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ORIGINAL RESEARCH

NURSING RESEARCH PRIORITIES IN INDONESIA AS PERCEIVED BY NURSES

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Abstract
Background: To promote excellence in nursing research, setting research priorities is needed to meet the need of community aligned with the national context. Unfortunately, limited number of studies has examined nursing research priorities in Indonesia.
Objective: To identify nursing research priorities in Indonesia from the perspectives of nursing experts.
Methods: This was a descriptive qualitative study. Focus group discussion was conducted among participants who were purposively selected ($n = 13$). Data were analyzed using a consensus-based method.
Results: The top ten research priority lists were identified. The priorities were nurse competence, quality of nursing care in nursing services, nursing policy, nurse work environment, nurse mobility, interprofessional education and collaboration, teaching learning evaluation, nursing career, complementary therapy in nursing, and technology and informatics in nursing.
Conclusion: Findings of this study could be used as the basis of direction for development of future research in Indonesia.

KEYWORDS
nursing research; qualitative research; focus groups; nursing process; nursing services

BACKGROUND

Setting nursing research priorities is becoming popular today to guide researchers to conduct future studies and advance research collaboration (Aungsuroch et al., 2019). But, although setting a research priority or research agenda is considered as the main strategy to bridge the gap between nursing science and practice (Aungsuroch et al., 2019), there is a limited number of studies related to the identification of research priorities in nursing in Indonesia, which is just limited to only two studies (Utomo et al., 2011; World Health Organization, 2017), which focus on the national strategies for operational research to support prevention and control of malaria, tuberculosis and neglected tropical diseases, and focus on health care system addressing rich-poor gaps in health care access and outcomes. Thus, it is difficult to conclude that these research priorities represent health care in Indonesia, especially priorities in nursing discipline.

Determining nursing research priorities is very important because research is an essential component of the nursing educational process, and it has a tremendous influence on current and future professional nursing practice (Tingen et al., 2009). In addition, although the nursing roles vary in a variety of settings, but their primary goal remains the same: to provide optimal care using evidence-based practice, and the source of evidence is based on nursing research. In other words, nursing research is vital to the professional nursing practice (Tingen et al., 2009).

Nowadays, nursing research has been developed in Indonesia, especially in nursing education, which students in undergraduate and graduate programs are required to conduct research for conferring degree. However, the question is whether the number of researches that have been conducted is aligned with the national context, or based on the needs in nursing services and education. As a nurse, we need to answer the demand of Indonesian community through research in response to the stage of nursing development (Thompson, 2017). Thus, this study aimed to identify nursing research priorities as perceived by Indonesian nurses in Indonesia, which specifically focus on nursing education and services.

Funding of Nursing Research Projects
Typically research funding for major nursing projects has come from Ministry of Research, Technology and Higher Education of the Republic of Indonesia (RISTEK-DIKTI) and LPDP (Indonesia Endowment Fund for Education) as the best regional fund management institutions to prepare future leaders and foster innovation for a prosperous, democratic and justice; and to focus on developing the quality of human resources in various fields that support the acceleration of Indonesia's development (Simlitabmas, 2018). Research and community service become one of the things that are being emphasized by the government in universities in Indonesia. The success indicators are intellectual property patents improvement, upgrading of downstream products, especially research leading to community

service, and enhancement of industrial prototype products. There are many funding schemes are designed to help universities in Indonesia to strengthen international collaborative research, such as funding for research and community research grant, international research collaboration and international publication grant, national innovation system research incentives, enhancing international publication (EIP), and research pro (non-degree) (Simlitabmas, 2018).

METHODS

Study Design and Participants

This was a descriptive qualitative study. Participants were purposively selected to explore more information regarding nursing research priorities in Indonesia. The inclusion criteria of participants were: directors of nursing, nurse managers (all grades), clinical nurse specialists, and clinical nurse facilitators, who are closely involved in all levels of health services. In this study, there were 13 participants were selected, which consisted of: 9 nurses' educators, 1 hospital nurse manager, 2 clinical nurses in hospital, and 1 member from Association of Indonesian Nurse Education, as they would be able to provide relevant information in regards to nursing research priorities in different settings. The participants were contacted through short message service (SMS) and phone call.

Procedure

Data were collected on September 2017 in the Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada. Once the participants accepted the invitation, an appointment was scheduled for focus group discussion (FGD). FGD was conducted using bilingual languages, Indonesian and English language by principle investigators approximately for 120 minutes. There were two steps of procedures in this study: i) all participants were given a blank of paper and asked to write the nursing research priorities based on their expertise, observation and clinical practice in the nursing field, ii) the principle investigators collected all the information and wrote all the priorities items in front of all of participants in the white board, iii) each participant was asked to discuss each item by comparing the items and emerged if there were same contents. In the end, consensus was reached among all participants and agreed with the priorities.

Data Analysis

In this study, a consensus-based approach was chosen to determine nursing research priorities as perceived by Indonesian nurses. Consensus tends to improve the acceptability of the exercise; individual ranking prevents dominance of a few participants (Viergever et al., 2010).

Ethical Consideration

The ethical approval of this study has been secured by the Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia. We confirmed that each respondent has obtained an appropriate informed consent. All participants were informed about the objective of the study and assured that participation in the study was voluntary. Moreover, they were able to withdraw from the study at any time. The researchers guaranteed the confidentiality of their data and also ensured them that their information would be published anonymously.

RESULTS

This study aimed to determine nursing research priorities in Indonesia. The first step to do was to invite all participants to list priorities using a written method. From this method, there were 51 items identified as shown in **Table 1**.

Table 1 List of Research Priorities in A Written Method

Nursing Education		Nursing Service	
1. Learning media		4. Optimizing the role of nursing profession in developing health policy	
2. Learning method – curricula		5. Awareness of nurses towards nursing profession	
3. Learning evaluation		**Nursing Service**	
4. Research development		1. Elderly health management	
5. Learning (labs and clinics) supervision		2. Non communicable disease control	
6. Internship program		3. Environment and disaster risk reduction	
7. Interprofessional education		4. Dementia	
8. Application of OSCE as national exam		5. Vulnerable family and intervention	
9. Patients education for community		6. Assessment methods	
10. Personal behavior of students, lecture and staff		7. Expanding and enhancing disaster preparedness and mitigation	
11. Curriculum development		8. Health promotion and prevention for chronic diseases	
12. Student center learning		9. Behavior modification for patients with CVDs	
13. Teaching methods		10. Palliative care and end of life	
14. Feasibility of practice setting and curriculum demand		11. HIV and infection promotion and prevention	
15. Qualification of teachers		12. Pain management	
16. Evaluation of competencies (cognitive, affective, psychomotor)		13. Nursing informatics	
17. Curriculum evaluation		14. Early detection for emergency	
18. The role of teacher as students' advisor		15. Universal coverage	
Nursing Organization		16. Efficiency of nursing care	
1. Nurse competence		17. Humanistic nursing care	
2. Human resources management		18. Patient safety	
3. Career ladder		19. Quality of nursing care	

Nursing Service (Cont.)

20. Standard of nursing language	25. Complementary therapy in independent nursing practice
21. Nursing delivery	26. Independent nursing practice
22. Infection prevention and control	27. Nursing technologies
23. Effectiveness of nursing intervention	28. Independent nursing practice
24. Nurses role in the program of family health	

The next step was that the principle investigators invited all participants to discuss one by one of the topics to understand why they chose the topic by providing the reasons, and then comparing each item to find similarities and differences. In this step, all items were grouped into 10 research priorities (see **Table 2**), and agreed by all participants. And the further step was that the principle investigators analyzed the contents and developed area for possible investigation in each priority. Member check was done to confirm that the findings were agreed by participants (see **Table 3**).

Table 2 Top 10 Nursing Research Priorities

1. Nurse competence
2. Quality of nursing care in nursing services
3. Nursing policy
4. Nurse work environment
5. Nurse mobility
6. Interprofessional education and collaboration
7. Teaching learning evaluation
8. Nursing career
9. Complementary therapy in nursing
10. Technology and informatics in nursing

Table 3 Nursing Research Priorities and Areas for Possible Investigation

Priorities	Possible Investigations
Nurse competence	• To develop strategies to improve nurse competence • To identify factors related to nurse competence and performance • To develop instrument to measure nurse competence • To evaluate nurse competence
Quality of nursing care in nursing services	• To develop strategies to improve nursing care quality • To develop standard for nursing practice/guideline in each setting • To develop nursing outcome or sensitive indicators • To develop instrument to measure nursing care quality, nurse satisfaction, and nursing outcomes
Nursing policy	• To explore the policy on nursing workforce (supply and demand) • To explore the sources of health policy that influence nursing practice • To better understand policy/advocacy concepts and methodology utilized in all levels of nursing education and services
Nurse work environment	• To examine the impact of nursing work environment on patient outcomes • To improve positive practice environment
Nurse mobility	• To identify internal nurse mobility (rural to urban area or urban to rural area) and their related factors • To identify factors influencing nurse turnover
Interprofessional education and collaboration	• To develop framework for interprofessional education (IPE) and interprofessional collaboration (IPC) in hospital setting • To measure the effectiveness of interprofessional education and collaboration
Teaching learning evaluation	• To examine the effectiveness of teaching learning • To measure learning outcome • To evaluate curriculum models • To measure nurse educators' competence
Nursing career	• To develop the framework of nursing career development • To identify career needs from the perspectives of staff nurses • To explore perspectives of students on nursing career as a choice
Complementary therapy in nursing	• To examine the effect of complementary nursing therapies on patient outcomes • To explore the attitudes of nurses toward the use of complementary nursing therapies
Technology and informatics in nursing	• To explore the attitudes, knowledge, awareness, and readiness of nurses towards use of technology and informatics • To identify nurses' technology and informatics competencies • To examine the effect of technology and informatics on nursing and patient outcomes

DISCUSSION

Our findings reveal nursing research priorities in Indonesia, which were grouped into ten themes, namely: nurse competence, quality of nursing care in nursing services, nursing policy, nurse work environment, nurse mobility, interprofessional education and collaboration, teaching

learning evaluation, nursing career, complementary therapy in nursing, and technology and informatics in nursing. We discuss the research priorities in each theme as the following:

Theme 1. Nurse Competence

All participants agreed that nurse competence should be the first priority in Indonesia. Competence is the basis of the frameworks of professional practice (Cashin et al., 2017), which refers to the total of observable behaviors that occur in professional practice, categorized and specified in relation to measurable standards. Competence also refers to unobservable attributes, capacities, dispositions, attitudes, and values that the professional should have, which are inferred by detectable behaviors (Campion et al., 2011; Gunawan, Aungsuroch, & Fisher, 2018; Rass, 2008). The need for development and evaluation of competence is subjected to nurses. Competence assessment is a paradigm that is common in the healthcare environment and this being particularly true within the nursing profession (Franklin & Melville, 2015). In this study, our research priorities include developing strategies to improve nurse competence based on the level of nurses, as there are many nurses background in Indonesia (Gunawan & Aungsuroch, 2015). In addition, we need to measure nurse competence and identify factors influencing their competence.

Theme 2. Quality of Nursing Care in Nursing Services

Quality of nursing care is the important indicator of best practices in the hospital, which also reflects on nursing image. This priority is likely to focus on studies regarding the improvement of strategies to increase care quality, development of standard of nursing practice, nursing outcomes and sensitive indicators and their measures. Nursing-sensitive outcome indicators are valid and reliable measures that reflect the structure, processes and outcomes of nursing care and clinical practice in the hospital unit setting (Doran, 2010; Heslop & Lu, 2014).

Theme 3. Nursing Policy

This priority is likely to focus on studies to explore the health policy regarding the supply and demand of nurses in Indonesia, and identify the sources, concept and methods influencing nursing practice in all levels of education and practices. As a nurse, we need to be more prepared in the role of advocacy and policy development (Staebler et al., 2017). Through policy work, nurses can and should influence practice standards and processes to assure quality of care.

Theme 4. Nurse Work Environment

This priority is likely to identify the impact of nurse work environment on patient outcomes and to improve positive practice environment. Research suggests that administrative interventions aimed at improving the quality of the practice environment, have more effect on staff retention and maintenance of adequate staffing levels than increasing recruitment or salaries (Twigg & McCullough, 2014). Positive Practice Environments (PPE) are settings that support the excellence and the effectiveness of work, particularly to support nurse performance, improve quality patient care and to ensure the health, safety and personal well-being (ICHRN, 2018).

Theme 5. Nurse Mobility

To know the trend of internal nurse mobility is needed, as we found unequal distribution of nurses in Indonesia. Most of nurses tend to move to urban areas, especially in big cities in DKI Jakarta, West Java, Central Java, East Java, and North Sumatera (Gunawan, 2016). However, some participants said that nurses nowadays are moving to rural areas because high competition in urban areas. That is why we need to know the updated information and its related factors. In this priority, the participants are not likely to focus on international mobility because some barriers for international migration, especially for language. In addition, we also focus on nurse turnover and its affecting factors.

Theme 6. Interprofessional Education and Collaboration

Interprofessional education is an important step to provide patient care in a collaborative team environment among health professions students. Once health care professionals begin to work together in a collaborative manner, patient care will improve (Buring et al., 2009). Interprofessional teams enhance the quality of patient care, lower costs, decrease patients' length of stay, and reduce medical errors (Institute of Medicine Committee on the Health Professions Education, 2003). This priority is likely to focus on studies related to development of framework for interprofessional education and collaborative practice, measurement of its effectiveness.

Theme 7. Teaching Learning Evaluation

The purpose of nursing education is to transfer nursing knowledge and assist nursing students to acquire the necessary skills and attitudes associated with nursing practice (Salsali, 2005). This priority focuses on the effectiveness of teaching learning and to measure the learning outcomes and curriculum models. In addition, we seek to measure the nurse educator's competence. Teaching learning is a dynamic process, which includes active engagement of both the student and faculty (Johnson-Farmer & Frenn, 2009). Thus, the teacher is responsible to create an environment that improves students' focus (Horsfall et al., 2012).

Theme 8. Nursing Career

A career plan refers to a process of becoming aware of self, opportunities, constraints, choice, and consequences; identifying career-related goals, timing, and sequence of steps to attain the goals (Gunawan, Aungsuroch, Sukarna, et al., 2018). This priority is likely to focus on studies related to the identification of career needs of nurses at different career stages, as well as to explore the hospital frameworks or programs whether it meets and satisfy nurses needs or not. As literature said that it is crucial to assess nurses' career needs and its development program from hospital (CHANG et al., 2007). In addition, it focuses on the exploration of students' perspective in choosing nursing as career.

Theme 9. Complementary Therapy in Nursing

The use of complementary/alternative therapies has increased exponentially during the past quarter century (Lindquist et al., 2013), including in Indonesia. Complementary is preferred by some as it conveys the idea that a therapy is used as an adjunct to Western therapies whereas alternative indicates a therapy that is used in place of a Western medicine approach (Lindquist et al., 2013). This priority focuses on the exploration of Indonesian nurses toward complementary therapies and examination of their effects on patient outcomes.

Theme 10. Technology and Informatics in Nursing

The need for research on technology has arisen over the past 20 years and it has been used to support the daily living activities, help interaction, educate patients, and enable the use of healthcare services (Korhonen et al., 2015). Nurses need to anticipate the impact of technology on care to move beyond a reactive approach to

technological advances (Archibald & Barnard, 2018). Information communication technology (ICT) and its applications are seen as tools to engage patients in self-care (While & Dewsbury, 2011). This priority is likely to focus on research related to the attitudes, knowledge, awareness, and readiness of nurses towards the use of technology and informatics, nurses' competencies on technology and informatics, and identification of the effect of technology and informatics on nursing and patient outcomes.

Limitation of the Study

In this study, although we think that the research topics identified could represent the research priorities in Indonesia, however, it is possible that some important topics were missed because the participants were limited to some parts of the regions, particularly only in Yogyakarta Indonesia. Further study is needed to validate the items with bigger sample size in Indonesia.

CONCLUSION

This study provided the top ten nursing research priorities and areas of possible investigation. These priorities could be considered as the basic of future direction of nursing research in Indonesia and funding should be coherent with these priorities as acknowledged by nurse experts. This study is a positive step towards the future of professional nursing development.

DECLARATION OF CONFLICT OF INTEREST
None declared.

AUTHORSHIP CONTRIBUTION

Criteria	Author Initials
Made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;	LL, YA, WW, SS, JG, MP
Involved in drafting the manuscript or revising it critically for important intellectual content;	LL, YA, WW, SS, JG, MP
Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content;	LL, YA, WW, SS, JG, MP
Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.	LL, YA, WW, SS, JG, MP

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