues to be inconsistent from a humanistic standpoint, with the biomedical model still prioritized over integrated humanistic approaches in professional practice.[13]

Several studies conducted in Chile have explored empathetic behavior using the Jefferson Scale among physical therapy students: at the University of Chile in Santiago[14]; Universidad de las Americas in Concepción[15] and Santiago[16]; Universidad Mayor in Temuco[17]; Universidad de Magallanes in Punta Arenas[18]; among physical therapy faculty at the University of Chile[19]; and throughout medical students at Universidad del Desarrollo in Santiago[20], fifth-year medical students at the University of Chile in Santiago[21]; dental students at Universidad de Concepción in Concepción[22-23]; Universidad San Sebastián in Concepción[24]; Universidad Finis Terrae in Santiago[25]; Universidad Andrés Bello[26]; and nursing students at Universidad Mayor in Temuco.[27]

Although some linguistic adaptations of the empathy scale have been proposed at a national level, these have not been applied to sufficiently representative samples to permit rigorous psychometric analysis. Furthermore, the scale has not yet been validated for non-medical health science students, making existing results less reliable or valid for proper interpretation. In response to this gap and given the lack of a culturally adapted and validated instrument to measure empathy in non-medical health science students,

this study undertook the cultural adaptation and psychometric validation of the Jefferson Scale of Physician Empathy (HPS version) in a sample of health science students at Universidad Andrés Bello, Concepción-Talcahuano campus, Chile.

Materials and Methods

Study Type and Design:

This study employed a cross-sectional, observational design with an exploratory-descriptive scope, aiming to identify and analyze characteristics of the participants through various variables.

Population and Sampling:

The target population comprised students from non-medical health science programs at Universidad Andrés Bello, Concepción-Talcahuano campus, Chile. Based on methodological guidelines, a minimum sample size of 200 participants was required to ensure a maximum allowable error margin of 7% in proportion estimates.[28] A stratified proportional probability sampling method was used, based on eligibility criteria, with a 95% confidence level and a 6% margin of error. The final sample consisted of at least 209 students across the first to five years of the Kinesiology, Speech Therapy, Occupational Therapy, and Nutrition and Dietetics programs, who met the inclusion criteria.

Inclusion Criteria:

- Enrollment at Universidad Andrés Bello, Concepción campus
- Affiliation with one of the following programs: Kinesiology, Speech Therapy, Occupational Therapy, or Nutrition and Dietetics
- Informed consent to participate in the study (see Appendix)
- Ability to comprehend the survey instructions

Procedure:

Several preparatory steps were conducted before scale validation. First, a back-translation of the instrument was carried out by a native English-speaking translator, following the guidelines for adapting psychological assessment instruments.[29] This ensured conceptual and linguistic equivalence between the original version and the Spanish translation.[30-31] Second, for cultural adaptation, a panel of eight expert judges[32] reviewed

the translated items as well as the operational definition of the construct, assessing the relevance and coherence of each item. Third, a pilot test of the instrument was conducted with second- and fourth-year Kinesiology students at Universidad Andrés Bello[33], to evaluate item comprehension.[28]

Following this initial process, the Jefferson Scale of Physician Empathy (HPS version) was distributed to students in the Kinesiology, Speech Therapy, Occupational Therapy, and Nutrition and Dietetics programs at Universidad Andrés Bello, Concepción-Talcahuano campus.

Instrument:

The scale consists of twenty items rated on a seven-point Likert scale. Half of them are positively worded, while the other 10 are negatively worded (items 1, 3, 6, 7, 8, 11, 12, 14, 18, and 19). For analytical clarity, negatively worded items were reverse-scored using the formula 8-x, where "x" represents the score given by the respondent. This transformation ensures all item responses reflect a positive empathy score, allowing the final mean score to directly reflect the participant's level of empathy.

Ethical Considerations:

All participants took part voluntarily, without coercion or incentives, and signed an informed consent form (Appendix). Respondents were required to answer at least sixteen out of the twenty items; otherwise, their answers were excluded from data analysis. If four or fewer items were missing, those values were replaced with the respondent's average score from completed items. Participants were anonymized using sequential numeric codes instead of personal identifiers. They were assured that their responses were confidential, individual, and used exclusively for research purposes. Participants were informed that all answers were acceptable and that there were no right or wrong responses—only different response styles, as stated in the general instructions.

Results

Descriptive Analysis:

A total of 212 students responded to the scale, representing four programs—Kinesiology, Speech Therapy, Nutrition and Dietetics, and Occupational Therapy. Of the respondents, 175 were female and 37 were male. Scores on the Jefferson Scale of Physician Empathy (JSPE) ranged from a minimum of 79 points to a maximum of 135, with a mean score of 114.55 points (Table 1).

Table 1. Descriptive results for the gender variable

Academic Year	Gender	Mean	Standard Deviation	N
1st Year	Female	115.896	11.973	58
	Male	117.153	12.422	13
	Total	**116.126**	**11.976**	**71**
2nd Year	Female	111.965	13.728	29
	Male	115.000	11.832	06
	Total	**112.485**	**13.309**	**35**
3rd Year	Female	111.400	15.316	40
	Male	114.555	10.596	09
	Total	**111.979**	**14.520**	**49**
4th Year	Female	115.031	12.688	32
	Male	118.833	12.890	06
	Total	**115.631**	**12.622**	**38**
5th Year	Female	116.500	11.905	16
	Male	119.666	13.317	3
	Total	**117.000**	**11.799**	**19**

Reliability Analysis:

Initially, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity were performed using the FACTOR ANALYSIS software to assess the adequacy of the data for factor analysis. As shown in Table 2, the determinant of the correlation matrix was 0,00002, indicating a high level of intercorrelation among variables. This was further confirmed by the significance level of Bartlett's Test of Sphericity, which was 0,0001. The KMO value exceeded 0,70, suggesting that the data matrix was suitable for factor extraction.

Table 2. KMO And Bartlett's Test Results

Determinant of the polychoric correlation matrix		.000028
Kaiser-Meyer- Olkin sample adequacy measure.		,757
Bartlett's test for sphericity	gl	190
	Sig.	.000010

Dimensionality of the 20 items was evaluated using principal component extraction with orthogonal rotation. Exploratory factor analysis identified three distinct factors, described as follows. All positively worded items with factor loadings above 0.40 loaded onto Factor 1, labeled "Perspective-Taking" (items 2, 4, 5, 9, 10, 13, 15, 16, 17, and 20). Meanwhile, seven of the ten negatively worded items (1, 7, 8, 11, 12, 14, 19) loaded onto Factor 2, labeled "Compassionate Care," with high factor loadings. Finally, Factor 3 consisted of the remaining items (3, 6, 18), corresponding to the domain "Ability to Step into the Patient's Shoes."

Although Cronbach's alpha is widely used for estimating internal consistency, it may not be appropriate when the response scale is ordinal in nature. This is the case with the JSPE, for which the appropriate correlation matrix is the polychoric correlation matrix. Therefore, reliability was assessed using ordinal alpha, following estimation of the polychoric correlation matrix. An exploratory factor analysis (EFA) was conducted on this matrix to confirm the factorial structure of the instrument, using FACTOR ANALYSIS software (Table 3).

To evaluate differences in empathy scores on the JSPE-HPS based on gender, the Wilcoxon-Mann-Whitney non-parametric test was conducted using SPSS version 20. In addition, to analyze differences across academic programs, the Kruskal-Wallis non-parametric test was applied.

Table 3. Factor Weightings for factor analysis exploratory of the Jefferson Medical Empathy Scale (HPS Version)

	Perspective taking	Compassionate care	Putting yourself in the patient's shoes
Range	1-7	1-7	1-7
Media	68,87	34,45	11,23
Standard deviation	8,19	6,08	3,58
Bias	-1,35	-1,14	0,16
Ordinal alpha	0.926	0.899	0.975
Reactive	**Factorial loading**		
1. Health care professionals' understanding of their patients' feelings and the feelings of their families do not influence treatment outcomes.	0.039	**0.364**	-0.023
2. Patients feel better when the health professional understands their feelings.	**0.783**	0.236	0.013
3. It is complex for the health professional to see things from the patients' perspective.	-0.026	0.179	**0.511**
4. Understanding body language is as important as verbal communication in the relationship between the healthcare professional and the patient.	**0.503**	0.403	0.020
5. A healthcare professional's sense of humor contributes to better clinical outcomes.	**0.734**	0.025	-0.004
6. Because people are different, it is difficult to see things from the patients' perspective.	0.073	0.019	**0.G72**
7. Paying attention to the patient's emotions is not important during the anamnesis.	0.246	**0.558**	0.008
8. Considering patients' personal experiences does not influence treatment outcomes.	0.093	**0.701**	-0.010
9. Health professionals should try to put themselves in their patients' shoes when caring for them.	**0.608**	0.172	0.055
10. Patients value the understanding of their feelings on the part of the healthcare professional, which is therapeutic in itself.	**0.621**	0.319	0.153
11. Patients' illnesses can only be cured by specific treatment; therefore, the emotional ties between healthcare professionals and their patients have no influence on treatment outcomes.	**0.288**	**0.520**	**-0.112**

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12. Asking patients about what is going on in their personal lives does not help in understanding their physical problems.	**0.295**	**0.708**	**0.030**
13. Health professionals should try to understand what is going on in their patients' minds by paying attention to nonverbal aspects and body language.	**0.576**	**0.375**	**0.140**
14. I believe that emotions have no relevance in the treatment of diseases.	**0.332**	**0.742**	**0.065**
15. Empathy is a therapeutic skill; without it, the success of the health professional is limited.	**0.586**	**0.131**	**-0.149**
16. The health professional's understanding of the emotional state of his or her patients, as well as that of their families, is an important component of the healthcare professional-patient relationship.	**0.5G8**	**0.427**	**0.131**
17. Healthcare professionals should try to think like their patients in order to provide better care.	**0.580**	**0.089**	**0.134**
18. Healthcare professionals should not allow themselves to be influenced by personal ties to their patients or their patients' families.	**0.021**	**-0.055**	**0.20G**
19. I do not enjoy reading non-medical literature or the arts.	**0.103**	**0.2G3**	**0.135**
20. I believe that empathy is an important factor in the treatment of patients.	**0.713**	**0.376**	**-0.114**

Note. Figures in bold indicate the highest factor loadings.

Discussion

The results of this study confirmed the presence of three underlying components. The first factor can be considered the primary dimension of the scale, as indicated by the highest mean score (68.87). This factor, “Perspective-Taking,” has been widely described in the literature as the core cognitive component of empathy and the “springboard” for deeper empathic engagement with others.[34] It included 10 items with factor loadings equal to or greater than 0.50. The ordinal alpha for this factor was 0.92. The second factor, “Compassionate Care,” comprised six items with loadings equal to or greater than 0.36, yielding an ordinal

alpha of 0.89. The final factor, "Ability to Step into the Patient's Shoes," included two items with loadings of 0.51 and 0.972, and demonstrated an ordinal alpha of 0.97.

These findings align with those of Hojat[35], who identified a primary factor (with loadings above 0.35) composed of ten positively worded items (Cronbach's alpha = 0.80); a second factor (loadings above 0.52) composed of six negatively worded items (Cronbach's alpha = 0.71); and a third factor (loadings of 0.77 and 0.72) made up of two items (Cronbach's alpha = 0.71). Similarly, Alcorta-Garza[2] reported a first factor with loadings above 0.30 composed of ten positively worded items, a second factor (loadings above 0.40) consisting of seven negatively worded items, and a third factor with high loadings composed of two negatively worded items.

Regarding reliability, internal consistency was assessed using ordinal alpha, which is appropriate given the ordinal nature of the scale responses.[36] Therefore, a polychoric correlation matrix was used[37], yielding an overall ordinal alpha of 0.907. Additionally, Cronbach's alpha was calculated at 0.77, falling within the acceptable range for personality measures. This value is consistent with those reported by Alcorta-Garza[2] (Cronbach's alpha = 0.74) and Hojat[34] (Cronbach's alpha = 0.80).

In terms of gender, male students had a slightly higher mean score (117.04) than female students (114.15), though the difference was not statistically significant ($p = 0.053$). This result contrasts with previous findings in which female students typically score higher than their male counterparts on empathy measures.[9–38] Some researchers suggest that women generally exhibit a more "empathic" behavioral style than men. When analyzing specific programs individually, male students in the Nutrition and Dietetics program scored significantly higher than their female peers ($p = 0.005$). However, further investigation is needed to explore the relationship between empathy and gender, taking into account both intrinsic and extrinsic factors. One possible explanation, as noted by Alcorta-Garza[2], is that educators often assume empathy can be developed solely through theoretical or cultural references, which may be insufficient.

Concerning academic progression, results showed that empathy levels tend to be higher at the beginning of the program and lower empathy levels towards the end of it, a trend also reported by Hojat[39]. However, rather than a consistent linear decline, the data revealed fluctuations, with increases and decreases throughout the years. In the case of the Kinesiology program, empathy levels were higher in the final year than in the first, although the difference was not statistically significant ($p = 0.210$). As Abarca[20] suggests,

these fluctuations in empathic orientation may be related to the complexity of clinical treatments and high technical demands, which could cause students to focus more on their performance than on patient needs. Carrasco, Bustos, and Díaz[23] argue that this decline in empathy may reflect the development of a professional identity as part of the learning process. Additionally, this decrease may result from a defensive response driven by fear or insecurity as students begin their first direct interactions with patients.[40] Future research could explore whether specific courses or curricular components are associated with increases or decreases in empathy across academic levels.

The results provide evidence of the reliability and validity of the Jefferson Scale of Physician Empathy (HPS version) in its Spanish adaptation, consistent with findings reported by Sergio Serrada.[41] These outcomes support the initial hypothesis: the JSPE-HPS, when applied to students in non-medical health programs, meets the psychometric criteria necessary to be considered a valid and reliable instrument.

Conclusions and Limitations

This study represents a foundational step toward the development of effective training processes, as understanding students' empathic orientation enables educators to implement targeted strategies to enhance this critical skill. It also provides a foundation for curricular modifications aimed at fostering increased empathy levels throughout students' academic programs. This is particularly relevant given that awareness of social and emotional factors significantly influences therapeutic outcomes and contributes positively to patient rehabilitation.

The limitations of this study are primarily related to the sampling methodology. As a cross-sectional investigation, it captures the empathic profile of a single cohort without tracking individual changes over time. Additionally, sociodemographic, attitudinal, and religious variables, as well as the students' emotional state at the time of completing the JSPE-HPS, were not considered. Therefore, it is recommended that future research adopt a longitudinal design, allowing for tracking changes and acquiring a better understanding of empathy throughout students' academic training. Additionally, the inclusion of complementary instruments could help assess the influence of other variables, thereby enabling the exploration of factors that promote empathy. These enhancements may help to answer questions such as: What is the relationship between the achievement of graduate profile outcomes and the development of empathy?

Finally, it is important to note that this study aimed to establish associations rather than causal relationships. Nor did it seek to identify which components of empathy are modifiable—an objective that would require a different research design and a more detailed analytical approach.

Informed Consent and Ethical Considerations

This study adhered to established ethical principles in research, as no personal identifying data—such as student names—were collected, thereby ensuring complete privacy and confidentiality. The database was treated as a set of numerical records corresponding to the empathy levels of non-medical health science students from the Faculty of Rehabilitation Sciences at Universidad Andrés Bello.

All participants voluntarily signed an informed consent form, which was based on the four fundamental bioethical principles proposed by Childress and Beauchamp.[42] The study complied fully with Chilean Law No. 20.120 and its corresponding Regulation No. 114, officially enacted on September 22, 2010.[43]

Equity, Diversity, and Inclusion Statement

This study was conducted under the principles of equity, diversity, and inclusion, ensuring fair and balanced representation throughout all stages of the research. An inclusive approach was adopted in selecting the study population by involving students from various non-medical health science programs, without discrimination based on gender, age, or socioeconomic background. A stratified probabilistic sampling method was used to ensure equitable representation across different academic levels and disciplines, allowing the results to broadly reflect the reality of non-medical health science students.

The methodology employed incorporated a research design that upheld principles of equity in both data collection and analysis, avoiding biases related to gender, field of study, or academic standing. Statistical tools were used to facilitate objective, evidence-based analysis, ensuring that the interpretation of results accurately reflected the experiences and perceptions of all participants.

Finally, the interpretation of findings was guided by an equity-focused perspective, recognizing the diversity of factors that influence empathy and avoiding generalizations that could obscure important group-level distinctions.

Conflict of Interest

The authors declare that there are no conflicts of interest.

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APPENDIX

Supplementary Material:

The supplementary material associated with this article will be available here.

- Appendix – Informed consent form

CASE REPORTS

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Mindfulness-Based Physiotherapeutic Intervention for Administrative Staff in Upper Secondary Education: Effects on Work-Related Stress and Interoceptive Awareness.

Case Series

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Mindfulness-Based Physiotherapeutic Intervention for Administrative Staff in Upper Secondary Education: Effects on Work-Related Stress and Interoceptive Awareness.

Case Series

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Abstract: Physical therapists can play a key role in addressing public health issues such as work-related stress, which has had considerable negative consequences for workers' health in Mexico. **Objective:** To describe the effects of a mindfulness-based intervention on work-related stress and interoceptive awareness among administrative staff in upper secondary education (n = 12). **Case Description:** Twelve administrative employees from an educational center were included. Prior to the intervention, participants reported stress levels ranging from "no stress" to "moderate stress," as measured by the Work Stress Test of the Mexican Social Security Institute (IMSS). Similarly, each participant presented varying levels of interoceptive awareness, measured using the Multidimensional Assessment of Interoceptive Awareness (MAIA). **Intervention:** The intervention consisted of twelve sessions incorporating passive and dynamic mindfulness techniques, conducted at the workplace during working hours. **Results:** A reduction in work-related stress levels was observed in 11 of the 12 participants, as well as an increase in interoceptive awareness in 11 participants. **Conclusion:** Mindfulness-based physiotherapeutic interventions may serve as valuable therapeutic resources for positively impacting work-related stress and body awareness among educational staff.

Summary Box

Mindfulness-based physiotherapy may represent a valuable strategy for promoting both physical and mental health among public-sector workers. Physiotherapists can play a key role in the prevention and management of social and public health issues, such as occupational stress, whose consequences in Mexico have become increasingly severe and evident.

Keywords: Mindfulness, work-related stress, physiotherapy, interoception awareness, mental health

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Introduction

The issue of Work-related stress and its emerging solutions is of interest to all health professionals. In this context, the physiotherapists holds a critical position to support the implementation and dissemination of strategies that promote well-being and mental health in diverse population groups, particularly among workers. To achieve this, they can rely on the biopsychosocial model and implement therapeutic resources such as mindfulness—a mind-body intervention that constitutes one of the two fundamental pillars of mental health physiotherapy: body awareness and physical activity.[1]

Persistently high levels of stress contribute to the development of mental disorders, particularly depression, anxiety, and burnout syndrome. In terms of physical health, stress can lead to cardiovascular diseases, musculoskeletal disorders, and gastrointestinal conditions, among others. Moreover, it may trigger maladaptive coping behaviors such as excessive consumption of alcohol, tobacco, and drugs, as well as the emergence of risky habits and unfavorable lifestyle changes that act as risk factors for the onset of non-communicable diseases.[2-4]

Today, work-related stress is considered a modern-life epidemic.[4-5] According to a recent report from the World Health Organization (WHO), Mexico ranks first globally in the prevalence of work-related stress, with a rate of 75%, surpassing countries like China and the United States.[6] This means that approximately 8 out of every 10 people in Mexico experience work-related stress.[7] This phenomenon not only poses a public health issue but also represents an economic and social problem, resulting in productivity losses equivalent to up to 4% of the national GDP, decreased work performance, absenteeism, and even workplace accidents. Consequently, the financial impact extends to individuals, businesses, institutions, and the healthcare system.[8]

The concept of mindfulness refers to a stable mental state in which distractions do not hijack attention. This state or attitude is cultivated by focusing on the present moment experience, while becoming fully aware of the thoughts, emotions, and bodily sensations that arise, and accepting them just as they are, without judgment or labeling.[9-12] Mindfulness practices can be divided into two main categories: mindfulness-informed interventions and mindfulness-based interventions. The former are influenced by mindfulness philosophy and combined with other methodologies to produce specific physiological or psychological effects, such as stress reduction, improved respiratory function, or enhanced interoceptive awareness (the

mostly unconscious internal perception of bodily states) through breathing exercises or sequences of mindful movement. In contrast, mindfulness-based interventions aim to cultivate it as the primary goal, often involving formal mental exercises like mindful breathing. A key example is the Mindfulness-Based Stress Reduction (MBSR) program developed by Jon Kabat-Zinn in 1979 at the University of Massachusetts, originally designed for managing chronic pain patients.[10-14]

This case series aims to describe the effects of a mindfulness-focused intervention on levels of work-related stress and interoceptive awareness in administrative staff from upper secondary education institutions, who reported distress due to excessive workload and presented with varying degrees of stress and interoceptive awareness, as evaluated using two different measurement instruments.

Case Presentation

This study included 12 individuals performing administrative roles at an upper secondary education center. As an initial step, an informational session was conducted for both managerial and administrative staff to present the issue of work-related stress and its harmful health effects, as well as explaining the objectives of the research. This activity aimed to encourage voluntary participation in the project and, in parallel, while promote self-care as a transversal component within physiotherapy practice.

Table 1 presents the general characteristics of the participants who chose to be part of this case series, including personal details, clinical background, main stress-related concerns, and whether they had previously received any intervention to address this issue. All participants worked nine-hour days, five days a week, with a 45-minute break each day.

Diagnostic Evaluation

Each participant's level of work-related stress was assessed using the Work Stress Test from the Mexican Social Security Institute (IMSS)[2] (Appendix 1). This tool consists of 12 items rated on a scale from 1 to 6, ranging from 'never' to 'very frequently,' based on the symptoms experienced during the last three months. Total scores extend from 12 to 72; higher scores indicate greater severity of work-related stress. The initial evaluation followed the instrument's original guidelines, focusing on the past three months. However, the post-intervention assessment applied the same test, referencing the previous month to measure the immediate effect of the intervention.

Table 1. Participant characteristics

Participant	Gender	Age	Position	Physical Condition	Mental Condition	Reported Stress	Associated Complaints	Previous Intervention
P1	Female	32	Counselor	None	None	Not reported	None	None
P2	Male	29	Administrative Assistant	None	None	Pressure to meet deadlines	None	None
P3	Female	49	Counselor	Hypertension	None	Excessive workload	Anxiety and elevated blood pressure	None
P4	Male	59	Administrative Assistant	Type 2 Diabetes and Hypertension	Depression	High-pressure work	Insomnia	None
P5	Female	33	Counselor	None	None	Not reported	Anxiety and overweight	None
P6	Female	20	Lab Manager	None	None	Headaches, eye and stomach pain	Gastrointestinal issues	None
P7	Female	43	Outreach Coordinator	Hypothyroidism	None	Sleep problems, difficulty enjoying rest days	Poor stress management	None
P8	Male	46	Maintenance Officer	Type 2 Diabetes	None	Increased workload	Anger and frustration	None
P9	Female	39	Administrative Deputy Director	None	None	Not reported	Stress	None
P10	Female	52	Assistant to the Director	None	None	Not reported	Stress	None
P11	Female	47	Librarian	Hypertension	None	Managing several tasks simultaneously	Hypertension	None
P12	Male	61	Maintenance Officer	Hypertension	None	Not reported	None	None

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To measure interoceptive awareness, the Multidimensional Assessment of Interoceptive Awareness (MAIA)[15] was used (Appendix 2). The scale comprises 32 items across eight subscales: "Noticing, Not-Distracting (three reverse-scored items), Not-Worrying (two reverse-scored items), Attention Regulation, Emotional Awareness, Self-Regulation, Body Listening, and Body Trusting." The maximum score is 40, with reversed items adjusted before calculating the final score. Higher scores reflect greater interoceptive awareness. Both this scale and the Work Stress Test were self-administered via digital forms (Google Forms) at the beginning and end of the intervention.

Therapeutic Intervention

The intervention involved twelve group sessions in total, each lasting 90 minutes. These were held at the workplace during working hours, with two sessions conducted per week.

The sessions incorporated mindfulness-based strategies applied within a physiotherapeutic context. Six sessions focused on static corporal practices, such as body scanning and mindful breathing. The other six sessions involved dynamic practices, such as mindful stretching and walking, as described in Table 2. Minimal materials were required: yoga mats and comfortable clothing to facilitate participation.

At the end of each session, participants were reminded of the date and materials needed for the next session, along with the health benefits of mindfulness practices, in order to foster adherence to the program.

Results

A comparison of initial and final evaluations revealed that 11 out of the 12 participants experienced a reduction in their levels of work-related stress. In contrast, participant P6 showed a slight increase in their score, rising from 33 to 34 on the IMSS Work Stress Test (Figure 1). This increase was linked to more frequent experiences of symptoms during the past month, including extreme fatigue, localized pain, decreased sexual interest, and muscle tremors.

Regarding interoceptive awareness, scores improved in 11 of the 12 participants following the intervention. Participant P3 was the only exception, showing a decrease in his total score from 26 to 24.1, as shown in Figure 2. This decline was reflected primarily in the MAIA subscales: Noticing, Attention Regulation, Emotional Awareness, Body Listening, and Body Trusting, detailed in Table 3.

Table 2. Description and structure of the therapeutic intervention

THERAPEUTIC INTERVENTION			
Body-Based Practices	Mindful Movement (Stretching and Walking)	Stillness-Based Practices (Body Scanning and Mindful Breathing)	Two sessions per week
Number of Sessions	6	6	
Frequency	Once per week	Once per week	
Therapeutic Session Development			
Session Stage	**Description**		**Duration**
Introduction	Attendance was taken and a warm welcome provided to create a sense of safety and trust. General instructions were given, encouraging curiosity, self-compassion, and a non-judgmental attitude during the activity.		10 minutes
	The core component of these sessions is to prioritize **awareness in movement** rather than movement quality, through guiding questions such as: *"What sensations do you notice in your body as you perform this movement?"* *"Does this movement evoke any emotions?"* *"As you hold this position or perform this movement, do you perceive any sensations in distal areas of your body?"*	Participants were encouraged to maintain the same position throughout the exercise, allowing themselves to fully engage with the present-moment experience. Only in cases of pain or discomfort were they invited to shift into a more comfortable position.	
Development	The session included a routine of dynamic stretches involving the spine as well as the upper and lower limbs, performed in various positions: supine, seated, and standing. These exercises were accompanied by calming background music to promote a sense of relaxation and body awareness. At the end of the routine, participants engaged in a group walk in a circle, during which they were invited to focus their attention on bodily sensations and emerging emotions during movement. This practice was encouraged to be performed barefoot in order to enhance sensory perception and bodily awareness.	A body scan exercise was conducted in a supine position, lying on mats placed on the floor. The practice began at the feet and progressed toward the head, guiding participants to focus their attention on present sensations in different parts of the body, as well as on the perceived size and shape of those sensations, with particular emphasis on the joints. The activity was accompanied by relaxing background music to facilitate a state of calm and inner connection. At the end of the scan, participants performed 20 conscious breaths in the same position, marking the closure of the intervention.	70 minutes
Session Closure	At the end of the session, participants were invited to voluntarily share their individual experiences, expressing thoughts, sensations, and perceptions related to the intervention. This space aimed to foster an environment of empathy, active listening, and validation of personal experiences. To conclude, the benefits of mindfulness—introduced at the beginning of the program—were revisited, thereby reinforcing participants' motivation and the sense of continuity in the therapeutic process.		10 minutes

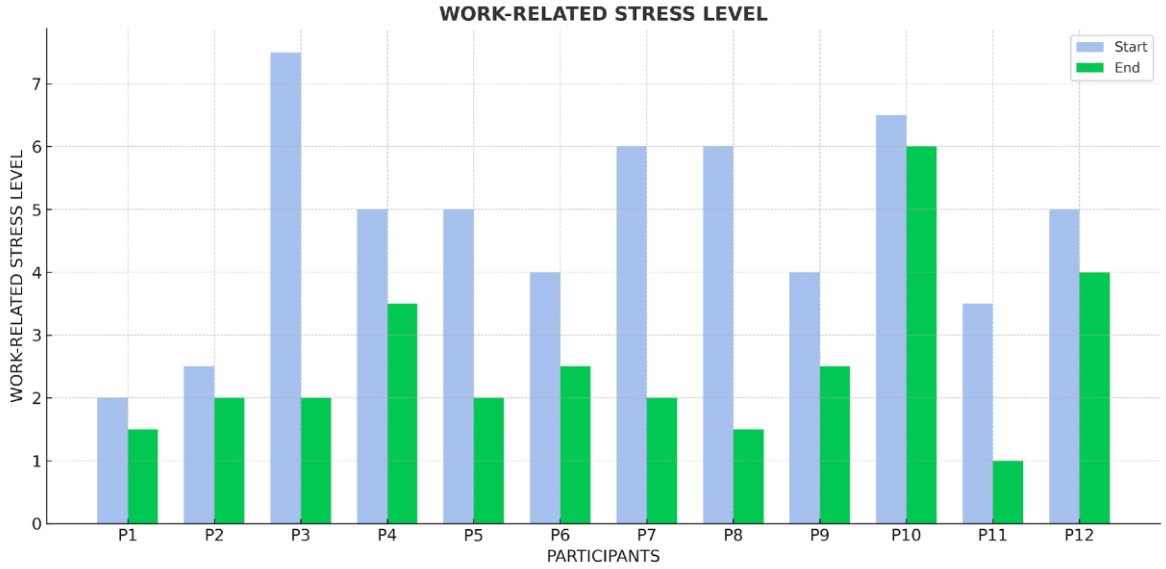

Figure 1. Work-Related Stress levels by participant

Note. The values for work-related stress levels correspond to those used in the IMSS Work-Related Stress Test.

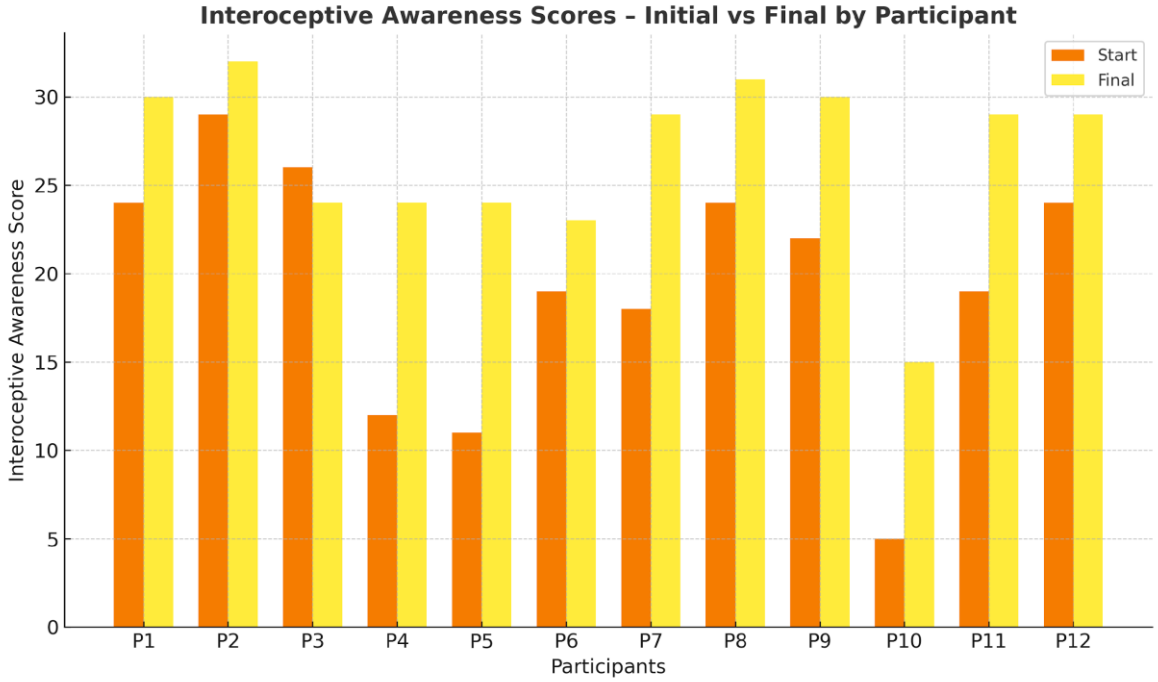

Figure 2. Interoceptive Awareness scores by participant

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Table 3. Results of each subscale of the Multidimensional Assessment of Interoceptive Awareness by participant

Participant	Noticing		Not-Distracting		Not-Worrying		*Attention Regulation*		*Emotional Awareness*		*Self-Regulation*		Body Listening		Trusting	
Intervention Phase	*Start*	*Final*	*Start*	*Final*	*Start*	*Final*	*Start*	*Final*	*Start*	*Final*	*Start*	*Final*	*Start*	*Final*	*Start*	*Final*
P1	*4.0*	*3.7*	*2.6*	*3.0*	*1.0*	*1.0*	*2.5*	*3.8*	*3.8*	*5.0*	*3.7*	*5.0*	*2.6*	*3.3*	*4.0*	*5.0*
P2	*4.0*	*3.5*	*1.3*	*3.0*	*3.3*	*3.6*	*3.1*	*3.5*	*5.0*	*4.6*	*4.2*	*4.7*	*4.0*	*4.3*	*5.0*	*5.0*
P3	*4.5*	*4.2*	*3.0*	*4.0*	*1.0*	*1.6*	*3.0*	*1.7*	*3.8*	*3.6*	*3.7*	*3.7*	*3.0*	*2.0*	*4.0*	*3.3*
P4	*1.7*	*4.0*	*0.6*	*1.0*	*0.0*	*2.0*	*1.4*	*3.1*	*4.2*	*4.6*	*2.5*	*3.6*	*0.6*	*3.0*	*0.6*	*3.3*
P5	*3.2*	*3.2*	*1.6*	*2.3*	*0.0*	*2.6*	*0.8*	*3.0*	*2.4*	*3.0*	*0.2*	*3.2*	*1.0*	*3.6*	*1.6*	*3.0*
P6	*2.0*	*2.2*	*2.3*	*2.3*	*3.0*	*3.3*	*1.5*	*2.0*	*2.0*	*3.6*	*2.2*	*3.0*	*2.0*	*2.6*	*3.0*	*3.3*
P7	*4.0*	*3.2*	*2.3*	*1.6*	*1.6*	*3.0*	*1.1*	*3.8*	*3.8*	*4.6*	*1.0*	*4.0*	*1.3*	*4.0*	*2.6*	*5.0*
P8	*2.5*	*4.5*	*2.6*	*1.0*	*2.3*	*2.3*	*3.2*	*4.4*	*3.6*	*4.8*	*3.2*	*4.7*	*3.3*	*4.6*	*3.3*	*4.6*
P9	*3.7*	*4.2*	*0.0*	*1.6*	*1.0*	*3.0*	*2.5*	*4.1*	*4.0*	*4.8*	*4.7*	*4.5*	*2.3*	*3.3*	*3.6*	*5.0*
P10	*2.2*	*2.0*	*0.6*	*1.3*	*0.6*	*2.0*	*0.0*	*1.1*	*1.2*	*3.8*	*0.5*	*2.0*	*0.0*	*0.6*	*0.0*	*2.0*
P11	*3.7*	*3.7*	*1.6*	*0.0*	*1.6*	*3.6*	*2.1*	*4.2*	*4.0*	*4.0*	*2.5*	*4.7*	*0.0*	*4.0*	*3.3*	*5.0*
P12	*4.0*	*4.2*	*0.6*	*1.3*	*2.0*	*2.0*	*2.4*	*3.1*	*4.8*	*4.8*	*3.5*	*4.5*	*2.6*	*4.3*	*4.3*	*4.3*

Note. *Shaded cells indicate the subscales in which participants' final scores, compared to their initial scores, reflect an increase in interoceptive awareness levels.*

Overall, the five MAIA subscales that showed improvement in the largest number of participants were: Attention Regulation and Body Listening (both in 11 of 12 cases); Self-Regulation (10 participants); and Not-Worrying and Body Trusting (9 participants), as summarized in Table 4 and Figure 3.

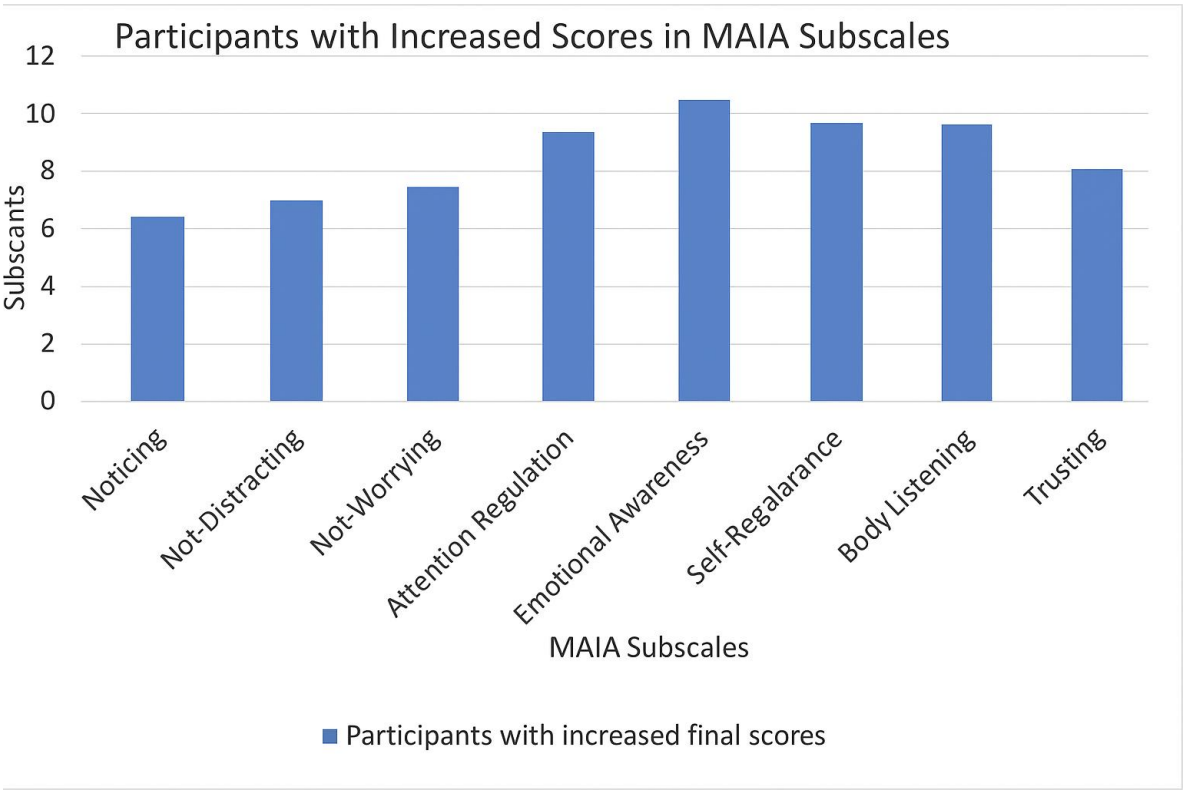

Figure 3. MAIA Subscales with the highest number of participants showing increased Interoceptive Body Awareness after the intervention.

Discussion

The final results demonstrated that mindfulness, when applied within the physiotherapeutic context, had a favorable effect on reducing work-related stress, as 11 out of 12 participants showed a decrease in their stress levels. These findings are consistent with previous research that strongly supports mindfulness as an effective strategy for alleviating occupational stress.[10] Similarly, another study reported that the implementation of mindfulness, particularly through the Mindfulness-Based Stress Reduction (MBSR) program, successfully reduced work-related stress levels among psychiatric nursing staff, a population characterized by a high workload and significant emotional demands.[16]

The therapeutic intervention implemented in this study, carried out at the participants' workplace and during working hours, may have contributed to their physical and mental well-being. This assertion is supported by a systematic review indicating that mindfulness training programs conducted in workplace

settings promote workers' mental health and well-being by reducing occupational stress levels. Moreover, such interventions have been reported to positively impact mental disorders such as depression, as well as to improve job satisfaction and work performance.[17] It is worth noting that only participant P6 exhibited an outcome contrary to the expected, which may be related to specific physical experiences identified during the final assessment of work-related stress. In this case, an increase was observed in the frequency of symptoms such as extreme fatigue and exhaustion, reduced sexual interest, muscle tremors, and painful or stabbing sensations in various parts of the body. This outcome may be attributable to individual factors or the participant's specific occupational context.

This intervention did not specifically assess the impact of psychosocial risk factors, which are closely related to the conditions and organization of the work environment. These factors may have been present during the intervention period and could have influenced the outcomes obtained.

Regarding the results on interoceptive awareness, an increase was observed in 11 out of 12 participants, suggesting a positive effect of mindfulness when applied as a physiotherapeutic tool. This improvement may represent a relevant benefit in the participants' work context, as the five MAIA subscales that showed the greatest improvements were: *Attention Regulation*, *Noticing*, *Self-Regulation*, *Not-Worrying*, and *Trusting*. Among these, *Noticing* and *Trusting* have been associated with greater resilience and improved stress coping. Notably, the *Trusting* subscale, which evaluates the individual's relationship with their own body, may support the development of healthier interpersonal relationships and, consequently, contribute to better job performance.[14]

The results obtained are consistent with previous studies reporting the positive effects of mind-body therapies, such as mindfulness and body awareness practices, which have been shown to enhance interoceptive awareness among other benefits.[18]

It is important to note that participant P3 experienced an outcome contrary to the rest of the group, showing a decrease in interoceptive awareness levels after the intervention, which may be attributed to individual factors. Interoception can be assessed through objective measures—known as interoceptive accuracy—which reflect the ability to perceive internal physiological signals. This may differ from interoceptive sensitivity, which is based on self-reported perception and individual beliefs regarding bodily sensations. Therefore, the self-perception of interoception may not always align with an individual's actual physiological

interoceptive state. Additionally, self-report scales such as the MAIA assess specific skills that require a certain level of conceptual understanding and body-oriented language. This presents a methodological challenge, as participants' interpretation of the items may vary and even shift before and after undergoing a mind-body intervention.[18]

One limitation of this case series lies in the adjustments made to the original instructions of the IMSS Occupational Stress Test, which was designed to assess symptom frequency over the past three months. In this study, the original timeframe was preserved for the initial assessment; however, for the final evaluation, the reference period was adapted to the last month to measure the immediate effect of the intervention. This methodological decision aligns with the specific objective of the study and the intervention duration (six weeks), seeking a more direct correlation between the intervention and the observed changes.

Another relevant limitation was the lack of in-depth contextual information about the participants. No data were collected regarding their social situation or specific psychological aspects. Although they were asked about the presence of mental disorders, as shown in Table 1, this information was insufficient for a more in-depth analysis. Future research should consider collecting more detailed information on participants' physical health status in order to identify potential comorbidities or dysfunctions that could influence the intervention's outcomes. Likewise, it is important to take into account biopsychosocial risk factors and their potential impact on occupational stress levels, as well as to explore whether these can be positively modified through this or similar interventions.

In this regard, mindfulness, when integrated as a resource within physiotherapy, represents a therapeutic tool with the potential to promote physical and mental well-being among employees in public education institutions.

Informed Consent and Ethical Considerations

Once participants voluntarily expressed their intention to take part in the study, they were provided with an informed consent form (Appendix 3) prior to the initial diagnostic assessment and the therapeutic intervention. Following the General Health Law on Health Research, specifically Article 17, this study is considered to involve minimal risk, as it employed diagnostic tools to assess physiological and behavioral states and included low-intensity physical exercises focused on body awareness.

Equity, Diversity, and Inclusion Statement

Participants in this study were selected through an open call addressed to all administrative staff at the workplace, ensuring voluntary participation. All individuals who expressed interest were accepted and included without distinction of age, gender, religion, socioeconomic status, ethnic background, or sexual orientation. Throughout the intervention, all participants received the same level of care, guidance, information, and instructions, ensuring equitable treatment in every session.

Patient Perspective

At the end of the intervention and following the final evaluation, participants were invited to share their personal experience through a questionnaire. All respondents reported having had a positive experience. Most participants highlighted a greater connection with their bodies, as well as the acquisition of strategies to listen to and better understand their physical sensations. Commonly reported perceptions included feelings of relaxation and well-being. Additionally, several participants indicated that they had acquired useful tools for regulating emotions, coping with stress, and improving their overall quality of life.

Conflict of Interest

The authors declare no conflicts of interest in relation to this study.

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APPENDICES

Supplementary Material

Supplemental material associated with this article will be made available here.

- Appendix 1 - Work-Related Stress Test
- Appendix 2 - Multidimensional Assessment of Interoceptive Body Awareness
- Appendix 3 - Informed Consent

PERSPECTIVES

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The Importance of Trauma-Informed Care: A Call to Action for Physical Therapist Practice, Education, Research, and Advocacy

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PERSPECTIVE

The Importance of Trauma-Informed Care: A Call to Action for Physical Therapist Practice, Education, Research, and Advocacy

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Abstract: Trauma exposure is associated with a host of biopsychosocial effects, including premature mortality, compromised physical/mental health, substance misuse, and addiction; 90% of American adults report at least one significant lifetime traumatic incident. Disparate trauma exposure among people with physical disabilities, lower socioeconomic status, rural residence, and/or racial/ethnic minority status creates a strong rationale supporting trauma-informed care (TIC) in promoting health equity. Although physical therapist (PT) practice, education, and research do not routinely integrate TIC, public health needs and the opportunity to advance health equity compel greater professional involvement in addressing trauma and its impact on overall wellness. This perspective describes (1) the biopsychosocial impact of trauma; (2) screening and assessment of trauma exposure and its impact; (3) TIC in physical therapy practice; (4) the impact of unaddressed trauma; and 5) TIC in physical therapy education, research, and advocacy. Physical therapy professionals should apply this information to address the gap in trauma-informed care for individuals, families, groups, and communities.

Summary Box

• The high prevalence of trauma exposure constitutes a strong need for physical therapy involvement in trauma-informed care. This paper provides important perspectives regarding challenges to physical and mental wellness due to the physiological, psychological, and social effects of trauma. New knowledge for physical therapists and the advancement of trauma-informed care includes how to recognize and respond to signs and symptoms of trauma using universal trauma precautions and individually tailored treatment strategies, and the integration of trauma-informed care in physical therapy education, research, and advocacy.

Keywords: Trauma-informed care, trauma-informed physiotherapy, trauma-informed physical therapy, physiotherapy in mental health

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Introduction

Trauma is an event, series of events, or circumstances experienced by an individual as physically or emotionally harmful or life threatening; it can have lasting adverse effects on mental, physical, social, emotional, and/or spiritual well-being.[1] Examples of trauma include, but are not limited to, experiencing or observing physical, sexual, and emotional abuse; intimate partner/domestic violence; childhood neglect; having a family member with a mental health or substance use disorder; experiencing or witnessing violence in the community and/or during military service; poverty and systemic discrimination; natural disasters; medical trauma (direct or family-related); refugee trauma, and/or acts of terrorism.[1-2] Although children and adults experience many of the same types of trauma, adults may be more likely to exhibit the effects of repeated lifetime trauma and/or complex trauma.[3]

The World Mental Health Survey, which included 68,894 respondents across twenty-four countries, estimates a 70.5% prevalence of exposure to traumatic events. More than 30% of respondents reported exposure to four or more traumatic events.[4] Similarly, epidemiological data show a 90% prevalence of at least one traumatic exposure among American adults, while 30% report six or more lifetime traumatic events.[5] Exposure to traumatic events poses a significant threat to both mental and physical health. Sequelae include anxiety, depression, substance misuse, suicide, self-injury, an increased likelihood of post-traumatic stress disorder (PTSD),[3] and a host of physiological associations that include autoimmune disease (HR 1.36, 95% confidence interval 1.33, 1.40),[6] and chronic pain.[7]

While there is a growing acknowledgment in physical therapy of the impact of trauma throughout the lifespan[8], the increasing prevalence of traumatic events requires education and implementation of trauma-informed care (TIC). This perspective describes (1) the biopsychosocial impact of trauma; (2) screening and assessment of trauma exposure; (3) TIC and the impact of unaddressed trauma in physical therapy practice; and 4) TIC in physical therapy education, research, and advocacy. Physical therapists (PTs) can apply this information to address translational knowledge gaps by being cognizant of the widespread impact of trauma; recognizing its signs and symptoms; and responding with policies, procedures, and practices to resist re-traumatization for individuals, families, groups, and communities. (Table 1)

Table 1. Rs of Trauma-Informed Care

Realize	Realize the widespread impacts of trauma and understand potential paths to recovery.
Recognize	Know the signs and symptoms of trauma and recognize that these signs and symptoms may present differently in individuals and groups.
Respond	Respond by fully integrating knowledge about trauma into policies, procedures, and practices.
Resist Retraumatization	To resist retraumatizing people that have been affected by trauma, be aware of how your language and the environment you create may act as a potential trigger.

Biopsychosocial Effects of Trauma Exposure

Trauma exposure is associated with a host of biopsychosocial effects, including premature mortality, compromised physical/mental health, substance misuse, and addiction. Physiological responses to trauma exposure include chronic systemic inflammation linked with greater risks of metabolic disease, cardiovascular disease, and type 2 diabetes.[9] Long-term effects of trauma contribute to persistent physiological arousal and autonomic dysregulation, as well as reduction in physical activity, to avoid responses reminiscent of acute stress, such as increased heart and respiratory rates.[10] The Centers for Disease Control-Kaiser Permanente adverse childhood experiences (ACE) study increased public awareness of the associations between early trauma and lifetime health effects.[11] When comparing people with the highest versus lowest levels of reported ACEs, researchers found a 20-year reduction in life expectancy.[12] Subsequent studies found that people with multiple ACEs have a greater prevalence of modifiable health risks when compared with the general population, resulting in higher rates of obesity, ischemic heart disease, stroke, liver disease, lung cancer, COPD, autoimmune disorders[13], depression, addiction, and premature mortality.[14] In addition, people who report trauma exposure are 2.7 times more likely to exhibit a functional somatic syndrome (95% confidence interval 2.27 – 3.10).[10] Functional somatic syndrome encompasses a host of possible diagnoses such as chronic pain, fibromyalgia, chronic fatigue syndrome, and temporomandibular joint dysfunction.[10] Functional somatic issues can lead to sleep disturbances, social isolation, diminished quality of life, and a greater risk of disability.[10]

The most prominent psychological condition associated with trauma exposure is post-traumatic stress disorder (PTSD).[1] However, not all signs and symptoms following trauma are pathological. Although effects vary among individuals, most trauma survivors show acute emotional and psychological reactions that may

include fatigue, confusion, numbness, sadness, anxiety, dissociation, and blunted affect.[1] In particular, PTs and rehabilitation professionals should be attentive towards delayed, persistent, and/or severe reactions, such as unrelieved emotional and/or mental distress; disruptive intrusive memories despite a safe environment; sleep problems; nightmares; avoidance of situations, sensations, or activities reminiscent of the traumatic event; and/or dissociation.[1] Possible signs of dissociation include a fixed or distant visual "glaze," sudden absence of emotion, lack of verbal communication, and incongruent verbal or physical responses.[1] PTs and rehabilitation professionals must also be observant of triggers, or stimuli that induce memories and reactions associated with the trauma. Trauma survivors are often aware of these triggers, although some triggers may be subconscious.[1] Triggers are different from flashbacks, which is where a trauma survivor re-experiences the trauma event as though it were happening again. Typically, flashbacks are brief occurrences, but they can cause lasting emotional and/or psychological after-effects.[1] Epidemiological research estimates the global prevalence of PTSD at 5-10% of the population.[15] However, these data under-represent the true scope of the problem due to variations in symptoms, recognition, and diagnostic criteria.[15]

Major catastrophic events can cause collective societal trauma where effects extend beyond individuals to affect families, groups, and/or communities (Figure 1).[16] The Holocaust[16], the terrorist attacks of September 11, 2001[17], and the COVID-19 pandemic are examples of collective trauma.[18] When catastrophe disrupts a shared sense of safety, meaning, and/or cultural identity, members of the affected group may continually recall the event to gain a better understanding of the experience.[19-20] Although some aspects of this social discourse can assist in positive adaptation, adverse individual and communal psychological effects are also possible.[18] Additionally, collective trauma can become encoded within group memories, resulting in intergenerational and transgenerational trauma.[16] Consequences of generational trauma include an increased risk of PTSD among children of people with PTSD.[16] Although childhood exposure to overt, conscious and subconscious PTSD-related parental behaviors may explain some of this association, environmental and physiological effects are also possible.[16] For example, research demonstrates that offspring of Holocaust survivors and Vietnam veterans had an increased tendency towards anxiety, worry, catastrophization, nightmares, dysphoria, hypervigilance, and disruptions in interpersonal relationships, sometimes referred to as "secondary traumatization."[16] Epigenetic mechanisms that contribute to transgenerational trauma include DNA methylation and oxidative damage that may influence gene

expression, leading to phenotypic changes in children.[16] Social learning theory, attachment theory, and family dynamics may also mediate the incidence and experience of collective trauma.[16]

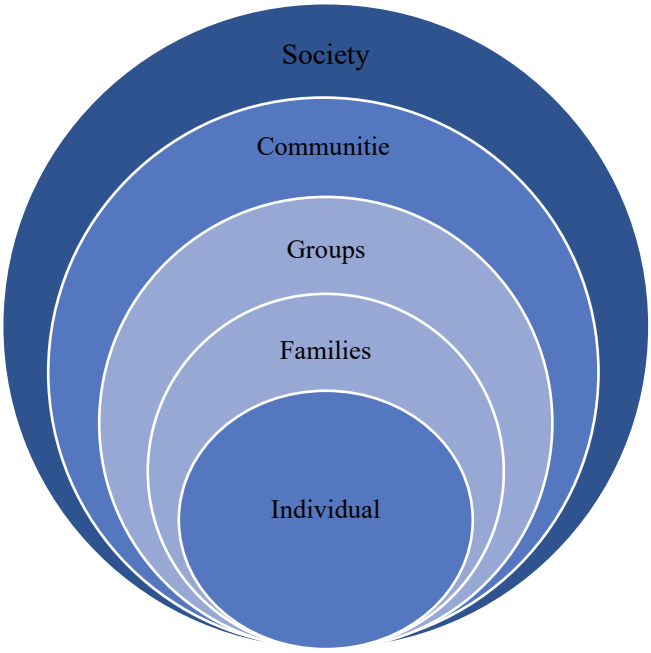

Figure 1. Levels of Trauma Experience

Screening and Assessment of Trauma Exposure and Its Impact

Based on the high prevalence of lifetime trauma exposure, PTs must have ways to evaluate and manage associated psychological distress. The Commission on Accreditation of Physical Therapy Education Standards and Required Elements require that physical therapist programs prepare students to complete examination and screening to inform patient and client management across the spectrum of comprehensive physiological, psychosocial, and mental health.[21] Furthermore, the American Physical Therapy Association, House of Delegates, affirms the role of PTs in addressing mental well-being, stating "it is within the professional scope of physical therapy practice to screen for and address behavioral and mental health conditions in patients, clients, and populations."[22] Likewise, the International Organization of Physical Therapy in Mental Health reflects the scope of PTs' professional responsibilities in applying best scientific and clinical evidence in addressing psychosocial, as well as biological, wellness.[23] Therefore, screening and

assessment of trauma exposure and its potential impact is an essential component of direct patient care.[24] The Guide to Physical Therapist Practice 4.0 provides an overview of risk factors, indications, and methods of assessing cognitive and mental function and patient needs, as well as examples of tests, measures, and tools PTs can use to ensure that they integrate the presence and severity of mental health conditions into the comprehensive plan of care.[25]

Many survivors find it difficult to recount the nature of traumatic exposures, particularly in the early stages of the therapeutic relationship. Therefore, it may be more appropriate for PTs to approach this topic by asking about signs and symptoms associated with trauma rather than details about the traumatic event.[26] Questions may include whether patients are experiencing sleep impairments, difficulty concentrating, agitation, self-isolation, mood changes, anxiety, fear, or depression. During the physical exam, PTs should also be sensitive towards symptoms of sympathetic nervous system arousal that can occur in trauma survivors; these include sensitivity to sound and tactile stimuli, exaggerated startle reactions, and muscle tension.[26] PTs can also use standardized assessment measures (Table 2) to screen for PTSD. Posttraumatic Stress Disorder Primary Care (PTSD-PCL-5) is a screening tool designed to identify individuals with probable PTSD in primary care settings (Table 3). If an individual indicates an experience of past trauma, the PTSD-PC-5 poses five yes/no questions. A cut-point of four likely indicates a PTSD diagnosis and warrants referral to a mental health provider for further evaluation.[27] The PTSD Checklist (PCL) is another valid questionnaire that has been administered in physical therapy settings and is sensitive to quantifying post-treatment changes in trauma symptoms.[27] The gold standard in trauma diagnosis is the Clinician-administered PTSD Scale (CAPS-5). The CAPS-5 is a structured interview that PTs can use to identify past month signs and symptoms of PTSD, lifetime signs and symptoms of PTSD, and PTSD symptoms over the past week.[28] A version for children and adolescents ages seven and above (CAPS-CA-5) is also available.[29]

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Table 2. Screening Tools for Posttraumatic Stress Symptoms

Questionnaire	Description
Primary Care PTSD Screen for DSM-5 (PC-PTSD-5)	A 5-item screen designed to identify individuals with probable PTSD in primary care settings. The first question assesses lifetime exposure to traumatic events. If a respondent denies exposure, the PC-PTSD-5 is complete with a score of 0. However, if a respondent indicates that they have had any lifetime exposure to trauma, the respondent is instructed to respond to 5 additional yes/no questions about how that trauma exposure has affected them over the past month. Because the PC-PTSD-5 was designed to identify respondents with probable PTSD, those screening positive require further assessment, preferably with a structured interview such as the Clinician-administered PTSD Scale (CAPS-5).
Clinician-administered PTSD Scale (CAPS-5)	The gold standard in PTSD assessment. A 30-item questionnaire, corresponding to the *DSM-5* diagnosis for PTSD**.** The CAPS-5 is a structured interview that can be used to assess PTSD symptoms over the past week, past month, and lifetime symptoms of PTSD. CAPS-5 asks questions relevant to assessing the dissociative subtype of PTSD (depersonalization and derealization), but no longer includes other associated symptoms (e.g., gaps in awareness).
PTSD Checklist for DSM-5 (PCL-5)	The PCL-5 is a 20-item self-report checklist of PTSD symptoms based on the DSM-5 criteria. Respondents rate each item from 0 ("not at all") to 4 ("extremely") to indicate the degree to which they have been bothered by that particular symptom over the past month (or past week if using the PCL-5 weekly). The PCL-5 is a self-report measure that can be completed by patients in a waiting room prior to a session or by participants as part of a research study. It takes approximately 5-10 minutes to complete.
(CAPS-CA-5)	A 30-item clinician-administered PTSD scale based upon *DSM-5* criteria for children and adolescents ages 7 and above. It is a modified version of the adult CAPS-5 that includes age-appropriate items and picture response options.
The Adverse Childhood Experiences (ACEs) Questionnaire (Felitti et al., 1998)	A 10-item measure used to measure childhood trauma. The questionnaire assesses 10 types of childhood trauma measured in the ACE Study. Five are personal: physical abuse, verbal abuse, sexual abuse, physical neglect, and emotional neglect. Five are related to other family members: a parent who is an alcoholic, a mother who is a victim of domestic violence, a family member in jail, a family member diagnosed with a mental illness, and the disappearance of a parent through divorce, death or abandonment.

Table 3. PTSD-PC-5 Tool

Sometimes things happen to people that are unusually or especially frightening, horrible, or traumatic. For example: • a serious accident or fire • a physical or sexual assault or abuse • an earthquake or flood • a war • seeing someone be killed or seriously injured • having a loved one die through homicide or suicide. Have you ever experienced this kind of event? YES / NO If no, screen total = 0. Please stop here. If yes, please answer the questions below.
In the past month, have you… 1. Had nightmares about the event(s) or thought about the event(s) when you did not want to? YES / NO 2. Tried hard not to think about the event(s) or went out of your way to avoid situations that reminded you of the event(s)? YES / NO 3. Been constantly on guard, watchful, or easily startled? YES / NO 4. Felt numb or detached from people, activities, or your surroundings? YES / NO 5. Felt guilty or unable to stop blaming yourself or others for the event(s) or any problems the event(s) may have caused? YES / NO
Scoring Preliminary results from validation studies suggest that a cut-point of 3 on the PC-PTSD-5 (e.g., respondent answers "yes" to any 3 of 5 questions about how the traumatic event(s) have affected them over the past month) is optimally sensitive to probable PTSD. Optimizing sensitivity minimizes false negative screen results. Using a cut-point of 4 is considered optimally efficient.

Due to multiple geographical, socioeconomic, and cultural health inequities, PTs must be aware of variations in the prevalence and distribution of trauma exposure and associated risks to physical and mental wellbeing. Health inequities are more than dissimilarities in health outcomes among different segments of the population. Instead, inequities reflect avoidable differences in risks, rates, and severity of illness, injury, disability, diminished quality of life, and reduced life expectancy. Geographical and socioeconomic

inequities often intersect. For example, rural communities experience disparate trauma exposure and consequences, particularly among people with lower incomes. Many primary and secondary trauma exposures are higher within rural and lower income communities. This includes physical and sexual violence, accidents, unexpected mortality within one's family and/or social network, employment instability, housing instability, and witnessing trauma.[30] Within the United States, rural suicide rates are nearly double the rates of death by suicide in urban locations.[31] In addition, more veterans reside in rural locations (nearly 25% more than other geographical locations),[31] and more rural children reside in poverty.[31] Higher rates of substance misuse in rural communities exacerbate childhood trauma exposure due to disruptions of the family unit, childhood abuse and neglect, truancy, lack of educational opportunities, unmet developmental needs, lack of appropriate role models, and higher rates of interpersonal violence.[31] Genetic and epigenetic factors associated with generational patterns of substance use disorder, along with higher rates of ACEs, make it more likely that children will develop addiction themselves.[31] Children who grow up in homes affected by substance misuse, who witness abuse and domestic violence, and/or live with family members who have mental health challenges are twelve times more likely to attempt suicide, seven times more likely to misuse alcohol, and ten times more likely to use illicit drugs in adulthood.[31]

Cultural inequities in trauma exposure and its consequences share factors with intergenerational and transgenerational trauma. Across generations, social disadvantages due to racism, stigma, and financial stressors contribute to differences in health status and protective resources among immigrant, refugee, indigenous, and sexual minority groups.[20] These disadvantages increase vulnerability to mental health challenges, such as PTSD, chronic grief, suicide, depression, and substance use.[20] PTs can work with disadvantaged individuals and communities to address societal risks and build capacity and resilience using health promotion strategies.[20] The World Health Organization's health equity priorities highlight the need to create proportionate opportunities throughout the lifespan by reducing unequal risk exposures and structural barriers through policies, systems, and services that enhance accessibility to tailored, quality services. To advance these goals, the physical therapy profession can implement the World Health Organization Health Equity Policy Tool.[32] This tool provides a broader perspective of how social determinants influence health disparities.

Trauma-Informed Care (TIC) in Physical Therapy Practice

TIC refers to best practices across healthcare settings to ensure that people who have experienced traumatic events have access to quality care.[33] Since many traumatic events involve the physical body,[33] TIC is of particular relevance during hands-on PT interventions. There are two major categories of foundational TIC principles: (1) "universal trauma precautions" and (2) trauma-specific care.[33] Even patients without trauma can experience anxiety and discomfort when seeking healthcare.[33] Therefore, universal trauma precautions should be widely implemented, even when a patient's trauma history is unknown. Although survivorship may heighten the need for TIC, universal trauma precautions recognize that all patients can benefit from responsive, compassionate communication and treatment. Many patients, particularly those with a trauma history, report feeling a lack of control in healthcare settings. Lack of control and bodily autonomy can trigger anxiety, flashbacks, and other physical and psychological symptoms of trauma.[33] Widespread use of trauma-informed techniques engenders trust and rapport.[33]

Within the current healthcare environment, most providers do not routinely screen for a history of trauma, heightening the need for universal trauma precautions in physical therapy practice.[14] For example, only 18-19% of female survivors of childhood sexual abuse (CSA), report being screened by a healthcare provide, although 96.5% stated they would like this to be a component of evaluation.[14] Even within level I and II trauma centers, only 7% of providers routinely screen for signs and symptoms of PTSD.[14] Barriers to screening and TIC include lack of specialized provider training, provider discomfort in assessing and responding to disclosure of trauma or abuse,[14] and possible difficulty connecting triggering circumstances with the original trauma. Within PT practice, examples of triggering stimuli might include tightening the blood pressure cuff around the person's arm to monitor vitals, asking patients to disrobe to allow access to the treatment site, and having patients lay prone or supine while the physical therapist remains standing next to the treatment table. Physical contact and cardiorespiratory arousal during therapeutic exercise can also potentially trigger somatic and psychological reactions, and impede patient engagement in the plan of care.[14,34] Many aspects of healthcare encounters involve vulnerability, loss of personal privacy, and fear of judgment.[35] Collaborative, patient-centered TIC can modulate these threats and triggers.[14]

The Substance Abuse and Mental Heart Services Administration (SAMHSA) outlines 6 core principles for TIC: 1) safety, 2) trustworthiness and transparency; 3) peer support and mutual self-help; 4) collaboration

and mutuality; 5) empowerment, voice, and choice; and 6) recognition of cultural, historical, and gender issues that may interact with other risks and trauma-related experiences.[1] (Table 4) To promote patient-centered, responsive communication, PTs need to create a safe space for trauma disclosure by treating patients with dignity and respect.[35] This may involve private areas for sensitive communication, examination, and interventions, as well as consistent implementation of shared decision-making to empower voice and choice.[35] Even within a supportive environment, some trauma survivors may still be unwilling or unable to disclose.[33,35] A universal approach to TIC ensures sensitivity and responsiveness across diverse individuals and reduces stigma. Important aspects of TIC encompass compassionate communication within an environment that minimizes noise and distractions. Although there is a need for additional training and education in TIC, PTs already possess expertise that complements a trauma-informed approach. PTs regularly engage in active listening and other facets of patient-centered communication that cultivate close rapport, strong therapeutic alliance, and a gentle invitation to disclose and discuss trauma history. By explaining options using use a calm tone of voice and simplified terminology, PTs can facilitate collaborative treatment planning and promote autonomy.[33] This personalized, biopsychosocial approach helps restore patients' trust in situations where there has been a prior history of negative healthcare interactions.[33]

Table 4. Six Principles of Trauma-Informed Care

Safety	Ensuring that both the physical and emotional safety of individuals is prioritized to foster a secure environment.
Trustworthiness and transparency	Operations and decisions should be conducted with transparency to build and maintain trust among staff, clients, and family members of those receiving services.
Peer Support	Peer support plays a vital role in establishing safety and hope, and is integral in the healing process and recovery.
Decision-Making	There should be true partnership and leveling of power differences between staff and clients, recognizing that healing happens in relationships and in the meaningful sharing of power and decision-making.
Empowerment, Voice, and Choice	Individuals' strengths are recognized and built upon, fostering an environment where clients feel validated and affirmed in their ability to make decisions about their treatment.
Cultural, Historical, and Gender Issues	The organization actively moves past cultural stereotypes and biases, offers access to gender-responsive services, leverages the healing value of traditional cultural connections, and recognizes and addresses historical trauma.

Adapted from SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach

The Impact of Unaddressed Trauma in Physical Therapy Practice

When PTs are unable to recognize and address the effects of trauma, it can interfere with differential diagnosis, patient engagement, and optimal treatment outcomes. Unrecognized, unaddressed trauma symptoms threaten mental wellness and increase risk of substance misuse.[33] Although all providers should be aware of signs and symptoms of trauma, PTs have an advantage due to repeated, extended contact with patients that enhances recognition of behaviors that are unusual for that particular individual.

Trauma can heighten autonomic nervous system (ANS) reactivity, thereby exerting an excitatory influence on all bodily systems.[12] TIC enables PTs to be mindful of emotional, cognitive, behavioral, and physical symptoms of ANS reactivity; these may include changes in muscle tension, breathing, facial color, and expressions.[12] PTs can incorporate neuroeducation to enable trauma survivors to learn and recognize symptoms and implement effective self-regulation during episodes of aberrant physiological, psychological, and emotional responses. Over time, self-regulation can promote increased neuroplasticity by creating new patterns that create a sense of calm and balance.[12]

During each clinical encounter, PTs can incorporate TIC principles by routinely asking patients what makes them most comfortable. Patients may feel less anxious if the PT provides a brief overview of the types of physical contact and what parts of the body will be involved before beginning an exam or intervention. Allowing time for patients to ask questions also allays fears and anxiety by promoting a greater sense of control. When possible, PTs can provide choices to patients about how to provide access to the treatment site. For example, some people may be more comfortable wearing their clothing rather than a gown. In addition, PTs can provide options for patient positioning, especially if laying supine is triggering. Since triggers can vary, it may be helpful for the PT to ask whether the patient is concerned about any particular aspects of treatment. These steps provide an opportunity for shared decision-making and alterations in the plan of care. The PT and patient should also work together to plan how the patient will communicate if they experience distress, and how the PT should respond.[33]

Exercise and physical activity,[37] and sensory, body, and movement awareness are key physical therapy interventions that complement TIC.[37-38] Authors of a systematic review and meta-analysis on the effects of therapeutic movement on trauma-associated mental health challenges identified aerobic fitness, such as walking, running, swimming, and cycling, and mindful movement (e.g., yoga), as well as resistance training,

as helpful interventions.[38] In trauma survivors, therapeutic movement in trauma survivors improved depressive symptoms, sleep disturbances, dissociation, and quality of life.[38] Yoga also enhanced self-regulation and self-care.[39] Additionally, exercise and physical activity reduce risks of cardiovascular and metabolic disease in trauma survivors.[38] However, there is a need for further studies regarding mechanisms and effect sizes for specific exercise and movement-based interventions.[38]

Manual therapy and interpersonal touch can improve physiological and emotional regulation in people who have experienced trauma by promoting appropriate responses to anxiety, stress, and depression.[40] Moderate pressure soft tissue mobilization may activate parasympathetic nervous system responses, stimulate oxytocin release, and suppress cortisol activity, although further investigation is warranted.[40] PTs can also integrate mindfulness-based interventions such as acceptance and commitment therapy (ACT)[41] to facilitate present moment awareness and non-judgmental acceptance of thoughts and emotions.[42] Since trauma exposure is associated with adverse behaviors such as low physical activity, poor nutritional intake, and high rates of tobacco and other substance use, PTs should also integrate health-promoting interventions to address holistic physical and mental well-being.[43]

Organizations can support PTs and other health professionals in the delivery of TIC by providing adequate time, space, and resources to address the complex needs of trauma survivors.[33] In an anonymous survey, clinicians at a regional trauma center reported that time constraints were one of the largest barriers to TIC.[44] Additional barriers included inadequate knowledge and training, along with the absence of standardized trauma-informed procedures and protocols. Providers also reported concerns that they might advertently upset or possibly re-traumatize vulnerable patients.[44] Indeed, organizations and individual practitioners must be sensitive toward protecting vulnerable populations against well-meaning but harmful patient interactions. Trauma survivors may feel re-victimized if healthcare providers pay excessive attention to their negative experiences and adverse consequences without also acknowledging manageability of trauma symptoms and positive coping. Strength-based questions about survivorship and growth can enhance patients' self-efficacy. If providers do not address empowerment and resilience, survivors may not return for treatment because of discomfort and poor outcome expectations.[12] When discussing trauma, providers should emphasize resilience factors, including personal characteristics, family or social support, and community resources.[12] A well-designed organizational approach to TIC should also involve an interprofessional, patient-centered team and a network and directory of community resources for referral.[35]

Trauma-Informed Care in Physical Therapy Education, Research, and Advocacy

To better prepare physical therapists to support people with trauma, educational curriculum must include mental health and psychologically based techniques.[44] Although TIC may not specifically be incorporated in many physical therapy entry-level programs, PTs currently employ various mental health interventions to manage chronic conditions.[50] According to SAMHSA, trauma-informed programs, organizations, and systems need to recognize the broad impact of trauma, as well as a variety of paths to recovery.[1, 35] All PTs should be able to recognize signs and symptoms of trauma in patients/clients, families, caregivers, and colleagues so that they can respond appropriately and actively resist re-traumatization.[1] As part of foundational sciences, student PTs (SPTs) should learn physiological responses to both acute and chronic stress, including activation of the hypothalamic-pituitary axis (HPA). When activated, the HPA stimulates the hypothalamus to release pro-inflammatory cytokines that trigger corticotrophin-releasing hormone (CRH). In turn, CRH stimulates the pituitary gland to secrete adrenocorticotrophin-releasing hormone (ACHT) setting off a cascade of cortisol, norepinephrine, and epinephrine release from the adrenal cortex. Multiple physiological effects of this pathway of events include hepatic release of glucose stores, increased heart rate, respiratory rate, and blood pressure. Ordinarily, a negative feedback loop limits activation of the HPA to periods of acute stress. However, chronic stress can disrupt this feedback, resulting in neuroendocrine and immune system dysfunction that may include immunosuppression as well as an increased risk of autoimmune disorders.[45] Disruptions are physiological responses and the HPA can lead to epigenetic changes in the brain. These changes can create potential inheritance in children (aka – generational stress). The most vulnerable regions of the brain appear to be the hippocampus, the prefrontal cortex, and the amygdala, contributing to impaired learning and acquisition of new memories, emotional dysregulation, and diminished impulse control. Children and adolescents are particularly vulnerable to these alterations due to immature stages of brain and physiological development.[45] Therefore, SPTs and experienced clinicians need to have knowledge and experience in screening for ACEs and other traumatic exposures while indicating the relevance of this history in terms of an individual's current state of health. Further suggestions for TIC training include simulated experiences, interprofessional collaboration with mental health providers, and opportunities for community engagement.[49]

PT education should also cover relationships between trauma, health inequities, and social determinants of health.[46] To advance health equity, instructional methods should include culturally competent

communication.[49] The prevalence of trauma exposure dictates that all PTs learn how to recognize acute signs and symptoms of trauma, and how to assist someone who is reacting to a traumatic experience.[35] In addition, PTs need to learn how to be sensitive and aware of the possible effects of their own personal and professional trauma, including the benefits of trauma-informed self-care.[35] Trauma-informed self-care can reduce burnout, secondary traumatic stress, compassion fatigue,[41] and professional attrition.[12] One skill that enhances practitioner resilience, as well the ability to recognize and address effects of trauma, is ACT. ACT is a mindfulness-based approach where an individual cultivates an awareness of their current situation, and its impact on sensations, thoughts, and emotions. Through this mindful awareness, individuals can intentionally select appropriate behaviors based on their core values rather than a stress or trauma-associated reaction, thereby promoting resilience and positive coping.[41]

During entry-level PT education, faculty can employ trauma-informed practices such as content warnings when discussing sensitive topics within student coursework. These strategies model appropriate steps in TIC by creating a safe environment, promoting choice, and shared decision-making. Faculty can augment these strategies by being sensitive toward potentially triggering situations, such as requirements for physical contact and interacting with other genders when practicing lab skills.[35] Peer support and faculty mentorship can assist in creating an open dialogue with support for trauma-related experiences,[35] providing an academic background that translates into clinical practice.

Since trauma-informed physical therapy practice and education remains in its early stages, collaborative research is needed to provide evidence-based strategies to reduce the adverse impact of trauma on the physical and mental well-being of survivors. Just as TIC involves a patient-centered approach, for maximum benefit, PTs and other scientists should invite trauma survivors to participate in research to generate appropriate questions, determine the best methodology for gathering data, and disseminate findings to key stakeholders.[33] Using cross-sectional methods, physical therapy researchers can gather data on patient satisfaction, retention, and engagement to determine whether TIC improves outcomes compared with traditional assessment and treatment.[33] As experts in non-invasive health promotion interventions, PTs should also research best approaches to mitigating physiological and behavioral risks among trauma survivors.[33] Additionally, as essential members of the interprofessional, patient-centered care team, PTs should take a leadership role in research pertaining to best approaches to collaboration, referral, and communication, to ensure continuity of TIC across specialties and settings.[33]

To support social justice, research is also needed to identify the most effective and cost-efficient methods for preventing and addressing trauma. Evidence that that empirically demonstrates the impact of social reform on reducing community vulnerability to trauma and its adverse effects while promoting access to care and available resources can strengthen advocacy.[49] In addition, researchers can expand studies on the effects of ACEs to incorporate participants who are more diverse by including members of marginalized groups. Community-based participatory research methods would enhance inclusivity.[46]

Regarding advocacy, PTs, physical therapist assistants, and students must become involved in promoting changes in public policy and allocation of resources, particularly in light of the intersectionality among trauma, health inequities, social determinants of health, and social justice. Examples of steps the physical therapy profession can take include advocating for the prevention and mitigation of substance misuse through public education, early intervention, and expanded access to treatment.[46] We must also be aware of inequities in legal drug enforcement based on socioeconomic and or racial/minority status. Changing from a no-tolerance approach to one that is oriented towards harm reduction and recovery may have an intergenerational effect by reducing the risk of childhood trauma, family disruption, housing instability, financial hardship, and foster placement as part of the consequences of drug-related legal issues. Each of these factors elevates childhood exposure to violence, abuse, and other forms of trauma.[46] Advocacy also promotes public awareness of the impact of trauma and resources that promote resilience through individual and collective empowerment.

Recommendations/Conclusion

TIC is an important strategy for promoting mental and physical health equity[48] within PT practice, education, research, and advocacy. Given the high prevalence of trauma, PTs must be equipped with the knowledge and skills to recognize and respond to the full scope of trauma's expressions and its significant impact on mental and physical well-being. To accomplish these goals, physical therapy education, practice, research, and advocacy must integrate TIC principles. In practice, universal trauma precautions are essential, as well as trauma-specific interventions tailored to individuals with known trauma histories. Educational curricula should encompass trauma's biopsychosocial effects and TIC strategies, ensuring PTs are adept in behavior change techniques.[51] Furthermore, research into TIC's efficacy and advocacy for policy

changes that address social determinants of health are pivotal. Collectively, these measures will enhance care delivery, ensure the well-being of trauma survivors, and foster health equity.

Diversity, Equity, Inclusion Statement

In developing this perspective on trauma-informed care in physical therapy, we recognize that trauma is a universal experience that does not discriminate; however, its impact can be profoundly influenced by one's background, including race, gender, sexual orientation, age, socioeconomic status, disability, and other marginalized identities. Our approach to trauma-informed care is built on the understanding that diverse experiences and identities shape the health outcomes of individuals.

Conflict of interests

The authors report no conflicts.

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Epistemological Approaches to Community Mental Health and Intersections With Physiotherapy

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Epistemological Approaches to Community Mental Health and Intersections With Physiotherapy

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Abstract: This article proposes a comprehensive understanding of mental health that goes beyond the traditional biomedical approach and integrates the social, cultural, and political dimensions that shape the experience of health and illness. By broadening the analysis to include the health conditions of communities and the ways in which these are addressed, physiotherapy and its object of study—human movement—gain relevance. Human movement manifests in diverse ways depending on people's life stories, experiences, knowledge, and relationships. These bodily expressions may reflect both needs and potentialities, contributing to the promotion of individual and collective well-being and to the construction of a more just society. This perspective entails an ethical-political commitment to the recognizing health as a right and highlighting the need to develop interventions that address individual, group, and collective dimensions, while articulating with both operational and strategic approaches.

Summary Box

• This manuscript offers insights into the health–illness–care process within the field of mental health.

• It presents epistemological approaches to community and mental health, as well as the role physiotherapy plays in this domain.

• It is relevant because reflecting on key categories such as health, wellbeing and human movement has significant implications for professional practice with individuals, collectives, and territories. These reflections open up possibilities for the social construction of health and the accomplishment of this fundamental right.

Keywords: health promotion, community mental health, collective health, physiotherapy, epistemology

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Introduction

The mental health sector has been shaped by multiple intervention mechanisms developed across diverse contexts, settings, and populations, under a wide range of disciplinary approaches. In light of this plurality of scenarios, it is necessary to develop theoretical–conceptual and praxeological frameworks that make it possible to understand such diversity and complexity.[1] In the case of physiotherapy, efforts to expand its scope of understanding beyond the conventional biomedical paradigm take on particular relevance. In this regard, the incorporation of socio-critical and cultural perspectives constitutes a crucial milestone for both disciplinary knowledge and professional practice[2], as it opens the way for meaningful dialogue around the health–illness–care process in complex circumstances.

This reflection entails an ethical–political commitment to the recognition of health as a fundamental right.[3] It also requires acknowledging how different social actors construct knowledge and articulate actions for the promotion and care of health, taking into account their particularities and potentialities from a biopsychosocial perspective.[4] Consequently, it becomes essential to understand both the individual and collective dimensions of human movement as a foundational element of professional physiotherapy practice.

Objective

To analyze the health–illness–care process concerning various theoretical, historical, methodological, and praxeological conceptions of mental health in community contexts, as well as its intersection with physiotherapy.

Reflections

The integration of a critical model into various knowledge management domains entails both epistemological and ideological ruptures with established institutional and cultural frameworks. In the case of reflecting on the object of knowledge referred to as mental health, it becomes necessary to establish analytical dimensions that consider the *"object,"* the *"concept,"* and the *"field."* This also involves addressing fundamental questions such as: *How do we see? How do we think? How do we act?*[5]

Identifying the epistemic obstacles present in the history of health enables a transformation of current practices. One example is public health at the beginning of the 20th century, which adopted a perspective

centered on illness and death as the starting point for understanding health. This perspective was referred to as *"public pathologism,"* and it was grounded in positivist methodology to explain the population's risk of disease, as well as in structural functionalism to understand social reality. This approach privileged the role of the State as the guarantor of disease prevention.[6]

In line with the above, Edmundo Granda proposes several metaphors to understand the epistemic deconstruction of public *pathologism*. First, *"the power of life,"* which invites reflection on the capacity of individuals to generate health in their everyday lives, considering their social relationships, norms, and structures across different environments. Second, *"the power of knowledge,"* which underscores the importance of information exchange, the recognition of diversity, and the articulation among actors to ensure equitable access to scientific and technological progress. Finally, *"good political power,"* associated with building health citizenship and strengthening the State, which—in the context of mental health—is connected to the restoration of rights and the response to issues such as stigma and social exclusion.[6]

Reflecting on *"how we think"* involves recovering historical understandings of the health–illness–care process and their application within the field of mental health. On one hand, the view that situates health and illness as opposing extremes has led to dichotomies that deepen social divides, adopt labeling and exclusion, and perpetuate an hegemonic view of health and life. On the other hand, a conception centered on the life–death continuum allows for prolonged accompaniment of individuals, recognizing the elements that shape their ways of living and dying across different contexts and circumstances.[7]

Everything previously mentioned is grounded in a reflection on the category of *health*, understood as a multifaceted concept that, despite its variations, consistently recognizes the human capacity to adapt to the environment. This notion encompasses conditions, capacities, and opportunities that enable both individuals and collectives to develop in society according to their own expectations and aspirations.[8] Health is also conceived as a diverse concept—since it includes both collective and individual perspectives; relative—because it depends on the situation, time, and circumstances of the one defining or experiencing it; complex—for the reason that it involves multiple factors, some of which are essential depending on the adopted perspective; dynamic—because it is changeable and can exist in degrees; and open—because its meaning can be transformed by societal shifts.[9]

It is worth noting that, currently, various comprehensive frameworks intersect with the health–illness–care process. Among them is the salutogenic model, which promotes health and well-being in contrast to the pathogenic model, which focuses on the causes of disease. Likewise, the biopsychosocial model integrates the biological, psychological, and social dimensions of individuals' lives. Added to these is primary health care as an operational component, which prioritizes comprehensive care and fosters strategies for health promotion, disease prevention, and community and social participation. All these approaches are fundamental for strengthening population well-being.[10-11] This highlights the importance of reflection in this field, as well as the potential of holistic approaches that require intersectoral articulation and knowledge dialogue.

Regarding its convergence with physiotherapy, from a disciplinary perspective, it is essential to recognize how different actors build health practices from their everyday experiences, particularities, and potentialities. In this sense, the responses that emerge encompass dimensions related to the manifestation of movement within a context of increasing organization and complexity. This analysis considers various levels: individual, group, and collective; structural and systemic; as well as operational and strategic domains.[12] These dimensions are also shaped by contextual possibilities and by the elements that influence the development of professional praxis.

In the case of Colombia, for instance, the epistemological scope of physiotherapy links its practice with individuals, families, and communities, as well as with their surroundings. Its objective is embodied in the study, understanding, and management of human movement as a key element of health and well-being.[13] From this perspective, the focus should not be limited solely to the “pathological,” but rather—aligned with broader notions of health—physiotherapy can incorporate the sociocultural dimension of the body and permeate everyday processes, including the psychic and social spheres.[14-15] Thus, the goal is not only to repair what is altered, but to enhance people’s capacities and resources so they can fully participate in their environment, making bodily movement a vehicle for navigating life. All of this is connected with differential approaches, interdisciplinary perspectives, and actions aimed at addressing the social determinants of health.

Additionally, human bodily movement permeates individuals' existence, their health processes, and the configuration of spaces. This underscores the importance of articulating movement with spatial, symbolic, and relational dimensions, expressed through the concept of *territory*. This concept goes beyond being understood as a mere physical container; it invites a rethinking of the environment and populations, not from an instrumental logic, but as a sociohistorical situation and a project of liberation constructed by social actors.[16] In this context, the body also becomes a site for performative action.

Thinking about mental health requires taking into account the conceptual frameworks that shape practices in this field. In this regard, the definition proposed by the World Health Organization deserves critical reflection: mental health is understood as "a state of well-being in which the individual realizes their own abilities, can cope with the normal stresses of life, can work productively and can contribute to their community".[17] Although this perspective is well-intentioned, it also maintains an individualistic view by focusing on the subject without acknowledging the processual nature of mental health or the multiple historical, socioeconomic, cultural, biological, and psychological determinants that shape it. Moreover, it fails to recognize that preserving and improving health necessarily involves a dynamic of social construction linked to the realization of human and social rights.[18]

Therefore, discussing the construction of a just, free, and democratic society—where each person is recognized and valued—contributes to mental health by acknowledging psychic and social suffering without necessarily pathologizing it from biological or psychiatric perspectives[19]. This requires accepting the shift from the category of *"patient"* to that of *"person,"* incorporating a subjective and intersubjective dimension that highlights the *"relational subject."* It also calls for moving beyond *"diagnosis"* as an individual label and device, and beyond *"stigma,"* toward the construction of *"health citizenship"* from a perspective of reparation and social inclusion. In light of this, it becomes essential to transcend the risk-factor lens—focused on pathology—and to shift attention toward the social determinants of health and the notion of *buen vivir* (good living), from an autonomous, self-defined perspective.[19-20]

To fully understand the concept of mental health, it is essential to analyze various epistemological perspectives. The biomedical and behavioral perspective, with its pathologizing and individualizing approach, has historically been hegemonic, extending a medicalizing logic to social phenomena. Meanwhile, the well-being and potential-oriented perspective, although valuable, has been criticized for its

functionalism and individualism, promoting an unattainable notion of happiness and a view of resilience that overlooks vulnerability as an ontological condition and suffering as a socially inevitable reality. In contrast, cultural, psychosocial, and social-determinants-based perspectives emphasize the need to consider the socioeconomic, political, and historical context of health–illness processes. These approaches promote an ethic of care, solidarity, and the de-pathologization of suffering. They also aim to overcome the binary between culture and society, incorporating popular semiology and the intersubjective dimension of the human being as an inhabitant of the world.[21]

Currently, in the face of contemporary societal challenges, many collective health and mental health issues are expressed through the fragility of social relationships and the erosion or weakening of community-based support networks.[22] For this reason, integrating a perspective focused on disease prevention and the promotion of community mental health requires an epistemological openness toward recognizing the subjective afflictions of our time in all their complexity. These afflictions must be understood as dynamic processes within the health–illness–care continuum, and their approaches must take into account collective, diverse, and historical dimensions, as they are embodied in singular bodies that reveal their interconnections within the social fabric—emerging from collectively experienced challenges.[22]

In light of the above, the production and revitalization of knowledge within everyday spaces becomes essential as a pathway toward community health organization. In this process, active community participation, the transformation of social ties into solidarity-based relationships, and the recognition of the community as an active agent in transforming its own realities are fundamental elements for the development of community mental health.[23] This perspective opens the door to imagining proposals that *de-pathologize* identities, *de-localize* care spaces, and support the creation of initiatives where people come together not because they share diagnoses or labels, but rather because of common interests, passions, and desires.[24]

From what has been outlined throughout this text, several key considerations emerge: community mental health goes beyond the appropriation of spaces and network-building, requiring a shift from the functionalist approach that reduces the relationship between services and the community to a purely operational articulation. Practices in this field are not limited to outpatient treatments but seek to collectively build spaces and strategies that foster mental health and autonomy.[25] To achieve this, it is

essential for professionals to take on the roles of caregivers–interpreters, mediators, and intercultural translators, employing methods that integrate diverse narratives, foster dialogue, and acknowledge the power of identities in everyday life—thus accompanying the struggle for life and health within the territories.[6]

Finally, as a proposal for the intersection between community mental health and physiotherapy, there are still paths to explore in the promotion of well-being among individuals and collectives facing challenges related to their mental health or associated conditions, through human bodily movement. In this context, physical activity, exercise, functional movement, bodily practices, as well as bodily and movement awareness play a crucial role in improving mood, cognitive function, distress management, relationship-building, social inclusion, and overall quality of life.[26] Likewise, it is necessary to adopt a perspective focused on creating supportive environments and strengthening peer connections in order to reduce stigma and foster the construction of *health citizenships* that transcend diagnostic labels.[27]

Conclusions

Intersectoral and interdisciplinary articulation in community mental health enriches and strengthens the diversity of perspectives and approaches, becoming a key element for driving transformations in both knowledge and context-sensitive praxis. In this regard, social participation spaces in health must be instructed by the interpretations and meanings constructed by the various actors who advocate for life and mental health. These spaces, rather than functioning merely as instruments, should be conceived as reflective processes that emerge from the convergence of diverse currents and perspectives—open to dialogue and the recognition of otherness.

Social intervention processes linked to community mental health also allow for the development of disciplinary perspectives on the phenomenon under study. From a physiotherapeutic standpoint, human bodily movement can be understood through various analytical dimensions—individual, group, and collective—as well as through praxeological aspects that contribute to the configuration of health. Making the physiotherapist's role visible in these spaces is crucial, as in the everyday experience of bodily movement—where it emerges and is expressed in diverse forms according to life stories, experiences, knowledge, and social ties—both needs and potentialities become apparent, oriented toward the construction of a more just society. This perspective recognizes human movement in its diversity and

highlights its contributions to social inclusion, community participation, promotion of autonomy, reduction of stigma, equalization of opportunities, strengthening of the social fabric, and shaping of territorial dynamics.

Equity, Diversity, and Inclusion Statement

Throughout this manuscript, differential approaches to health have been made explicit, along with an ethical–political commitment to the realization of human rights. Likewise, the text proposes perspectives aimed at fostering health citizenship and a more just professional practice, aligned with social inclusion and the recognition of otherness and alterity.

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Conflict of Interest

The authors declare no conflicts of interest.

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