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Satisfaction with nursing clinical placements in the Northern Territory and work intentions post-graduation

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ABSTRACT

Objective: The aims of this study are to assess nursing student satisfaction with their Northern Territory clinical placement; describe the characteristics of these students; and examine the relationship between student placements and future rural/remote work intentions.

Background: Positive clinical placement experiences in a rural or remote setting can encourage student nurses to consider working in rural and remote locations after graduation.

Study design and methods: The study is a cross-sectional survey of nursing students, and a review of placement data. Participants were studying a pre-registration Bachelor of Nursing course from a variety of Australian universities who undertook a clinical placement of usually four or more weeks in the Northern Territory from 2017-2019. The main outcome measures are overall satisfaction with their placement, and consideration of living and working in a rural or remote location after graduating. Logistic regression analyses examined the relationship

between student placements and future rural or remote work intentions.

Results: One hundred and sixty three undergraduate nursing students responded to the online survey. The majority (70%) of placements were undertaken in remote or very remote (18%) locations. Satisfaction with the placement was very high (94%), and 88% agreed/strongly agreed that the placement had encouraged them to consider working in a rural or remote setting. Satisfaction with educational resources and prior interest in working remotely were associated with overall placement satisfaction ($p < 0.10$). Overall satisfaction with the placement and prior consideration of working regionally, rurally, or remotely were significantly associated with feeling encouraged to consider working rurally or remotely ($p < 0.05$).

Conclusion: This study supported the logical pathway of providing a satisfying clinical nursing placement in the Northern Territory to contribute to a higher likelihood of the student considering

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working in a remote or rural setting after graduation. Providing satisfying remote clinical placements is a strategy for growing a nursing workforce for remote and rural settings.

Implications for research, policy and practice:

Ongoing investment in remote clinical nursing placements is needed to ensure nursing students are satisfied with their placement. In particular, the educational resources and support during the placement need to be of high quality. Actively recruiting students who had a prior interest in working in a regional, rural or remote setting will likely lead to high satisfaction with the placement and contribute to an interest in working in a rural or remote setting post-graduation.

What is already known about this topic?

- Recruitment of student nurses and preparation for working in the rural and remote sector are important for improving population healthcare outcomes for populations who live there.

- Previous studies of nursing, allied health and medical students indicate that exposure to positive placement experiences in regional, rural or remote locations increases the likelihood of students returning to those locations after completing their study.

What this paper adds

- Data from this study come predominately from remote clinical placements.
- Satisfaction with clinical placements in remote locations in the Northern Territory of Australia, and prior interest in working remotely, are associated with considering working in a regional, rural or remote location.
- Satisfaction with educational resources is associated with overall placement satisfaction.

Key words: Remote health; clinical placements; workforce training; primary health nursing; Remote Area Nursing

OBJECTIVE

Understanding the characteristics of nursing students electing to have a remote placement, and their experience of their placement is important to ensure high quality, targeted rural and remote placements that encourage students to consider rural or remote employment after graduation. The aims of this research were to assess nursing student satisfaction with their clinical placement in the Northern Territory (NT) of Australia and its impact on their consideration of working in a rural or remote area, and to describe the characteristics of these nursing students and the placements. The importance of this study is demonstrated by the overarching understanding that student clinical placements are typically considered to be a 'try before you buy' strategy for health services and students. However particularly in remote Australia there are insufficient nursing professionals to deliver needed services and it is also therefore, more challenging to procure student placements in remote regions.

BACKGROUND

The NT has a population of 245,353 in an area over 1.3 million square kilometres with a population density of 0.2 persons per square kilometre.¹ Using the Modified Monash Model (MMM), most of the NT is classified as very remote (MMM7), followed by remote (MMM6) with a small region around Darwin classified as a regional centre (MMM2) and small rural towns (MMM5).² There are two major teaching hospitals and three smaller public hospitals. Primary Health

Care (PHC) is provided in more than 80 health centres in remote communities run by the NT Government (NTG) and Aboriginal Community Controlled Health Organisations (ACCHOs). PHC is predominantly provided by resident remote area nurses (registered nurses) and Aboriginal health practitioners, with visiting allied health and specialist services.

The delivery of healthcare in the rural and remote sector is heavily dependent upon sustainable recruitment and retention processes of qualified nurses and midwives.³ Overall annual turnover rates of NT remote area nurses were very high (148%).⁴ The high turnover and unstable workforce are associated with higher costs and poorer health outcomes for Aboriginal peoples living in remote communities.⁵ A review of the literature identified that appropriate education for the nursing workforce can assist in recruitment and retention, specifically, "(M)aximising early exposure and training in remote areas and contextualising the curriculum for Indigenous health and remote practice".^{4(p5)}

Numerous studies have showed significant improvements in medical clinician recruitment to rural and remote areas due to educational initiatives and clinical placements,⁶ however initiatives focused on nursing and allied health students have been less studied. A recent cross-sectional study suggests non-medical students (nursing, midwifery, dentistry and allied health) receive significantly less support than medical students to undertake rural placements.⁷ An international review looking at intended and effective settlement of nursing students and newly graduated nurses in rural settings in Australia, Canada and the United States indicates

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that rural background, rural placements as well as peer support and the working environment can be factors that lead to an intention to settle in a rural area after graduation.⁸

Managing staff turnover and retention in remote health services is a policy priority.⁹ Attracting new nurses to work in a regional, rural or remote location is also a policy priority. In 2016 the Australian Government introduced the Rural Health Multidisciplinary Training (RHMT) Expansion funding program.¹⁰ The RHMT program encourages the recruitment and retention of rural and remote health professionals by “supporting effective rural training experiences” as a strategy for longer term recruitment of health professionals to the regional, rural and remote workforce.¹⁰ In 2016, a number of universities across Australia were separately awarded funding through this program to provide support for work integrated learning placement students from nursing (and allied health professions). This was also the case in the NT to support nursing and allied health student placements across the whole of the Territory. The funding is designed to create placement opportunities with local health services as well as supervising students on placement. The University also supports students on placement with cultural training, interprofessional education and financial support for accommodation and travel. The RHMT funding encourages rural and remote placements as a strategy for longer term recruitment of health professionals to the rural and remote workforce, which is consistently supported by the literature.^{6,11-14}

Student placements are a compulsory component of pre-registration training for nurses with the standards set by the accreditation agency the Australian Nursing and Midwifery Accreditation Council.¹⁵ Due to the large number of universities offering pre-registration nursing courses, the resulting competition for clinical placements and the increased Commonwealth funding, the number of students electing to undertake a rural and remote placement has been increasing.

For student placements to effectively attract graduates into the rural and remote health workforce, they must achieve clinical learning requirements, be well supported both academically and personally and fulfill students’ interest in aspects of rural or remote living, such as learning about Aboriginal and Torres Strait Islander cultures. An analysis of factors associated with students’ rural practice intentions were a “positive” practice experience, interactions with “supportive staff,” and interactions with the “community” in general.¹⁶ Minimum living conditions must also be met.¹⁷

Other qualitative research investigating factors affecting placement satisfaction and wellbeing identified three enablers: enjoyment of the rural environment and community, working in a positive, friendly and supportive workplace, and exposure to broad practice and enhanced learning opportunities.¹³ This study also identified five

barriers to placement satisfaction and wellbeing: increased financial stress; travel and accommodation challenges and concerns; study-work-life balance and isolation issues; encountering stressful work situations and/or personal events while on placement; and communication issues with universities.¹³ Additional factors positively impacting upon student placements are enjoyment of immersion into new settings preparedness for placement, and opportunities for both autonomous and interprofessional practice.^{18,19}

So while much is known generally about factors that influence students to join the workforce in the location of their clinical placements, including in rural locations, the specific perceptions of students undertaking an NT nursing placement have not been studied previously. Given the importance of the nursing workforce to overall service delivery in remote NT, it was important that this study specifically investigate the perceptions of those nursing students who had experienced an NT placement.

STUDY DESIGN AND METHODS

DESIGN

The research design is a cross-sectional survey plus a descriptive analysis of a database. Two approaches were used to address the research aims. The first was an online satisfaction survey of nursing students conducted after completion of an NT placement. Second, de-identified student administrative records of undergraduate nursing student placements in the NT were analysed.

SETTING AND SAMPLE

The setting is Northern Territory clinical placements for nursing students from across Australia supported by the RHMT Expansion funding. Pre-registration Bachelor of Nursing students represent a sub-set of all students undertaking a learning placement in the NT, and are the largest single professional group (approximately 40% of all student placements). All nursing students who had undertaken an RHMT supported clinical placement from 2017 to 2019 were eligible to participate in an online cross-sectional survey (n=780) sent from one to three months after their NT placement was completed. Eligible students were from multiple Australian Universities that teach nursing and had to travel to the NT for their placement. However, as nearly all the students were undergraduate Bachelor of Nursing students, we excluded post-graduate nursing students from our primary analysis. Depending on the year and the structure of the university, most placements were between two to eight weeks, with an average of four weeks. Nursing students were required to submit an expression of interest prior to being accepted for placement, to ensure suitability for a remote environment placement. Some students may have undertaken multiple placements or placements at different stages of their degree.

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DATA COLLECTION

Each nursing student was invited to participate by email after their placement (at the end of each quarter) and while participation was explicitly stated as voluntary, students were reminded of the survey twice if they had not responded. Consent was assumed by survey completion. We did not link student satisfaction data to other data as the satisfaction survey are anonymous. The questions used were from the Australian Rural Health Education Network (ARHEN) Student Survey Working Group,¹⁷ and used by all University Departments of Rural Health across Australia to assess student satisfaction with their learning placements. No information on validity and reliability is available. The primary outcomes of interest were agreeing or strongly agreeing with the statements “This placement has encouraged me to consider living and working in a rural or remote location after I graduate” and “Overall, I was satisfied with my placement”. We hypothesised that the students were satisfied with their placements, and that their placements encouraged them to consider living and working in a rural or remote location. Further, we hypothesised that those students who were satisfied with their placements would be more likely to be encouraged to consider living and working in a rural or remote location.

Other questions asked about individual characteristics, such as prior interest in living and working in a regional, rural or remote location following graduation, having a rural or remote background, identifying as Aboriginal or Torres Strait Islander, age and gender. Further questions asked about the placement experience, such as participation in Indigenous cultural safety/awareness training, adequacy of this training, receipt of financial assistance, adequacy of education resources and supervision, and adequacy of accommodation. We hypothesised that some of these variables will be associated with satisfaction with their placement and being encouraged to consider living and working in a rural or remote location; and that placement data will demonstrate changes in the number of placements to reflect capacity building strategies in more remote locations.

De-identified records for these same students (but not linked to retain anonymity) were extracted from an administrative database for the years 2017-2019. The database is a standard student registration form owned and managed by the University, with personal contact details, dates and locations of placement, course being studied, and supervisor. Only de-identified structural characteristics of interest were used in this analysis, including the number of students undertaking a placement, and placement time (number of weeks, and average placement length) over time. The base site of the placement was also of interest in terms of potential to expand the placement program.

ANALYSIS

Cross-tabulation of the two main outcome variables (considering rural/remote work and overall placement satisfaction) and all other variables and chi square analysis was used to identify a sub-set of variables with univariate statistical association ($p < 0.10$) with these outcomes for undergraduate nurses. This sub-set of variables were entered into a logistic regression model to identify independently statistically significant variables. Non-significant variables were individually removed from the model to identify the best fitting model based on the Pseudo R^2 statistic. Descriptive data from the administrative database for where all nursing student placements occurred are presented to examine change over time.

Ethics approval was provided by The Flinders University Social and Behavioural Research Ethics committee (Project Number 8245). This approval included the use of de-identified data on student placement length and location.

RESULTS

One hundred and sixty three pre-registration Bachelor of Nursing students responded to the online satisfaction survey with mostly complete data (21% response rate). We only included the data for the undergraduate nursing students in our primary analysis (excluding 14 post-graduate nursing students). Nearly all respondents (94%) were satisfied with their placement, and 88% responded that the placement experience had encouraged them to consider working rurally or remotely after graduating. There was little variation in responses to these variables by most personal or placement characteristics (see Table 1). However, in univariate analysis satisfaction with clinical supervision, educational resources and accommodation, and adequacy of their cultural training were associated with overall satisfaction with their placement. Prior interest in working regionally, rurally or remotely, satisfaction with clinical supervision and educational resources, adequacy of cultural training and overall satisfaction with the placement were associated with reporting being encouraged to consider working in a rural or remote location after graduation (see Table 1).

Using logistic regression and adjusting for other variables in the model, satisfaction with educational resources (AOR=22.49, $p=0.067$) and prior interest in working regionally, rurally or remotely were statistically ($p < 0.10$) associated with overall satisfaction with the placement (see Table 2). Satisfaction with clinical supervision was borderline independently associated with overall satisfaction with the placement.

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TABLE 1: FACTORS ASSOCIATED WITH UNDERGRADUATE NURSING STUDENTS' OVERALL SATISFACTION WITH STUDENT PLACEMENT AND FEELING ENCOURAGED TO CONSIDER WORKING RURALLY OR REMOTELY

		N=163 (%)	Overall satisfaction with student placement		Feeling encouraged to consider working rurally or remotely	
			% Agreeing/Strongly agreeing	P*	% Agreeing/Strongly agreeing	P*
Personal characteristics						
Identify as Aboriginal or Torres Strait Islander	Yes	10 (6%)	100	0.417	100	0.223
	No	147 (94%)	94		87	
Sex	Male	26 (16%)	92	0.747	83	0.512
	Female	133 (84%)	94		88	
Age (years)	18-25	66 (41%)	92	0.796	85	0.406
	26-32	45 (28%)	96		93	
	33-65	50 (31%)	94		86	
Rural background	Yes	62 (50%)	97	0.088	92	0.063
	No	61 (50%)	89		81	
Prior interest in working remotely	Yes	120 (75%)	97	0.026	93	0.001
	No	39 (25%)	87		72	
Placement characteristics						
Satisfied with supervision	Yes	143 (88%)	98	<0.001	91	<0.001
	No**	19 (12%)	63		58	
Satisfaction with educational resources	Yes	137 (86%)	99	<0.001	91	<0.001
	No	23 (14%)	64		64	
Satisfaction with accommodation	Yes	139 (87%)	96	0.008	88	0.246
	No	20 (13%)	80		80	
Inter-professional	Yes	126 (79%)	95	0.171	88	0.775
	No	36 (21%)	89		86	
Based in ACCHO	Yes	17(14%)	100	0.212	94	0.318
	No	108 (86%)	92		85	
Timely cultural safety training	Yes	118 (94%)	93	0.466	86	0.957
	No	7 (6%)	86		86	
Adequacy of cultural safety training	Yes	147 (94%)	95	0.047	90	0.006
	No	10 (6%)	80		60	
Overall satisfaction with placement	Yes	151 (94%)	–	–	92	<0.001
	No	10 (6%)	–		11	
Structural characteristics						
Placement length	≤2 weeks	3 (2%)	100	0.323	100	0.744
	>2 weeks, ≤ 4 week	35 (22%)	89		86	
	>4 weeks, ≤ 12 weeks	71 (44%)	93		86	
	>12 weeks	53 (33%)	98		91	
Financial assistance provided	Yes	88 (70%)	93	0.825	85	0.555
	No	37 (30%)	92		89	

*Univariate chi square

** Yes means Agree and Strongly agree, and No means Neither agree nor disagree, disagree and strongly disagree

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TABLE 2: FACTORS ASSOCIATED WITH UNDERGRADUATE NURSING STUDENTS' OVERALL PLACEMENT SATISFACTION AND ENCOURAGEMENT TO WORK RURALLY OR REMOTELY IN MULTIVARIATE LOGISTIC REGRESSION MODELS

	Overall Satisfaction		Encouraged to work rurally or remotely	
	AOR*	p	AOR*	p
Adequacy of cultural training	0.73	0.830	4.43	0.119
Supervision satisfaction	6.08	0.171	1.69	0.656
Satisfaction with educational resources	22.49	0.067	1.87	0.620
Prior interest in working regionally, rurally or remotely	9.30	0.087	4.48	0.022
Overall satisfaction	–	–	40.89	0.004

*Adjusted Odds Ratio

In a separate logistic regression model adjusting for other variables in the model, two factors were independently statistically significantly associated with considering working in a remote location after graduation (see Table 2). These were overall satisfaction with their placement (AOR=40.89, $p=0.004$), and prior consideration of working regionally, rurally or remotely (AOR=4.48, $p=0.022$).

Universities across Australia ($n=23$) supported their students in having a clinical placement in the Northern Territory. Most of the students (75%) came from the two Universities with campuses in the NT.

DISCUSSION

The results show that nursing students were highly satisfied with their placement experience, and most reported that the placement had encouraged them to consider working in a remote setting. This is consistent with feedback from allied health students on placement in the NT.²⁰ Nursing students' satisfaction with their educational resources was the only factor associated with overall placement satisfaction. Meeting learning requirements, and therefore likely fostering a sense of confidence and skill in a remote setting, would plausibly be related to a satisfying placement. Learning clinical skills is a major objective for students on rural/remote placements.^{21,22} Nursing students are also often provided with an educational facilitator in addition to the clinical supervisor they work alongside. Facilitators provide support for both clinical learning outcomes as well as more general pastoral care and personal support in the transition to a new setting. This additional educational resource may also have been a factor in the satisfaction with the placement experience as a whole.

Only two variables, overall placement satisfaction and prior interest in working regionally, rurally or remotely were associated with increased positivity towards working rurally or remotely. Focusing placement recruitment efforts on those student nurses who were already interested in working remotely seems likely to be highly effective. Further,

highlighting a career development pathway for remote area nursing for student nurses interested in working remotely may help nurses prepare for this role. This might encompass providing information to undergraduate nurses describing the role of a remote area nurse, the skills and training required and courses that might help prepare them, and also the unique settings and the benefits of working remotely, such as discovering more about remote communities and Indigenous culture.

Of course, good supervisors are at the heart of a good placement, and systems need to be established to ensure ongoing high quality supervision, to maintain high levels of satisfaction with their educational resources and to support students in the transition to rural and remote life.^{25,26} Supervisors need to have a clear understanding of their roles and expectations and also of what the student is expected to learn, be trained and supported in providing supervision, and have good communication with the host University.²⁴ These topics are covered in supervisor orientation training programs which are supported by the RHMT program in the NT. However, it is worth noting that while nurses, health service managers and University trainers valued clinical skills, a qualitative study in the NT identified that Aboriginal staff and community residents in remote communities prioritised cultural skills over clinical skills, and that having the "right" nurse was more important than having more nurses.²⁷

Future nursing workforce needs mean a greater emphasis is needed on attracting students from rural and remote backgrounds into nursing, and who are prepared to work in rural and remote areas.²⁸ A broader package of workforce strategies is needed.²⁹ Nurses in rural and remote areas need to be able to demonstrate an extended knowledge and skills base from within their own discipline, and embrace the concept of an advanced generalist nursing role.³⁰ It is therefore essential that as well as exposure to rural and remote practice, in their placements, pathways for new graduates and novice nurses to move into rural and remote practice must also be developed. It has also been suggested

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that mandating credentialing of rural and remote nurses should be avoided, but that accessibility to education for rural and remote nursing needs to increase.³¹ For example, post-graduate programs such as the Flinders University Graduate Certificate in Remote Health Practice are being used by the Central Australian Aboriginal Congress in Alice Springs to support a career pathway into remote area nursing. Further, some regions (e.g. Katherine, NT) proactively support nursing students to have a clinical placement in the very remote Primary Health Care Sector.

LIMITATIONS

Although consistent with other online surveys, the low response rate raises the possibility of biases in the responses. There is some ambiguity around student satisfaction with 'educational resources', as these would vary from placement site to placement site, and we are not able to define exactly what the resources were or to differentiate them from the support of facilitators and supervisors. Likely resources include profession-specific learning materials made available by health services providing the placement, and student-focused professional development sessions and cultural education workshops made available by ourselves. Indeed, there are some limitations to the analyses and interpretation of the results because of the standardised instrument we used to collect satisfaction data,¹⁷ which did not provide detailed information in some areas (e.g., educational resources, supervision quality) and had unknown validity and reliability. It is possible that other variables (i.e. potential endogeneity) could explain the results, although our conclusions are consistent with the literature.

It is worth noting that traditionally important variables such as length of placement and rural background,³² were not statistically significant in our multivariable analyses (although rural background was significant ($p < 0.10$) in univariable analysis. This may be due to the very high levels of satisfaction with the placement which has skewed the results and makes it more difficult to see variation in the data.

MacKay et al note that most research on factors associated with nurses' decisions to work in a rural or remote setting are cross sectional or at a single moment in time.³³ This highlights the need for prospective studies to understand nurses' experiences over time,³⁴ and the complexity of the decision-making process over the course of a career.

CONCLUSION

Nursing students were highly satisfied with their clinical placements in largely remote settings in the NT and felt their placement encouraged them to consider working in a rural or remote setting. Two factors that were associated with overall placement satisfaction were satisfaction with educational resources (which can be influenced by placement organisers

and supervision) and prior interest in working regionally, rurally or remotely (which can be identified and prioritised). Providing satisfying remote clinical placements is a strategy for growing a nursing workforce for remote and rural settings.

IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

Ongoing investment in remote clinical nursing placements is needed to ensure nursing students are able to undertake placements in these settings that meet their learning needs while ensuring they are satisfied with their placement. In particular, the educational resources and support during the placement need to be of high quality, because of their association with overall placement satisfaction. Actively recruiting students who had a prior interest in working in a remote setting will likely lead to high satisfaction with the placement and contributes to an interest in working in a rural or remote setting post-graduation.

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