International Journal of Africa Nursing Sciences 10 (2019) 102–109

Contents lists available at ScienceDirect

International Journal of Africa Nursing Sciences

journal homepage: www.elsevier.com/locate/ijans

Establishing the context for a Master degree programme in Nursing at the National University of Lesotho

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ARTICLE INFO

Keywords:
Context of Master degree
Master in Nursing
National University of Lesotho
Nursing competencies
Nursing education
Nursing specialisation

ABSTRACT

The National University of Lesotho Nursing Department, in implementing the first Master degree programme in Nursing, conducted a rapid needs assessment to understand the nursing education status in the country, establish the nature of the Master degree programme suitable to meet needs of the country and identify the core competencies expected from the graduates produced from the Master degree programme. A quantitative survey was administered to registered nurses and/or midwives who were selected conveniently and 93 returned completed questionnaires. Data were analysed using Microsoft Excel Software and the SPSS (v23). Permission was sought from the Nursing Directorate at the Ministry of Health (Lesotho), participants gave informed consent and ethical principles were adhered to throughout the project.

Pre-service Nursing and Midwifery Programmes were perceived as adequately preparing graduates for the health care system in Lesotho. The Master degree programme was perceived as necessary to strengthen the Nursing and Midwifery workforce and, specialisations to be prioritised were in line with the country's health agenda and national health priorities. Clinical specialisation with an option of a minor in nursing education or clinical leadership was identified as necessary. A number of competency areas were identified to serve as a guiding framework in competency-based curriculum development.

Establishing the context is key in developing continuing education programmes that are relevant and responsive to needs of the population and health care system. Continued stakeholder input is necessary to ensure that the programme developed produces specialist nurses that add value to the nurse-driven health care system in Lesotho.

1. Introduction and background

The health workforce is one of the six building blocks of a strong health care system, in which countries should invest, in order to achieve the objective of universal equitable access to good quality health care (World Health Organisation [WHO], 2017). With nurses forming the bulk of the health workforce in the healthcare system, nursing education institutions have to offer programmes that produce appropriate graduates in terms of quality, quantity, and relevance (WHO, 2014). The competencies of the graduates should be aligned to the needs of the population and to the health care system (Mtshali & Gwele, 2015).

In most countries, there is a growing concern that the education of nurses is not aligned to the health service delivery needs and that the graduates are not equipped with competencies required to address the rapidly changing health profile of the population (Frenk et al., 2010; Murarane za & Mtshali, 2018; Murarane za, Mtshali, & Mukasomi, 2017; WHO, 2014). WHO (2013) recommends transforming and scaling up health professionals' education by revising and updating curricula on a regular basis, linking disease burden to the training needs, adopting competency-based curricula, and equipping educators with competencies required to produce the required graduates (WHO, 2013; 2014). In the Lesotho context, nursing education programmes should respond to the country's national health agenda, the burden of disease, the high maternal mortality ratio, which is at 1024/100000.00 live births (Lesotho Demographic and Health Survey (LDHS), 2014).

Most of the efforts in nursing education have focused on increasing the number of nurses and midwives at entry level which is not enough to address the needs of the population and the health care system

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https://doi.org/10.1016/j.ijans.2019.02.002
Received 27 July 2018; Received in revised form 11 February 2019; Accepted 15 February 2019
Available online 18 February 2019

(WHO, 2016a,b). WHO advocates the continuing of nursing and midwifery education as the roles, responsibilities, and scope of practice for nursing and midwifery workforce continues to evolve and expand in line with local, regional and global health challenges (WHO, 2016a,b). This organization cautions that constant development of human resources for health might not yield the anticipated results (WHO, 2014). Aligning the supply and skills of the nursing and midwifery workforce to the population and health systems needs is a foundation for a strong workforce that is able to respond to the national health priorities and to the universal health coverage agenda drawn up by the WHO (2016a,b). Countries, therefore, have to invest in developing advanced nursing practitioners with specialist skills that match the health needs of populations and that can work to their full potential (WHO, 2016a,b).

According to the International Council of Nurses (ICN) specialist nurses are prepared through formally recognised programmes of study at an advanced level to be registered and licensed to practice as specialist nurses in a branch of the nursing field (ICN, 2009). These nurses are equipped with advanced skills, Specialist practice in nursing includes clinical practice which has a number of sub-specialities, teaching, administration, research, and consultancy. Due to variations in the specialist's programme globally, the ICN (2009) published core competencies for nurse specialists, which are commonly used by countries as a reference. The competency areas are grouped into three domains; professional, ethical and legal practice; care provision and management; and professional, personal and quality development. The *professional, ethical and legal practice domain* includes accountability, ethical practice, and legal practice; the *care provision and management domain* comprises health promotion, assessment, planning, implementation, evaluation, therapeutic communication and interpersonal relationships; the l*eadership and management* domain has leadership and management, safe environment, inter-professional health care, delegation and supervision; and the *Professional, personal and quality improvement* domain includes enhancement of the profession, quality improvement and continuing education (ICN, 2009).

The WHO (2007) Nursing Education and Training Standards for the African Region recommended adoption of competency-based curricula to address the mismatch between the needs of the health care system and graduate competencies. Developing a competency-based curriculum, unlike the traditional content-driven curriculum, which is decided upon by the educators, requires in-depth understanding of the local context, population needs, health system priorities and competencies expected from the graduates. This requires conducting a situational analysis and tasks analysis that will serve as a foundation of the competency-based curriculum (Al Agili, 2013; Uys & Gwele, 2005).

2. Nursing education context in Lesotho

Nursing education in Lesotho is part of the mainstream education system (Botma, 2014). The country has six nursing education institutions (See Table 1) which are dedicated to preparing the nursing and midwifery workforce, mainly at the pre-service level, with only one institution offering post-basic qualifications (Botma & Nyoni, 2015; National University of Lesotho (NUL), 2014). These institutions include the National University of Lesotho, National Health Training College, Maluti School of Nursing, Paray School of Nursing, Roma School of Nursing, and Scott School of Nursing (Ts'ephe, 2012). The latter four nursing education institutions are faith-based organisations and together they are called the Christian Health Association of Lesotho (CHAL). They share health facilities and resources with their associate hospitals (Botma, 2014). Although these nurses are contributing significantly to the health care system, there is a need for continuing education to produce specialist nurses who will function at an advanced level across the health care system; from the primary health care settings to the tertiary level within their scope of practice (Lesotho Nursing and Midwifery Strategic Plan (LNMSP), 2014). Anecdotally, the nurses in Lesotho had to further their studies at Master degree and Doctoral level in other countries, which was costly to the family, institutions, and country.

Table 1
Profile of Nursing Education Institutions in Lesotho.

Nursing Education Institution	Type of a HEI	Programme Offered
National University of Lesotho	Public	5-year BSc in General Nursing and Midwifery Bachelor of Nursing Science (Completion Programme)
National Health Training College	Public	Certificate in Nursing Assistant Diploma in General Nursing Ophthalmic Nursing Diploma in Psychiatry & Mental Health Nursing Diploma in Primary Health Care (Clinician)
Maluti School of Nursing	Private	Diploma in General Nursing Diploma in Midwifery
Paray School of Nursing	Private	Certificate in Nursing Assistant Diploma in General Nursing
Roma School of Nursing	Private	Diploma in General Nursing Diploma in Midwifery
Scott School of Nursing	Private	Certificate in Nursing Diploma in General Nursing

The current nursing and midwifery training programmes in the country focus on producing four cadres: nursing assistants, general nurse, nurse-midwife and three types of specialist nurses (ophthalmic nurses, primary health care nurses, clinicians and psychiatry/mental health nurses (LNMSP, 2014)). The NUL is the only institution that produces nurses with integrated nursing and midwifery qualifications (Botma, 2014). The National Health Training College (NHTC) is the only institution that provides post-basic diploma programmes. The scope of practice and place of deployment of these categories of nurses differs in line with their educational preparation (LNMSP, 2014).

The need for strong health systems that are able to deliver high quality care has become increasingly clear. To contribute meaningfully to strengthen the health system in Lesotho, NUL through the Faculty of Health Sciences and Nursing Department established the first Nursing Master degree programme in the country to produce specialist nurses and midwives with relevant competencies to address the priority health needs of Lesotho. The introduction of the Master degree in Nursing is in line with one of the Lesotho Higher Education Strategic Objectives, of broadening the range of programmes offered in the country and contributing to the Lesotho Higher Education target of 20% increase in the range of Higher Education (HE) programme offerings by 2018.

A rapid needs assessment was conducted in 2015 by the Nursing Department at NUL to inform the development of a Master degree programme that is responsive to needs of the population and priorities of the health system, which is the focus of this paper. The needs analysis project was supported through the Nursing Education Partnership Initiative (NEPI) through ICAP, the US Government funded initiative, which was aimed at supporting Lesotho to address the Human Resources for Health (HRH) gap, as well as address issues regarding the quality and the relevance of the nursing education to the country's health context.

3. Problem statement

Currently, specialist nurses in the country undergo training in other countries as there is no institution in Lesotho that offers postgraduate studies to nurses and midwives (Botma, 2014). The country has a demand for nurses prepared at postgraduate level to contribute meaningfully to a health care system that has adopted a Primary Health Care strategy (LNMSP, 2014). The nurses and midwives are confronted on a daily basis with expanding roles, responsibilities, and scope of practice

due to the increasingly complex demands of the health care system, and the healthcare users and their families, which requires practitioners with a different set of skills. Nurses currently account for approximately 90% of the health workforce in the country directly engaged in health service production (HRDSP, cited in the LNMSP, 2014). Efforts in the country have focused on increasing the numbers and quality of pre-service nurses and midwives (WHO, 2016a,b), with minimal investment in continuing education. Evidence on the need to strengthen the nursing and midwifery workforce highlights the need for continuing education (WHO, 2017) and to match the education of nurses and midwives with the national and community health needs (Murararaneza & Mtshali, 2018). Hence, the need to conduct a needs analysis to inform the development of the Master degree programme at the National University of Lesotho.

4. Purpose of the study

The purpose of this study was to conduct a needs analysis in order to establish the perceptions of the status of nursing education in the country and determine the need for a Master degree in nursing programme in Lesotho,

5. Objectives of the study

To identify speciality areas in nursing to be prioritized and;

To determine core competencies required from the graduates of this Master degree programme.

6. Methodology

Design: A quantitative rapid needs assessment survey was conducted in this project.

6.1. Population and sample

The population included nurses and midwives from the clinical practice setting, the nurse managers, lecturers from the Schools of Nursing, and the University-based Nursing Department, the graduates, the representatives from the Regulatory Body and Professional Association, and other stakeholders. The total population was approximately 200 however, data were collected from a sample of 93 participants who were selected conveniently from the groups mentioned above. Data was collected on those participants who were available at the time of distributing questionnaires. Representation from the various groups was key as the Master degree programme would draw candidates from a pool of graduates produced from various nursing programmes either inside or outside Lesotho.

6.2. Ethical considerations

The NEPI Coordinator in the Lesotho ICAP offices secured permission from the Ministry of Health in Lesotho through the Nursing Directorate to conduct the needs assessment. Gatekeeper permission was obtained from the heads of the facilities where participants were drawn. The purpose of the study was explained to the participants and they were given an opportunity to ask questions to assist them to make an informed decision. They were also informed of their rights and the right to withdraw from the study at any stage without any negative consequences. Thereafter the participants completed an informed consent form to record voluntary participation without any coercion. Principles of anonymity and confidentially were also observed in this study.

6.3. Data collection

A semi-structured questionnaire that was adapted from the NUL Department of Nursing (DoN) was used to collect data. Data were collected from the 22nd of May to 5th June 2015, through a survey that had three sections. The items on the last two sections of the survey used a five stage Likert scale from strongly disagree to strongly agree. The first section focused on the demographic characteristics of the participants, the second section collected data on the appropriateness, comprehensiveness, sufficiency and relevance of current education to meet the health care needs of the population, and the last section focused on the perceived need for the proposed Master degree, the speciality areas in nursing to be prioritised in the context of the District Health Management System in Lesotho, and global directives in health. The survey had one open-ended question allowing participants to include their additional comments. A core team comprising academics from NUL DoN and Lesotho NEPI Team conducted fieldwork. The research study and it procedures were introduced to heads of key divisions, i.e. nurse managers from 21 hospitals, principal nurses from six nurse training institutions, nursing directorate in the Ministry of Health, Lesotho Nursing Council, Lesotho Nurses Association, former graduates of the department of nursing and other key stakeholders. The core research team personally distributed the questionnaires to the various stakeholders. Nurse managers from 21 hospitals were approached during a monthly meeting and asked to participate in the study, whilst for all other participants, permission was first sought from their respective institutional management and then asked to take part in the study during their break times. An arrangement that the completed questionnaires be posted in a box that was kept in a central place and was easily accessible to all the participants at the various facilities was made by the study team members. Questionnaires were collected after three days by the study team.

6.4. Validity and reliability

Content validity was enhanced through subjecting the draft data collection tool to a group of experts in nursing, nursing education and research to ascertain relevance of items on the questionnaire. Input obtained on improving clarity of questions was incorporated into the tool. A pilot test was done on five nursing faculty to ascertain relevance of items on the questionnaire and it was concluded that the tool was appropriate for use as no other necessary amendments were reported.

6.5. Data analysis

Quantitative data were analysed using SPSS (23). Descriptive data analysis using frequency distribution was used to analyse data on perceptions using a five point Likert Scale. The frequency distribution results were later put into three categories (positive perception with options of strongly agree and agree; somewhat; and negative perception with options of strongly disagree and disagree). Correlations between variables were made using Spearman correlation.

6.6. Dissemination of findings

Validation of findings was done through subjecting the findings to the scrutiny of the critical stakeholders. Findings were presented to three groups of stakeholders; the University community, including University leadership and Faculty representatives, the Ministry of Health, with representatives from all groupings in nursing and interested parties, and the faculty in the Nursing Department for input to solicit feedback on the accuracy of the findings regarding areas that required refinement. Once consensus was reached, a needs analysis report was adopted to serve as the basis for the Master degree programme development process.

7. Results

7.1. Demographic characteristics of the participants

The demographic characteristics show that of the 82 participants who reported their current position, 59% (n = 49) worked as Nurses/Midwives in clinical practice settings; 11% (n = 9) were University-based lecturers, 10% (n = 8) College-based lecturers, 12% (n = 10) were nurse managers, 4% (n = 3) were graduates; 1%(n = 1) was from the Regulatory Body; 1% (n = 1) from the Professional Association and 2% (n = 2) were grouped as 'other'. With regard to highest qualifications, of the 83 participants who responded to this item, 42% (n = 35) had a Diploma in Nursing/Midwifery, 31% (n = 26) a Bachelor's Degree, 16% (n = 13) a Master degree, 4% (n = 3) a Doctoral Degree, 4% (n = 3) with a Post-basic or Advanced Diploma and 2% (n = 2) had other qualifications. About 56% (n = 52) reported that they obtained their qualifications at Universities (NUL, University of South Africa (UNISA), University of Free State (UOFS), Medical University of South Africa (MEDUNSA), University of Cape Town (UCT), University of Botswana (UB), University of Sydney, University of Zimbabwe (UZ), University of North-West (UNW), University of Florida (UF-USA), with 24% (n = 22) obtaining their qualifications from Colleges of Nursing and 20% (n = 19) from Schools of Nursing in the country Table 2.

7.2. Perceptions of the participants regarding education in nursing in Lesotho

7.2.1. Appropriateness of current levels of education

Regarding the participants' perception of the appropriateness of the current levels of nursing education to meet the needs of the population of Lesotho, the survey found that out of 93 participants, 76.7% (n = 62) had a positive perception [Agreed (45.2%, n = 42 and 21.5% (n = 20) strongly agreed] whereas 15.1% (n = 14) had a negative perception [10.8% (n = 10) disagreed, and 4.3% (n = 4) strongly disagreed]. The survey further showed that 18.3% (n = 17) reported that the current levels of education in nursing sciences to be somewhat appropriate to meet the needs of the population of Lesotho. To establish the overall perception of current levels of education in nursing sciences as being appropriate to meet the needs of the population of Lesotho, the computed results showed a minimum score was one and the maximum score was five, the mean was 3.69, the median four and the standard deviation (SD) was 1.06. The first quartile was three, second quartile was four, and third quartile was four. These results indicated a relatively high positive perception of the current levels of education in nursing sciences to be appropriate to meet the needs of the population of Lesotho.

Table 2
Current position and highest qualifications of the participants, type of NEI attended.

Current Position	Freq.	%	Highest Qualification	Freq.	%
Nurse & Midwives in Practice	49	59	Doctoral Degree/PhD	3	4
University-based Lecturers	9	11	Master's Degree	13	16
College-based Lecturers	8	10	Honors in Nursing	1	1
Nurse Managers	10	12	Bachelor's Degree in Nursing	26	31
Regulatory body	1	1	Diploma in Nursing/ Midwifery	35	42
Professional Association	1	1	Post-basic/Advanced Diploma	3	4
Graduates	3	4	Other	2	2
Other	2	2			
TOTAL	83	100	TOTAL	83	100

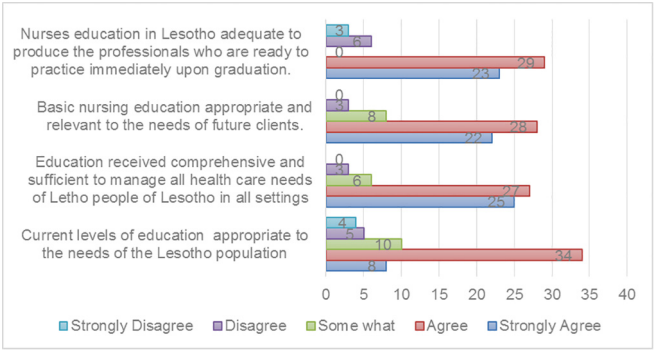

Fig. 1. Perceptions on Nursing Education in the Country.

7.2.2. Comprehensiveness and sufficiency of nursing education

The results regarding the comprehensiveness and sufficiency of the education of nurses to manage all health care needs of the people of Lesotho in all settings (Primary, secondary & tertiary levels), showed that out of 93 participants, 82.8% (n = 77) had a positive perception [50.5% (n = 47) strongly agreed, and Agreed 32.2% (n = 30)] whereas 8.6% (n = 8) had a negative perception [8.6% (n = 8) disagreed] (See Fig. 1). The survey indicated also that 8.6 (n = 8) reported that the education received was comprehensive and sufficient to manage all health care needs of the people of Lesotho in all settings (Primary, secondary & tertiary levels). The overall perception of the education received was regarded as comprehensive and sufficient to manage all the health care needs of Lesotho's people in all settings. The minimum score was two and the maximum score was five. The mean was 4.25, median five and the SD was 0.94. The first quartile was four, the second quartile was five, and the third quartile was five as well. These results indicated an overall high perception of the education received.

7.2.3. Appropriateness and relevance of nursing education

The results, regarding the participants perception of the appropriateness and relevance of basic nursing education to meet the needs of future clients, showed that the majority had a positive perception, 75.2 (n = 70) [46.2% (n = 43) agreed, and 29.0%(n = 27) strongly agreed], whereas 6.5% (n = 6) had a negative perception [6.5% (n = 6) disagreed]. It was noted also that 18.3% (n = 17) reported that the basic nursing education was somewhat appropriate and relevant to meet the needs of future clients. In computing the overall perception of the basic nursing education to be appropriate and relevant to meet the needs of future clients, the minimum score was two and the maximum score was five. The mean was 3.98, the median was four and the SD was 0.86. The first quartile was 3.50; the second quartile was four and the third quartile was five. These results indicated that overall, the participants had a relatively high perception of the basic nursing education to be appropriate and relevant to meet the needs of future clients.

7.2.4. Adequacy of nursing education

Responses to the item on the adequacy of the education of nurses in Lesotho to produce professionals who are ready to practice immediately upon graduation, the results reflected that the majority of the participants, 85% (n = 79) had a positive perception [49.5% (n = 46) agreed, and 35.5% (n = 33) strongly agreed], whereas 15.1% (n = 14) had a negative perception [12.9% (n = 12) disagreed, and 2.2% (n = 2) strongly disagreed (See Fig. 1). In establishing the overall perception of the participants on the education of nurses in Lesotho to be adequate to produce professionals who are ready to practice immediately upon graduation, the computed results revealed that the minimum score was one and the maximum score was five. The mean was 4.03, the median was four, and the standard deviation was 1.04. The first quartile was four, the second quartile was four and the third quartile was five. These results indicated a very high perception of the education of nurses in

Lesotho to be adequate to produce professionals who are ready to practice immediately upon graduation.

7.3. Correlation of constructs related to the perception of education of nurses in Lesotho

A Spearman correlation was run in order to determine the relationships between the various constructs related to the perception of the education of nurses in Lesotho. There was a statistically significant relationship between the following variables: The current levels of education in nursing sciences that are appropriate to meet the needs of the population of Lesotho and the education received to be comprehensive and sufficient to manage all health care needs of people of Lesotho in all settings (Primary, secondary & tertiary levels ($r_s[93] = 0.322$, $p = 0.002$).

The current levels of education in nursing sciences are appropriate to meet the needs of the population of Lesotho and the basic nursing education to be sufficient and appropriate to meet the needs of future clients ($r_s[93] = 0.212$, $p = 0.041$); the current levels of education in nursing sciences are considered to be appropriate to meet the needs of the population of Lesotho and the education of nurses in Lesotho is adequate to produce the professionals who are ready to practice immediately upon graduation ($r_s[93] = 0.309$, $p = 0.003$).

7.4. Areas of specialisation to be considered in the new Master degree programme

The areas of specialisations to be considered in the Master degree programme took into consideration the Demographic Health Survey (DHS) (2014) in Lesotho, the national health priorities and the burden of disease as well as the WHO health agenda. Out of 93, 83 participants identified Midwifery (89.2%; $n = 83$), Community Health Nursing (79.6%; $n = 74$), Nursing Education (58.1%; $n = 54$), Mental Health (47.3%; $n = 44$), Intensive Care Nursing (40.9%; $n = 38$), Tertiary Level Nursing [Medical Surgical] (38.7%; n = 36), Nursing Administration (35.5%; $n = 33$), Theatre Nursing (29.0%; $n = 27$), Nursing Anaesthesiology (19.4%; $n = 18$), Primary Health Care (3.2%; $n = 3$), Oncology and Palliative Care (3.2%; $n = 3$), Paediatric Nursing (2.2%; $n = 2$), HIV/AIDS management (1.1%; $n = 1$), Gynaecology (1.1%; $n = 1$) and Orthopaedics (1.1%; $n = 1$) Fig. 2.

7.5. Perceptions of the need for a Master degree in various clinical areas in Lesotho

All the participants indicated that there was a need in Lesotho for a Master degree that is clinically focused. They perceived a clinical Master degree with a range of specialisations in nursing as appropriate to the context of Lesotho. The results from the survey found that out of 93 participants, the majority, 87.1% ($n = 81$) had a positive perception [66.7% ($n = 62$) strongly agreed, and 20.4% ($n = 19$) agreed]; whereas a small percentage, 5.4% ($n = 5$) had a negative perception [5.4% ($n = 5$) disagreed]. It was also found that 7.5% ($n = 7$) reported that a Master degree programme, in various clinical areas, should somewhat increase the levels of competency to address the priority health needs of the people of Lesotho.

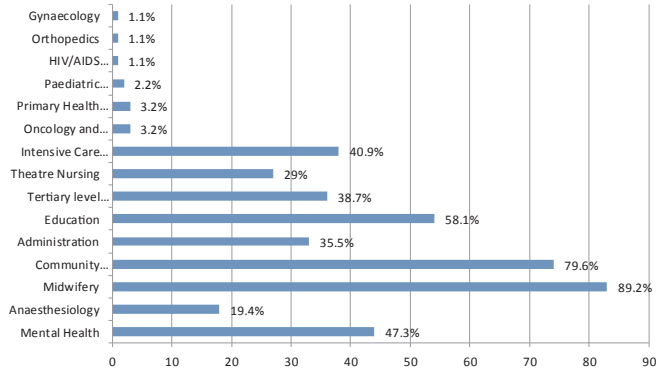

Fig. 2. Speciality areas in Nursing to be considered in the Masters programme.

The overall perceptions of how Master degrees in various clinical areas would increase the levels of competencies to address the priority health needs of the people of Lesotho were also calculated. The minimum score was two and the maximum score was five. The mean was four, the median was five and the SD was 0.86. The first quartile was four, the second quartile was five, and the third quartile was five. These results indicated that the participants had a very high regard for how Master degrees in various clinical areas should increase the levels of competencies to address the priority health needs of the people of Lesotho.

The results regarding how the clinical Master degree with a combination of Nursing Education specialisations should improve both nursing education and professional competencies for enhanced health outcomes found that out of 93 participants, the majority, 94% ($n = 85$) had a positive perception [67.7% ($n = 63$) strongly agree, and 23.7%($n = 22$) agreed]; and a small percentage 3.2% ($n = 3$) had a negative perception [3.2% ($n = 3$) disagree], and 5.4%($n = 5$) reported that the clinical Master degree with a combination of Nursing Education specialisations should somewhat improve both nursing education and professional competencies for enhanced health outcomes.

In computing the overall perception of this item the mean was 4.56, the median was five and the SD was 0.74. The first quartile was four, the second quartile was five and the third quartile was five. The findings showed that the participants had a very high regard for how the clinical Master degree with a combination of Nursing Education specialisations should improve both nursing education and professional competencies for enhanced health outcomes.

The participants also perceived that the clinical Master degree would improve research which informs nursing practice for quality improvement in nursing services delivery. The results showed that the majority, 96.8% ($n = 90$) had a positive perception [68.8% ($n = 64$) strongly agreed, and 28.0% ($n = 26$) agreed]; whereas a small percentage 2.2% ($n = 2$) had a negative perception [2.2% ($n = 2$) disagreed], with only 1.1% ($n = 1$) who reported that the degree should somewhat improve nursing services delivery. The minimum score when computing the overall perception regarding this item was two and the maximum score was five. The mean was 4.63, the median was five, and the SD was 0.62. The first quartile was four, the second quartile was five, and the third quartile was five. These results indicated that participants had a very high regard for how the clinical Master degree with a combination of Nursing Education specialisations should improve research which informs nursing practice for quality improvement in nursing services delivery Fig. 3.

7.6. Correlation of constructs related to the perception of the importance of Master degrees in various areas

A Spearman correlation was run in order to see the relationships between the various constructs related to perceptions of the importance of Master degrees in various areas. There was a statistically significant relationship between the following variables: The Master degrees in various clinical areas should increase the levels of competencies to address the priority health needs of the people of Lesotho, and the clinical Master degree with a combination of Nursing Education specialisations should improve both nursing education and professional competencies for enhanced health outcomes ($r_s[93] = 0.595$, $p < 0.001$); The Master degrees in various clinical areas should increase the levels of competencies to address the priority health needs of the people of Lesotho, and the Clinical Master Degree and Education should improve research which informs nursing practice for quality

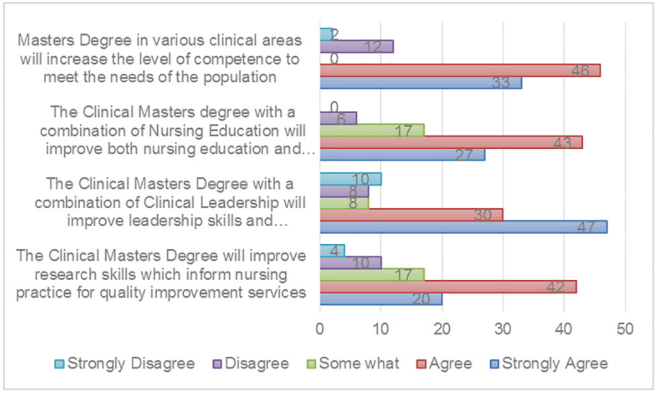

Fig. 3. Perceptions on the need for a Master's Degree in Lesotho.

improvement in nursing services delivery ($r_s[93] = 0.565, p < 0.001$).

7.7. Core competency areas to be developed in the Master degree programme

Seventy-one participants responded to this item, on the competency areas to be developed in the Master degree programme. The competency areas identified Advanced Clinical Practice, Care Provision and Management (70%; $n = 50$) Leadership and Management (63.4%; $n = 45$), Research and evidence based practice (63.0%; $n = 45$). The respondents also identified: Professionalism (36.6%; $n = 26$), Health information systems management (32.4%; $n = 23$), Communication and Therapeutic Relationships (32.4%; $n = 23$), Collaborative and Systems thinking (19.7%; $n = 14$) with 7% ($n = 5$) choosing 'other', which included teaching, advocacy, policy formulation, and HIV/AIDS management Table 3.

8. Discussion

The rapid needs assessment supported the need to strengthen the nursing and midwifery workforce in the country, in line with the reforms in the health care setting. Although the pre-service nursing and midwifery programmes were producing competent nurses, the need for a postgraduate programme that will produce specialist nurses was perceived as critical as these nurses are equipped to respond adequately to ongoing reforms in the healthcare system, the changing disease patterns and the need to improve the quality of care (Donald, et al., 2014; Tian et al., 2014). The expert nurses in the discipline of nursing will have an expanded range of competencies in clinical practice, theory and research to provide advanced care to patients in specialised clinical areas (Tian et al., 2014).

The findings showed a statistically significant relationship between pre-service nursing education and the quality of graduates produced to meet the needs of the population and the health care system in Lesotho by adequately preparing graduates to meet these needs. Pre-service education was perceived positively in terms of producing nurses and midwives who are equipped to meet the needs of the Lesotho population in all health care settings (primary, secondary and tertiary). In addition, the professionals produced were perceived to be ready to practice immediately upon graduation. The positive perceptions may be associated with the investment reported to have been made in nursing education in Lesotho by the Ministry of Health, working together with development partners (Botma, 2014; Middleton et al., 2014). Nursing education institutions in the country were supported in developing and in implementing competency-based pre-service nursing and midwifery curricula. Clinical education was strengthened through preceptorship training and by providing well-equipped simulated clinical skills laboratories (Botma, 2014; Middleton et al., 2014).

There were however, some negative perceptions with regard to the adequacy of graduates from the pre-service programmes to deal with the complex needs of the country's population and health care system, justifying the need for advanced preparation of nurses and midwives. These findings were in line with the country's LNMSP (2014), and the WHO global strategic direction of strengthening nursing and midwifery from 2016 to 2020 through continuing education for nurses to produce specialist nurses with advanced clinical skills, theoretical knowledge and research skills to improve the quality of care. Evidence shows that strong health care systems require nurses with a specific set of advanced skills to serve as clinical leaders to improve the quality of nursing and patient care (Donald et al., 2014; Tian et al., 2014). These nurse specialists, in nurse-driven health care systems in particular, have influence on improving patient outcomes, health service delivery, and in decreasing costs (Donald et al., 2014; Tian et al., 2014). They understand the challenges better and the dynamics of the health care environment (Donald et al., 2014). Hence the need for continuing education as it optimizes the nursing and midwifery impact on health care systems (WHO, 2016b).

The justification for the need to have a Master degree programme in the country was further supported by the demographic data which showed that 52% of the nurses and midwives obtained their postgraduate studies outside the country. All those with Master degree and PhD qualifications obtained them from higher education institutions in South Africa, Botswana, Zimbabwe, Australia and the United States of America as there is no institution that offers postgraduate qualifications in nursing in Lesotho (Botma, 2014). Sending nurses and midwives to other countries is a very costly exercise for the country, for the health care system, and for the families and individuals because of the associated risks. Dumont and Lafortune (2016) assert that increasing the capacity of education and training in the country to respond to current and future demands of the health care system serves as a great retention strategy for the health workforce.

The specializations proposed to be prioritized in the Master degree programme in this study were directly linked to the burden of disease, the national health priorities in the country, as stated in the LNMSP (2014), and the top 25 causes of death in the country. The specializations included community health nurses with a strong PHC focus, midwifery/maternal and child health, mental health and psychiatric nursing, advanced medical-surgical nursing with components of oncology and palliative care, critical care as well as trauma.

Prioritizing advanced preparation in maternal and child health is in line with the high maternal mortality rate which was estimated to be 487 deaths/100,000 live births in 2015 (Central Intelligence Agency [US], 2018), and low birth weight, maternal conditions and birth trauma which are listed as part of the top 20 causes of death in the country. The training of community health nurses who are equipped with PHC competencies was prioritized in this study as they are regarded as essential in the delivery of PHC and in multi-disciplinary teams which are designed to meet the complex health and social needs of the population (Tomblin-Murphy & Rose, 2018; Clancy, Leahy-Warren, Day, & Mulcahy, 2013). They serve as a conduit between the health facilities and communities whilst taking a lead in the coordination and delivery of more responsive services in community settings

Table 3
Core competency areas to be developed at Master degree level.

Competency area	Freq.	%
Advanced Clinical Practice, Care Provision and Management	50	70
Leadership and Management	45	63
Communication and Therapeutic Relationship	23	32
Collaborative and Systems Thinking	14	20
Research and Evidence Based Practice	44	62
Professionalism	26	37
Health Information Systems Management	24	34
Others (Teaching, Advocacy, Policy Formulation, HIV Management)	5	7

(McHugh, Horne, Chalmers, & Luker, 2009). The need for nurses with advanced preparation in community health nursing and PHC is greater in the health systems where there is a need to strengthen health promotion activities to address the increasing burden of disease, where hospitals discharge patients early to be cared for in community-based settings. The number of patients with complex health issues to be managed in community settings is increasing, where vulnerable groups are exposed to a number of issues that impact on their health. These challenges require a community health care system that is a change agent, with strong leadership skills, and that can utilize *meta*-cognitive thinking and problem-solving skills for effective practice.

Advanced preparation in psychiatric and mental health nursing was identified as one of the areas to be prioritized because the Primary Health Care approach adopted by the country requires de-institutionalisation of patients and integration of psychiatry and mental health care services into community, primary and district health care settings to reduce the treatment gap. Kliewer, Robyn, &, Trippany, 2009 in their work on de-institutionalisation and integration of mental health services into the community advocated for the advanced preparation at Master degree level to prepare the providers for the shift in treatment settings and mental health teams with limited specialists in mental and psychiatric care. Adding to the need for advanced preparation in mental health nursing is the uncontrollable HIV/AIDS pandemic. The prevalence of mental health disorders is higher amongst people living with HIV/AIDS, with the chances of suffering from major depression doubled in this group when compared to the general public (HIV Clinicians Society, 2013).

The findings also suggested a need for specialist nurses with an additional preparation in nursing education or clinical leadership depending on the career path they want to pursue. Joseph and Huber (2015) argue for nurses to have additional educational preparation and experience in clinical leadership as clinical leadership is a central ground that influences the innovation, quality care, patient safety, positive patient experiences and improved outcomes. Specialist preparation is essential for specialist nurses with a responsibility to coordinate and integrate care with members of the team, and affiliated sites such as laboratories, X-ray departments, and pharmacies (Joseph & Huber, 2015). WHO (2016b) underscores the importance of preparing nurses and midwives for the leadership roles to improve the quality of care and to be able to meet the challenges of dynamic health systems. According to WHO (2016b) nurse leaders need to act as positive change agents in creating effective and responsive health systems. Their capacity needs to be strengthened in policy development, management activities and evidence generation in order to improve the quality of service delivery (WHO, 2016b).

The findings also revealed a need for specialist nurses to have additional preparation in nursing education if they intend to choose that career path as proficiency in the clinical area does not automatically result in proficiency to teach (Booth, Emerson, Hackney, & Souter, 2016). Nursing education is defined as a field that comprises two different disciplines or professions; nursing and education, hence the need for additional preparation in education (Booth et al., 2016). Fiedler, Degenhardt, and Engstrom (2015) argue for a structured and systematic preparation of nurses for the teaching role, as it directly impacts on the quality of the future of nursing and on the midwifery workforce. The production of adequately prepared nurses and midwives who are equipped to make a difference depends on the quality of nurse educators (Mulaudzi et al., 2012). In Lesotho, equipping specialist nurses who intend to pursue a career with nurse educator competencies is in line with Botma, who recommended building the capacity of nurse educators in Lesotho as part of transforming nursing education in the country (Botma, 2014).

The core competency areas that were identified in this study included: advanced clinical practice, care provision and management; leadership and management; communication and therapeutic relationships; collaborative and systems thinking; research and evidence-based practice; professionalism; health information systems management and others (which included teaching, advocacy, policy formulation, HIV management). The competency areas of focus in the new Master degree programme are in line with the ICN (2009) core competencies for nurse specialists. This enhances the quality of specialist nurses produced and the quality of the programme in that it is globally comparable and locally relevant (Kraft, Kastel, Errikson & Hedman, 2017).

9. Conclusion

Strengthening health care systems requires a nursing and midwifery workforce that is prepared at an advanced level, through programmes that are based on the needs of the population and on the health care system. The development of an educational programme requires investment in time to allow stakeholder input and buy-in. The rigorous process of finalising the needs assessment report, which includes inviting stakeholders to comment on the emerging results and later subjecting the final report to the scrutiny of the key stakeholders, is critical in reaching consensus on what needs to be integrated, prioritized and serve as a guiding framework in designing a programme. In this study key stakeholders agreed on the strengths and limitations of the pre-service nursing education in meeting the needs of the population and health care system in the country, the need for a Master degree programme in nursing, as well as on the areas of specialisations to be prioritised and core competencies for specialist nurses produced from this programme.

10. Study limitations

This survey was conducted only to inform development of the Master degree programme in nursing. Not all possible stakeholders were able to participate in the project due to limited time frame for conducting the survey.

11. Conflic of interest

None of the authors has any competing interests.

12. Ethica approval

Lesotho Ministry of Health.

13. Authors' contributions

NGM: Conceptualisation, design, data analysis and manuscript writing.

MI: Critical reader, technical and administrative support to manuscript writing.

MN: Conceptualisation, design, data collection, manuscript editing.

TL: Conceptualisation, design, data collection, manuscript proof reading.

R: Conceptualisation, design, data collection, manuscript proof reading.

RJ: Conceptualisation, design, data collection and manuscript proof reading.

Acknowledgements

Prime Implementing Partner and funder ICAP Lesotho for NEPI for the financial and technical support (NEPIU92HA12772). Lesotho National Department of Health, National University of Lesotho management and Department of Nursing staff for support in conducting this survey.

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