



MACON & JOAN BROCK VIRGINIA HEALTH SCIENCES

Ellmer School of Nursing

AT OLD DOMINION UNIVERSITY

The Impaired Provider and Perception: A Closer Look at Knowledge, Confidence and Substance Use Disorder

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Problem

- **1 in 7** Americans over twelve struggle with substance use disorder (SUD) (CDC, 2022)
- SUD is considered the **#1 work hazard** for those in the anesthesia field (Rupprecht, 2022)
- **10-15%** of anesthesia providers will suffer from it during their careers (Rupprecht, 2022)
- **7-25%** of anesthesia residents die from SUD (Rupprecht, 2022)
- Over $\frac{1}{3}$ of providers did not report a peer (Ades et. al, 2022)
- Lack of knowledge regarding CRNAs returning to work (Carter et. al, 2019)



Purpose

- Assess baseline knowledge and confidence regarding:
 - SUD
 - The self-reporting process
 - Drug diversion laws
 - State alternative to discipline programs
 - The recovery process
 - Return to practice
- Provide an educational intervention regarding topics
- Compare two groups pre and post intervention



EBP Questions

RQ1

What are the characteristics of the CRNAs and SRNAs in Virginia?

RQ2

What are the CRNA and SRNA knowledge and confidence scores regarding substance use disorder, the self-reporting process, the recovery process, drug diversion laws, state alternative to discipline programs, and return to practice?



EBP Questions (cont.)

RQ3

Is there a difference between CRNAs and SRNAs who have a personal experience with substance use disorder and their willingness to encourage a peer to self-report or peer-report suspected substance use?

RQ4

Is there a difference in CRNA and SRNA knowledge and confidence scores related to willingness to encourage self-reporting or peer reporting after receiving education regarding substance use disorder, the self-reporting process, recovery process, drug diversion laws, state alternative to discipline programs, and return to practice?



IRB & Site

- ODU IRB Approval September 6, 2024
- The Virginia Association of Nurse Anesthetists (VANA) Annual Fall Conference on October 12-October 13, 2024, at the Hilton Virginia Beach Oceanfront Hotel



Sample

A convenience sample of CRNAs or SRNAs

Inclusion criteria

- Attending the conference
- Currently licensed and practicing CRNAs
- SRNAs currently enrolled in accredited nurse anesthesia program
- 18-89 years old

Exclusion criteria

- Unlicensed CRNAs
- Licensed but not practicing CRNAs
- SRNAs not currently enrolled in accredited nurse anesthesia program
- Those who are not between 18 and 89 years old



Methods

- Pre-experimental within-group pretest-posttest design
- Implied consent
- 2 groups: CRNA/SRNA
- Evaluated before and after receiving an educational intervention
- Intervention included:
 - i. A brief introduction of the study
 - ii. Demographic survey, SUD survey, Confidence Scale and Pre-knowledge test accessed via a QR code
 - iii. 45 minute education presentation on SUD provided by expert Rodrigo Garcia MSN, MBA, CRNA from Parkdale Center for Professionals
 - iv. A post-knowledge test provided by a QR code



Tools

- Data was collected via 2 surveys
 - Survey #1
 - Demographics (10)
 - Confidence scale
 - SUD Data Collection Questionnaire (13)
 - Pretest-posttest (16)
 - Survey #2
 - Pretest-posttest (16)
- Unique Identifier
- Reliability and Validity
 - Cronbach's alpha > 0.76
- Qualtrics QR codes and links




Sample Results

- Starting number of surveys
 - 88 Pre-Survey
 - 72 Post-Survey
- Eliminated surveys
 - Did not complete both pre and post test
 - Did not meet inclusion criteria (RNs, prospective SRNAs)
 - Not matching unique identifier
- Final number
 - 25 CRNAs
 - 25 SRNAs



Data Analysis (SPSS 28.0.0)

- Descriptive Statistics
- Independent samples t-tests
- Paired samples t-tests
- Pearson correlations
- P-value <0.05



Results: RQ1

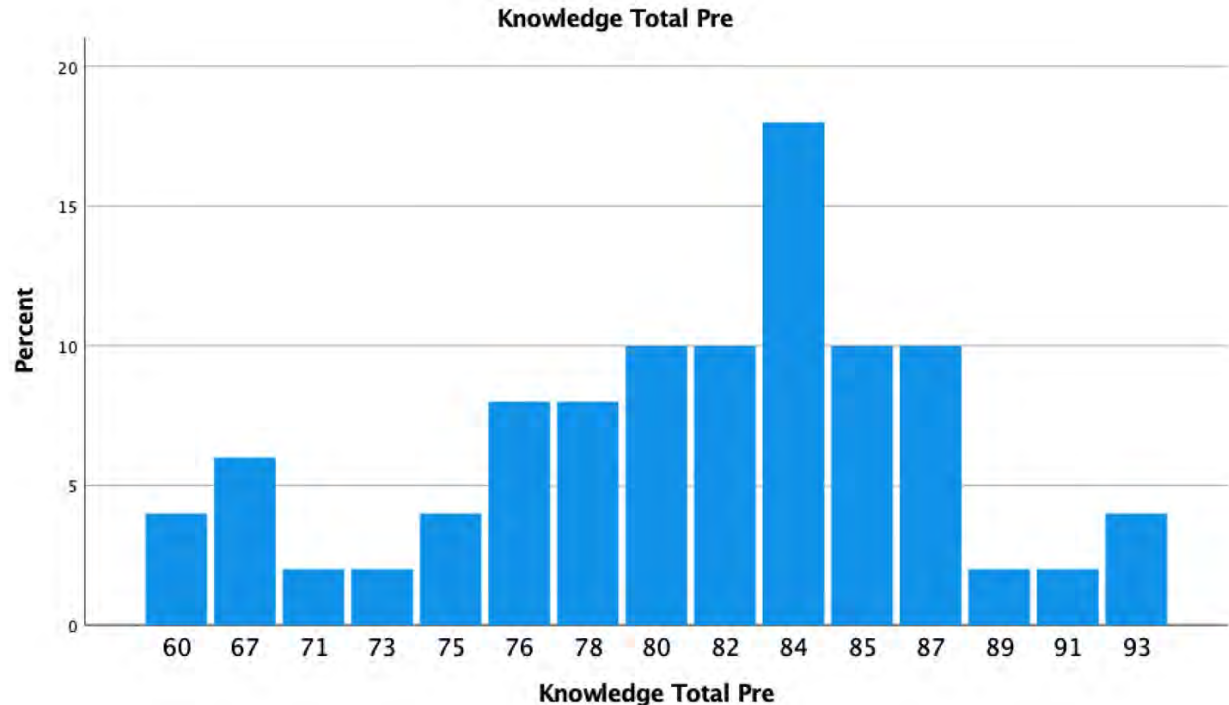
Characteristics of CRNAs and SRNAs in Virginia

Variable	N	%
Age (N=50)		
<25	2	4
26-35	20	40
36-45	15	30
46-55	5	10
56-65	7	14
66-75	1	2
Gender (N=50)		
Male	12	24
Female	37	74
Prefer not to answer	1	2
Credentials (N=50)		
Licensed/Practicing CRNA	25	50
SRNA	25	50



Results: RQ2 Pretest Knowledge Scores

N = 50	
Mean	80.47
Median	81.82
Mode	84
St. Dev.	7.299
Range	33
Minimum	60
Maximum	93





Results: RQ3 SUD personal experience and willingness to encourage reporting

Have you ever personally suffered from alcohol or drug misuse?		
	Frequency	Percent
No	46	92
Yes	4	8
Total	50	100



Results: RQ4 Difference in Pre and Post Knowledge & Willingness Scores

**Independent Samples T-Test
Differences in CRNAs & SRNAs**

	SRNA (N= 25)		CRNA (N = 25)		t	Two-sided p-value
	Mean	St. Dev.	Mean	St. Dev.		
Knowledge Pre	80.80	7.769	80.15	6.942	-0.314	0.755
Knowledge Post	84.44	8.200	83.42	6.305	-0.492	0.625
Willingness Pre	18.52	3.343	18.84	3.400	0.336	0.739
Willingness Post	20.24	2.314	19.60	3.082	-0.830	0.422

*Equal variances assumed

**Paired Samples T-Test
Combined CRNAs & SRNAs (N = 50)**

	Pre		Post		t	Two-Sided p-value
	Mean	St. Dev.	Mean	St. Dev.		
Knowledge	80.47	7.299	83.93	7.257	-3.974	<0.001
Willingness	18.68	3.341	19.92	2.717	-2.970	0.005



Results: RQ4 Difference in Pre and Post Knowledge & Willingness Scores (cont.)

Pearson Correlation
Willingness of Participant to Engage in Reporting

	N	Pearson	p-value
Willingness to engage PRE-intervention & Willingness to engage POST-intervention	50	0.541**	<0.001

Additional Significant Findings

Significant Pearson Correlations

	N	Pearson	p-value
Personal beliefs & personal concerns	50	0.600**	<0.001
Personal beliefs & pre-test willingness to engage	50	0.372**	0.008
Personal beliefs & post-test willingness to engage	50	0.286*	0.044
Awareness pre-test & awareness post-test	50	0.454**	<0.001



Additional Significant Findings (cont.)

Paired Samples T-test
Combined CRNAs & SRNAs (N = 50)

	Pre		Post		t	Two-Sided p-value
	Mean	St. Dev.	Mean	St. Dev.		
Knowledge	80.47	7.299	83.93	7.257	-3.794	<0.001
Willingness	18.68	3.341	19.92	2.717	-2.970	0.005
Awareness	11.98	3.878	18.80	2.893	-13.267	<0.001



Conclusions

- Significant increase in knowledge of CRNAs and SRNAs after an educational intervention
- Significant increase in willingness to engage in self or peer-reporting after an educational intervention
- Significant increase in awareness
- CRNAs and SRNAs may benefit from annual education regarding SUD and the details surrounding the impaired provider's recovery process.



Limitations

- No confidence analysis
- Time of presentation
- Survey length
- RQ length



Final Thoughts

“It is OK to say something and be wrong but it is not OK to say nothing and be right”

~ Rodrigo Garcia, Parkdale CEO





Questions?



References

- American Association of Nurse Anesthetists. (n.d.) *Peer Assistance FAQs*. <https://www.aana.com/membership/wellness-and-peer-assistance/peer-assistance/peer-assistance-faqs/>
- Burnes, B. (2020). The origins of Lewin's three-step model for change. *The Journal of Applied Behavioral Science*, 56(1), 32-59. <https://doi.org/10.1177/0021886319892685>
- Burnett, G., Fry, R. A., & Bryson, E. O. (2020). Emerging worldwide trends in substances diverted for personal non-medical use by anaesthetists. *BJA education*, 20(4), 114-119. <https://doi.org/10.1016/j.bjae.2020.01.002>
- Carter, T., McMullan, S. P., & Patrician, P. A. (2019). Barriers to reentry into nurse anesthesia practice following substance use disorder treatment: A concept analysis. *Workplace health & safety*, 67(4), 189-199. <https://doi.org/10.1177/2165079918813378>
- Health Practitioner Monitoring Program, Va. Code Ann. § 54.1-2515 (2017). https://www.dhp.virginia.gov/media/dhpweb/docs/laws-regs/Chapter25.1_HPMP.pdf



References

Riggs, M. & Knight, P. (1994). The impact of perceived group success-failure on motivational beliefs and attitudes: A causal model. *Journal of Applied Psychology* 79(5), 755-766. DOI:[10.1037/0021-9010.79.5.755](https://doi.org/10.1037/0021-9010.79.5.755)

Rupprecht, N. (2022). The impaired anesthesia provider: Strategies to prevent, recognize and treat substance use disorder within the workplace. *AANA Journal* 90(1), 64-70.

Samuelson, S. T., & Bryson, E. O. (2017). The impaired anesthesiologist: What you should know about substance abuse. *Canadian Journal of Anaesthesia* 64(2), 219–235. <https://doi.org/10.1007/s12630-016-0780-1>

Virginia Department of Health Professions. (n.d.). *Health Practitioners Monitoring Program FAQs*.
<https://www.dhp.virginia.gov/PractitionerResources/HealthPractitionersMonitoringProgram/WhatIsHPMP/FAQ/>

Virginia Department of Health Professions. (n.d.). *Health Practitioners Monitoring Program Laws and Regulations*.
<https://www.dhp.virginia.gov/PractitionerResources/HealthPractitionersMonitoringProgram/AboutHPMP/LawsRegulations/>