

Research report

Content analysis of safety management in Japanese midwifery educational textbooks

Kumiko Iwatani¹⁾, Keiko Shimada²⁾

¹⁾School of Nursing, Kanazawa Medical University

²⁾Faculty of Health Sciences, Institute of Medical, Pharmaceutial and Health Sciences,
Kanazawa University

Key words

safety management, midwifery, educational content, textbook, content analysis

Abstract

Purpose : To perform a descriptive content analysis of safety management in Japanese midwifery educational textbooks in order to clarify the teachable content and prevalent issues in midwifery education, so that the findings can be used as basic resources in midwifery education.

Methods : We extracted the descriptive content related to safety management from 13 midwifery educational textbooks. We then qualitatively analyzed the descriptive content in reference to the content analysis method.

Results : The following six categories were extracted from an aggregation of the descriptive information concerning safety management: 1) organization, duties, and risk management of midwives; 2) organization and management for safe healthcare provision; 3) perinatal medical accidents and risk management; 4) disaster countermeasures; 5) infection and countermeasures during the perinatal period; and 6) midwives and information management.

Conclusion : From the textbooks, we elucidated six content categories that should be taught in midwifery education. Furthermore, to improve safety management education, it was suggested that measures for medical accidents, understanding of legal responsibilities, risk prediction, team medical care, support for mothers and infants during disasters, and current information management methods need to be enhanced.

Introduction

Amongst medical professionals, physicians and nurses mainly perform risky acts that directly affect patients. Therefore, safe medical care for patients and medical staff must be ensured. The highest number of settled medical-related legal cases by medical field are internal medicine, surgery, and obstetrics and gynecology¹⁾.

Moreover, the number of physicians in the field of obstetrics and gynecology were the highest in terms of physicians involved in these settled medical-related legal cases²⁾. In the case of midwives, similarly, an obligation of care to perform follow-up, delivery assistance, and other tasks based on professional knowledge and skills when performing normal delivery or medical examina-

tion assistance is necessary. Therefore, acquiring safety management capabilities is essential.

In the field of midwifery education, the Act on Public Health Nurses, Midwives, and Nurses (1948 Law No. 203) was amended by the Act to Amend Part of the Act on the Promotion of Human Resources Such as Public Health Nurses, Midwives, and Nurses (2009 Law No. 78) in April 2010. The length of training in basic education for public health nurses and midwives was extended from six months or longer to one year or longer³⁾. The midwifery educational curriculum also increased from 23 units or more to 28 units or more from the 2011 school year³⁾. Since the 10 delivery assistance cases stipulated by the guidelines directly improve students' delivery assistance skills, it is unnecessary to stress the importance of these tasks in safety management education. However, different demands need to be met by midwives depending on national culture, social climate, and resident needs. Therefore, midwifery education markedly varies among countries because there is a great amount of diversity, ranging from midwives with no prior proper midwifery education to direct 3rd year entries following high school graduation without a nursing license, and midwifery is significantly influenced by ethnic and cultural differences. Therefore, we believed that it would be necessary to first demonstrate the components of educational content regarding safety management in midwifery in Japan, where a nursing license is the basis of midwifery education and sociocultural conditions are relatively stable. There have been no reports on practical education utilizing case examples or incidents from midwifery safety management.

Text analysis is a technique used to extract and construct necessary elements from educational content to provide fulfilling nursing education that can meet nursing needs as part of society's overall needs. Text analysis can identify systematic learning content as well as points of commonality and difference necessary for safety management in midwifery. However, text analysis concerning safety management in the field of nursing has been reported in a few previous

studies⁴⁻⁶⁾; however, no studies have analyzed educational content related to safety management in the field of midwifery. As education needs to be further analyzed with the aim of eliminating medical accidents in midwifery, the present educational content and methods should be examined.

Based on a literature search on safety management in midwifery, clinical studies accounted for most of the reports (e.g., risk factors and safe delivery in clinical midwifery practice^{7) 8)}, safety in patients' maternity care⁹⁻¹²⁾, selection of a safe birth place^{13) 14)}, risk management during home delivery^{15) 16)}, and medical malpractice and litigation involving midwives¹⁷⁻¹⁹⁾. Safety management is an important duty for midwives. However, an investigation of previous studies on midwifery students' safety management did not reveal any studies other than those analyzing incident reports in midwifery training²⁰⁾ and those clarifying the incidents characteristic of midwifery students²¹⁾. The above evidence suggests that we need to clarify the general content regarding safety management, the content that is being taught in midwifery education in Japan, and the content that needs to be taught.

Therefore, the present study's principal aim was to analyze the safety management content listed in Japanese textbooks used in midwifery education and elucidate the content that should be taught in and challenges facing midwifery education.

Operational Definition of Term

Safety management: According to the professional viewpoint in midwifery education, safety management is taking control and performing tasks so that there is no risk and conditions are maintained in good order.

Research Methods

1. Text Selection

A total of 70 syllabi available on the Internet were analyzed regarding safety management in midwifery education institutions over one week, beginning from June 23, 2014. Among these, 49 syllabi cited textbooks (not including reference

books), from which 31 textbooks were extracted. Information obtained from publishers confirmed that 17 textbooks were used by more than 50% of midwifery education institutions in Japan (approximately 200 schools). Of these, the 13 textbooks that described safety management (company A: Four books [Two books were published in 2013 and two books were published in 2010], company B: Five books [Two books were published in 2012, one book was published in 2010, and two books were published in 2009], and company C: Four books [One book was published in 2014, one book was published in 2010, and two books were published in 2009] were selected for the present analysis. For textbooks that were included in a series of several textbooks, each book in the series was treated as a separate book.

2. Data Collection

The 13 textbooks used in midwifery basic education were carefully read and all educational content regarding safety management was extracted. Based on the definition of safety management in the present study, we extracted the following categories: safety (management); safety; medical safety; safety guarantee; medical accidents (prevention); risk management; and risk prediction. The educational content regarding safety management was calculated as a ratio of the total number of pages in the textbook to quantitatively express the extent to which each textbook mentioned such content.

From the collected textbooks, we extracted information using the following criteria:

- 1) Total number of pages in the textbooks;
- 2) The number of pages with descriptions of safety management (even pages containing only one line of information on safety management were counted as one page) was calculated as a ratio of pages with safety management descriptions to the total number of pages;
- 3) Titles of chapters on safety management;
- 4) Details of contents on safety management.

3. Data Analysis

We qualitatively and inductively analyzed the descriptive content using the content analysis method²²⁾ as a reference. Data analysis was per-

formed by categorizing the content by similarity.

To ensure consistency, only one researcher extracted educational content related to safety management. The other research team members examined the validity of the analysis results. Validity of the categories was assessed as follows: a midwifery researcher classified each category independently while two researchers well versed in the field reexamined the categories. Scott's method²³⁾ was used to calculate the concordance rate. Determination of reliability was set at 70% of that by Funashima²⁴⁾.

Thereafter, the category descriptions extracted were classified according to each textbook.

4. Accuracy

To ensure the clarity, reliability, applicability, consistency, and validity of the research process²⁵⁾ during all the stages of the study (i.e., from the selection of the research topic to the data analysis), the researchers were continuously supervised by a professor who was well versed in qualitative research and who had accumulated educational experience concerning the research topic.

5. Ethical consideration

This study was approved by the Kanazawa Medical University Ethics Committee (Approval number: 204).

Results

1. Descriptive content concerning safety management in the textbooks

The ratio of the safety management-related content in the 13 textbooks to the total number of pages ranged from 0.4% to 71.7%, and the number of record units was 856. Based on the content, we classified the record units into six categories (Tables 1 and 2). Furthermore, information describing the textbook from which each category was extracted from is shown in Table 3. Two textbooks included all six extracted categories.

The content categories are shown in brackets [] in order of the highest quantity, and the results for each category are described below. Parentheses indicate the ratio of the number of recorded items to the total number of items.

[Organization, duties, and risk management of midwives] was classified into four items: organization and the range of midwives' duties, trends in maternal health and safety, safe midwifery skills, and safety management in response to location characteristics during the perinatal period (282 record units, 32.9%).

[Organization and management for safe healthcare provision] was classified into three items of organizational management: organizational management, legal interpretation of midwives concerning medical safety, quality and safety of healthcare (196 record units, 22.9%).

[Medical accidents and risk management during the perinatal period] comprised two items: medical accidents during the perinatal period and response to accidents (129 record units, 15.1%).

[Disaster countermeasures] comprised one item: disaster prevention system (98 record units, 11.4%).

[Infection risk during the perinatal period and countermeasures] comprised two items: status of infection risk and infection countermeasures during the perinatal period (93 record units, 10.9%).

[Midwives and information management] was classified into one item: information management

(58 record units, 6.8%).

2. Consistency of category classifications

The concordance rate for each category classification by two nursing researchers was 77.0%, thus ensuring the reliability of the study because according to Funashima (2007)²⁴⁾, a concordance rate of 70% or higher indicates that the reliability of the categories is ensured.

Discussion

In the present study, we examined the safety management content that should be taught in midwifery education and related issues in Japan.

There were six categories of educational content regarding safety management in midwifery education. For some of the textbooks, bias was noted in the descriptions of the categories. This may have been attributed to the fact that with regard to safety management in midwifery education, information is not taught based on standardized criteria because educational content is not standardized. Although textbooks used in each university naturally depend on the type of individual curricula, the degree of safety management capabilities expected from midwifery students after graduation is identical. Further study is required to examine the differences

Table 1 : Analysis of midwifery education texts containing a description of safety management

Text analyzed	Number of relevant pages*	Total number of pages	Ratio of relevant/total pages (%)
A	11	230	4.8
B	9	302	3.0
C	52	177	29.4
D	64	237	27.0
E	2	216	0.9
F	1	232	0.4
G	33	46	71.7
H	10	316	3.2
I	13	324	4.0
J	40	457	8.8
K	7	258	2.7
L	14	66	21.2
M	33	348	9.5

*Pages with even one line of information on safety management were counted as one page.

Table 2 : Descriptive safety management-related content extracted from midwifery textbooks

Record unit	Description content	Lesser category	Minor category	Subcategory	Category
6	Midwives' responsibilities and functions		Midwives' responsibilities		
19	Midwife duties: care during pregnancy, intrapartum period, postpartum period, and infancy, widwife care for women's health, local care provided for the mother and child, midwifery duty management, scope of midwifery duties		Midwives' duties		
3	Midwives' life events and career enhancement, their obstetrics and working style		Midwives' working styles	Organization and the range of midwives' duties	
1	Cooperation between midwives and obstetricians		Cooperation between midwives and other professions		
3	Social conditions and the midwife: current state of obstetrics, search for new perinatal care mechanisms, midwifery duty expectations		Social conditions and midwives		
6	Professional ethics, code of ethics, and international ethics for midwives, provision of the best care		Midwives and ethics		
9	Trends and issues concerning the health of the mother and child, continued ensurance of safety during pregnancy and delivery		Trends and issues concerning health of the mother and child	Trends in maternal health and safety	
3	Maternal and child health in an age of globalization, global trends and strategies related to maternal health, globalization of maternal and child health		Internationalization of health of the mother and child		
5	Midwifery and health economics, medical fees for midwifery acts, high-risk management, and medical economics		Midwifery and health care economy		
12	Safety management of the mother and child, safety based on individual care, basic theories and techniques that support midwifery activities, risk for women and provided medical models, evidence-based midwifery		Safety of midwifery care	Safe midwifery skills	
25	Cooperation with obstetricians, acquisition of resuscitation-related knowledge and skills, pregnancy management adaptation list, the use of guidelines		Technical preparation for abnormal situations		
30	Risk management in the birthing center, differences in the risks in medical institutions and birthing centers, management of facilities and equipment, business management, personnel management, record management, management of pharmaceutical products at the birthing center	Facility management at birthing centers			[Organization, duties, and risk management of midwives] (282 record units, 32.9%)
9	List of indicated births handled by the birthing center, births to be jointly managed with physicians, treatment of women with abnormal pregnancies	Indication of labor in birthing centers			
25	Compliance with the birthing center business guidelines, description of the birthing center management guidelines and medical safety support center, establishing a safety management office, recommending self-inspection for the functional evaluation of birthing center	Response to sudden changes in normal birth			
10	Appropriate explanation to accident victims, sorting and confirmation of facts, contact and response at the time of the accident, the safety committee's role, response to the report at the time of transport, points of note at the time of report submission	Response after accident and report	Safety management of the birthing center		
23	Reports on birthing center liability insurance, health instructor liability insurance, group accident insurance	Midwives in private practice and insurance		Safety management in response to location characteristics during the perinatal period	
19	Functional evaluation of birthing center for safety, introduction of evaluation in birthing center, details of birthing center's functional evaluations, significance and challenges of birthing center's functional evaluations	Functional evaluation of the midwifery house			
8	Cooperation with commissioned physicians and medical institutions, introduction of mother and child support facilities	Coordination between widwifery houses and associated facilities			
11	Risk management in the hospital, role of the full-time risk manager, coordination of perinatal-related departments, specific safety management efforts in the hospital midwifery system	Risk management in the hospital			
17	Installation of a room for medical safety countermeasures, placement of risk manager, installation of a patient consultation window, system of cooperation with other departments, incident and accident reports and responses, medical safety management training, and staff education	Installation of a room for medical safety countermeasures	Safety management in the hospital		
14	Risk management in the clinic, infection prevention, crime prevention measures, incident accident reports, pharmaceutical management, disaster prevention measures, response to emergency surgery at night, prevention of child theft		Safety management of the clinic		
24	Medical care in the NICU, basic principles of NICU nursing, basic knowledge of NICU management, impact and adjustment of the NICU environment		Safety management of the NICU		

The cell without any symbol was analyzed until can not break the contents down into smaller categories.

Table 2 : Descriptive safety management-related content extracted from midwifery textbooks(continued)

Record unit	Description content	Lesser category	Minor category	Subcategory	Category
26	Organization of midwifery management, organization of medical safety, establishment of committees related to medical safety, maintenance of the reporting system, requests for changing safety crisis management		Organization of midwifery management		
14	Hospital function evaluation, quality evaluation of midwifery services through self-inspection, mechanisms for improving nursing quality care, assessment of midwifery associated with a hospital function evaluation		Evaluation of quality and function		
8	Medical safety through team medical care, provision of safe and reliable midwifery care through local coordination and cooperation, sharing of incident cases		Medical safety by team care	Organizational management	
27	Maternal life-saving transport system, overview of the perinatal care network, specification of comprehensive perinatal medical center, fiscal measures for perinatal medical countermeasures, current status and challenges facing the maternal transport system	Current status of the maternal transport system and relevant issues	Local coordination		[Organization and management for safe healthcare provision] (196 record units, 22.9%)
29	Open and semi-open systems of perinatal care, open system model project, challenges facing the implementation of an open system, future outlook of open and semi-open systems of perinatal care	The open system's future outlook			
51	Medical law, criminal law, public health nurse, midwife, and nurse law, civil law, legal liability, unique legal provisions for midwives, criminal liability, civil liability, administrative liability, midwives' business monopoly, characteristics of perinatal care peculiarities and the law		Legal stipulations for midwives	Legal interpretation of midwives concerning medical safety	
24	Assurance of quality and safety of perinatal care, initiatives to achieve safety, efforts to evaluate and improve medical care quality, beginning of maternal transport, critical indicators		Assurance of quality and safety in perinatal healthcare		
4	Evidence-based medicine, consumer involvement with the evidence, quality assurance cycle based on evidence, patient satisfaction survey		Evidence for the assurance of medical care quality	Quality and safety of healthcare	
13	Medical policies and responsibilities in the hospital ward, hospital care plan responses, care process		Care for the quality and safety of medical care		
19	Medical accidents and risk management, causes of medical accidents, medical accidents and medical malpractice, rule violations, human error, concept of accident prevention measures, informed consent		Definition/classification of medical accidents		
11	Perinatal medical accidents and their causes, maternal and fetal risks, perinatal risk management		Cause of medical accidents during the perinatal period and risk management	Medical accidents during the perinatal period	[Medical accidents and risk management during the perinatal period] (129 record units, 15.1%)
17	Safety management guidelines related to medical care, risk management as a professional organization, system reserved for medical care-related safety management, implementation of staff training for safety management relating to medical treatment, incident/accident reporting and analysis		Safety management system		
37	Medication error, medical equipment operation error, slip/fall, blood transfusion error, management error related to medical equipment operation and tubing, kidnapping, mix-up, suffocation, accident related to neonate		Accidents that tend to occur during midwifery tasks		
3	What is a medical dispute, medical disputes and their solutions, countermeasures to prevent medical disputes		Medical dispute		
33	Response when accidents occur, response to persons involved in accidents, response to patients and family members, compensation for damages		Response after accident	Response to accidents	
9	What is the obstetric medical compensation system, structure of the obstetric medical compensation system, targets of certification and compensation		Obstetric medical compensation system		

The cell without any symbol was analyzed until can not break the contents down into smaller categories.

Table 2 : Descriptive safety management-related content extracted from midwifery textbooks(continued)

Record unit	Description content	Lesser category	Minor category	Subcategory	Category
3	Disaster prevention system/crisis management system in Japan	Disaster prevention system in Japan			
39	Thinking and assumptions related to preparing for disasters, function as a medical institution that is required in the event of a disaster, importance of a manual, daily preparation for disasters, the medical institutions's organizational preparation, preparation by midwives, guidance for delivery care during disasters	Guidelines and preparation for disaster prevention	Preparation for disaster		
9	Mother and child, family members, and women during disasters	Persons requiring aid during disasters		Disaster prevention system	[Disaster countermeasures] (98 record units, 11.4%)
9	Activities when a disaster occurs, nursing following a disaster, midwifery care in the event of a disaster	Activities during disasters			
8	Response to the acute phase, subsequent response, shelter management	Response by time period during disasters	Response in the event of a disaster		
3	Psychology of disaster victims, disasters and mental care	Disasters and mental care			
5	Legal response during disasters	Legal response during disasters			
22	What is disaster nursing, nursing by type of disaster, disaster relief		Status of disaster nursing		
13	Infection risk management during the perinatal period, infection control and midwifery care, principles of infection risk management, characteristics of infection risk		Characteristics of infection risk during perinatal period	Status of infection risk	
16	Standard precautions, hand hygiene, respiratory hygiene and cough etiquette, health care workers' health management		Basic infection countermeasures		
9	Prevention of mother-to-child GBS transmission, management of HBs antigen-positive/HCV antibody-positive/HIV-positive pregnant women, countermeasures for influenza		Pathogen-specific infection control		
12	Infection risk management at the time of birth assistance, infection control for the delivery room, person in charge of infection control for delivery, prevention of infection from blood and bodily fluids, response when exposed to blood		Infection control for birth assistance	Infection countermeasures during the perinatal period	[Infection risk during the perinatal period and countermeasures] (93 record units, 10.9%)
3	Occurrence of infection during breastfeeding support, principles of infection management risk in breastfeeding support		Infection control for breastfeeding support		
13	Special nature of infection management for neonates, principles of infection management for neonates, problems related to infectious diseases in newborns, infection control for neonates		Infection control for newborns		
27	System of neonatal infection control for the maternity ward, infection control for the delivery room, visitation based on delivery spare room use, infection prevention measures in the NICU, hospital infection control system in the birthing center		Infection prevention on the field		
43	Information necessary for perinatal care, information for midwifery management, midwives and records, information to be shared with the multidisciplinary team, information sharing with patients		Sharing of necessary information	Information management	[Midwives and information management] (58 record units, 6.8%)
15	Handling and provision of information, Act on the Protection of Personal Information, quick and safe transmission of information, promotion of information disclosure, and informed consent for medical safety		Handling of information		

The cell without any symbol was analyzed until can not break the contents down into smaller categories.

and similarities between the educational content extracted from the textbooks and that in the syllabi.

We extracted the following six categories in relation to safety management in midwifery education: [Organization, duties, and risk man-

agement of midwives]; [Organization and management for safe healthcare provision]; [Medical accidents and risk management during the perinatal period]; [Disaster countermeasures], [Infection risk during the perinatal period and countermeasures]; and [Midwives and informa-

Table 3: The state of category descriptions regarding safety management according to each text book

Text analyzed	Details of category by text					
	[Organization, duties, and risk management of midwives]	[Organization and management for safe healthcare provision]	[Medical accidents and risk management during the perinatal period]	[Disaster countermeasures]	[Infection risk during the perinatal period and countermeasures]	[Midwives and information management]
A	○	○				
B	○					
C	○	○	○			
D	○	○	○	○	○	○
E	○					
F	○					
G	○					
H		○			○	
I	○	○	○		○	
J	○	○	○	○	○	○
K	○	○	○			
L	○					○
M	○	○				

The cells marked by the symbol '○' in the table indicated that the text book included the description category concerned. On the contrary, the cells marked without symbol.

tion management].

[Organization, duties, and risk management of midwives] concerned safety management in response to a range of midwifery duties, skills, and perinatal situations. Moreover, this category had the greatest amount of content and was included in almost all the textbooks examined. Furthermore, this accounted for more than 30% of the descriptive content, which we believe shows the importance of decisions associated with birth assistance, which is the exclusive duty of midwives, and that of risk management. According to the International Confederation of Midwives (ICM), midwifery education is necessary for students to understand the scope of their duties and essential capabilities. Therefore, care during labor and birth, safe delivery assistance, and response to specific emergency situations are especially important educational contents. In addition to the shortage of obstetricians and decrease in the availability of facilities handling deliveries in Japan, pregnancy and delivery management by midwives has attracted attention²⁶⁾.

However, few reports have evaluated safety during pregnancy and delivery under the management of a midwife²⁷⁾. Studies have now begun reporting that there are no differences between low-risk primiparous pregnancies and deliveries conducted under the management of a physician or a midwife²⁸⁾. Education concerning midwives' organizational structure, duties, and safety is essential, and midwife-led education that allows midwives to perform duties confidently must be provided.

Content concerning [Organization and management for safe healthcare provision] was related to organizational management, midwifery, legal interpretation, and the quality of medical care during the perinatal period. Although this accounted for more than 20% of the descriptive content, the descriptions were only general explanations regarding legal interpretations and system maintenance. Medical safety is both an individual problem and an important aspect to be considered for adjusting the organizational structure. Chief nurses are particularly expected to

play a role in fostering the ward's medical safety culture and act as risk managers²⁹⁾. Moreover, creating an organizational system in which individuals with experiences in incidents or accidents can receive specific advice, discuss the workplace, and develop other forms of open communication is desirable³⁰⁾. Furthermore, based on the fact that not only nurses but also multi-disciplinary Team STEPPS (Team Strategies to Enhance Performance and Patient Safety) are expected to possess nursing abilities and skills³¹⁾, it is necessary to enhance medical skill capabilities and also conduct training to build teamwork and trust³²⁾. Midwifery clinical practice requires 11 units and is conducted over a long period. Therefore, students spend a substantial amount of time as part of a team, leading them to learn about organization and management from the perspective of secure health care providers. Thus, the role of clinical practice as a form of training that assists in improving team performance is significant.

[Medical accidents and risk management during the perinatal period] concerned perinatal medical accidents and responses. The obstetric medical compensation system, initiated in 2009, aims to provide early relief to children with severe cerebral palsy through cause analysis, prevention of recurrence, and an improvement in the quality of obstetric medical care. According to Kono, an accident investigation mainly aims to elucidate the cause of the accident and propose countermeasures to prevent future recurrence³³⁾; therefore, it is necessary to perform a background analysis to understand why the action that caused the accident was taken, rather than simply identifying the cause of the accident as being due to an individual's mere carelessness³⁴⁾. Our textbook analysis showed that descriptions including analysis of the causes of medical accidents, conflicts, and their resolutions accounted for only approximately 15% of the whole content. However, this result demonstrated that this information was provided as educational content. With respect to safety management taught in nursing education in 2006, the discussion of accident analyses, apart from typi-

cal medical practice, was rarely provided in the classroom⁶⁾; however, this trend appears to be changing. The most common medical malpractice lawsuit related to obstetrics and gynecology concerned accidents during the intrapartum period¹⁷⁾, and there were many similar delivery-related incidents for midwifery students²⁰⁾. The study of medical accidents and risk management by midwifery students allows them to predict risks in their own duties, thus leading to an increase in their awareness of the possibilities and the weight of their responsibility when they become involved in a medical accident. However, there is limited content related to an understanding of the responses required during medical accidents, understanding of legal liability, and risk predictions. Therefore, it is necessary to strengthen these areas and adjust educational methods. Moreover, as teamwork is essential during various situations in clinical practice, it is important to understand team medical care from the basic nursing education stage and also learn the basic qualities and abilities that promote it. However, the explanation of general principles is precedent, and the issue regarding limited content concerning specific practices persists.

Concerning [Disaster countermeasures], in 1998, there were few Japanese schools that discussed disaster nursing³⁵⁾. Based on the delivery care content in textbooks, the number of schools providing disaster nursing education has increased by 11.4%. This necessary change in educational content reflects the many recent unprecedented disasters faced by Japan. When a large number of people are affected by a natural or man-made disaster, medical workers and medical facilities also face the possibility of incurring damage. Therefore, systematic knowledge and skills are required for disaster nursing, as in the midwifery field. As part of their capabilities as autonomous professionals, newly graduated midwives are expected to be able to implement countermeasures during disasters³⁶⁾; however, one of the midwifery students' achievement goals upon graduation is reaching a level of knowledge that can provide support to the mother and child during disasters. Thus, there

is a gap between expectations from midwifery students and their achievement goals.

The content of [Infection risk during the perinatal period and countermeasures] comprised 10.9%. Moreover, the textbooks contained little content on infection prevention education related to breast care during the perinatal period³⁷⁾. Birth assistance particularly requires attention to exposure to blood, and infection control is also a focus of interest. The relation between midwifery skills and amniotic fluid infection has been indicated by a previous study³⁸⁾. However, rather than understanding the educational content of infection management as being a part of safety management, it should be regarded as educational content that includes each midwifery skill. Moreover, midwifery students' accumulation of experience through basic nursing education and on-site clinical practice may have led to the low level of content. As a general trend, the textbooks had little content concerning infection.

[Midwives and Information management] concerned the use and handling of information, and it had the least amount of content (6.8%). In the midwifery practical skill proficiency stages (clinical ladder) in Japan, which begin from novice workers, it is necessary that actions be performed according to the understanding and structure of the information management system³⁹⁾. Information management refers to the safety management content that has accumulated from basic nursing and there appears to be limited content on the topic. However, in the current internet society, thorough information management is required to ensure the confidentiality, safety, and possibility of information⁴⁰⁾; furthermore, the need for more specific descriptions is also observed.

Based on the above findings, we believe that it is necessary to clarify the goals of safety management at the time of midwifery student graduation and provide an indication of achievement for each step in the learning process. For example, should the ability to create a prompt report concerning an incident be required? Should reflection of the incident be mandatory? Should the ability to predict an accident be regarded as

the target level of achievement? Furthermore, as indicated by Bloom⁴¹⁾, it is necessary to understand the level of precision in the fields of psychiatry and kinesthetic and also clarify the level of understanding in the field of cognition. Thus, the competencies that midwives should possess after graduation will be clarified. In 2008, the regulations for the designation of public health nurses, midwives, and nursing education facilities were amended, and an "integrated field" was created. This facilitated team medical care, nursing management, and disaster nursing to be specified by the regulations with the aim of narrowing the divergence in education and clinical practice among newly graduated nurses. However, in universities with strong independence between subjects, it is necessary to make the effort to go beyond the course framework⁴²⁾. Future study is required to examine carefully the precise manner of handling educational content that is effective in basic midwifery educational courses designed to promote the basic practical skills required for midwifery, including achievement targets.

Conclusion

1. The descriptions concerning safety management in the midwifery education textbooks ranged from 0.4% to 71.7%. However, the safety management-related educational content in the textbooks may not have been standardized.

2. The educational content concerning safety management listed in midwifery educational textbooks could be classified as follows: [Organization, duties, and risk management of midwives]; [Organization and management for safe healthcare provision]; [Medical accidents and risk management during the perinatal period]; [Disaster countermeasures]; [Infection risk during the perinatal period and countermeasures]; and [Midwives and information management].

3. Results demonstrated that the following educational content needs enhancements: understanding measures to take at the time of a medical accident, understanding legal responsibilities, risk prediction, team medical care, support for mothers and infants during disasters, and

current information management methods.

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Conflict of Interest

None

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日本の助産学教育テキストにおける安全管理に関する内容の分析

岩谷 久美子¹⁾, 島田 啓子²⁾

¹⁾金沢医科大学看護学部, ²⁾金沢大学医薬保健研究域保健学系

キーワード

安全管理, 助産学, 教育内容, テキスト, 内容分析

要 旨

目的: 日本の助産学教育テキストから、安全管理に関する記述内容を分析し、助産師教育で教授すべき内容と課題を明らかにし、助産師教育の基礎資料とする。

方法: 助産師教育に使用されている13テキストから、安全管理に関する記述内容を抽出した。その記述内容を内容分析の手法を参考に質的に分析した。

結果: 安全管理に関する記述内容をカテゴリーに集約した結果、【助産師の職制・業務とリスクマネジメント】、【安全な医療提供のための組織と運営】、【周産期の医療事故とリスクマネジメント】、【災害対策】、【周産期における感染リスクと対策】、【助産師の情報管理】の6カテゴリーが抽出できた。

結論: テキストから助産学教育において教授すべき内容として6カテゴリーが明らかになった。さらに安全管理教育の充実に向けて、医療事故時の対応の理解、法的責任の理解、危険予測、チーム医療、災害時の母子への支援、現代に対応した情報管理の方法等の強化が必要であることが示唆された。