

REVIEW ARTICLE

The demands on nursing curriculum flexibility towards the need of global workforce: A systematic review

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Abstract

The demand for Indonesian nurses to work abroad has increased over the last five years. The challenge is that the orientation of the nursing education curriculum in Indonesia is still local, not yet leading to international standards. As a result, only a small number of nurses passed the selection, the process is longer, and the recruitment cost is higher. Therefore, this review aims to identify the global need for Indonesian nurses and provide an overview of the importance of structured planning in terms of nursing education curriculum related to job opportunities overseas. The study grouped, allocated, organized, and used relevant library variations. Researchers conducted a literature study regarding the demand for Indonesian nurses, the development of education and curriculum from several sources such as the Ministry of Health, the Indonesian Migrant Workers and Protection Agency (BP2MI), the Ministry of Higher Education, World Health Organization (WHO), as well as the latest journals, from 2016 to 2021. The data were reviewed, analyzed and alternative solutions were identified. The analytical review shows the demands on Indonesian nurses keep on growing. The magnitude of this demand is an opportunity as well as challenges that need to be anticipated earlier in terms of the nursing education curriculum and the Government policymakers.

Keywords: nursing education; global need of nursing; clinical practice; health policy maker

Introduction

Several countries requiring Indonesian nursing services from the Middle East, Europe, North America, Asia Pacific, Canada and Australia have not received positive response from Indonesian nurses. These job opportunities are only filled by very small number of nurses, cause a long process and cost a larger amount of funds (Mujiati et al., 2020). The number of participants sent from 2015 to 2018 were 278 people, 279 people and 324 people respectively (BNP2TKI, 2018). Majority of Indonesian nurses working in the Middle East and Japan (Efendi, 2018). Saudi Arabia needed 2000 nurses, but only dozens are registered and only dozens can pass (Elite, 2021). Currently there are only 65 nurses working in the UAE, though with the MoU, it is targeted that the number of Indonesian nurses in the UAE will increase to 1000 in the next two years (Kemenlu, 2020). A total of 116 Indonesian Migrant Workers (PMI) RI-Japan Government to Government (G to G) Program were dispatched by the Indonesian Migrant Workers Protection Agency (BP2MI) in 2020 (Tribunnews, 2020). Likewise the opportunities to Canada, there were only few qualified applicants available (Elite, 2021). The nurses program to the Netherlands is no different. Currently it has 10 batches, per batch there are 15 nurses to fulfill 110,000 nurses (Sidik, 2019). This phenomenon proves that there is no balance between the demand and readiness of the Indonesian nurses or the existing system.

In terms of education, there are three main obstacles as to why there is no balance between the demand and supply of Indonesian nurses abroad. The first is the development of specialist nurse education is still lacking in Indonesia (Efendi, 2018). Out of 899 nursing campuses, there are only 7 specializations in nursing education

(Medical Surgical, Pediatric, Mental Health, Community Nursing, Maternity nursing, Emergency Nursing, and Oncology Nursing). The second one is the Indonesian nursing curriculum still focuses on domestic need (I. J. H. Tukayo & Hardy, 2020). The third is the mindset of Indonesian nurses who prefer working in the archipelago (Hardy, 2016). These limitations hamper Indonesian nurses in filling the overseas opportunities in various nursing specialties, particularly in countries where English is used as a means of professional communication.

Furthermore Indonesian government's ability is still limited to appoint them to become civil servants, regardless of its efforts to provide concrete steps to overcome the Human Resources crisis in healthcare sector (Qawiyurrijal et al., 2021). The averages of nursing graduates in Indonesia are around 40.000 people per year (I. Tukayo et al., 2021). In terms of foreign language teaching, the course weight is between 2 and 4 semester credit units (SKS). There are campuses that provide foreign language courses up to 6 credits or more (Stikes WDH, 2021). At the University of Muhammadiyah Malang (2018) the institutional curriculum represents 50% global competency and 50% institutional competency. Therefore, in general recruitment process, Indonesian nurses still have to take part in a preparatory training program prior departure, including strengthening the language of the country in which they will work (Binawan, 2021). In other words the provision during the college period is still inadequate to meet the competency requirement for overseas placement. This article tried to explore relevant documents from the curriculum perspectives and identified the problems of the unfulfilled demands by foreign countries on Indonesian nurses as well as provided possible solutions.

Method

This study analyzed the results of extensive literature reviews through electronic and other media about the situation of nurses in Indonesia who are interested in working abroad, nursing education and training and nursing education curriculum in Indonesia. The key words were: “overseas jobs”, “nursing curriculum” and “Indonesian Migrant Workers”. They were identified from Google Scholar, ResearchGate and PubMed. The inclusion criteria were: Indonesian nurses (working abroad, in the recruitment process), males or females, language (English, Indonesian), nursing curriculum (global or local), types of research (primary research studies in English or Indonesian) and Government regulations on overseas placement. The authors used descriptive method because the data and information collected were from actual phenomena and through data collection, compilation and processing. The final results were analyzed by Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA), divided into three steps i.e. identification (records identified from database and records removed), screening (records screened and records excluded; records sought for retrieval and not retrieved; assessed for eligibility and records excluded) and included (studies included in the review).

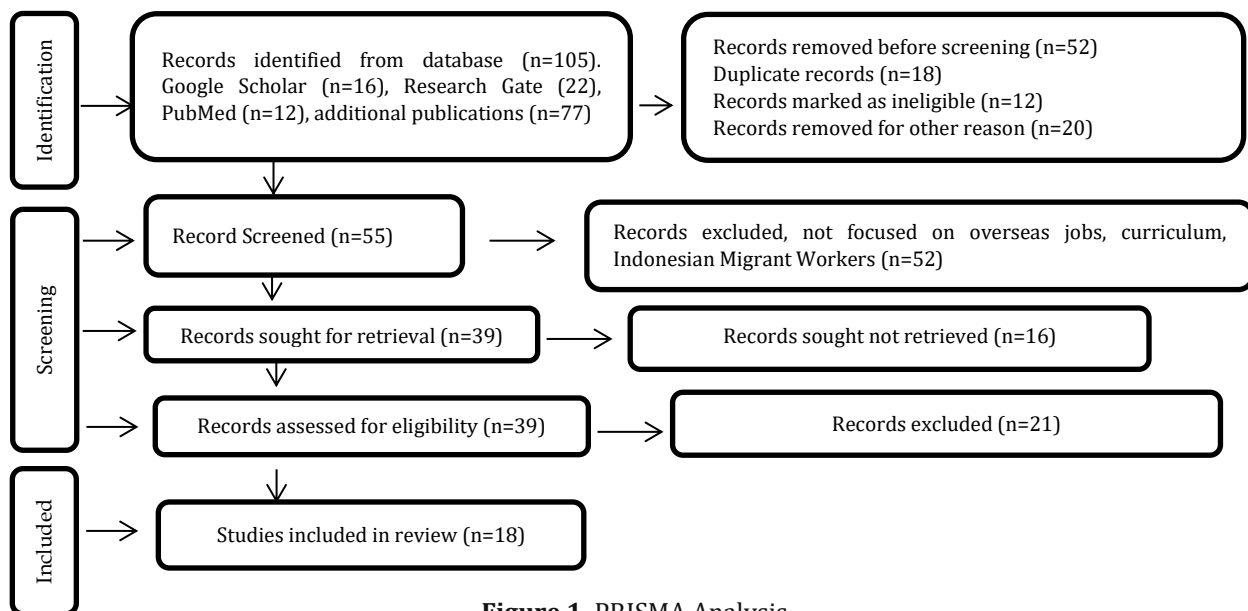


Figure 1. PRISMA Analysis

The above diagram shows that initially, 105 papers were identified from the database, of which 55 records were screened and 52 records were removed from the database. Records sought for retrieval 39, assessed for eligibility 39, and studies included in the review were 18 records. Out of the 18 records, 11 documents were about the demand on Indonesian nurses abroad and the other 9 documents were about nursing curriculum, both international and national standards as shown in the Table 1 below.

Result

The above diagram shows that initially, 105 papers were identified from the database, of which 55 records were screened and 52 records were removed from the database. Records sought for retrieval 39, assessed for eligibility 39, and studies included in the review were 18 records. Out of the 18 records, 11 documents were about the demand on Indonesian nurses abroad and the other 9 documents were about nursing curriculum, both international and national standards as shown in the Table 1 below.

Noon	Title	Authors	Year of Publication	Criteria	
				Demand on Nurses	Curriculum
1	5 Countries That Need Indonesian Nurses	Anwar	2019	v	
2	Signing of MOU between National Ambulance of UAE and PT Binawan Inti Utama	Binawan	2021	v	
3	The Government's Strategy in Improving the Competitiveness of Nurses in the Overseas Job Market	BNP2TKI	2016	v	v
4	The Situational Analysis Of Nursing Education And Workforce In Indonesia	Efendi, Chen, Kurniati, Nursalam, Yusuf	2018	v	v
5	Elite International Recruitment	Elite	2021	v	
6	Nursing Competency: Definition, Structure and Development	Fukada, M.	2018		v
7	The need for nurses from Indonesia in Japan is still high.	Kabar	2019	v	
8	Government Encourages Sending More Indonesian Nurses to UAE.	Kemenlu	2020	v	
9	Overseas Demand for Indonesian Nurses is Exploding	Lavinda	2016	v	
10	Placement of Nurses in Health Care Facilities Abroad: Paths and Constraints	Mujiati, Su'udi, Nugraha, Rosita.	2020	v	
11	English for Professional Nurse	Pratiwi	2016		v
12	Higher Educational Statistic Year 2018	Ristekdikti	2018		v
13	The Netherlands Needs Thousands of Nurses from Indonesia	Sidik, F.	2019	v	
14	Curriculum	Stikes WDH	2021		v
15	Competency in Nursing: A Concept Analysis	Tilley, DDS	2014		v
16	BP2MI Releases 116 Indonesian Migrant Workers Nursing Program to Japan	BNP2TKI	2020	v	
17	Character-Based Nursing Education Management.	Tukayo, IJH	2020		v
18	Nursing Undergraduate Education Study Program Guidelines	Unpad	2017		v

Table 1. List of Studies Included in Review

Discussion

Firstly, currently, Indonesia only meets 60% of the needs of nurses according to world standards (Media Indonesia, 2020). If we follow the Universal Health Coverage (UHC) recommendation, the demand for nurses will increase along with the government's efforts to meet the target number of nurses as recommended by UHC. The number of global nurses until 2018 reached 27.9 million, of which 19.3 million were professional nurses (WHO Region, 2018). This shortage decreased to 13 million nurses in 2020 (ICN, 2020). Approximately 5.3 million (89%) of

the shortage are in low and middle to lower income countries (WHO, 2020). Government analysis reveals that 31,150 Indonesian nurses are unemployed (BNP2TKI, 2016). The Central Statistics Agency (Badan Pusat Statistik, 2020) projected the total population of Indonesia in 2035 to be around 305 million people with a larger population composition in the adolescent and elderly age groups. The major challenges faced in the future include the provision of employment opportunities. According to BPS (2020) the number of workforce in August 2020 was 138.22 million. The Labor Force Participation Rate (TPAK) in the same month increased by 7.07%. However, it is not yet known whether the increased labor supply has been matched by adequate employment opportunities, including in the nursing profession sector (Mujiati et al., 2020). Thus, efforts need to be addressed. Sending nurses abroad is a concrete solution to the threat of a shortage of job opportunities for the nursing profession in Indonesia until 2035. Table 1 below shows an example of the Indonesian nurses' opportunities abroad.

No.	Countries	Since	Total need of the number of nurses
1	South Korea	2015	1.000
2	Japan	2016	35,000-40.000
3	Holland	2020	110,000
4	United Arab Emirates	2020	1,000
5	Australia	n.d.	Not mentioned

Table 2. List of countries in need of Indonesian nurses. Source: Lavinda, (2016).

Secondly, regarding the fulfillment of work requirements abroad, i.e. administration and competencies, the fulfillment of administrative requirements are for institutional administrative purposes, while competency requirements are for practical needs in the workplace. Nursing competencies include core abilities that are indispensable to fulfill one's role as a nurse (Fukada, 2018). According to the nursing law stated in Law No.38, 2014, only nurses who have competencies can be empowered in nursing services (Kemenkes, 2019). Regulation of the Minister of Health of the Republic of Indonesia No. 37 of 2015, in Article 2, states that the utilization of Indonesian health workers abroad aims to optimally utilize them to carry out health efforts in transferring science and technology, increasing the professionalism and competitiveness of Indonesian workers at the international level (Mujiati et al., 2020). To meet those requirements, we need to know the conditions. The requirements for nurses to be accepted for work abroad consist of administrative and competency requirements. Administrative requirements are not fixed and can change every year, while competency requirements include the mastery of nursing knowledge and skills and have language skills according to the request of the destination country (Zulfikar, 2017). According to Tilley (2014), the role of competency in education has grown dramatically as that of employers and health care educators identifying gaps between education and practice. In addition, having registration status for nurses in the destination country is also a major requirement. The inability to meet these requirements will result in professionals to be unacceptable to work. Evidence of nursing competency is manifested in the form of a Nursing Registration. Therefore Indonesian nurses who are interested to work abroad have to possess nursing registration and have to adjust to the nursing competency of the destination country. These requirements should be introduced to the nursing students as part of the subject of Trends and Perspective of Nursing.

Thirdly, language skills are part of communication skills which are very important in nursing services (Bello, 2017). The review found that the averages of English languages during study are 2 Semester Credit (SKS) given in semester 1 (Juniarti & Trisyani, 2017). The number of credits is far from sufficient, although in general students have studied English since junior high school (SMP), followed by senior high school (SMA). The output of learning English during college is not maximum and effective, without certification, for example through TOEFL or IELTS. The students' abilities cannot be measured. To work abroad, although not all of them require English certificate, the initial selection used is mostly in English (Zolot, 2019). Therefore, intensive learning in English will help early readiness for nurses who are interested in working abroad. This is suggested by learning English for Professional Nurse (Pratiwi,) and Harmanto (2016) in the Speak English for Professional Nurses program. In addition, the introduction of work programs abroad also requires socialization long before they are recruited. The introduction of the program while still in college will greatly assist their preparation, including communicating with the nurses' families to get moral support.

Fourthly, the need of reforming the curriculum. Permenristekdikti number 44/2015 concerning Higher Education Standards for Higher Education, Article 1, point 6. The curriculum is a set of plans and arrangements

regarding graduate learning outcomes, study materials, processes, and assessments that are used as guidelines for implementing study programs (Kemenristekdikti, 2014). Article 3 paragraph 2: The National Standard shall: serve as the basis for the implementation of learning based on the curriculum in the study program. Article 4 paragraph 2: (1) National Education Standards consist of: a. graduate competence standard; b. standard of learning content; c. learning process standards; d. learning assessment standards; e. standards for lecturers and educational staff; f. standard of learning facilities and infrastructure; g. learning management standards; and h. learning financing standards. (2) The National Education Standards as referred to in paragraph (1) become a reference in preparing, implementing and evaluating the curriculum. This regulation shows that the preparation of the national curriculum has clear precedence. Meanwhile Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 79 of 2014 concerning Local Content of the 2013 Curriculum states Article 2 (1) Local content is the study material or subjects in educational units which contain content and learning processes about potential and uniqueness local which is intended to form students' understanding of the excellence and wisdom of the area where they live. Article 3, Local content is developed on the principle of: a. suitability with the development of students; b. integrity of competence; c. type flexibility, the form and arrangement of the time of operation; and the benefit for the national interest and face global challenges. Article 4, Local content may include, among others: a. cultural arts, b. craft, c. physical education, sports, and health, d. language, and / or e. technology. Thus, giving lectures in English which is integrated into the teaching and learning process is part of the development of the local content which is in accordance with the rules contained in the above articles 2, 3 and 4, for the benefit not only individual students, but also the college and country.

Year	Code	First semester	Hours	Credit	Code	Second semester	Hours	Credit
1	COM 101	Information and Communication (ICT)	45	3	SOC 102	Sociology	60	4
	APH 101	Anatomy and Physiology	60	4	NSG 102	Fundamental of Nursing (Clinical)	135	3
	NSG 101	Fundamental of Nursing (Theory)	30	2	NSG 104	Professional, Ethical and Legal Aspect of Nursing	30	2
	MIP 101	Microbiology and Parasitology	45	3	PSY 102	Psychology	45	3
	BIO 101	Introduction to Biochemistry	30	2	NUD 102	Nutrition and Dietetics	30	2
	Total	5	210	14	Total	5	300	14
2	Code	Third Semester	Hours	Credit	Code	Fourth Semester	Hours	Credit
	NSG 201	Health Assessment (Theory)	45	3	NSG 203	Community Health Nursing (Theory)	45	3
	NSG 207	Health Assessment (Clinical)	135	3	NSG 205	Community Health Nursing (Clinical)	135	3
	NSG 202	Pediatric Nursing (Theory)	45	3	NSG 206	Introduction to Research	45	3
	NSG 204	Pediatric Nursing (Clinical)	135	3	NSG 208	Medical and Surgical Nursing (Theory)	60	4
	PHA 201	Pharmacology	45	3	NSG 210	Medical and Surgical Nursing (Clinical)	170	4
Total	5	405	15	Total	4	455	17	
3	Code	Fifth Semester	Hours	Credit	Code	Sixth Semester	Hours	Credit
	HSM 301	Health Service Management (Theory)	30	2	NSG 302	Mental Health/Psychiatric Nursing (Theory)	45	3
	HSM 303	Health Service Management (Clinical)	45	1	NSG 304	Mental Health/Psychiatric Nursing (Clinical)	135	3
	NSG 305	Sexual Reproductive Health and Rights	30	2	NSG 306	Obstetrics and Gynecology (Theory)	45	3
	NSG 301	Medical and Surgical Nursing 2 (Theory)	60	4	NSG 308	Obstetrics and Gynecology (Clinical)	135	3
	NSG 303	Medical and Surgical Nursing 2 (Clinical)	170	4	Total	4	360	12
Total	5	335	13	Total	4	360	12	

Table 3. International Curriculum Diploma of Nursing. Source: WHO (2016).

Year	Code	First Semester	Hours	Credit	Code	Semester 2	Hours	Credit
1	COM 101	Communication and ICT	45	3	NURS 100	Professional, Ethical and Legal Aspect of Nursing	30	2
	SOC 102	Sociology	60	2	PSY 102	Psychology	45	3
	APH 101	Anatomy and Physiology	60	4	NUD 102	Nutrition & Dietetics	30	2
	NURS 101	Fundamental of Nursing (Theory)	30	2	NURS 102	Health Assessment (Theory)	45	3
	NURS 103	Fundamental of Nursing (Clinical)	135	3	NURS 104	Health Assessment (Clinical)	135	3
	MIP 101	Microbiology and Parasitology	45	3	BIO 106	Introduction to Biochemistry	30	2
Total		6	375	17	Total	6	315	15
2	Code	Third Semester	Hours	Credit	Code	Fourth Semester	Hours	Credit
	NURS 201	Community Health Nursing (Theory)	45	3	NURS 202	Pediatric Nursing (Theory)	45	3
	NURS 203	Community Health Nursing (Clinical)	135	3	NURS 204	Pediatric Nursing (Clinical)	135	3
	PHARM 201	Pharmacology	45	4	NURS 206	Medical and Surgical Nursing 2 (Theory)	60	4
	NURS 205	Medical and Surgical Nursing (Theory)	60	4	NURS 208	Medical and Surgical Nursing 2 (Clinical)	170	4
	NURS 207	Medical and Surgical Nursing (Clinical)	170	4				
Total		5	455	17	Total	4	410	14
3	Code	Fifth Semester	Hrs	Credit	Code	Sixth Semester	Hrs	Credit
	MID 301	Foundations of Midwifery and Anatomy of Physiology in Midwifery	75	5	MID 300	Midwifery Science 2 (Theory)	60	4
	MID 303	Midwifery Science 1 (Theory)	45	3	MID 302	Midwifery Science 2 (Clinical)	170	4
	MID 305	Midwifery Science 1 (Clinical)	170	4	MID 304	New-Born Baby (Theory)	45	3
	NURS 307	Introduction to Research	45	3	MID 306	New-Born Baby (Clinical)	135	3
Total		4	335	15	Total	4	410	14
4	Code	Seventh semester	Hrs	Credit	Code	Eight semester	Hrs	Credit
	NURS 301	Mental Health and Psychiatric Nursing (Theory)	45	3	NURS 400	Community Midwifery (Theory)	45	3
	NURS 303	Mental Health and Psychiatric Nursing (Clinical)	135	3	NURS 402	Community Midwifery (Clinical)	170	3
	NURS 305	Health Services Management (Theory)	45	3				
	NURS 307	Health Services Management (Clinical)	135	3				
Total		4	360	12	Total	4	215	6

Table 4. International Curriculum Structure Bachelor of Nursing. Source: WHO (2016)

Nursing education curriculum in Indonesia has basically what we call “*Muatan Lokal*” (Local Content) where individual campus has the authority to ‘change’ the teaching subjects according to the institutional objectives, such as at Muhammadiyah University in which ‘Religion-related subjects’ are given more credits. Therefore there is flexibility in the teaching learning process in order to be able to prepare young nurses to be globally recognized. For example by giving more credits to the English or other foreign languages, or through the teaching of nursing-related subjects steps by steps delivered in English. This strategy eventually will improve the students’ English. However, other subjects are also required such as Transcultural Nursing, CGFNS, N-CLEX or Prometric Test.

Table 3 and 4 above are examples of international curriculum based on WHO recommendations. Similar curriculums are applied in various countries even though English is not their main language like in India, the Philippines, Malaysia, Sri Lanka, Pakistan, Bangladesh and some Arab countries in the Middle East where nursing students learn nursing in English. They use English as the language of instruction in the nursing lectures, although not 100%. Learning nursing sciences in English helps students master and fluent in English both theoretically and

practically in the workplace. Although some developed countries such as Japan and Germany do not use English in their nursing practice, it must be admitted that English is an international language as well as the language of sciences. Therefore, being flexible in implementing the nursing curriculum in Indonesia could be the core management of teaching in order to be internationally recognized to fulfill the nursing workforce requirement in many countries where English is the means of communication.

Conclusion

In the midst of globalization, the world's need for nursing services has never subsided. The demand for nurses is always increasing. Some countries are not able to produce their own nurses. That is why they recruit many nurses from other countries, including from Indonesia. Unfortunately, to meet their demand, for some reasons Indonesian nurses are unable to meet the requirements. This article has attempted to discuss the demands on Indonesian nurses and the curriculum flexibility of Indonesian nursing education towards global market needs. After reviewing 18 studies by PRISMA diagram, basically there is an open door of opportunity to improve the Indonesian nurses' performance in order to meet the international standards. The drawback of this study is not supported by primary research on Indonesian nurses working overseas. This study still needs further research in the future in order to implement its recommendation. However, it is expected that Indonesian nurses, the Government, policy makers, management of nursing colleges and lecturers will be able to take lessons from the study, so that in the future they may improve the quality of nursing education and its professionals in Indonesia to meet the need of global nursing workforce.

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