



IMPACTS OF PERFECTIONISM, STRESS, ANXIETY, AND COPING STRATEGIES IN STUDENT PHYSICAL THERAPISTS AND STUDENT PHYSICAL THERAPIST ASSISTANTS

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INTRODUCTION & PURPOSE

Limited research has been done to identify the correlation between **perfectionism**, **stress**, **anxiety**, and specific **copied mechanisms** within the population of graduate students in the health science professions.¹

The purpose of this study is to examine the variables of perfectionism, stress, anxiety, and coping strategies in student physical therapist (SPTs) and student physical therapist assistants (SPTAs).

Table 1 (below) provides the demographic data for the student participants in this study.

Category	N (%)
Gender	
Male	49 (22.2)
Female	171 (77.4)
Prefer not to say	1 (0.5)
Program of Study	
Physical Therapy (SPT)	187 (87.6)
Physical Therapy Assistant (SPTA)	34 (15.4)
Graduation Year	
2023	56 (25.3)
2024	97 (43.9)
2025	65 (29.4)
Year in School	
Year 1/First year	89 (40.3)
Year 2/Second Year	88 (39.8)
Year 3/Third Year	44 (19.9)
Category	Mean ± SD (Range)
Grade Point Average	3.66 ± 0.30 (2.40-4.00)
Age	24.57 ± 4.05 (18.00-45.00)

VARIABLES

Perfectionism: When an individual strives for perfection and setting exceptionally high standards for performance.²

Stress: Physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation.³

Anxiety: An emotion characterized by feelings of tension, worried thoughts, and physical changes like increases in blood pressure.⁴

Coping: Strategies used to help adapt to high levels of stress and/or stressful situations.⁵

METHODS

RESEARCH DESIGN: Non-experimental survey conducted via Qualtrics

SUBJECT SELECTION: Non-random sample of convenience

INCLUSION CRITERIA: ≥18 years-old; enrolled in full-time in DPT or PTA program

INSTRUMENTS:

Perfectionism: *Almost Perfect Scale – Revised (APS-R)*⁶

Stress: *Perceived Stress Scale (PSS-10)*^{7,8}

Anxiety: *State Trait Anxiety Index (STAI)*⁹

Coping: *Brief COPE Scale*¹⁰

PROCEDURES:

- ✓ Approved by IRB prior to student contact
- ✓ Invitations delivered during the FA22 and SP23 semesters
- ✓ Two reminder emails after the respective initial invitations

HYPOTHESES CLUSTER

HYPOTHESIS #1: Males and Females will report equal levels of stress

HYPOTHESIS #2: SPTs will report higher levels of stress and anxiety compared to SPTAs

HYPOTHESIS #3: SPTs/SPTAs will demonstrate higher levels of perfectionism

HYPOTHESIS #4: SPTs/SPTAs will report the use of problem-focused coping strategies

RESULTS - Instruments

Survey Instrument Outcomes are presented in **Table 2**.

PERFECTIONISM (Table 3):

- 65.0% (N=145) students classify as “perfectionist”
- 33.9% (N=75) students classified as perfectionist of maladaptive nature

STRESS (Table 3):

- 10.8% of students were experiencing high levels of stress
- 71.3% of students were experiencing moderate levels of stress
- 17.9% of students were experiencing low levels of stress

ANXIETY (Table 3):

- 57.0% of students generally indexed at high anxiety levels
- 20.6% of students current state indexed at a moderate anxiety level
- 26.9% of students generally indexed at no-to-low anxiety levels

COPING (Table 2):

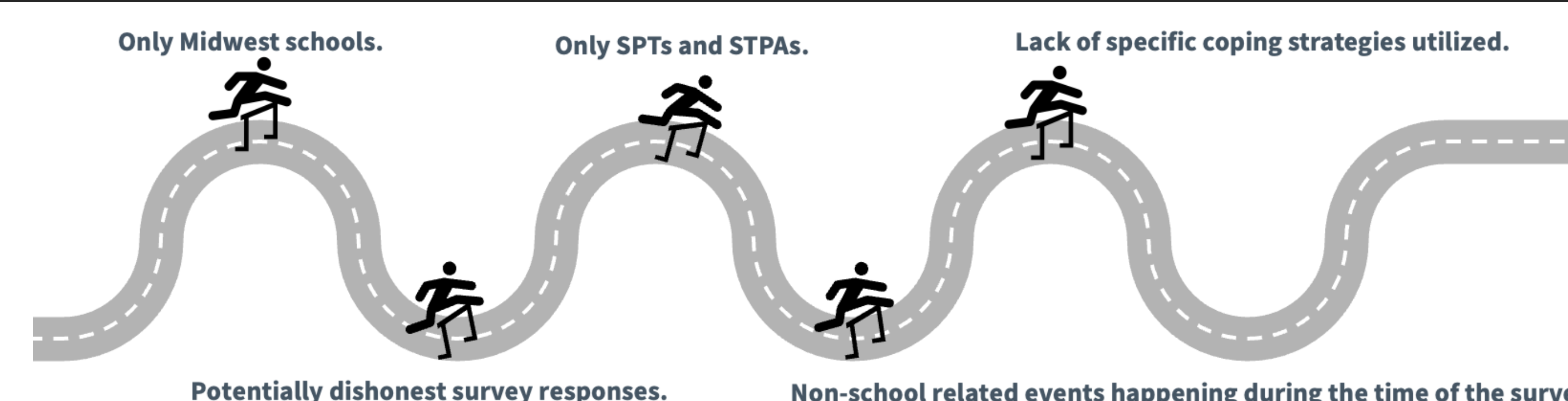
- Problem-Focused coping strategies were the most frequently used (\bar{x} = 2.65 of 4)
- Avoidant-Focused coping strategies were used second most (\bar{x} = 2.26 of 4)
- Emotion-Focused coping strategies were used the least (\bar{x} = 1.63 of 4)

Scale	Mean	Standard Deviation
Almost Perfect Scale		
Standard Total	43.14	4.67
Discrepancy Total	44.87	16.14
Order Total	22.40	3.97
Perceived Stress Scale		
Total	22.38	3.33
State Trait Anxiety Index		
STAI Y-1 Current State	45.70	12.16
STAI Y-2 General State	45.97	11.21
Brief COPE		
Problem Focused	2.65	0.54
Avoidant Focused	1.63	0.38
Emotion Focused	2.26	0.47

Table 3. Survey Scale Categories

Scale	N (%)
Almost Perfect Scale	
Non-Perfectionist (Standard Total Score < 42)	76 (34.1)
Perfectionist (Standard Total Score ≥ 42)	145 (65.0)
Adaptive Perfectionist (Discrepancy Total Score < 42)	70 (31.4)
Maladaptive Perfectionist (Discrepancy Total Score ≥ 42)	75 (33.6)
Perceived Stress Scale	
Low Stress (PSS-10 Total = 0-13)	40 (17.9)
Moderate Stress (PSS-10 Total = 14-26)	159 (71.3)
High Stress (PSS-10 Total = 27-40)	24 (10.8)
State Trait Anxiety Index	
STAI Y-1 Current State	
No-to-Low Anxiety (STAI Y-1 = 20-37)	60 (26.9)
Moderate Anxiety (STAI Y-1 = 38-44)	46 (20.6)
High Anxiety (STAI Y-1 = 45-80)	115 (51.6)
STAI Y-2 General State	
No-to-Low Anxiety (STAI Y-1 = 20-37)	58 (26.0)
Moderate Anxiety (STAI Y-1 = 38-44)	36 (16.1)
High Anxiety (STAI Y-1 = 45-80)	127 (57.0)

LIMITATIONS



RESULTS - ANALYSIS OF DIFFERENCES

Independent t-test indicated a significant difference between genders.

- Females scored 2 points higher on the PSS-10 ($P < .028$)
- Females scored 4 points higher on both forms of the STAI (Y1: $P = .017$, Y2: $P = .030$)
- Females reported using problem-focused ($P = .021$) more than males
- Females reported using emotion-focused coping strategies ($P < .009$). more than males

ANOVA indicated a significant difference between the PSS-10 and both forms of the STAI.

- Participants with low stress had moderate current and general anxiety ($P < .001$)
- Those with moderate or high stress had high current and general anxiety ($P = .001$)

Chi-Square indicated a significant difference between the PSS-10 and both STAI forms.

- Students with high anxiety have moderate stress

Chi-Square indicated a significant difference between the APS-R and both STAI forms.

- Students with high anxiety are more likely to be maladaptive perfectionists
- Students with no-to-low anxiety are more likely to be adaptive perfectionists

DISCUSSION

HYPOTHESES CLUSTER:

- Hypothesis #3 accepted; 65.5% of participants were perfectionists
- Hypotheses #1, #2, and #4 were rejected

PERFECTIONISM:

- Over one-third of the participants classified as maladaptive perfectionists
- Negligible correlation between student stress levels and perfectionist categorization

STRESS:

- The findings in our study is consistent with the current literature.¹¹

ANXIETY:

- Proportional relationship between high anxiety and perceived stress in SPTs¹²
- Anxiety and stress combination are not exclusively linked to the success and well-being

COPING:

- Current literature¹¹ backs the use of problem-focused coping strategies in SPTs

CONCLUSION & CLINICAL RELEVANCE

- ✓ Students in health-related fields, particularly SPTs, have been found to experience increasing levels of stress, anxiety, and perfectionism, which can have negative effects on their mental and physical health.
- ✓ Graduate students in health science fields may experience greater levels of stress due to their academic demands.
- ✓ Educational programs should understand the toll of stress, anxiety, and perfectionism on their students and provide resources to help students navigate their education with less resistance, such as finding adaptive coping strategies.

IMPLICATIONS FOR FUTURE RESEARCH

- ✓ Establish normative data in DPT and PTA programs for comparisons
- ✓ Investigation of causative factors of stress and anxiety from generalized data
- ✓ Identify positive coping strategies for program implementation

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