Utilizing a Podcast to Address Certified Registered Nurse Anesthetist and Student Registered Nurse Anesthetist Burnout

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Problem Statement

- CRNAs in the United States are experiencing increased levels of burnout, a phenomenon which contributes to negative outcomes such as decreased patient satisfaction, an increased number of medical errors, and increased costs to organizations. SRNAs also experience burnout due to the stressful nature of their training yet there is a paucity of literature to explore how burnout varies among SRNA cohorts.

Background

- Burnout is a complex human experience characterized by emotional exhaustion, loss of personal accomplishment, and depersonalization (Maslach & Jackson, 1981).
  - **Emotional exhaustion**: depleted emotional resources
  - **Loss of personal accomplishment:** decreased sense of accomplishment professionally or personally
  - **Depersonalization:** cynicism towards patients
- Christina Maslach developed the Maslach Burnout Inventory (MBI) in 1981 and today it is considered the gold standard for burnout assessment.
- Those suffering from burnout are more likely to experience anxiety, depression, and substance abuse (Balayssac et al., 2017).
- Patient safety may be at risk as burned-out anesthesia providers are prone to making medication errors (de Oliveira et al., 2013).
- Up to 72% of CRNAs working at a level-one trauma facility reported experiencing burnout (Vells et al., 2021).
- The average cost to replace an experienced CRNA was estimated to be approximately $145,000 to $157,000 in 2020 (Mahoney et al., 2020).
- The use of podcasts among graduate students enhances learning, increases engagement, and promotes accessibility (Shifrin, 2024).

Purpose

- The purpose of this project is to evaluate and compare burnout levels among CRNAs and SRNAs working at a large academic medical center and to increase awareness of the consequences of burnout. A two-part educational podcast series introduces listeners to evidence-based methods to mitigate burnout.


Methods

- This project was reviewed and received approval by an institutional review board.
- A literature review was conducted utilizing MeSH terms: "burnout," "CRNA," "Certified Registered Nurse Anesthetist," "stress," and "student."
- This project was awarded the Dean's DNP Scholarly Project Grant and utilized the funding to purchase licensing rights to administer the Maslach Burnout Inventory-Human Services Survey for Medical Personnel (MBI-HSS, MP) from Mind Garden, Inc.
- An online survey was created in REDCap and included the MBI, demographic questions, and a free response to report stress management strategies.
- Data analysis was conducted via REDCap and Microsoft Excel. Descriptive statistics were used to summarize demographic data.
- Measures of central tendency were calculated for the three subcategories of the MBI and a t-test was performed to compare MBI results between CRNAs and SRNAs using a 95% confidence interval.
- Two podcast episodes were recorded and published on Spotify and Apple Podcasts. Content includes survey results and evidence-based methods to mitigate burnout.

Results

Comparison of Mean MBI Scores Between CRNAs and SRNAs
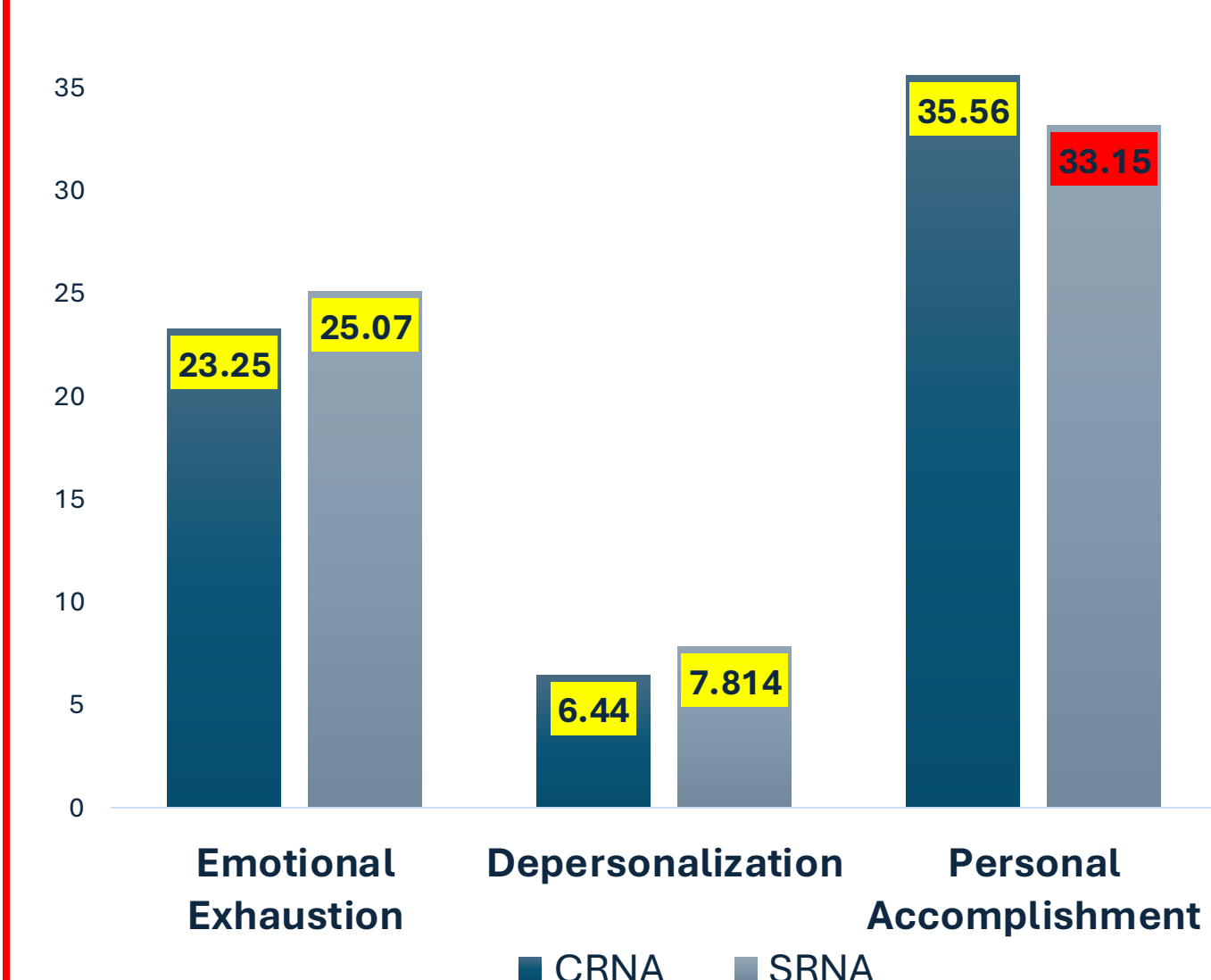
MBI Scoring Table			
Occupational Exhaustion	EE <17.9	EE 18-29	EE >30
	Low degree	Moderate Degree	High Degree
Depersonalization	DP<5.9	DP 6-11	DP >12
	Low degree	Moderate degree	High degree
Personal Accomplishment	PA <33.9	PA 34-39	PA >40
	Low degree	Moderate Degree	High degree

- SRNAs had a statistically significant low PA score compared to CRNAs ($p < 0.05$)
- There was no statistically significant difference in EE or PA scores between the CRNAs and SRNAs

CRNA Sample Characteristics	N = 32	%
Years of CRNA work experience		
<1	1	3.1
1-3	7	21.9
4-9	9	28.1
10+	15	46.9
Average hours scheduled per week		
<20	0	0
20-30	1	3.1
30-40	18	56.3
>40	13	40.6
Hours of overtime worked in last month		
0	8	25
1-12	8	25
13-23	9	28.1
>24	7	21.9

SRNA Sample Characteristics	N = 59	%
Year in Training		
SRNA1	17	28.8
SRNA2	23	39.0
SRNA3	19	32.2

MBI Realm	SRNA Cohort	Mean Score
Emotional Exhaustion	SRNA1	23.35
	SRNA2	22.91
	SRNA3	27.21
Depersonalization	SRNA1	11.12
	SRNA2	5.00
	SRNA3	8.26
Personal Accomplishment	SRNA1	35.37
	SRNA2	32.48
	SRNA3	31.89

Discussion

- This project provides foundational knowledge of the incidence of burnout among the University of Cincinnati CRNAs and SRNAs to identify needs for future quality improvement interventions for these populations.
- Results from the survey were discussed in a fully accessible and free podcast-style educational session.
- Both CRNAs and SRNAs experience a moderate degree of burnout which highlights the importance of developing and maintaining healthy coping mechanisms early in one's career.
- Strengths of this project include use of a survey that is considered the gold standard for burnout recognition and digitally accessible results for dissemination.
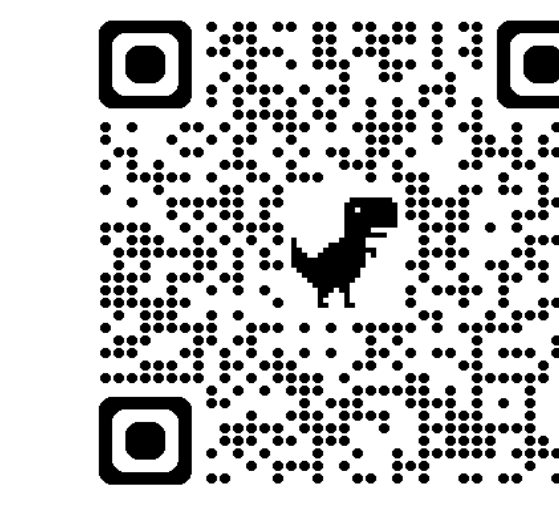- Weaknesses include limited sample size.

Conclusions

- Increasing awareness of one's own level of burnout is a necessary first step to take when beginning to address burnout.
- Future projects should be aimed at evaluating podcasts downloads, creating further episodes, and implementing and evaluating various EBP strategies to mitigate burnout in this population.

References

Podcast Links

Apple Podcasts

Spotify