



TEXAS WOMAN'S UNIVERSITY

Descriptive Study Exploring Trauma, Depression, Stress, Anxiety, Grit, Resilience
and Burnout in Early Career Physical Therapists Licensed five years or less

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The Gap in Research

- Physicians, nurses, and pharmacists
 - high levels of depression, anxiety, stress
- Trauma (physical/sexual abuse, neglect and dysfunctional household)
 - increases morbidity and mortality
 - Studies avail with physicians
- Burnout
 - Increasing in health care linked to intention to leave the profession
 - poorer quality of care
- Not studied in early career PTs

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Purpose and Research Hypothesis

- Study purposes:
 - explore relationships between grit, resilience, depression, anxiety and burnout.
 - explore trauma history as a vulnerability factor for poor mental health (depression and anxiety) and wellbeing (burnout) in early career PTs.
- *Research hypothesis:* On average, early career PTs with at least one adverse childhood experience will have differences in depression, anxiety, stress, resilience, grit and/or burnout compared to early career PTs with no adverse childhood experiences.

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Definitions

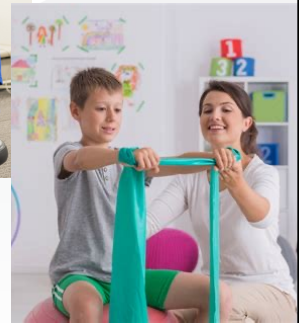
Term	Definition
Trauma	results from a single or multiple events, that is experienced as physically or emotionally harmful or life threatening and has lasting adverse effects
Burnout	work related phenomenon from chronic stress due to high work demands & inadequate resources. Consists of 3 domains – emotional exhaustion, depersonalization, lack of personal accomplishment
Depression	is a loss of interest or pleasure, and feelings of worthlessness
Anxiety	is having a heightened reaction to threatening situations and includes state, trait & test anxiety having negative impacts to wellbeing
Stress	is a response to a perceived/real threat or harm manifesting feelings of emotional and/or physical tension. Stress can have + or - impacts
Grit	is having perseverance and persistence towards long term goals
Resilience	is having successful coping & ability to succeed while facing adversity

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SUBJECTS

- Licensed PTs with 5 years or less of initial licensure recruited through email lists provided by state licensing boards (AK, AZ, FL, NY, OH, OR, RI, WA, WI, and TX)
- No exclusion criteria and no incentives
- An a priori power analysis determined an estimated sample size of 78



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METHODS

IRB reviewed and exempted this cross-sectional, descriptive study using a 90-item emailed survey

- October 2022 to November 2022
- Initial email with a follow up reminder 3 weeks later
- 10.5 minutes to complete
- Valid & reliable embedded tools:
 - Adverse Childhood Experiences (ACE) questionnaire
 - Depression, anxiety, and stress scale (DASS-21)
 - Short Grit Scale (SGS)
 - Brief Resilience Scale (BRS)
 - Burnout subscale of the Professional Fulfillment Index (PFI).

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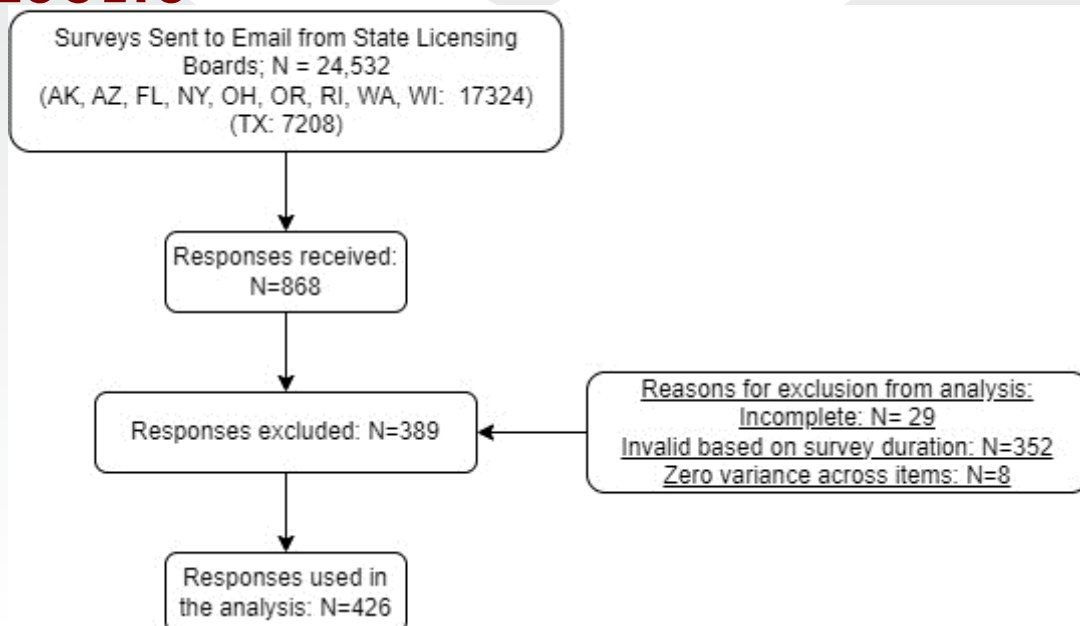
Data Analysis

- PTs were dichotomized into two groups: with and without ACE.
- Frequencies were tabulated for ACE, age range in five-year increments and gender.
- Demographic and descriptive statistics (means and standard deviations)
- All assumptions were met
- A MANOVA was run to determine if trauma influences depression, anxiety, stress, grit, resilience, and burnout on their own or in combination.
- The omnibus MANOVA was statistically significant
- Follow up univariate analyses were run using one-way ANOVAs with alpha adjusted using Bonferroni Correction
- Spearman rho correlations to analyze relationships

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RESULTS



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Table 1. Participant characteristics	
Total	n = 426 (%)
Gender	
Female	308 (72.5)
Male	112 (26.4)
Choose not to answer	3 (.7)
Non-binary	1 (.2)
Non-binary, transgender	1 (.2)
Age Range (year)	
1978-1982 (40-44)	5 (1.2)
1983-1987 (35-39)	27 (6.5)
1988-1992 (30-34)	108 (25.6)
1993-1997 (25-29)	273 (65)
1998 (24)	7 (1.7)
Ethnicity	
Hispanic/Latino or Spanish Origin	45 (10.6)
How do you describe yourself?	
American Indian or Alaska Native	4 (.9)
Asian	28 (6.6)
Black or African American	16 (3.8)
Native Hawaiian or other Pacific Islander	1 (.2)
White	374 (87.8)
Other ethnicity – 2 - Hispanic	2 (.5)
1 – Biracial	1 (.2)

RESULTS

Table 2. Proportion with Adverse Childhood Experiences (ACE) in Early Career PTs vs. U.S. Population		
Number of ACE	Early Career PTs*	Population (Giano et al. 2020)
0	43.9%	42%
1	19%	22.9%
2	14.1%	12.8%
3	8.0%	8.2%
4 or more	11.5%	13.3%
* Missing data – 3.5%		

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RESULTS – Between Group Differences

MANOVA: Wilks' $\lambda = .961$, $F(6, 385) = 2.576$, $P = .019$, observed power = .85

Table 3. Descriptive statistics for depression, anxiety, stress, grit, resilience, and burnout disaggregated by the presence or absence of at least one ACE (N = 392)

Variable	No Adverse Childhood Experiences (n = 177)		At Least One Adverse Childhood Experiences (n = 215)		Post hoc ANOVAs
	M	SD	M	SD	
Depression*	9.21	8.10	11.49	8.46	.007
Anxiety	7.29	9.91	8.03	6.22	.266
Stress*	13.95	7.64	16.46	7.83	.002
Grit	3.58	.56	3.45	.61	.023
Resilience	3.33	.72	3.16	.84	.040
Burnout	2.74	.88	2.88	.85	.100
* Significant with Bonferroni correction < .008					

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RESULTS

Grit:

- 57% of the early career PTs had grit levels above average (Duckworth, 2009)

Resilience:

- 32.4% had low resilience (Smith, 2013)

Burnout:

- 96% were classified as having burnout (Trockel, 2018)

Table 4. Depression, Anxiety and Stress by Severity Category (% of sample)

Variable	Moderate	Severe
Depression	21%	7.4%
Anxiety	19.6%	6.9%
Stress	19.1%	10.4%

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RESULTS - Associations

- Early career PTs with higher levels of stress had...
 - lower grit ($r_s = -.23, P < .001$;
 - lower resilience scores $r_s = -.44, P < .001$)
 - much higher burnout levels ($r_s = .59, P < .001$).
- Early career PTs with higher levels of depression had...
 - lower grit ($r_s = -.35, P < .001$)
 - lower resilience ($r_s = -.38, P < .001$)
 - much higher burnout levels ($r_s = .59, P < .001$).
- Conversely, early career PTs with higher resilience scores had lower burnout levels ($r_s = -.29, P < .001$).

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DISCUSSION

- Trauma linked to:
 - adverse mental and physical health, and lower quality of life (Felitti, 1998)
- Preemployment ACE screening:
 - identify PTs at an increased risk
 - Target supports to individuals with greater risk
- Potential interventions not well established on systems level should be explored
- Resilience training
- Other potential factors: employment status and practice setting

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Limitations

- Non-response bias may have occurred due to the nature of the topics included. (National Research Council, 2013)
- Moral distress and moral injury are related to burnout but not included in this study. (Kellish, 2021)
- Burnout subscale of PFI not previously used with this population although has concurrent validity with Maslach Burnout Inventory. (Trockel, 2018)

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 - Ann Medley, PT, Ph.D
 - Jodi Thomas, PT, DPT, DHSc



Center for Student Research



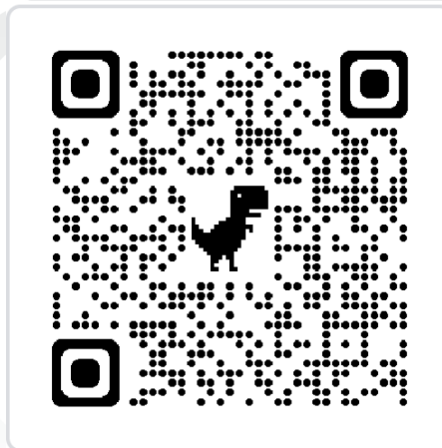
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Q & A



REFERENCES



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