

SHAPING THE FUTURE RURAL NURSING WORKFORCE: INSIGHTS FROM UNDERGRADUATE STUDENTS IN ALBERTA

Chelsea Viney, BN student, Trinity Ley Ramos, BN student, Elizabeth Cernigoy PhD(c), MScN, RN, Gillian Comchi, MN, RN, Chris Dore, MN, RN, Keltie Hamilton, MPH, PhD student, Bryde Henderson, MN-LPNP, RN, Wendi Lokanc-Diluzio, PhD, RN, Jason Wengel, MA, RN

Background

The disparities in healthcare access are being exacerbated by the shrinking nursing workforce and continue to disproportionately affect rural communities across Canada. Between 2013 and 2022, Canada faced a significant decline in the rural and remote nursing workforce with a drop from 11.1% in 2013 to 9.6% in 2022 (CIHI, 2024). The Nursing Education in Southwestern Alberta (NESA) Bachelor of Nursing (BN) and Bachelor of Nursing After Degree (BNAD) program integrates rural health concepts into its curriculum, exposing students to the unique challenges of rural practice. Despite these efforts, gaps remain in understanding what motivates or discourages nursing students from pursuing rural employment post-graduation.

Objectives

This study identifies factors influencing NESA nursing students' intentions to work in rural healthcare settings after graduation. The findings will inform strategies to strengthen nursing curricula and have the potential to guide organizational incentives and policy initiatives aimed at building a more sustainable rural nursing workforce.

Research Question

What are the factors that influence NESA nursing students' intentions to pursue employment in rural healthcare settings post graduation?

Methodology

Design

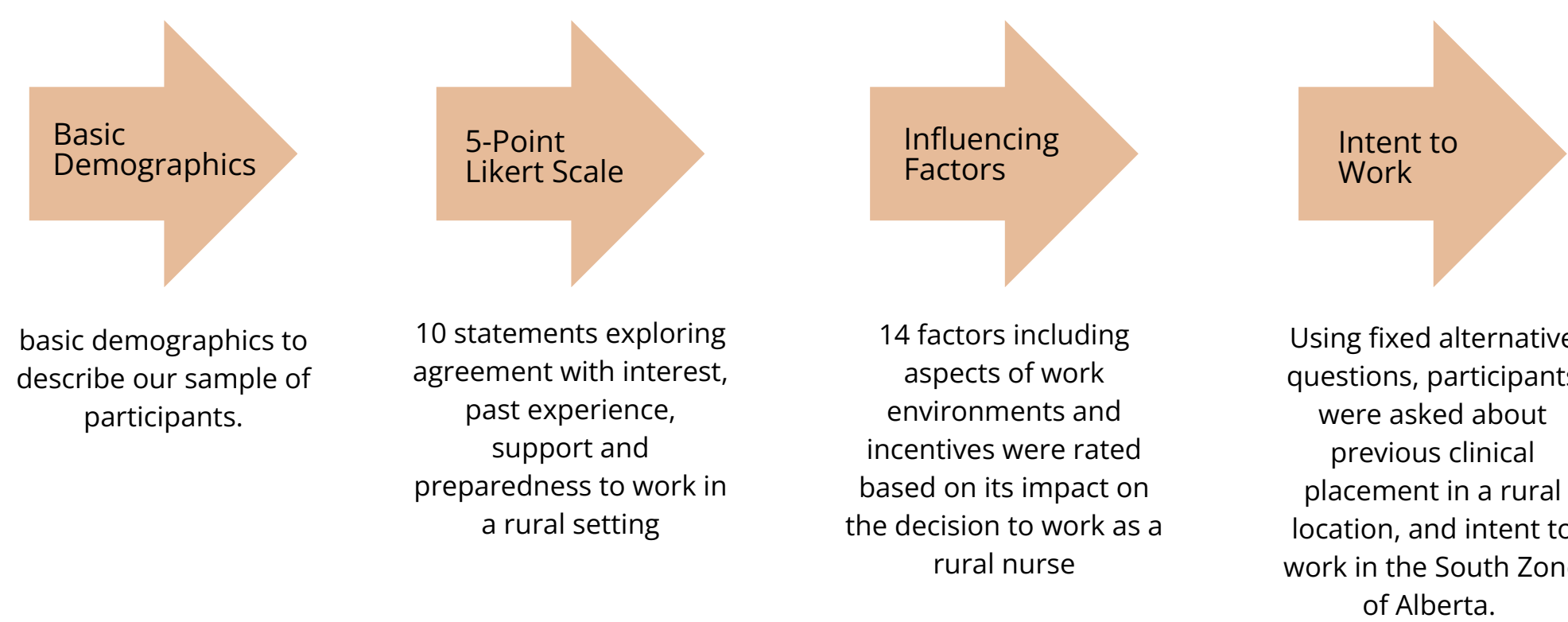
This quantitative, cross-sectional study collected data through a structured online survey assessing demographic factors, rural clinical experiences, and work intentions. The sample included students in all years of current NESA BN and BNAD program students.

Recruitment

Student recruitment occurred from September 20, 2024 to March 31, 2025 and was conducted through a recruitment poster and a recruitment email. The recruitment email was then followed up with a reminder email sent every 2-4 weeks.

Data Collection

Data was collected through an online survey using the Qualtrics platform. The data collection tool was developed specifically for this study and was informed by previous studies (Terry et al., 2020; Calma et al., 2022; Pudpong et al., 2017). The survey contained 4 sections.



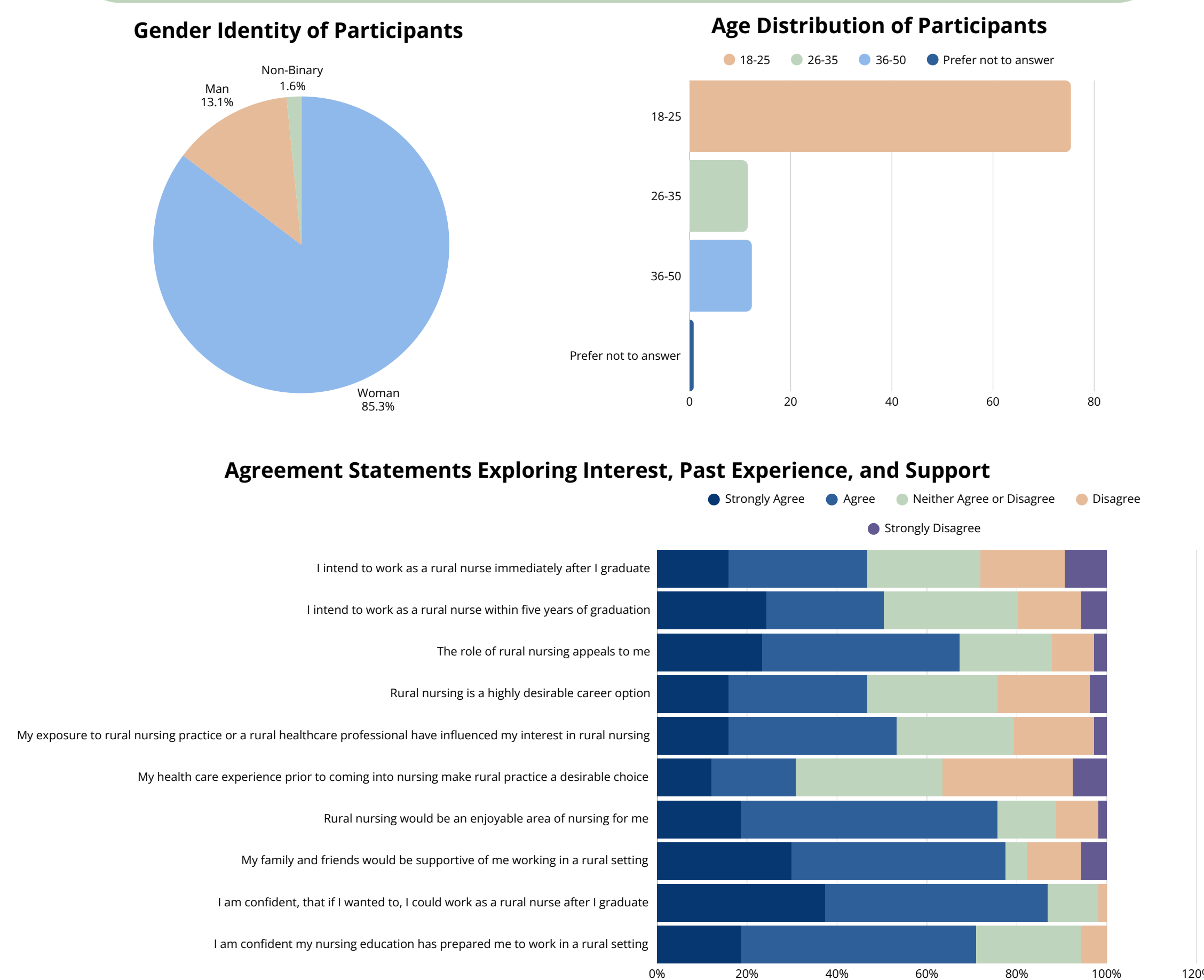
Data Analysis

The questionnaires were analyzed using SPSS. Demographic factors were analyzed with descriptive statistics. Independent sample t-tests were used to compare the means between those who have completed clinical placements in rural settings compared to those who have not. Due to this study being self reported data among a cohort of nursing students, the most appropriate way to evaluate a relationship between if attending a rural clinical placement (Yes vs. No) was associated with agreeing to the statements (Agree vs. Disagree) in the agreement statements above was conducting risk ratios and odds ratios. This involved transforming the Likert scale variables to be in the categories Yes (containing strongly agree/agree) and No (containing neither agree or disagree, disagree, and strongly disagree).

Key Findings

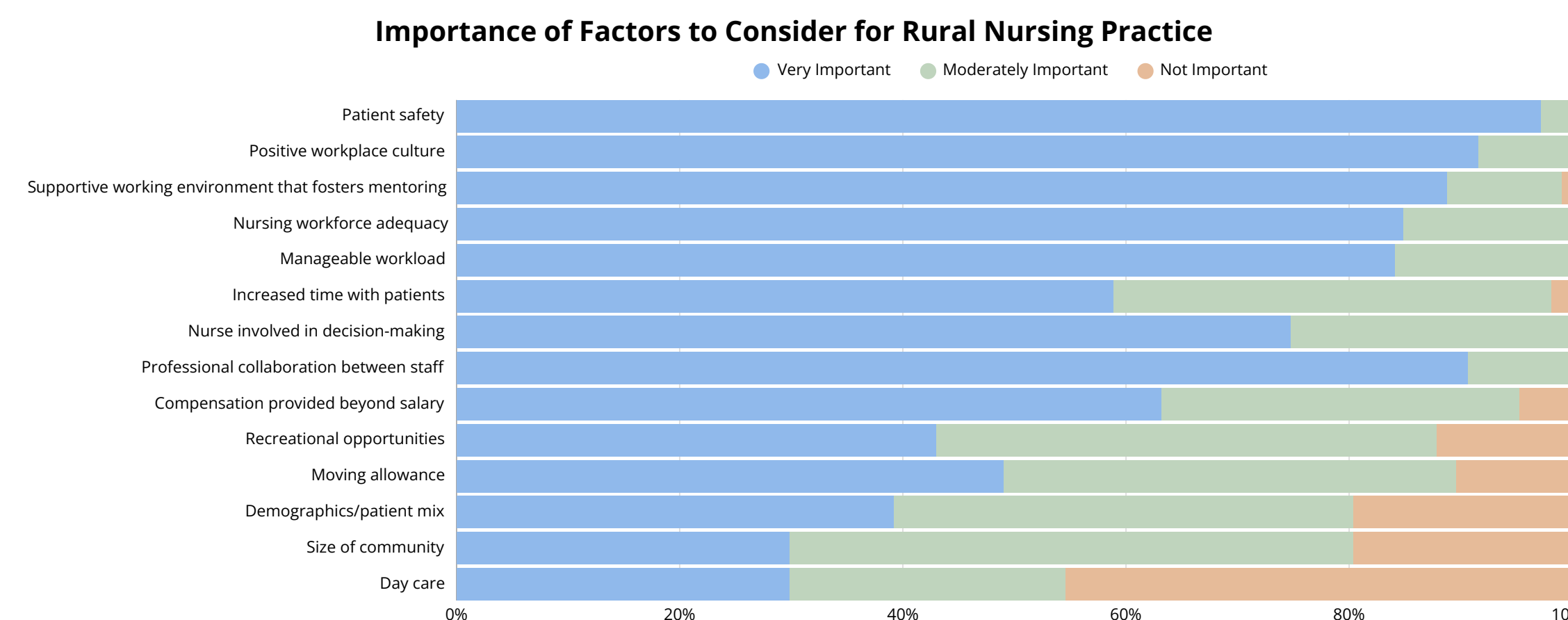
- A positive correlation was found between exposure to the rural setting and appeal/intention to work in rural settings post-graduation.
- Patient safety, positive workplace culture, and professional collaboration between staff were the top 3 highest rated factors of importance when considering rural practice among nursing students.
- There is a gap in students' knowledge of incentives to stay and seek careers in the South Zone of Alberta.

Results



The relationship between the appeal of rural nursing and having attended a rural placement is statistically significant $p=0.012$. The Odds Ratio is 2.88 CI (1.2-6.6) which demonstrates statistical significance and means that participants were 2.8 time more likely to agree with the statement *"The role of rural nursing appeals to me."* Looking at the Relative Risk (1.45OR 95% CI [1.04-2.00]), those who agreed with this statement, were 1.45 times more likely to have attended a rural clinical compared to those who did not.

Other statements that were statistically significant were *"My exposure to rural nursing practice or a rural healthcare professional have influenced my interest in rural nursing," "Rural nursing would be an enjoyable area of nursing for me,"* and *"I am confident, that if I wanted to, I could work as a rural nurse after I graduate."*



Discussion & Implications

This study explores the factors influencing NESA nursing students' intentions to pursue rural practice. Among 122 survey respondents, 41.0% indicated they came from a rural (<60,000) community prior to starting the program; 46.7% of those surveyed intended to work in a rural setting directly after graduation; and 50.4% intended to work in a rural setting within five years of graduation, suggesting a strong inclination to return to their home communities. This aligns with existing research linking rural background to increased interest in rural practice (Smith et al., 2020). As the survey included students from all four years of the NESA program, some responses may reflect intent without direct rural placement experience.

Of the respondents, 57.4% (n=70) had completed a clinical rotation in a rural setting. Positive correlations were observed between rural placement experience and the following statements.

"Rural nursing would be an enjoyable area of nursing for me."

"My exposure to rural nursing practice or a healthcare professional have influenced my interest in rural nursing."

"I am confident my nursing education has prepared me to work in a rural setting."

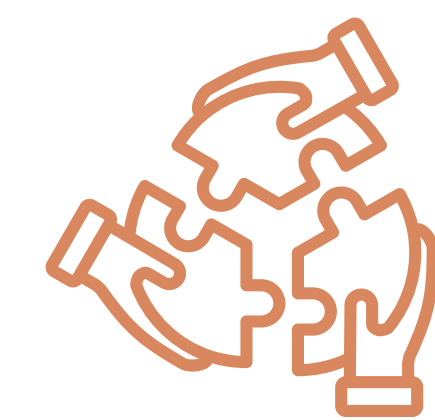
These findings support previous literature indicating that high-quality and positive experiences in a rural practicum strengthen students' motivation to enter rural nursing roles (Mortimer et al., 2018; Rogers, 2021; Smith et al., 2020).

This study has highlighted the need for increased research on specific factors that play a role in pursuing careers in rural practice. One example in the literature is social connectedness and its role in helping students feel integrated and connected to rural communities, which correlates to students' intention to return to rural practice after completing their nursing program (Hayes et al., 2020; Mortimer et al., 2018; Terry et al, 2020).

Among students' responses, the highest rated factors of importance for considering rural practice among nursing students included the following:



Patient Safety



Positive Workplace Culture



Professional Collaboration between Staff

Additionally, this study highlighted students' limited awareness of existing work incentives within Alberta's South Zone. This suggests informational gaps related to recruitment and retention initiatives, which is an important consideration given that nursing students represent a vital source of the future rural workforce.

Overall, These findings suggest that strong collaboration between post-secondary institutions and healthcare organizations to expand well-supported rural placements and develop mentorship opportunities may enhance graduates' interests in pursuing rural nursing careers. The findings also provide insight for healthcare leaders and policymakers seeking to design incentives and strategies that align with students' motivations, ultimately contributing to addressing rural nursing shortages and improving healthcare access in underserved communities.

References

- Calma, K. R. B., McInnes, S., Halcomb, E., Williams, A., & Batterham, M. (2022). Confidence, interest and intentions of final-year nursing students regarding employment in general practice. *Collegian*, 29(2), 220-227.
- Canadian Institute for Health Information (CIHI). (2024). Keeping pace with changing population needs. <https://www.cihi.ca/en/the-state-of-the-health-workforce-in-canada-2022/keeping-pace-with-changing-population-needs>.
- Hays, C., Devine, S., & Glass, B. D. (2022). Exploring the nursing student experience at a remote Australian university campus: A qualitative study. *BMC Nursing*, 21(1), 211.
- Mortimer, J., Verma, A., Reimann, C., Brown, A., & Woolley, T. (2019). Are all rural placements created equal? A national study of placement experiences among multidisciplinary health students. *Australian journal of rural health*, 27(3), 118-124.
- Pudpong, N., Suphanchaimat, R., Battria, B., Hou, J., Vu, L. T., & Dipika, P. (2017). A final year nursing student survey: rural attitudes, perceived competencies and intention to work across five Asian countries. *BMC Nursing*, 16, 1-11.
- Rogers, C. (2021). Supporting health students on rural placements: A scoping review. *Australian Journal of Rural Health*, 29(3), 319-331.
- Smith, T., Sutton, K., Beauchamp, A., Depczynski, J., Brown, L., Fisher, K., Waller, S., Wakeley, L., Maybery, D., & Versace, V. L. (2021). Profile and rural exposure for nursing and allied health students at two Australian Universities: A retrospective cohort study. *Australian Journal of Rural Health*, 29(1), 21-33.
- Terry, D. R., Peck, B., Smith, A., Stevenson, T., Nguyen, H., & Baker, E. (2020). What Australian nursing students value as important in undertaking rural practice. *Online Journal of Rural Nursing and HealthCare*, 20(1). <http://dx.doi.org/10.14574/ojrnhc.v20i1.589>



LETHBRIDGE
POLYTECHNIC



NURSING EDUCATION
IN SOUTHWESTERN ALBERTA
BN PROGRAMS

RiPAP
Alberta's Rural Health
Professions Action Plan



University of
Lethbridge