

Professional Nurses' Rating of Western Cape Nurse Graduates' Competence and the Required Skills and Attributes

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Abstract

Introduction: There is global concern that newly qualified nurse graduates lack skills and competence, due to inadequate preparation during nursing undergraduate programmes. The alignment of nursing programmes in South Africa to the Higher Education Qualification Sub-framework has created an opportunity to positively influence the design and development of new programmes based on research evidence.

Aim: The study aimed to assess, from the perspective of professional nurses, the preparedness of nursing graduates from a Western Cape university for practice and to identify areas for programme improvement.

Methods: The study employed a quantitative descriptive survey design and included professional nurses directly supervising the nursing graduates during their community service year. The sample size was 71 and the response rate was 56.3%.

Results: Professional nurses rated graduates as competent or proficient in almost all skills. The skills and attributes required for the graduate to function effectively in the workplace was rated important to very important. It was also found that there was inadequate structured support to assist graduates in the transition from student to professional nurse.

Conclusion: Areas for improvement, based on recommendations from professional nurses, have potential for improving the graduate's readiness for practice. However, some recommendations are not within the scope of practice of the bachelor of nursing programme. The study highlights the importance of collaboration between educational and practice settings in producing competent nursing graduates ready for the healthcare workforce.

Keywords: competence; skills; professional nurses; nurse graduates; South Africa

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Introduction and background

In South Africa, professional nurses play an important role in the preparation of nursing graduates. They ensure that they have the essential skills and competencies to deliver high-quality patient care. Professional nurses are key to the evaluation of nursing graduates' readiness for practice and their preparedness to contribute positively to the South African healthcare system. However, there is global concern that newly qualified nursing graduates lack skills and competence, due to inadequate preparation during their nursing undergraduate programmes.

International studies have reported on employers' concerns that nursing programmes fail to sufficiently equip graduates for the constantly evolving workplace, do not meet industry requirements or are out of date (Chan et al., 2017; Harrison et al., 2020; Sharma et al., 2021).

Although research has been conducted to understand graduate nurses' preparedness for practice and stakeholder cooperation to mitigate competency gaps, Harrison et al. (2020) argue that the phrase "readiness for practice" is still being explored in the literature, and further explanation is necessary to evaluate and provide recommendations that are helpful to all stakeholders. A scoping review conducted in Finland on nurse managers' perceptions of newly graduated nurses' competence and related factors found that the existing literature on the managers' perceptions of newly graduated nurses was limited and fragmented and further research is required (Kukkonen et al., 2020).

Nursing graduates in sub-Saharan Africa are regarded by nursing professionals as underprepared for the workforce (Dlamini et al., 2014). Similarly, several studies suggest that nursing graduates in South Africa are generally perceived as ill-prepared for practice and further investigation to gauge their proficiency and practice preparedness is required (Armstrong & Rispel, 2015; Bvumbwe & Mtshali, 2018; Shongwe, 2018).

In South Africa the nursing profession embarked on a national review of nursing qualifications to ensure that all nursing programmes are aligned to the Higher Education Qualification Sub-framework (HEQSF) (Bezuidenhout et al., 2014). This was an opportune time to conduct a graduate tracer study to determine, from the perspective of both the graduates and the employers whether the graduates were sufficiently prepared for the world of work.

The aim of the study was to assess, from the perspective of professional nurses, the preparedness for practice of nursing graduates from a selected Western Cape university.

The objectives were:

- to describe the professional nurses' views regarding the attributes, skills and competence of the graduates they supervise
- to explore professional nurses' suggestions regarding areas for improvement.

Methods

A quantitative descriptive survey design was used. Health facilities in the Western Cape, where the university graduates completed their community service served as the setting for the study.

Population and Sampling

The population included all professional nurses who supervised graduates from the R425 Bachelor of Nursing programme of the specific university during their community service year. Purposive sampling was utilised to select professional nurses who supervised the graduates from the specific university. Professional nurses who supervised graduates during their first six months as a community service practitioner were eligible to participate in the study. It was based on the researcher's judgment about who could participate in the survey. The sample size was $n=71$.

Development of tool

The questionnaire development was guided by literature and previous tracer studies, including the Tertiary Education Commission Graduate Tracer Study conducted in Mauritius in 2011 (Tertiary Education Commission, 2012) and the Wawasan Open University Graduate Tracer Study, conducted in November 2011 (Wawasan Open University, 2013). The surveys were adapted to the current study's research objectives.

The self-administered questionnaire comprised closed-ended, open-ended, and ranking-type questions, consisting of single-item and multiple-item questions, with various scales to establish the strength of the professional nurses' views. The questionnaire was divided into sections:

- the health facility and unit where the graduates were employed
- the critical skills required for successful performance in that specific unit
- a comparison of skills required in practice with the clinical training provided in the Bachelor of Nursing programme.

The professional nurses rated the relevance of the knowledge, skill sets, and attributes graduates gained from the legacy nursing curriculum (R425) and their efficacy in the workplace. The rating was based on the university's Charter of Graduate Attributes for the Twenty-first Century (Bozalek & Watters, 2014).

The graduates, telephonically contacted by the researcher for an appointment, were requested to hand the information sheet, consent form, and survey to their professional

nurse supervisor. A sealable envelope was provided in which the completed consent form and questionnaire were inserted. The researcher documented the name and contact information of the graduate's supervisor from whom the envelope was collected. This was to ensure that the appropriate professional nurse completed the survey to prevent selection bias. The survey was self-administered and anonymised with data analysis to reduce social desirability bias. The survey was completed while the graduate was still on placement in the ward or within a month of having supervised the graduate, to avoid recall bias on the participant's part. The researcher followed up telephonically when the graduate's supervisor did not complete the survey as agreed. An alternative agreed-upon date was set to collect the completed survey. This was done to avoid nonresponse bias.

Seventy-one (71) survey questionnaires were distributed to consenting professional nurses, and 40 completed forms were returned (response rate of 56.3%). The survey data was initially processed and categorised using a standard coding system before being entered into the SPSS version 24 software for analysis. Nominal data, such as answers that were either "yes" or "no," were assigned codes of 1 and 0, respectively. The data were analysed using descriptive statistics, including frequency distributions for categorical variables, measures of central tendency such as mean and median and measures of variability including range and standard deviation.

Ethical considerations

The research was approved by the Senate Research and Ethics Committee of the University of the Western Cape (Reg. No. 15/8/20). The Western Cape Department of Health granted permission for the research to be conducted at the health facilities. Informed written consent was obtained from the professional nurses. Each professional nurse was assigned a number which was linked to the particular graduate supervised, to ensure anonymity.

Results

Healthcare facilities where professional nurses worked

Most professional nurses worked in tertiary healthcare institutions (36%) and in community healthcare facilities (33%). The remainder worked at regional hospitals (16%) and district hospitals (15%).

Clinical settings where the professional nurses worked

Most professional nurses worked in the Midwifery settings (17.5%), followed by Paediatrics (10%) and Community Health Facilities (10%). A total of 7.5% of professional nurses worked in Outpatient units specialising in trauma, and 7.5% in General Medical and Surgical units and 5% worked in Psychiatric units.

Professional nurses' overall competence ratings of graduates

The professional nurses were asked to rate the graduates on fourteen (14) skills based on the university graduate attributes, in terms of “not yet competent”, “competent” and “proficient”. A scale rating was assigned where “not yet competent” rated 0 and “proficient” rated 2. A total rating per graduate was then computed for overall competence.

Five (5) graduates were rated above 80% competent. One was rated at 82% competent, two graduates received outstanding ratings of 96% and two were 100% competent. At the lower end of the overall competence rating, eight (8) graduates received ratings below 50%, with four graduates rated 46%, one graduate 32%, two graduates 14% and one graduate 7% competent (Table 1).

Table 1: Professional nurses' overall competence rating of graduates

Graduate number	Professional nurses' competence rating
8	100
51	100
5	96
9	96
35	82
23	75
40	71
14	71
52	68
28	68
34	64
57	64
7	64
37	64
3	64
42	61
32	61
29	57
43	57
36	57
33	54

Graduate number	Professional nurses' competence rating
41	50
64	50
15	50
26	50
27	50
4	50
2	50
6	50
46	50
48	46
44	46
38	46
19	46
18	32
73	14
16	14
30	7

Required skills and attributes

Professional nurses rated the skills and attributes required for the graduate to function effectively in the workplace. Most professional nurses (95%) rated nursing-specific clinical skills and teamwork as very important. The significance of theoretical knowledge relevant to nursing, the capacity for working under pressure and problem solving were also rated as very important by 85.0% of the professional nurses.

Verbal communication and attention to detail were rated as very important by 82% professional nurses. Written communication skills were also rated as very important by 80.0% of the professional nurses. Only 10.0% of professional nurses regarded computer literacy as very important (Table 2).

Table 2: Professional nurses' rating of skills and attributes in terms of importance

Item	Not Important %	Important %	Very Important %
Nursing-specific clinical knowledge	0	5	95
Teamwork	0	5	95

Item	Not Important %	Important %	Very Important %
Nursing-specific theoretical knowledge	0	15	85
Ability to work under pressure	0	15	85
Problem solving skills	0	15	85
Verbal communication skills	0	18	82
Attention to detail	0	18	82
Written communication skills	0	20	80
Ability to work independently	0	22	78
Planning and organisational skills	0	25	75
Analytical skills	0	30	70
Adaptability	0	34	66
Initiative	0	40	60
Computer literacy	20	70	10

Graduates' skill and attributes rating

Professional nurses generally rated graduates as competent or proficient in the required skills. The same scale, “not yet competent” rated 0 and “proficient” rated 2, was used.

A total of 80% of graduates were rated competent in problem-solving, followed by nursing-specific theoretical knowledge (78%), planning and organization skills (74%) and analytical skills (74%). Teamwork had the highest proportion of graduates rated as proficient (50%). This was followed by 38% of graduates rated proficient in their ability to function independently and 36% for their ability to work under pressure (Table 3).

Skills in which graduates were rated as not yet competent included taking initiative (13%), computer literacy (11%), problem solving skills (10%), planning and organisational skills (10%), analytical skills (10%) and attention to detail (10%).

Table 3: Professional nurses' rating of competence per skill and attribute

Item	Not Yet Competent %	Competent %	Proficient %
Problem solving skills	10	80	10
Nursing-specific theoretical knowledge	0	78	22
Planning and organisational skills	10	74	15
Analytical skills	10	74	16
Nursing-specific clinical knowledge	5	73	22
Written communication skills	3	68	29
Attention to detail	10	67	23

Item	Not Yet Competent %	Competent %	Proficient %
Verbal communication skills	5	64	31
Adaptability	8	63	29
Initiative	13	61	26
Computer literacy	11	57	32
Ability to work under pressure	8	56	36
Ability to work independently	8	54	38
Teamwork	5	45	50

According to the professional nurses, most health institutions lacked a formal support system to assist graduates to adjust from university to the world of work. Only 24% of the institutions had structured mentorship programs, and only 22% of the facilities had structured orientation programs. Only 11% had a formal mentorship and supervision program. A peer supervision system was reported to be present in only 27% of the facilities (Figure 1).

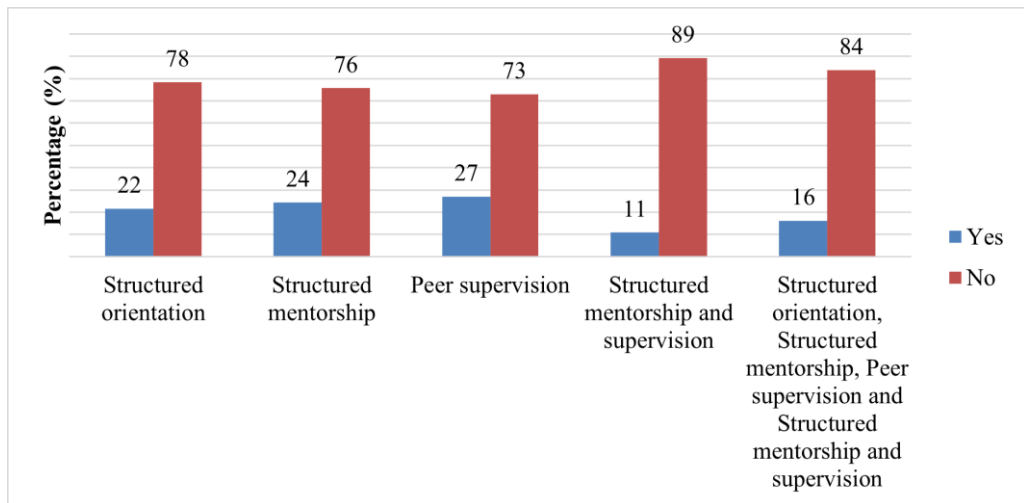


Figure 1: Available support systems to aid the graduates' transition into practice

Proposed theoretical and clinical education improvements

Open-ended questions were used to ask for respondents' suggestions of theoretical and clinical components of the legacy nursing programme that are still relevant for the new programme and needed improvement. Respondents' recommendations were largely linked to the clinical settings in which they were working and not to the specific graduate that they were supervising at the time. They made suggestions for the improvement of theory and clinical education and practice in a number of clinical settings (Table 4).

Improvement suggestions for theoretical input for general and surgical nursing included basic nursing care, patient care during an acute illness, advocacy for patients and problem-solving techniques. In midwifery, respondents suggested boosting skills relevant to the second stage of labour, such as reading partograms, delivery of a breech infant, and managing shoulder dystocia. The improvement of interpersonal skills including management of disagreements and conflict mediation was recommended for the community health nursing component (Table 4).

Clinical improvement skills suggested included enhancing medication management, post-operative care plans, dressings, physical assessments, and increasing on-site and bedside teaching and clinical exposure. Recommendations for orthopaedic nursing included training in traction and suturing, and triage skills were highlighted as necessary for trauma care (Table 4).

Table 4: Proposed theoretical and clinical education improvements

Clinical area	Theoretical Education	Clinical Education
General medical and surgical	Basic nursing care Nursing care of a patient in the acute phase of a medical condition Patient advocacy Problem-solving Application of theory to practice	More clinical exposure Dressings Medication Post-operative care plans On-site teaching of graduates at the bedside Physical assessment
Midwifery	CTG Interpretation Referral	Obstetric emergencies 2nd stage of labour Interpretation of partogram Breech delivery Shoulder dystocia
CHN	Conflict Management	Grievance handling
Paediatrics	Immunisations First 1000 days Neonatology Congenital Defects Burns	First 1000 days Physical assessment
Theatre	Infection control Knowledge of major procedures	Theatre techniques
Outpatients, e.g. Trauma	Occupational health and safety Triage	Suturing Triage skills
Gynaecology	Sexually transmitted infections	Pap smear
Orthopaedics	Wound care Applying casts e.g. Plaster of Paris	Traction
Psychiatry	Substance Abuse	Interviewing

Reliability

The Cronbach's coefficient alpha varied for sections and ranged between 0.78 and 0.96. Tavakol (2018) suggests that a satisfactory Cronbach's coefficient alpha falls between the range of 0.70 to 0.95.

Validity

The study supervisor and a statistician review the survey for errors and assessed its face validity. The survey items were assessed by an education and curriculum development expert to confirm that they were appropriate for measuring what they intended to measure, ensuring content validity.

Discussion, recommendations and limitations

Although specific to the study context, all skills, based on the university's graduate attributes charter, were rated as important or very important by the professional nurses. Computer literacy was the only skill rated as unimportant by 20% of the professional nurses. The South African Nursing Council (SANC) recommends that the new Bachelor of Nursing qualification recognises computer literacy as a crucial skill. The framework emphasises that graduates must have the knowledge and skills to access, create, and manage information for various users, including healthcare information systems. This is dependent on computer literacy (Tegegne et al., 2023; Veljkovic et al., 2022).

The results of the study show that professional nurses rated nursing-specific clinical skills, teamwork, theoretical knowledge relevant to nursing, the capacity for working under pressure, attention to detail, problem-solving, and verbal and written communication skills as very important for nurse graduates to be functional in their specific health facilities. Rabie et al. (2020), in their study on the perceptions of nurse educators and final-year nursing students regarding the knowledge, skills, and attitudes needed for newly graduated registered nurses to deliver quality patient care in South Africa, reported similar findings.

The skills identified by Rabie et al. (2020) included knowledge skills such as theoretical knowledge, holistic care, cultural diversity, and code of conduct, interpersonal skills, skills related to management and administration, and practical and personal skills. Positive attitudes were highlighted as important, such as being positive, caring, humble, friendly, empathetic, being a lifelong learner, going the extra mile, compassionate, having passion, approachable, sensitive, helpful, and non-judgmental (Rabie et al., 2020). The authors developed a competency profile to assist new nurse graduates in delivering quality patient care when entering the clinical practice environment and proposed that further research is needed on other health care professionals to expand on the findings of their study (Rabie et al., 2020). The current study, based in the Western Cape Province, adds the perspectives of professional nurses in health facilities.

It is important to note that although studies have been conducted to evaluate the skills of the newly graduated nurses, these may differ across countries and health care facilities, thus may not have evaluated the same set of skills. The skills in the current study were derived from the graduate attributes specific to the university where the graduates completed the nursing programme. This makes it difficult to compare skills on a national level. It is therefore proposed that a national programme, such as the Bachelor of Nursing, requires a more specific national competency framework deemed relevant to practice.

Martin and LaVigne (2023), in their paper about the use of Readiness to Practice Indicators (RPIs), as an evidence-based tool to assess nurse graduate skills, stated that academic institutions and hospitals want the same outcomes which is safe, practice ready nurses, but use different tools to evaluate practice readiness. The authors emphasise the need for collaboration between nursing education institutions and health facilities to evaluate the practice readiness of new nurse graduates (Martin & LaVigne, 2023). Similarly, collaboration between the education and practice sectors is crucial to meet the health needs and health system requirements in South Africa, not only to evaluate practice readiness of nurse graduates but to aid in the transition from university to the world of work. The proposed RPIs performance evaluation tool (Martin & LaVigne, 2023) synthesises nursing practice standards specific to their country.

Professional nurses rated graduates as competent or proficient in almost all skills. This indicates that the legacy nursing programme produced graduates with the necessary skills and qualities to excel in the workforce. In a cross-sectional study done in six European countries, nurse managers similarly assessed the level of competence of graduating nursing students as good, but there were statistically significant differences between countries (Kukkonen et al., 2023). They found that, overall, graduating students seemed to meet the competence demands of the employer and managers. Further research was, however, proposed to confirm an apparent connection between managers' competence assessment and their individual background factors, such as qualifications and dissatisfaction with their country's nursing programme (Kukkonen et al., 2023). Hyun et al. (2020) found a difference in the perceived level of competency of new graduate nurses among various stakeholders in Australia. Ofoha and Iwuchukwu (2018), in their tracer study aimed at assessing the professional skills of nurse graduates in Nigeria and exploring employers' expectations of their skills, also found that a significant proportion of graduates met and exceeded employer expectations. In a study exploring the perceptions of professional nurses regarding the clinical competence of community service practitioners during their year of community service in the North West province of South Africa, it was found that the majority of community service practitioners were perceived to be competent and capable of working independently, but they still required supervision and mentorship to refine their competency (Matlhaba et al., 2021).

In the current study it was found that most health facilities lacked a formal support system, with a mere 11% of the health facilities having a formal mentorship and supervision program in place. Support programs would provide the newly graduated nurse with the supervision and mentorship to refine their competency, as proposed by Matlhaba et al., (2021). Scheepers et al. (2022), in their study on transition support needs of nurse graduates in the North West Province of South Africa, concluded that a structured compulsory community service program for nurse graduates can improve their transition in the South African context. They further highlight the importance of nursing staff support for nurse graduates (Scheepers et al., 2022). One of the themes identified in their study was the existence of the theory-practice gap in nursing education and highlights the importance of collaboration between nursing education institutions and practice to bridge the theory-practice gap (Scheepers et al., 2022).

Hyun et al. (2020) also advocated for stakeholder cooperation to resolve competency gaps and give new graduate nurses supportive opportunities to close any initial skill gaps. A concept analysis of the readiness of recently graduated nurses for clinical practice, conducted by Mirza et al. in 2019, emphasised the need for intersectoral collaboration to develop the concept further and explore humanistic characteristics related to practice readiness (Mirza et al., 2019).

Based on a study done in Kenya, Tanzania, and Uganda, Brownie et al. (2020) suggested similar actions to increase collaboration between nursing education institutions and clinical practice facilities, address practice expectations, and conduct additional research on graduate skills and expectations of employers. An integrative review of the South African landscape revealed a lack of planning and coordination between the education and health sectors, resulting in unmet health needs (Bvumbwe & Mtshali, 2018). The current study offers further information in support of improved collaboration among the nursing education stakeholders.

It is important to note that neither the legacy curriculum content of the university nor the SANC qualifications framework for the legacy Bachelor of Nursing programme was made available to the professional nurses who participated in the current study. Caution should therefore be exercised when interpreting the theoretical and clinical education suggestions for improvements, made by professional nurses in this study. Furthermore, the suggestions for improvements provided by the professional nurses might be subjective and based on the professional nurses' personal experiences and observations of the graduates they supervised. In addition, it is limited to their area of work. Most of the recommended improvements relate to general medical and surgical nursing. Some suggestions made by the professional nurses might already be integrated into the legacy programme's content, but might not have been known to the professional nurses. Other suggestions may not fall under the scope of practice of graduates from the Bachelor of Nursing qualification, and may be more suitable for speciality Postgraduate Diploma qualifications. For instance, the legacy Operating Theatre Nursing programme and the most recent Postgraduate Diploma programme in Perioperative Nursing include theatre

techniques, which is not a core area of learning in the Bachelor of Nursing programme. Incorporating the recommendations for theoretical and clinical education improvement in the new Bachelor of Nursing programme (R174) would enhance the relevance of the curriculum to practice.

A possible limitation in the study is the small sample size, although this was based on the limited population of professional nurses meeting the inclusion criteria. This limits generalisability of the results to other contexts.

Conclusion

The study highlights the importance of assessing nurse graduates' competence and identifying areas for improvement to address any gaps in their competence. In this study, professional nurses reported the graduates as competent and proficient in most areas, albeit it being contextual to the specific setting. However, they did identify certain theoretical and clinical areas that needed improvement.

The current study provides the first evidence from professional nurses, regarding the work readiness of graduates from the specific university in the Western province, who completed the legacy Bachelor of Nursing qualification leading to registration as a Nurse (General, Psychiatric and Community) and Midwife according to Regulation 425 (R.425) of 22 February 1985 (Minister of Health, 1985). The findings add to the existing national body of knowledge on employers' perceptions of nurse graduates' readiness for the health workforce.

Importantly, it also shaped the development of the micro-curriculum of the recently introduced HEQSF Bachelor of Nursing qualification, leading to registration in the categories Professional Nurse and Midwife according to Regulation 174 (R174) (Minister of Health, 2013) offered at the university where the study was conducted. The previous nursing programme's strengths and challenges, as highlighted by professional nurses, were considered when developing the new curriculum.

The study highlights the need to consider professional nurses' perceptions of graduates' readiness for practice when designing curricula and planning the placement of students for work-integrated learning. This will ensure that graduates are better equipped for practice.

A national framework for the evaluation of nurse graduate competence in the South African context, based on the scope of practice and standards of care, would act as the standard to guide the nursing education institutions, health facilities and relevant stakeholders such as Departments of Health. The study findings offer insights regarding professional nurses' view on nurse graduate readiness for practice, to ultimately ensure that competent graduates for the health workforce are produced.

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Contributions of authors

Felicity Daniels made a substantial contribution to conceptualisation and design and was the principal researcher of the overarching project. Lindy van der Berg was responsible for conceptualising the PhD study, under the supervision of Felicity Daniels, and for the acquisition of data and was the PhD candidate of the overarching project.

Lindy van der Berg drafted the manuscript and Felicity Daniels. critically revised it for important intellectual content and editing.

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