



TEXAS WOMAN'S UNIVERSITY

Reliability and Validation of the Professional Fulfillment Index with Physical Therapists

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Background/ Gap in Research



Burnout prevalence is high at
50% in healthcare workers
(Prasad et al., 2021)

Work-related chronic stress linked to:

- likelihood to leave the job or profession
- poor quality of care
- poor well-being



Gold Standard: Maslach Burnout Inventory (MBI)



Novel tool: Professional Fulfillment Index (PFI)

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Operational Definitions

| Term | Definition |
|----------------------|---|
| Burnout | chronic work stress due to high demands & inadequate resources leading to exhaustion, cynicism and reduced personal efficacy (Qiao and Schaufeli, 2011) |
| Emotional Exhaustion | “...wearing out, loss of energy, depletion, debilitation, and fatigue” (Maslach & Leiter 2016, p 103) |
| Cynicism | “...negative or inappropriate attitudes towards clients, irritability, loss of idealism and withdrawal.” (Maslach & Leiter, 2016, p 103) |

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Research Question

Is the PFI Burnout Scale a valid and reliable tool for use with physical therapists (PTs)?

Table 7 To what degree have you experienced the following?

| During the past two weeks I have felt... | Not at all Score=0 | Very little Score=1 | Moderately Score=2 | A lot Score=3 | Extremely Score=4 |
|---|-----------------------|------------------------|-----------------------|------------------|----------------------|
| a. A sense of dread when I think about work I have to do | | | | | |
| b. Physically exhausted at work | | | | | |
| c. Lacking in enthusiasm at work | | | | | |
| d. Emotionally exhausted at work | | | | | |
| During the past two weeks my job has contributed to me feeling... | Not at all Score=0 | Very little Score=1 | Moderately Score=2 | A lot Score=3 | Extremely Score=4 |
| a. Less empathetic with my patients | | | | | |
| b. Less empathetic with my colleagues | | | | | |
| c. Less sensitive to others' feelings/emotions | | | | | |
| d. Less interested in talking with my patients | | | | | |
| e. Less connected with my patients | | | | | |
| f. Less connected with my colleagues | | | | | |

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METHODS

IRB reviewed and exempted this cross-sectional, descriptive study using an electronic, anonymous survey (Qualtrics)

- October 2022 to November 2022
- Recruitment emails sent to staff PTs by supervisors with one follow up email
- Contained link and QR code to survey
- No exclusion criteria and no incentives
- 90-item survey including:
 - Demographics (gender, age, ethnicity, race, APTA membership, clinical instructor status, primary practice setting, state residence)
 - MBI (overall burnout score, emotional exhaustion, cynicism)
 - PFI (overall burnout score, work exhaustion, interpersonal disengagement)

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Participants

- Eight organizations participated
- Practice settings represented:
 - hospital (acute care)
 - inpatient rehab
 - outpatient rehab clinics
 - sub-acute rehab
 - home health
- A priori power analysis = estimated sample size of 84



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Instruments

Maslach Burnout Inventory

- 22-items with 3 subscales
 - 9 for Emotional Exhaustion
 - 5 for Cynicism
 - 8 for Personal Accomplishment
- Each item rated from 0 (never) to 6 (daily)
- Sum for subscale scores and overall score
- Higher scores = greater burnout except for Personal Accomplishment

Professional Fulfillment Index

- 10-items with 2 subscales
 - 4 for Work Exhaustion
 - 6 for Interpersonal Disengagement
- Each item rated from 0 (not at all) to 4 (extremely)
- Items averaged with a score between 0 and 4
- Higher scores = greater burnout

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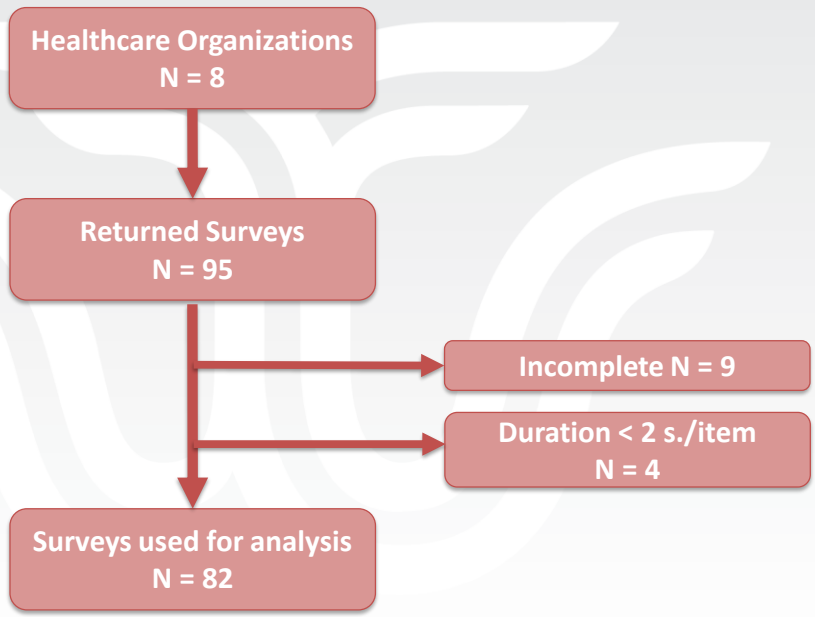
Data Analysis

- Are survey items are measuring the same construct? (Internal consistency)
 - Cronbach's Alpha (Portney, 2020)
- Are survey tool results stable over time? (Test-retest reliability)
 - Intraclass correlation (ICC) with a two-way mixed effects model with absolute agreement (Portney, 2020)
- Is the novel PFI related to the reference standard, MBI, at the same time point in time? (Concurrent validity)
 - Bivariate correlation analysis (Portney, 2020)

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RESULTS



RESULTS – Participant Characteristics

| Gender | N = 82 |
|--------------------------------|-------------------|
| Female | 55 (67.1%) |
| Male | 25 (30.5%) |
| Prefer not to say/Other | 2 (2.4%) |
| Birth Year | N = 79* |
| 1951 – 1957 (age 66-72) | 3 (3.9%) |
| 1958 – 1967 (age 56-65) | 10 (12.7%) |
| 1968 – 1977 (age 46-52) | 16 (20.3%) |
| 1978 – 1987 (age 36-45) | 26 (32.9%) |
| 1988 – 1997 (age 26-32) | 21 (26.6%) |
| 1998 (age 25) | 3 (3.8%) |

| Ethnicity | N = 82 |
|-------------------------------|-------------------|
| Hispanic/Latino/Spanish | 1 (1.2%) |
| How do you describe yourself? | N = 82 |
| Asian | 8 (9.8%) |
| Black/African American | 2 (2.4%) |
| White/Caucasian | 70 (85.4%) |
| Other: Black Indian | 1 (1.2%) |
| Choose not to answer | 1 (1.2%) |

* Missing data

RESULTS – Participant Characteristics

| Are you a current APTA member | N = 82 |
|--|------------|
| No | 52 (63.4%) |
| Yes | 30 (36.6%) |
| Primary practice setting | N = 82 |
| School system (K – grade 12) | 1 (1.2%) |
| Acute care hospital | 14 (17.1%) |
| Inpatient rehab facility | 8 (9.8%) |
| Skilled nursing facility | 5 (6.1%) |
| Home care/Patient's home | 18 (22%) |
| Outpatient clinic: Hospital-based | 26 (31.7%) |
| Outpatient clinic: Group/Private practice | 6 (7.3%) |
| Other: multiple settings, swing bed, day neuro | 4 (4.9%) |

| Are you a clinical instructor? | N = 82 |
|--------------------------------|-----------------|
| No | 38 (46.3%) |
| Yes | 44 (53.7%) |
| State of Residence | N = 82 |
| Florida | 23 (28%) |
| Texas | 19 (23.2%) |
| New York | 19 (23.2%) |
| Oregon | 15 (18.3%) |
| Ohio | 6 (7.3%) |

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RESULTS - Research hypotheses

1. There will be good concurrent validity of the PFI for quantifying burnout in physical therapists, with good to excellent ($r > .75$) positive correlation between the PFI and MBI corresponding subscales and overall score.

PFI work exhaustion with MBI emotional exhaustion ($r = .83, p < .001$)

PFI interpersonal disengagement with MBI cynicism ($r = .68, p < .001$)

PFI burnout and MBI Burnout ($r = .66, p < .001$).

2. There will be good internal consistency of PFI items in physical therapists with an overall alpha coefficient $> .75$.

Excellent internal consistency ($\alpha = 0.92$)

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RESULTS - Research hypotheses

3. There will be good test-retest reliability of the *PFI subscales* for quantifying burnout and fulfillment in physical therapist with interclass correlation coefficients $> .75$.

Work exhaustion: $ICC_{(3,2)} = 0.82, p < .001$

Personal disengagement: $ICC_{(3,2)} = 0.82, p < .001$

4. There will be good test-retest reliability of the *total PFI burnout score* for quantifying burnout and fulfillment in physical therapist with interclass correlation coefficients $> .75$.

Overall burnout score: $ICC_{(3,2)} = 0.90, P < .001$

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DISCUSSION

- PFI items are measuring same construct with excellent internal consistency
- PFI scores are stable over time when no change was expected
- The novel PFI has acceptable relationships with the MBI, the strongest being the exhaustion subscales
- PFI validation makes burnout assessment, especially work exhaustion, more available without cost for use with PTs
 - Pre-employment screening
 - Annual employee well-being screening
 - Assess effectiveness of interventions

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Limitations

- Non-response bias may have occurred due to the nature of the topics included (National Research Council, 2013)
- Sample was a convenience sample from select states in the US and results may not be fully generalizable.

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Q & A



REFERENCES

