Stress and Burnout Levels Among Oregon CRNAs: A Comprehensive Assessment

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Problem Description

Occupational stress is an inherent aspect of the healthcare profession, but when prolonged exposure occurs, burnout may develop (Del Grosso & Boyd, 2019). Burnout experienced by medical providers can lead to a range of physical and psychological issues, including depression, migraines, heart-related conditions, difficulties in balancing work and family life, and heightened mental health concerns (Del Grosso & Boyd, 2019). Furthermore, burnout has been shown to have adverse effects on the organization, such as higher employee turnover, reduced job satisfaction, and increased absenteeism, ultimately impacting the quality and satisfaction of patient care (Del Grosso & Boyd, 2019).

In a single healthcare organization, burnout may affect two-thirds of providers, with one-third meeting severe burnout criteria (Vells et al., 2021). Burnout among anesthesia providers has been linked to lower patient satisfaction, increased patient recovery time, and increased patient safety incidents (Niconchuk & Hyman, 2020). Certified Registered Nurse Anesthetists (CRNAs) are vulnerable due to their demanding work environment, long hours, exposure to high-stress cases, and the critical responsibility of ensuring patient safety (Del Grosso & Boyd, 2019). Burnout among CRNAs is around 72%, with the most frequent component being emotional exhaustion, followed by depersonalization and a lack of personal accomplishment (Vells et al., 2021). High burnout rates can result in CRNA attrition, creating a shortage of anesthesia providers. A recent study showed that 21.8% of CRNAs planned to leave their current position within two years (Lea et al., 2022). Given the increasing demand for healthcare services, such a shortage could strain the healthcare system more (Lea et al., 2022). An ongoing shortage of anesthesia providers makes it critical to understand the barriers to the retention and job satisfaction of CRNAs (Negrusa, 2021).

This paper seeks to present a comprehensive problem analysis of stress and burnout levels among CRNAs in Oregon. Drawing on existing research, this study will highlight the critical nature of the problem, its implications for patient care and the healthcare system, and the need for targeted interventions. A deeper understanding of the unique challenges CRNAs face in Oregon is essential for crafting tailored interventions and support systems. Addressing burnout necessitates a comprehensive approach, including targeted interventions, workplace reforms, and a focus on well-being. By addressing burnout among CRNAs, Oregon can enhance patient care quality and ensure the sustainability of its anesthesia workforce.

Available Knowledge

Stress and burnout among CRNAs in Oregon are of paramount concern within the healthcare landscape. The demanding nature of the profession is characterized by high-pressure work environments, extended working hours, and the weighty responsibility of safeguarding patients' lives. According to Mahoney et al. (2020), the most significant reason CRNAs intend to leave, regardless of gender or years of experience, is to find better working conditions regarding skill variety and autonomy. One study during the COVID-19 pandemic reported that 51.8% of participants worked more than 50 hours per week, and nearly 69.4% were on call at least twice a week, making them particularly susceptible to these challenges (Tsan et al., 2021). Romito et al. (2020) observed that anesthesia providers experience elevated levels of burnout, with prevalence rates ranging from 10% to 41%. Notably, anesthesia providers in high-acuity settings report even higher burnout rates, nearing 55% (Romito et al., 2020).

Hyman et al. (2017) conducted a study investigating work-related factors and resources linked to burnout among perioperative providers, including CRNAs. Employing an online survey comprising a modified Maslach Burnout Inventory (MBI)-Human Services Survey and the Social Support and Personal Coping Survey, they uncovered that CRNAs exhibited higher

burnout scores in comparison to their nursing and other counterparts while scoring similarly to physicians (Hyman et al., 2012). Elevated stress levels can lead to diminished job satisfaction, increased turnover rates, and, most concerningly, medical errors, which directly affect patient outcomes (Niconchuk & Hyman, 2020). CRNAs have reported strained personal relationships, decreased job satisfaction, and a reduced sense of professional accomplishment (Lea et al., 2022). These unique and professional consequences not only impact individual CRNAs but also have ripple effects on healthcare institutions, as it costs about $150,000 to replace a CRNA, contributing to an environment where high-quality patient care becomes increasingly challenging (Lea et al., 2022).

An integrative review by Del Grosso and Boyd (2019) underscores that while burnout prevalence has been broadly examined within perioperative providers in the United States, a significant gap exists in research directly measuring burnout among CRNAs. Additionally, no studies have specifically highlighted burnout among CRNAs in Oregon. This emphasizes the pressing need for more Oregon-specific research to address and tailor interventions to mitigate the issue comprehensively.

Rationale

Currently, the prevalence of stress and burnout among CRNAs in Oregon is still being determined, limiting the ability to implement change aimed at reducing stress and burnout among this population. The Copenhagen Burnout Inventory (CBI) has been used among many healthcare organizations to assess stress and burnout among their staff. A study done by Thrush et al. (2021) showed that the CBI survey results provided significant evidence to indicate that the survey is a reliable and valid tool for measuring burnout among participants.

The framework used in this inquiry is the Plan, Do, Study, Act (PDSA) model created by the Institute for Healthcare Improvement (IHI). The PDSA focuses on identifying a problem,

designing a measurable solution, and utilizing the results to adjust and improve outcomes over time. Using this model as guidance, we will be able to gather data to gain insight into what factors may be contributing to stress and burnout among CRNAs in Oregon.

Specific Aims

This project aims to use the CBI to measure stress and burnout among CRNAs in Oregon. By identifying the prevalence and reasons for stress and burnout among this population, the data collected can be used to create future interventions.

Methods

Context

Oregon has 60 acute care inpatient hospitals (Oregon Health Authority, 2018). In 2018, an average of 52,000 surgeries were done per quarter in Oregon, a 3.5% increase compared to the previous year (Oregon Health Authority, 2018). Around 350 practicing CRNAs currently work in Oregon in all types of care settings (Oregon Association of Nurse Anesthetists [ORANA], n.d.). Forty percent of the CRNAs in Oregon work in rural, non-metropolitan areas and are responsible for providing 80% of the anesthesia-related services in these communities (ORANA, n.d.). In 2003, Oregon was the 11th state to opt out of the federal physician supervision requirement for CRNAs to close the gap in the anesthesia provider shortage, making care more accessible to people in rural communities (Baird et al., 2020).

Interventions

In evaluating stress and burnout among Oregon's CRNAs, this intervention adopts a systematic approach rooted in the Plan, Do, Study, Act (PDSA) model, employing the validated Copenhagen Burnout Inventory (CBI) assessment tool. Permission to use the CBI was granted by Denmark's *National Research Centre for the Working Environment*. This 19-item questionnaire is segmented into three sections examining personal, work-related, and client-associated burnout.

Utilizing a 5-point Likert scale, the CBI uses dual scales: one measuring occurrence frequency and the other capturing intensity of feelings, each applied contextually within the inventory. The survey was emailed to CRNAs via the Oregon Association of Nurse Anesthetists (ORANA) using the Qualtrics platform. The survey starts by asking demographic questions [Appendix C], and workplace dynamics, and finishes with the CBI. Data was collected over 30 days, beginning on March 1st, 2024. A second email was sent out after two weeks to serve as a reminder for CRNAs who had not completed it. The collected data was analyzed after March 31st, 2024.

Study of the interventions

A dual methodology was employed to comprehensively assess stress and burnout among Oregon's CRNAs. Integrating quantitative and qualitative methods, the evaluation aimed for a thorough analysis. Qualitative analysis uncovered insights from CRNAs, capturing their perceptions about well-being and work conditions from free text input. Simultaneously, quantitative data provided an overview of response rates. By merging these methodologies, the study intended to holistically evaluate stress and burnout's impact on CRNAs in Oregon.

Measures

The primary focus of this study was to utilize the CBI questionnaire, comprising nineteen items, to assess burnout across personal, work-related, and client-related domains. ORANA distributed the CBI survey among its 450 members, with data collected as survey responses were returned, allowing for periodic assessment of response rates. Rigorous quality checks were implemented throughout the study to ensure the reliability of the assessment, maintaining data accuracy and completeness.

Analysis

Qualtrics software was utilized for this survey, with a goal response rate of 10%. According to the CBI guidelines, respondents who answer fewer than 50% of the questions in

each of the three sections are classified as non-responders, and their surveys are not included in the analysis. To analyze the data gathered, a mixed-method approach was employed. The quantitative analysis involved statistical techniques with SSPS to assess response rates, the distribution of burnout across different sections of the CBI, and comparisons among scales employed within the questionnaire. This comprehensive approach facilitates a nuanced understanding of the experiences of CRNAs and the dynamics of stress within the surveyed population.

Ethical considerations

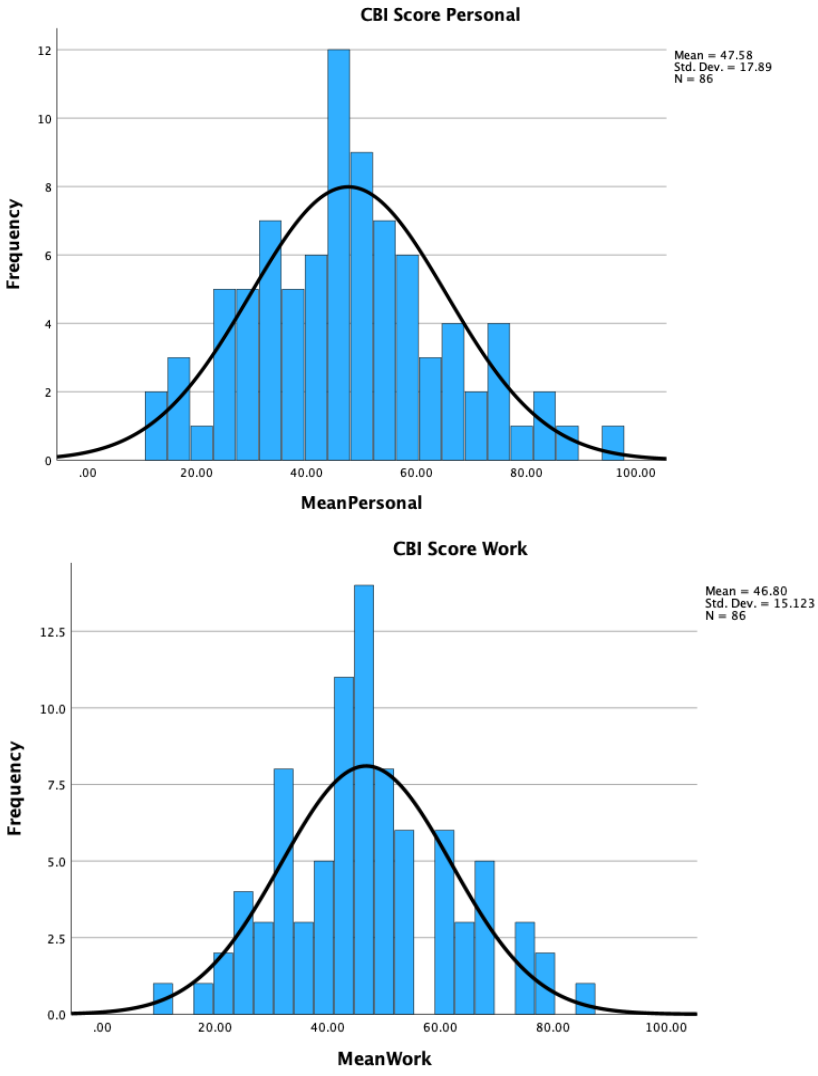
Ethical considerations were sufficiently addressed before the CBI was distributed among Oregon's CRNAs. Participation in the survey is voluntary, and submission implies consent. CRNAs were assured of confidentiality and anonymity, with no identifiable information collected. Explicit consent from ORANA was obtained to distribute the survey. The study adheres to ethical guidelines, ensuring participant privacy, voluntary engagement, and organizational consent while being devoid of conflicts of interest.

Results

Surveys

Survey results can be found in Appendix E. The survey was sent to 450 ORANA members and 95 survey results were recorded, yielding a survey response rate of 21.1%. Nine surveys were partially completed and were excluded from the CBI analysis, and 86 surveys were fully completed (19.1%). Twenty one participants reported working more than their contracted hours weekly (24%), 17% (n=15) report working more than their contracted hours every other week, 19% (n=16) work more than their contracted hours monthly, 20% (n=17) report working

more than their contracted hours a few times a year, 5% (n=4) report working more than their contracted hours yearly, and 15% (n=13) report never working more than their contracted hours. CBI results were separated into three categories; work, personal, and patient related stress/burnout. The mean score for personal related stress and burnout was 47.58 with a standard deviation of 17.89 (n=86). The mean score for work related stress and burnout was 46.80 with a standard deviation of 15.12 (n=86). The mean score for patient related stress and burnout was 25.49 with a standard deviation of 18.85 (n=86). See table 1.



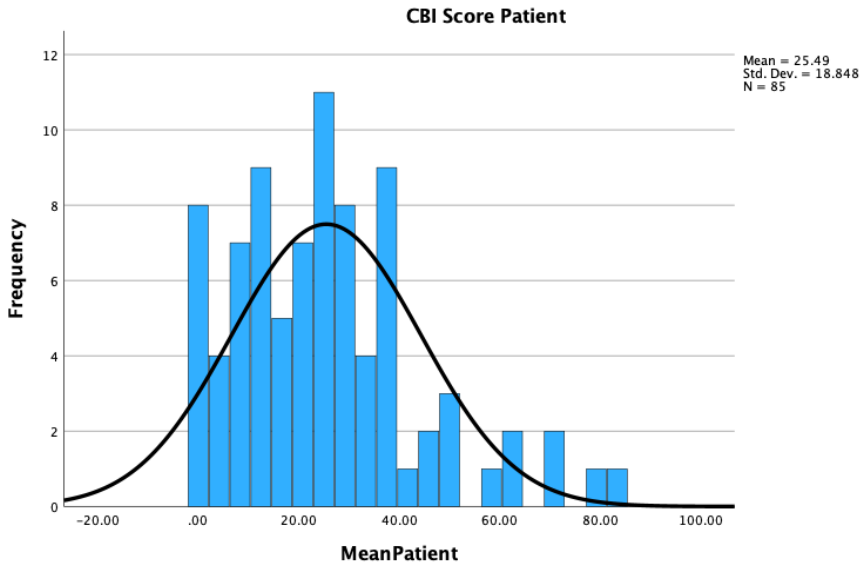


Table 1

Interpretation

Per the PUMA study for the Copenhagen Burnout Inventory, a score 50 points or more indicates a high degree of stress and burnout (Borritz & Kristensen, 2004). While none of the categories indicates a high degree of stress and burnout with a score of 50 points or greater, the personal and work related CBI scores are significantly higher than the patient-related stress and burnout score in this sample. We ran a Spearman's correlation where r = -0.33 and p=.002 and found there is a statistically significant correlation between the average amount of personal stress and frequency of working outside of contracted hours. There is not a significant correlation between working outside of contracted hours and work related burnout and patient related burnout. See table 2.

Correlations

			How often do you work more than your contracted hours?	MeanPersonal	MeanWork	MeanPatient
Spearman's rho	How often do you work more than your contracted hours?	Correlation Coefficient	1.000	-.333**	-.212	-.036
		Sig. (2-tailed)	.	.002	.051	.740
		N	86	86	86	85
	MeanPersonal	Correlation Coefficient	-.333**	1.000	.808**	.472**
		Sig. (2-tailed)	.002	.	<.001	<.001
		N	86	86	86	85
	MeanWork	Correlation Coefficient	-.212	.808**	1.000	.597**
		Sig. (2-tailed)	.051	<.001	.	<.001
		N	86	86	86	85
	MeanPatient	Correlation Coefficient	-.036	.472**	.597**	1.000
		Sig. (2-tailed)	.740	<.001	<.001	.
		N	85	85	85	85

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2

There is a statistically significant correlation between personal, work, and patient related stress scores and satisfaction levels as a CRNA. The higher the satisfaction score, the lower the stress and burnout. See table 3.

Correlations

		MeanPersonal	MeanWork	MeanPatient	Please indicate your satisfaction level with your current position as a CRNA:
MeanPersonal	Pearson Correlation	1	.831**	.513**	-.550**
	Sig. (2-tailed)		<.001	<.001	<.001
	N	86	86	85	85
MeanWork	Pearson Correlation	.831**	1	.637**	-.558**
	Sig. (2-tailed)	<.001		<.001	<.001
	N	86	86	85	85
MeanPatient	Pearson Correlation	.513**	.637**	1	-.422**
	Sig. (2-tailed)	<.001	<.001		<.001
	N	85	85	85	84
Please indicate your satisfaction level with your current position as a CRNA:	Pearson Correlation	-.550**	-.558**	-.422**	1
	Sig. (2-tailed)	<.001	<.001	<.001	
	N	85	85	84	85

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3

There is a strong correlation between the mean work related burnout score and the mean personal related burnout score ($r=0.83$, $p<0.001$). There is moderate correlation between the mean personal burnout score and the mean patient related burnout score ($r=0.51$, $p<0.001$).

There is a moderate correlation between the mean work burnout score and the mean patient related burnout score (r=0.64, p<0.001). See table 4.1 and 4.2.

Correlations

		MeanPersonal	MeanWork	MeanPatient
MeanPersonal	Pearson Correlation	1	.831**	.513**
	Sig. (2-tailed)		<.001	<.001
	N	86	86	85
MeanWork	Pearson Correlation	.831**	1	.637**
	Sig. (2-tailed)	<.001		<.001
	N	86	86	85
MeanPatient	Pearson Correlation	.513**	.637**	1
	Sig. (2-tailed)	<.001	<.001	
	N	85	85	85

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.1

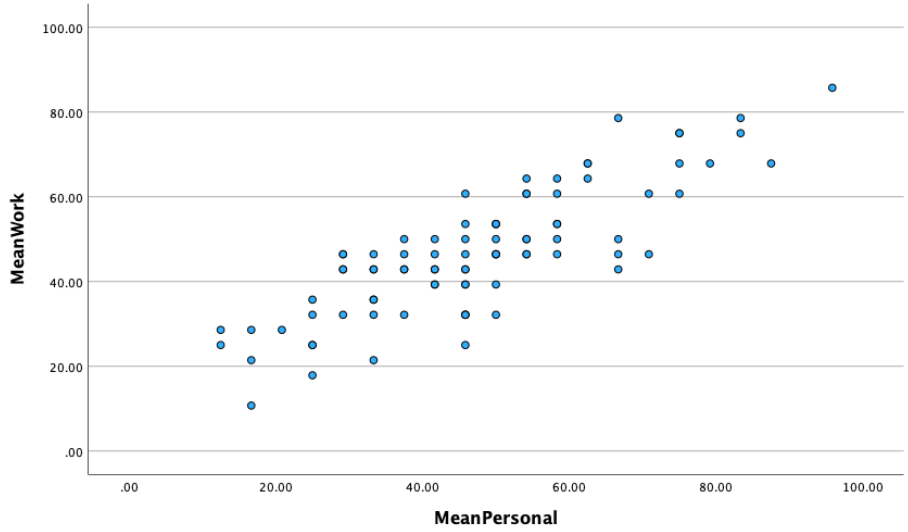


Table 4.2

Summary

We observed an average amount of personal related stress on a scale of 47 points and 46 points for work related stress, however, the average score for patient related burnout was 25 points, suggesting that in general, people report less patient related stress than they do work related or personal related stress. People who worked more than their contracted hours have higher CBI scores representing personal related stress and burnout, but not statistically significant work and patient related stress and burnout. Higher job satisfaction was associated

with lower CBI scores, suggesting that more satisfied individuals experience less stress and burnout in their personal, work, and patient-related encounters.

Limitations

While this study provides valuable insights into stress and burnout among CRNAs in Oregon, several limitations should be acknowledged. Firstly, factors such as response bias and self-reporting inaccuracies could have influenced the internal validity of the study. Efforts were made to minimize bias by ensuring anonymity and confidentiality, but inherent biases in survey responses may still exist. Furthermore, the cross-sectional nature of the study design limits the ability to establish causal relationships between variables. Longitudinal studies could provide more robust insights into the dynamics of stress and burnout among CRNAs. Despite these limitations, rigorous methodological approaches were employed, including the use of validated assessment tools and a mixed-methods approach to data analysis, to mitigate potential sources of bias and imprecision.

Conclusions

This study sheds light on the current state of stress and burnout among CRNAs in Oregon, providing valuable insights that can inform targeted interventions and support systems. By employing the CBI, this research not only identifies the prevalence for stress and burnout among CRNAs but also lays the groundwork for sustainable solutions. The findings offer actionable data that healthcare organizations, policymakers, and stakeholders can utilize to develop tailored interventions aimed at enhancing the well-being of CRNAs and improving patient care quality. Further efforts to evaluate and address stress and burnout among CRNAs in Oregon is essential for fostering a supportive work environment, enhancing job satisfaction, and ensuring the sustainability of the anesthesia workforce.

Acknowledgement

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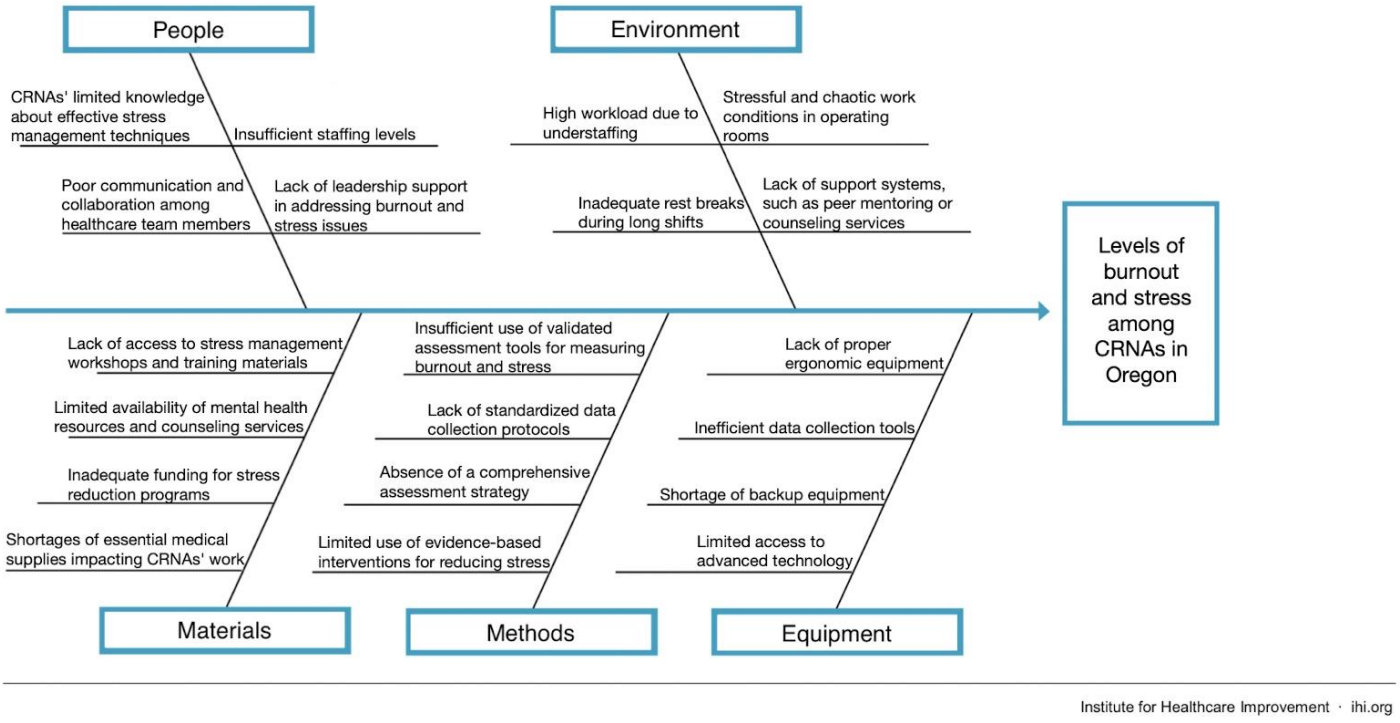
Appendix A:

Project Timeline

	Dec-Jan. 2023-2024	Feb. 2024	March 2024	April 2024	May 2024	June 2024	July – November 2024
Finalize project design and approach (703A)	X						
Complete IRB determination or approval (703A)	X						
Finalize Survey and Proposal		X					
Survey Collection			X	X			
Final data analysis					X		
Write remaining sections of final paper (703B)					X	X	
Prepare for project dissemination (703B)							X

Appendix B:

Cause & Effect Diagram



Appendix C:

Tool(s) [questionnaires, surveys, data management]

Stress and Burnout Among Oregon CRNAs

Start of Block: Informed Consent

Q1 Hello,

Thank you for participating in this brief questionnaire on stress and burnout among CRNAs in Oregon. This survey is being carried out by Ashlea Thomas and Tyler Downey as part of their Doctor of Nursing Practice project with Oregon Health and Science University's Nurse Anesthesia Program.

Participation in this survey is completely voluntary and anonymous. You may skip whatever questions you choose. Your individual response will not reflect on you or your status as a CRNA in any way. Our main objective is to obtain an accurate and up-to-date look at the prevalence of stress and burnout among CRNAs in Oregon with hopes of guiding future interventions.

This questionnaire should take about 10-15 minutes to complete. Thank you again for helping to advance CRNA practice in Oregon.

Please indicate your willingness to participate in this voluntary survey by choosing the appropriate response below.

- ○ I have read the above information and I voluntarily consent to participate in this questionnaire (1)
- ○ I do not consent to participate in this voluntary questionnaire (2)

End of Block: Informed Consent

Start of Block: Demographics & Workplace Dynamics

Q2 What age range do you fall under?

- ○ < 25 years (1)
- ○ 25-30 years (2)
- ○ 31-35 years (3)
- ○ 36-40 years (4)
- ○ 41-45 years (5)
- ○ 46-50 years (6)
- ○ 51-55 years (7)
- ○ 56-60 years (8)
- ○ 61-65 years (9)
- ○ >65 years (10)

Q3 What gender do you identify as?

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary / third gender (3)
- ○ Prefer not to say (4)

Q4 How many years have you worked as a CRNA?

- ○ <1 year (1)
- ○ 1-5 years (2)
- ○ 6-10 years (3)
- ○ 11-15 years (4)
- ○ 16-20 years (5)
- ○ 21-30 years (6)
- ○ 31-40 years (7)
- ○ >40 years (8)

Q5 What is the highest level of education you have obtained?

- ○ Masters (1)
- ○ DNP/DNAP (2)
- ○ PhD (3)
- ○ Other (4) _____

Q6 How often do you work more than your contracted hours?

- ○ Weekly (1)
- ○ Every other week (2)
- ○ Monthly (3)
- ○ Few times a year (4)
- ○ Yearly (5)
- ○ Never (6)

Q7 How often are you contacted on your day off to be asked to work extra?

- ○ Never (1)
- ○ Sometimes (2)
- ○ About half the time (3)
- ○ Most of the time (4)
- ○ Always (5)

Q8 How many extra shifts per month do you pick up without being asked?

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- >4 (6)

Q32 Are you required to work holidays, weekends, nights, and/or take call?

- Yes (1)
- No (2)

Q31 What community setting do you work in?

- Rural (1)
- Suburban (2)
- Urban (3)

Q36 How would you describe the care setting in which you work? Please select all that apply.

- ☐ Small regional hospital (1)
- ☐ Academic/Teaching hospital (2)
- ☐ Government hospital (3)
- ☐ Non-teaching hospital (4)
- ☐ Non-hospital setting (5)
- ☐ Other (6) _____

Q37 How many locations (e.g., ORs, Endo suites, MRIs, Cath Labs) do you provide anesthesia at your facility?

- ○ 1-4 (1)
- ○ 5-9 (2)
- ○ 10-14 (3)
- ○ 15-20 (4)
- ○ >20 (5)

Q9 How many places are you employed as a CRNA?

- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ >3 (4)

Q38 Do you feel you are compensated adequately for the demands of your job?

- ○ Definitely not (1)
- ○ Probably not (2)
- ○ Might or might not (3)
- ○ Probably yes (4)
- ○ Definitely yes (5)

Q33 What are your primary responsibilities as a CRNA where you work? Please select all that apply.

- ☐ Administration (1)
- ☐ Teaching/Precepting (2)
- ☐ Research (3)
- ☐ Quality Improvement (4)
- ☐ Clinical Practice (5)
- ☐ Other (6) _____

Q34 Regardless of the cultural day-to-day environment, what is the official policy on the type of practice model in your facility?

- ○ Medically Directed (1)
- ○ Medically Supervised (2)
- ○ Independent Practice (Team Model) (3)
- ○ Independent Practice (CRNA Only) (4)

Q35 How would you describe the Physician Anesthesiologist to CRNA supervision dynamic regardless of the official policy?

- ○ I practice anesthesia independently with staff physician anesthesiologists available as professional colleagues (1)
- ○ My practice is supervised by a staff physician anesthesiologist, but I provide most of the input on the anesthetic plan and delivery of care (2)
- ○ My practice is supervised by a staff physician anesthesiologist and they are involved in all decisions regarding patient care and delivery of anesthesia (3)
- ○ I am supervised during the day shift, but not so much on night, on-call, or weekend shifts (4)
- ○ I work in a CRNA only practice setting (5)

Q38 In your current facility, do you feel you are able to practice to the full scope of your education and training?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q39 Do you feel there is adequate support from your colleagues?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q40 Please indicate your satisfaction level with your current position as a CRNA:

0 (0)
1 (1)
2 (2)
3 (3)
4 (4)
5 (5)
6 (6)
7 (7)
8 (8)
9 (9)
10 (10)

End of Block: Demographics & Workplace Dynamics

Start of Block: Copenhagen Burnout Inventory

Q11 How often do you feel tired?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q12 How often are you physically exhausted?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q13 How often are you emotionally exhausted?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q14 How often do you think: "I can't take it anymore"?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q15 How often do you feel worn out?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q16 How often do you feel weak and susceptible to illness?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q17 Is your work emotionally exhausting?

- ○ To a very high degree (1)
- ○ To a high degree (2)
- ○ Somewhat (3)
- ○ To a low degree (4)
- ○ To a very low degree (5)

Q18 Do you feel burnt out because of your work?

- ○ To a very high degree (1)
- ○ To a high degree (2)
- ○ Somewhat (3)
- ○ To a low degree (4)
- ○ To a very low degree (5)

Q19 Does your work frustrate you?

- ○ To a very high degree (1)
- ○ To a high degree (2)
- ○ Somewhat (3)
- ○ To a low degree (4)
- ○ To a very low degree (5)

Q20 Do you feel worn out at the end of the working day?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q21 Are you exhausted in the morning at the thought of another day at work?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q22 Do you feel that every working hour is tiring for you?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q23 Do you have enough energy for family and friends during leisure time?

- ○ Always (1)
- ○ Often (2)
- ○ Sometimes (3)
- ○ Seldom (4)
- ○ Never (5)

Q24 Do you find it hard to work with patients?

- ○ To a very high degree (1)
- ○ To a high degree (2)
- ○ Somewhat (3)
- ○ To a low degree (4)
- ○ To a very low degree (5)

Q25 Do you find it frustrating to work with patients?

- ○ To a very high degree (1)
- ○ To a high degree (2)
- ○ Somewhat (3)
- ○ To a low degree (4)
- ○ To a very low degree (5)

Q26 Does it drain your energy to work with patients?

- To a very high degree (1)
- To a high degree (2)
- Somewhat (3)
- To a low degree (4)
- To a very low degree (5)

Q27 Do you feel that you give more than you get back when you work with patients?

- To a very high degree (1)
- To a high degree (2)
- Somewhat (3)
- To a low degree (4)
- To a very low degree (5)

Q28 Are you tired of working with patients?

- Always (1)
- Often (2)
- Sometimes (3)
- Seldom (4)
- Never (5)

Q30 Do you sometimes wonder how long you will be able to continue working with patients?

- ○ Always (1)
- ○ Often (2)
- ○ Sometimes (3)
- ○ Seldom (4)
- ○ Never (5)

End of Block: Copenhagen Burnout Inventory

Start of Block: Final Comments

Q37 Do you have any additional comments to explain how your work creates stress and burnout in your life, as well as any suggestions to improve this?

_____

End of Block: Final Comments

Appendix D:

IRB application or determination

IRB MEMO

Research Integrity Office
3181 SW Sam Jackson Park Road - L106RI
Portland, OR 97239-3098
(503)494-7887 irb@ohsu.edu

NOT HUMAN RESEARCH

January 18, 2024

Dear Investigator:

On 1/18/2024, the IRB reviewed the following submission:

Title of Study:	Stress and Burnout Levels Among Oregon CRNAs: A Comprehensive Assessment
Investigator:	Rishelle Zhou
IRB ID:	STUDY00026792
Funding:	None

The IRB determined that the proposed activity is not research involving human subjects. IRB review and approval is not required.

Certain changes to the research plan may affect this determination. Contact the IRB Office if your project changes and you have questions regarding the need for IRB oversight.

If this project involves the collection, use, or disclosure of Protected Health Information (PHI), you must comply with all applicable requirements under HIPAA. See the HIPAA and Research website and the Information Privacy and Security website for more information.

Sincerely,

The OHSU IRB Office

Appendix E:

Survey Results

Hello, Thank you for participating in this brief questionnaire on stress and burnout among CRNAs in Oregon. This survey is being carried out by Ashlea Thomas and Tyler Downey as part of their Doctor of Nursing Practice project with Oregon Health and Science University's Nurse Anesthesia Program. Participation in this survey is completely voluntary and anonymous. You may skip whatever questions you choose. Your individual response will not reflect on you or your status as a CRNA in any way. Our main objective is to obtain an accurate and up-to-date look at the prevalence of stress and burnout among CRNAs in Oregon with hopes of guiding future interventions. This questionnaire should take about 10-15 minutes to complete. Thank you again for helping to advance CRNA practice in Oregon. Please indicate your willingness to participate in this voluntary survey by choosing the appropriate response below. 95

Q1 - Hello, Thank you for participating in this brief questionnaire on stress and burnout among CRNAs in Oregon. This survey is being carried out by Ashlea Thomas and Tyler Downey as part of their Doctor of Nursing Practice project with Oregon Health and Science University's Nurse Anesthesia Program. Participation in this survey is completely voluntary and anonymous. You may skip whatever questions you choose. Your individual response will not reflect on you or your status as a CRNA in any way. Our main objective is to obtain an accurate and up-to-date look at the prevalence of stress and burnout among CRNAs in Oregon with hopes of guiding future interventions. This questionnaire should take about 10-15 minutes to complete. Thank you again for helping to advance CRNA practice in Oregon. Please indicate your willingness to participate in this voluntary survey by choosing the appropriate response below.	Percentage	Count
I have read the above information and I voluntarily consent to participate in this questionnaire	100%	95
I do not consent to participate in this voluntary questionnaire	0%	0

What age range do you fall under? 86

What age range do you fall under?	Average	Minimum	Maximum	Count
< 25 years	-	-	-	0
25-30 years	2.00	2.00	2.00	1
31-35 years	3.00	3.00	3.00	9
36-40 years	4.00	4.00	4.00	19
41-45 years	5.00	5.00	5.00	14
46-50 years	6.00	6.00	6.00	12
51-55 years	7.00	7.00	7.00	13
56-60 years	8.00	8.00	8.00	11
61-65 years	9.00	9.00	9.00	6
>65 years	10.00	10.00	10.00	1

What gender do you identify as? 86

Q3 - What gender do you identify as?	Percentage	Count
Male	51%	44
Female	49%	42
Non-binary / third gender	0%	0
Prefer not to say	0%	0

How many years have you worked as a CRNA? 86

Q4 - How many years have you worked as a CRNA?	Percentage	Count
<1 year	2%	2
1-5 years	12%	10
6-10 years	24%	21
11-15 years	27%	23
16-20 years	19%	16
21-30 years	12%	10
31-40 years	5%	4
>40 years	0%	0

What is the highest level of education you have obtained? 86

Q5 - What is the highest level of education you have obtained? - Selected Choice	Percentage	Count
Masters	80%	69
DNP/DNAP	20%	17
PhD	0%	0
Other	0%	0

How often do you work more than your contracted hours? 86

Q6 - How often do you work more than your contracted hours?	Percentage	Count
Weekly	24%	21
Every other week	17%	15
Monthly	19%	16
Few times a year	20%	17
Yearly	5%	4
Never	15%	13

How often are you contacted on your day off to be asked to work extra? 86

Q7 - How often are you contacted on your day off to be asked to work extra?	Percentage	Count
Never	24%	21
Sometimes	59%	51
About half the time	9%	8
Most of the time	6%	5
Always	1%	1

How many extra shifts per month do you pick up without being asked? 84

Q8 - How many extra shifts per month do you pick up without being asked?	Percentage	Count
0	50%	42
1	17%	14
2	19%	16
3	6%	5
4	4%	3
>4	5%	4

Are you required to work holidays, weekends, nights, and/or take call? 86

Q32 - Are you required to work holidays, weekends, nights, and/or take call?	Percentage	Count
Yes	63%	54
No	37%	32

What community setting do you work in? 86

Q31 - What community setting do you work in?	Percentage	Count
Rural	29%	25
Suburban	27%	23
Urban	44%	38

How would you describe the care setting in which you work? 86

Q36 - How would you describe the care setting in which you work? - Selected Choice	Percentage	Count
Small regional hospital	47%	40
Academic/Teaching hospital	29%	25
Government hospital	2%	2
Non-teaching hospital	19%	16
Non-hospital setting	13%	11
Other	7%	6

How many locations (e.g., ORs, Endo suites, MRIs, Cath Labs) do you provide anesthesia at your facility? 86

Q37 - How many locations (e.g., ORs, Endo suites, MRIs, Cath Labs) do you provide anesthesia at your facility?	Percentage	Count
1-4	34%	29
5-9	34%	29
10-14	12%	10
15-20	5%	4
>20	16%	14

How many places are you employed as a CRNA? 86

Q9 - How many places are you employed as a CRNA?	Percentage	Count
1	52%	45
2	24%	21
3	13%	11
>3	10%	9

Do you feel you are compensated adequately for the demands of your job? 86

Q38 - Do you feel you are compensated adequately for the demands of your job?	Percentage	Count
Definitely not	12%	10
Probably not	21%	18
Might or might not	17%	15
Probably yes	36%	31
Definitely yes	14%	12

What are your primary responsibilities as a CRNA where you work? Please select all that apply. 86

Q33 - What are your primary responsibilities as a CRNA where you work? Please select all that apply. - Selected Choice	Percentage	Count
Administration	29%	25
Teaching/Precepting	49%	42
Research	1%	1
Quality Improvement	16%	14
Clinical Practice	100%	86
Other	2%	2

Regardless of the cultural day-to-day environment, what is the official policy on the type of practice model in your facility? 86

Q34 - Regardless of the cultural day-to-day environment, what is the official policy on the type of practice model in your facility?	Percentage	Count
Medically Directed	20%	17
Medically Supervised	31%	27
Independent Practice (Team Model)	8%	7
Independent Practice (CRNA Only)	41%	35

How would you describe the Physician Anesthesiologist to CRNA supervision dynamic regardless of the official policy? 84

Q35 - How would you describe the Physician Anesthesiologist to CRNA supervision dynamic regardless of the official policy?	Percentage	Count
I practice anesthesia independently with staff physician anesthesiologists available as professional colleagues	19%	16
My practice is supervised by a staff physician anesthesiologist, but I provide most of the input on the anesthetic plan and delivery of care	43%	36
My practice is supervised by a staff physician anesthesiologist and they are involved in all decisions regarding patient care and delivery of anesthesia	4%	3
I am supervised during the day shift, but not so much on night, on-call, or weekend shifts	0%	0
I work in a CRNA only practice setting	35%	29

In your current facility, do you feel you are able to practice to the full scope of your education and training? 86

Q38 - In your current facility, do you feel you are able to practice to the full scope of your education and training?	Percentage	Count
Always	43%	37
Often	20%	17
Sometimes	20%	17
Seldom	13%	11
Never	5%	4

Do you feel there is adequate support from your colleagues? 86

Q39 - Do you feel there is adequate support from your colleagues?	Percentage	Count
Always	50%	43
Often	38%	33
Sometimes	8%	7
Seldom	2%	2
Never	1%	1

Please indicate your satisfaction level with your current position as a CRNA: 85

Q40 - Please indicate your satisfaction level with your current position as a CRNA:	Percentage	Count
0	1%	1
1	0%	0
2	0%	0
3	1%	1
4	2%	2
5	2%	2
6	12%	10
7	20%	17
8	27%	23
9	18%	15
10	16%	14

How often do you feel tired? 86

Q11 - How often do you feel tired?	Percentage	Count
Always	10%	9
Often	45%	39
Sometimes	36%	31
Seldom	8%	7
Never	0%	0

How often are you physically exhausted? 86

Q12 - How often are you physically exhausted?	Percentage	Count
Always	3%	3
Often	22%	19
Sometimes	49%	42
Seldom	23%	20
Never	2%	2

How often are you emotionally exhausted? 86

Q13 - How often are you emotionally exhausted?	Percentage	Count
Always	7%	6
Often	26%	22
Sometimes	52%	45
Seldom	14%	12
Never	1%	1

How often do you think: "I can't take it anymore"? 86

Q14 - How often do you think: "I can't take it anymore"?	Percentage	Count
Always	1%	1
Often	8%	7
Sometimes	24%	21
Seldom	33%	28
Never	34%	29

How often do you feel worn out? 86

Q15 - How often do you feel worn out?	Percentage	Count
Always	7%	6
Often	24%	21
Sometimes	48%	41
Seldom	19%	16
Never	2%	2

How often do you feel weak and susceptible to illness? 86

Q16 - How often do you feel weak and susceptible to illness?	Percentage	Count
Always	1%	1
Often	10%	9
Sometimes	27%	23
Seldom	44%	38
Never	17%	15

Is your work emotionally exhausting? 86

Q17 - Is your work emotionally exhausting?	Percentage	Count
To a very high degree	9%	8
To a high degree	19%	16
Somewhat	42%	36
To a low degree	24%	21
To a very low degree	6%	5

Do you feel burnt out because of your work? 86

Q18 - Do you feel burnt out because of your work?	Percentage	Count
To a very high degree	5%	4
To a high degree	13%	11
Somewhat	38%	33
To a low degree	31%	27
To a very low degree	13%	11

Does your work frustrate you? 86

Q19 - Does your work frustrate you?	Percentage	Count
To a very high degree	2%	2
To a high degree	13%	11
Somewhat	41%	35
To a low degree	31%	27
To a very low degree	13%	11

Do you feel worn out at the end of the working day? 86

Q20 - Do you feel worn out at the end of the working day?	Percentage	Count
Always	13%	11
Often	30%	26
Sometimes	40%	34
Seldom	16%	14
Never	1%	1

Are you exhausted in the morning at the thought of another day at work? 86

Q21 - Are you exhausted in the morning at the thought of another day at work?	Percentage	Count
Always	1%	1
Often	13%	11
Sometimes	40%	34
Seldom	38%	33
Never	8%	7

Do you feel that every working hour is tiring for you? 86

Q22 - Do you feel that every working hour is tiring for you?	Percentage	Count
Always	1%	1
Often	8%	7
Sometimes	20%	17
Seldom	52%	45
Never	19%	16

Do you have enough energy for family and friends during leisure time? 86

Q23 - Do you have enough energy for family and friends during leisure time?	Percentage	Count
Always	6%	5
Often	59%	51
Sometimes	29%	25
Seldom	6%	5
Never	0%	0