Research Report

Exploring Indonesia's Midwifery Education Curriculum Change:

Faculty Voices

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インドネシアの助産教育カリキュラム改訂への探索：助産教員の声

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〔Abstract〕
This study aims to explore the midwifery faculty's voices about the changes and implementation of the Midwifery Diploma Core Curriculum in Indonesia. Method: A qualitative approach using in-depth interviews was conducted in West Java, Indonesia. Purposive sampling was used to select study participants and sample size followed the principle of data saturation. The study participants were midwifery-faculty who 1) had five years or more of teaching experience, 2) had completed or were continuing their master's degree in health science or midwifery, and 3) had experience in teaching both the previous and the new midwifery core curriculum.
Results: Eight participants were involved in this study. Three categories and their subcategories were revealed as the faculty voice about curriculum change. These were (1) pedagogic concerns: (a) resolves overlapping content, (b) adjust to the new trend, and (c) variety of teaching-learning methods; (2) putting priorities on normal case management: (a) reduction of credits for midwifery pathology, and (b) lack of emergency case practice; (3) cultural and infrastructure problems in the institution: (a) lack of faculty knowledge about curriculum development, (b) limited of faculty teaching and learning methods, (c) problem on implementation strategy, and (d) inadequate cooperation between faculty and clinical instructors
Discussion: Midwifery faculty voiced perceptions about the core curriculum change indicated that the faculty had less knowledge regarding the application of the new curriculum itself and its development. Thus seminars, workshops and continuing education on curriculum development and active teaching methods are needed to adequately implement the new curriculum in order to optimize student competencies as required.

〔Key words〕 nursing, midwifery, curriculum, education

〔要　旨〕
本研究は，インドネシアの助産師教育カリキュラムの改訂について，看護教員の声から探索することを

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目的とした。方法：インドネシアジャワ島西部において，非構造化面接を用いた質的アプローチを行った。対象者のリクルートは有意抽出法を用い，サンプルサイズは理論的飽和化の原則に従った。研究対象者は，１）５年以上の教育経験，２）健康科学または助産学の修士号を取得あるいは進学中であり，３）新旧カリキュラムの両方の教育経験がある助産教員８名である。結果：カリキュラム改訂に関する教員の声として，３つのカテゴリおよびそのサブカテゴリが明らかとなった。内容は，（１）教育上の懸念：（ａ）重複項目の解消，（ｂ）新傾向への適応，（ｃ）様々な教育方法の指導，（２）通常のケースマネジメントの優先順位付け：（ａ）助産病態生理学の単位削減，および（ｂ）緊急事例の演習不足；（３）教育機関における文化およびインフラに関する課題：（ａ）カリキュラム開発に関する教員の知識欠如，（ｂ）教員の教育および学習方法の限界，（ｃ）実施戦略に関する課題，および（ｄ）教員と臨床指導者の不十分な協力体制，である。考察：助産教員のコアカリキュラム改訂についての認識を明らかにし，新カリキュラム適用と開発に関する知識不足が示唆された。そのため，学生の能力を最適化し，新カリキュラムを適切に実装するために，必要に応じて，セミナーやワークショップなによる，カリキュラム開発と積極的な教育方法に関する継続的な教育が必要である。

〔キーワーズ〕 看護，助産学，カリキュラム，教育

Ⅰ．Introduction

The scope of the role and the functions of midwives have continuously developed to meet the standard of maternity care. In Indonesia, the competency design of midwives to construct the specialist role with respect to nurses was initiated with the establishment of the first Diploma of Midwifery by the Ministry of Health in 1996. However, Indonesia's Diploma Midwifery Core Curriculum was just instituted in 2002 by the Indonesian Agency for Development and Empowerment of Human Resources Health（BPPSDMK）Ministry of Health. Since that time there have been many changes in the regulations and midwifery professional development regarding the legal aspects affecting the health service; the Diploma Midwifery 2002 Core Curriculum（old curriculum）had to be reviewed, revised, and further developed. Therefore, in 2011, the new Diploma Midwifery Core Curriculum was published and was to be implemented within two years[1)].

Ⅱ．Background

In general, the change of curricula included in midwifery schools reflects the change of society's needs, and the advancing knowledge, and innovations in education. The curriculum should be up to date and respond to the practice realities[2)]. Theander et al.[3)] explained that the changes in the community need, disease, knowledge and technology, patient demand bring to the curriculum changes. However, the implementation of the new curriculums has not been easy and had faced the challenges inherent for any curriculum innovation.

A previous study indicated that curriculum implementation that is planned does not ruin as it`s planned[4)]. There are consistent characteristics associated with the success of curricular change including the area of the mission and goals of the organization, organization history on facing a change, politics manifesting in internal networking, the allocation of resources and the relationship with the external environment, organization structure, need for change, scope and complexity of the innovation in curriculum change, cooperative climate, the participation of the organization members, communication, human resource development consisting of training, incorporating new members, reward structure, evaluation, and leadership as reported by Bland, et al[5)].

In developed countries, the review of midwifery curricular, revision and modification has become a routine practice in order to maintain a relevant adaptable curriculum. Whereas, in a developing country, the initiation, implementation, and sustainable change of the midwifery curriculum such as in Indonesia has yet to be reached. Since the first core competency was launched in 2002, the next curriculum change needed almost one decade to modify the first curriculum.

Therefore, midwifery institutions were required to implement the core curriculum within a period of at least two years from the date it was published[1].

The voices of the change agents in the implementation of new midwifery curricula, such as faculty, are very important in order to reveal the consistent characteristics, the impact, and the diffusion of curricula innovation in the implementation of the new midwifery curriculum in Indonesia. According to Bland[5] stated that loyal efforts of institution personals and faculty determined the successful curriculum implementation. Therefore, the aim of this study was to document and thematized midwifery faculty' voices about the changes and implementation of the Midwifery Diploma Core Curriculum in Indonesia.

Operational definition Diploma of Midwifery is a vocational three-year program with 110-120 credits after 12 years of primary education.

Ⅲ. Methods

1. Design A qualitative approach using in-depth interviews with a purposive sample was conducted in February 2014.

2. Data collection and Participants

We first collected information about educational institutions in West Java that had implemented the new curriculum for at least 1 year (3 semesters running). We sent a letter of request to conduct our research to the 12 Diploma of Midwifery institutions in West Java and 4 institutions meeting the inclusion criteria agreed to participate: two schools were public schools, and two schools were private schools. We asked each of the school's director or lecturers to select the appropriate midwifery-faculty who met the following inclusion criteria: 1) had five years or more of teaching experience, 2) had completed or were continuing their master's degree in health science or midwifery, and 3) had experience in teaching both the previous and the newest midwifery core curriculum (had information about the actual process of teaching and learning of both the old curriculum and the new curriculum). Participants were then selected for in-depth interviews. Purposive sampling techniques were used. There were two participants from each institution. We explained the purpose of the study to all potential participants and obtained their informed consent to participate in the study. After consent was obtained, we conducted the interviews in the Indonesian language. The basic principle of determining the number of participants was data saturation. The saturation point was reached when no new information was obtained, and data repetition was occurring[6].

3. Instruments

In depth-interviews were conducted to clarify participants view on how the previous midwifery core curriculum and the recent midwifery core curriculum in designing education compared. The interview guide contained these questions: 1) What do you think about curriculum changes; 2) Explain your perspective of the old core curriculum, 3) What is your perspective of the new core curriculum and 4) What is your opinion about the learning and teaching methods used in order to improve midwives competency? The interviews were audio recorded with participant permission and lasted for an average of 30 minutes each.

4. Data Analysis

We transcribe all the audio recordings and carefully reviewed the transcripts to ensure clarity, completeness, and accuracy. Thematic analysis was performed by applying the following procedure: (1) transcribing, (2) coding and categorizing, (3) identifying themes, and (4) data interpretation. To increase the credibility, peer debriefing and member checking were used.

5. Ethical considerations

The study was approved by the Ethics Committee of the Universitas Padjadjaran Bandung, Indonesia No: 443 / UN6.C2.1.2 / KEPK / PN / 2013. We (the researchers) provided written information for the participants and explained the purpose of the research, confidentiality of data collected, protection of anonymity, and the right of refusal to participate.

Ⅳ. Results

Eight participants were involved in this part of the study to explore the old and new core curriculum in more detail. Their years of teaching experience mostly exceeded their clinical experience (see Table 1).

From the data analysis, 3 major categories emerged: (1) Pedagogic concerns (2) Putting priorities on normal case management, and (3) Cultural and infra-

Table 1. Participant profile（N= 8 ）

Participant Number	Age （Years）	Teaching Experience （Years）	Clinical Experience （Years）	Qualifications Master's Specialty
1	36	11	4	Midwifery
2	35	7	2	Midwifery
3	45	15	13	Public Health
4	35	6	2	Public Health
5	39	12	12	Midwifery
6	43	15	12	Public Health
7	48	20	15	Public Health
8	35	11	5	Midwifery

Table 2. Faculty voices: Categories and subcategories

Category	Sub-category
Pedagogic concerns	Resolves overlapping content
	Adjust to the new trend
	Variety of teaching learning methods
Putting priorities on normal case management	Credit reduction for midwifery pathology
	Lack of emergency case practice
Cultural and infrastructure problems in the institution	Lack of faculty knowledge about curriculum development
	Limitation of faculty teaching and learning methods
	Problem of implementation strategy
	Inadequate cooperation between faculty and clinical instructors

structure problems in the institution. Details of the categories and subcategories are presented in Table 2.

1. Pedagogic concerns

Participants considered that the curriculum change was about the pedagogic change such as program content, and teaching and learning strategies. There were three subcategories supporting these pedagogic concerns: a）resolves overlapping content, b）adjust to the new trend and c）variety of teaching learning methods. They are presented in more detail.

1）Resolves overlapping content problem

Most of the participants identified that the new core curriculum resolved overlapping content problem. Most participants said in the old curriculum there was much content redundancy:

"Overlapping! The material has been explained in antenatal care（ANC）, intranatal care（INC）, and postnatal care（PNC）. For the new curriculum, overlapping has been minimized and it is more integrated."（P-3）

2）Adjust to the new trend

Moreover, the participants' noted that the importance of curriculum change due to trends in community needs, science, and technology was necessary. They expected the new curriculum to addresses the new trends.

"Midwives' demands are also changing, according to the improvement of science and technology. Mothers now are getting smarter, technologically literate. In the new curriculum some parts are remove（or reduce）and some parts added to keep up and expand the role of midwife as the leading service in the community."（P-2）

"I am very pleased with the publication of this new curriculum. I hope that the new curriculum will improve students' competence and fulfill the society's demand for the role of midwife in the future."（P-3）

3）Variety of teaching-learning methods

Changes to the curriculum brought more interactive teaching methods. The participants in this study pointed out that the new curriculum promoted active learning.

"This is [new curriculum] student-based learning, it has Problem Based Learning, Project-based Learning, tutorials and others. Now the students can conduct problem solving and critical thinking (P-4).

2. Putting priorities on normal case management

Beside the pedagogic concerns, the participants also highlight the pathophysiology subject and credits. There are two subcategories:

1) Reducing in credits of midwifery pathology

The majority of participants noted that the credits for maternal neonatal emergencies were decreased compared to the previous curriculum because only a few students were exposed to maternity emergency cases. They lacked practice and simulation in the laboratory.

"It reduces the midwifery pathology (maternal neonatal emergencies) credits, in the end there is material that is not conveyed" (P-1)

2) Lack of emergency case practice

The participants point out that the new curriculum not only reduced the credits for midwifery pathology but also for the emergency case practice.

"Previously, with the high credits, it was still difficult to teach midwifery pathology to students, because we have to review again. And for the curriculum, the required cases were 5 midwifery pathology case, then it was mostly not achieved. I cannot imagine now when the credit is decrease, along with the simulation practice and the target of the case" (P-8)

3. Cultural and infrastructure problems in the institution

In implementing the new curriculum, there were some Cultural and infrastructure problems, including the lack of faculty skills and knowledge about how to develop the curriculum and use teaching methods that focused on students as required in the new curriculum. Not only that, but participants also recognized problems for the implementation strategy. Moreover, they identified inadequate cooperation between faculty and clinical instructors.

1) Lack of faculty knowledge about curriculum development

"We need faculty who can develop the curriculum, know what additional courses are needed, know how to develop the learning objective, determine what competencies will be supported, and decide how many credits are needed." (P-6)

2) Limited of faculty teaching and learning methods

In addition, the change from teacher-centered learning to student-centered learning, requires teachers to have more knowledge of the various methods that can be used in the teaching and learning processes.

"Implementation of the teaching method is not that easy, such as new learning methods, faculty here also do not understand how to do such, problem based learning, project based learning, and the discovery learning? [while referring to the curriculum document]" (P-3)

3) Problem of implementation strategy

Implementing the new curriculum, that was certainly different from the old curriculum required socialization. Participants found problems with the implementation strategy.

"Right now we are still implementing the curriculum as we are here, because to be honest, I am still confused what is the difference between this new curriculum and the previous one in the implementation. We need more socialization [orientation] about the implementation of new curriculum, so that the target of the government is achieved". (P-7)

"There is not much different in teaching between this new curriculum and old curriculum. We still use the old outline of learning guidelines". (P-4)

4) Inadequate cooperation between faculty and clinical instructors

It was not just the faculty who had to change their teaching approach; the clinical faculty who often had 'hands on' clinical guidance of students also needed to grasp the new methods. However participants described inadequate cooperation between faculty and clinical instructors.

"The process of learning in the clinic takes the cooperation of the clinical instructor in terms of method of guiding the students in improving student skills New curriculum focuses on competency and student center. Now, there is a gap between clinical instructors and school goals on giving student learning experience." (P-5)

Ⅴ. Discussion

1. Pedagogic concerns

The pedagogic concerns covered the program content and the teaching-learning methods. Curriculum change is supposed to eliminate overlapping content.

This opinion is commonly used to explain the reason for curriculum change. Previous research about master's nursing education in Iran noted the need for curriculum development because of the overlap of credits and repeated content especially in neonatal intensive care curriculum[7]. Similarly, Baron[8] conducted a study of the nursing curriculum in the USA and found that the curriculum needed revision because of content overload. In the discussion by Venvertloh[9] who studied the Gestalt of Nursing Curricula in the UK found that one way to avoid overlapping and overloading material was to develop a competency-based curriculum because it focuses on what competencies student need to achieve rather than what content student need to study. The curriculum change cannot be separated from the mandate to meet societal needs by incorporating more science and technology into the curriculum that could lead to midwifery students' increased knowledge. Schwendimann[10] studied the Master of Nursing Science curriculum at the University of Basel, Switzerland and stated that curriculum revision must address future demands resulting from the community's growing health care needs. Changing times also brings about changing needs and knowledge, especially from society. Community demands for the role of midwives are increasing, therefore the curriculum must be able to bridge these demands, to produce professionals who can think critically and have strong clinical reasoning skills.

To promote students' critical thinking, educators recommend active learning. Participants identified a variety of learning methods within the new curriculum. Similarly Baron[8] and Bristol et al[11].studied nursing education and reported that the changing curriculum was in line with the need to also change the learning methods into active learning. In the new curriculum, there are several learning methods, which a teacher can use to promote the student's deepened knowledge and critical thinking. The problem-based learning (PBL), tutorial, and team-based learning (TBL) are now the commonly accepted active learning methods. In, Indonesia, nursing educators have started to use problem-based learning methods. However, Indonesian nursing and midwifery schools typically have small numbers of faculty[12] making PBL less practicable. Suryani, et al.[13] conducted a qualitative study on nursing education in Indonesia and reported that there is a shortage of resources and some technical problems in implementing PBL, which makes it less appropriate.

Ulfa, Igarashi, Takahata and Horiuchi[14] implemented team-based learning in midwifery education in Indonesia as one of the proposed active learning. TBL was designed with structured activities and with only one facilitator for a large class. This study reported that TBL enhances student clinical reasoning and gain student positive learning experience.

The changes or revisions of the curriculum are needed periodically to address the development of needs. However, the change in teaching methods is an important aspect of overall[15].

2. Putting priorities on normal case management

The reduced credits in the pathology course and the lack of emergency case simulation in the new curriculum was a concern of the faculty, which caused the novice midwives and midwives to be less competent in this regard[16, 17]. This was partly due to the paucity of opportunity. Previous research by Farahani et al.[7] highlighted the neonatal intensive care curriculum in Iran in which fewer skill labs lead to the low competencies of the graduate student.

Maternal emergencies are not included as midwifery core competencies[18] and therefore were not included in the new curriculum via emergency case simulations. Despite, several research studies indicated that Indonesian midwives need more competencies in handling maternal emergency especially if they work in rural areas or in private home clinics[17-19]. In line of WHO that competence in clinical skills for rare cases but lifesaving is very important[20].

The International Confederation of Midwives [21] also states that the care provided by midwives is not only on preventive aspects, handling the normal cases, early detection of complication but also able to manage the emergency case. It is clear that the midwife must be given expertise for normal and complicated case management. As for Indonesia, due to the demographic area, it must be reviewed whether the need for midwife skill in dealing with pathological complications such as postpartum hemorrhage, in which intervention cannot be delayed and if there is no time to refer, then this competency will be assessed to be very important. Likewise, the incidence of maternal complications needs to be reviewed. The investigation should track the trend of cases in the community or in the hospital and is essential to use the data for consideration in designing a new curriculum or curriculum revision. In Jordan,

the midwifery curriculum is geared towards preparing students to become obstetric nurses rather than midwives, yet this is contrary to the role of midwives that is understood internationally[22]. Baron[8] studied the nursing curriculum in the US and found that the participants' opinion was that the curriculum content was more about disease and pathology, which became a burden for students. Deciding on the number of credits and course content during curriculum development requires the co-operation with clinical midwives, local hospitals, national health issues, and alignment with the present national and international goals of maternal child health[23].

Clinical experience in emergency management is not necessarily linked to curriculum design but can be addressed by developing the school program or module to cover required competencies which is less portion in core curriculum[24]. Previous qualitative research conducted by Adnani[25] revealed that this is still one of the problems in midwifery education in Indonesia, in which there was a gap between theory and clinical practice and also the lack of student`s hands -on experience. Therefore, faculty and clinical instructors have the important and challenging role of creating an effective approach to teaching-learning of obstetric emergency treatments in the absence of clinical experience.

3. Cultural and infrastructure problems in the institution

Indonesia's newly revised curriculum required a well-designed implementation in order to achieve student profiles as expected by the curriculum. The curriculum is not just a document but can also be used as a technical guide for schools to carry out learning processes. Therefore, improvement of faculty teaching competencies is important, such as arranging the development and implementation of the curriculum to include active learning. Every educational institution should develop and add an institutional curriculum to meet the required credits for the diploma program, as the core curriculum. The result revealed the importance of an implementation strategy that would reduce the faculty's insufficient knowledge of curriculum development and lack of student-centered learning methods so that it does not become a barrier in implementing the new curriculum.

Venance, LaDonna & Watling[26],exploring faculty perspectives after a curriculum change stated that teachers continued to use teaching strategies they had always used in their long teaching experiences. In line with Botma & Nyoni[27] study in nursing education in Africa, researchers reported that faculty exhibited a lack of ability or insufficient ability to interpret the curriculum. Hence, aside from the clinical expertise, the faculty needed to expand their understanding of curriculum development and teaching methods[8,28].

The WHO[28] Nurse Educator Core Competencies clearly state that faculty should update and scale-up their knowledge through educational training. Continuing education can help faculty in preparation and continued support to change pedagogical attitudes and overcome their discomfort[29]. Helping faculties to have the training, workshops and create professional learning communities are recommended to improve their knowledge and teaching skill.

The orientation regarding the description of the new curriculum is not enough to understand how the new curriculum is implemented. Faculty need to be involved in workshops or training about curriculum development and variety of teaching methods. The government must arrange the workshops or trainings to develop the expanded role of faculty. Particularly, when there is a curriculum change, the government collaborates with educational associations to hold workshops related to activities that will support the successful implementation of the new curriculum. In addition, support must also be present from the institution to encourage their faculties to continuie education. Institutions have provided regular workshops for faculty to sharpen the faculty role. Priestley[30] said the role of institutions is inevitable; it plays an important role in curriculum changes. Institutions must provide everything that will support the implementation of the new curriculum, both in terms of infrastructure as well as in terms of faculty expertise development.

During 2014 to 2020, there was some workshop held in midwifery educational institutions on curriculum development[31, 32]. However, previous research in 2017 about Indonesia midwifery education still point out about the need of continuity of reviewing the curriculum regularly and workshop for faculty to enhance their educator roles in term of curriculum development and transforming learning teaching method from passive learning to active learning[25].

Based on the midwifery national competency test, in the year of 2018, 2019, and 2020 it showed that more than 60 % student does not pass the national compe-

tency test[33]. Werni et al [34] reported that the midwives' competencies cannot be achieved optimally due to the many obstacles in the Midwifery diploma education, including the curriculum that has not been implemented appropriately. Therefore, the suggestion about faculty perspective in 2014 regarding the curriculum change still relevant to the current situation.

Moreover, in addition to improving the successful application of the curriculum, cooperation with clinical instructors needs more attention to ensure that there is no big gap between classroom practice and realities. To increase the effectiveness in the clinical setting, Baxter[35] proposed a communication, collaboration, application, reflection, evaluation (CCARE) model of clinical supervision in schools of nursing; this model expands the preceptor model. Initially, the faculty member needs to explain: (1) the typical picture of desired supervision, (2) the preceptor role in this model, and (3) emphasize that preceptor as a part of the educational team.

Recently, the preceptor and mentorship program has been going on and there is training for clinical instructors, but only in a few midwifery educational institutions. However, there were still many institutions that have not carried out proper mentor guidance in clinical practice[25].

To have better communication and collaboration with the clinical instructor, continuity support from schools to provide regular training for them. It leads to enhance their roles as a mentor, update their knowledge of evidence-based practice, develop concordance with faculty expectations.

4. Study limitations

A larger and more representative sample of midwifery faculty would provide thicker descriptions and thus transferability of how the new curriculum is being implemented. Furthermore, this study only recruit participants from one region of Indonesia, which cannot represent the wide views of participants in other regions especially in small city. In addition, this study was a qualitative study therefore the result cannot be generalized and may produce some bias because it not used qualitative software to interpret data.

Ⅵ. Conclusion

The Indonesian midwifery faculty voices about curriculum change in midwifery education in Indonesia were (a) pedagogic concerns, (b) putting priorities on normal case management, and (c) cultural and infrastructure problems in the institution. These results also indicated that curriculum change was acceptable and important, and there are some points revealed in this study that can be used for consideration during the next curriculum revision and implementation in Indonesia. Enhancing faculty knowledge about the curriculum and learning methods will improve their faculty role and create quality education in order to meet the required competencies in midwifery for the benefit of the community.

Conflict of Interest

The Authors declare that there are no conflicts of interest associated with this study.

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