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Comparing the professional role and tasks approved in curriculum with the ongoing role and tasks of midwives employed in Tabriz health care units

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Abstract

Background: Midwives play an important role in the implementation of health programs in health care units. The objective of this study was to compare the professional role and task in curriculum with the ongoing role and task of midwives working in the health care units of Tabriz (East Azarbaijan, Iran, 2015).

Methods: This cross-sectional study was done via census on all midwives working in rural and urban health units in Tabriz in 2015 (225 persons). The data was collected using a researcher-designed questionnaire based on the national midwifery curriculum approved in 2012. The questionnaire includes questions related to the use of specific teaching courses and their relevancy to the professional roles contained in the curriculum; a self-assessment of the midwives' current performance was completed by midwives themselves. The validity and reliability of questionnaire were confirmed. Data were presented using mean (SD) and n (%) for numerical and categorical variables.

Results: Professional roles and tasks contained in the curriculum were not fully relevant to current roles and tasks of midwives. The highest relevancy was related to the role of education and the lowest relevancy was seen in ongoing tasks related to disease diagnosis, care and intervention. Of the specialized courses, internships in pregnancy and childbirth and its pathology had the highest and lowest applications, respectively.

Conclusion: This study showed that, midwifery specialized training courses content and professional role and tasks curriculum-based are not consistent with ongoing expected real-world tasks. Therefore, it is essential that reforms are made to enhance the curriculum and efficiently align it with practical responsibilities and expectations.

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Introduction

To prevent health problems and promote public health and treatment, having capable and skilled personnel with sufficient knowledge and skills providing the best services is necessary. The lack of relevancy between academic courses and professional needs in the workplace is a critical issue in nursing and midwifery education.^{1,2} The United Nations' World's Midwifery Report notes that, although a number of countries promised and are showing developments in training skilled midwives, the desired standards have not yet been met.³ Midwifery skills and education in developing countries is defined based on the International Confederation of Midwives (ICM).

As defined by the ICM, "a midwife is a responsible and accountable individual who provides women with support, care and advice necessary during pregnancy and childbirth and the postpartum period, leads delivery on her own responsibility, and cares for newborns and infants." The care includes preventive measures, promotion of normal vaginal delivery, diagnosis of problems in both mother and child, access to medical care, and other appropriate help as well as participation in emergency measures.⁴ Defined roles and tasks in the curriculum for midwifery include diagnosis, care, treatment, training, counseling, and prevention. A skilled midwife is an essential link in all the care processes and has an important role in reducing

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mortality and morbidity, preventing maternal and child complications, increasing levels of reproductive health and health in childbearing women, and, finally, improving family and community health.³⁻⁶

In order to train a midwifery expert to fulfill the above-mentioned roles appropriately, it is necessary that midwifery students experience high quality education that fits the health needs and social conditions of the country.^{7,8} Given that health care is provided by midwives at the Tabriz University of Medical Sciences as an integrated service, and covers the whole population, including pregnant women and neonates, children, adolescents, young, middle-aged, and elderly men and women, workers in these health units have to acquire the needed skills and abilities to perform multiple roles and tasks required by the population in need of care. This is emphasized in the educational change and innovation package, as provided, and is localized and value-based.⁹ This problem is most often seen in education courses affiliated with the medical sciences. Sereshti et al¹⁰ surveyed the educational needs of midwifery graduates from the viewpoints of employed midwives and officials charged with oversight. The results showed that educational needs of midwives were not consistent with what officials expected. In the study, midwives had stated the educational requirements in their performance area that was not enough attention paid to them in their curriculum. Toulabi and Alhani¹¹ compared curriculum objectives with professional needs from the viewpoints of three years nursing and midwifery graduates, and the results showed a decreasing trend. Revision of the nursing and midwifery education system to improve the ability of graduates in patient care, more application of theoretical courses, getting training in professional efficiency were suggested. In a qualitative study, Amiresmaili et al¹² attempted to identify problems in general physician education and concluded that lack of comprehensiveness of courses and topics and a mismatch between designated educational goals and the real needs of society as well as an emphasis on theory to the detriment of practice in educational centers were among the most important challenges.

In their study in Indonesia, Henness et al¹³ reported the influence of midwives' educational needs in all tasks to determine and prioritize educational and training needs of midwives and a new curriculum to meet these needs. The results of a study of a training program in Jordan on the design and content of the midwifery curriculum and the ability of the curriculum to train skilled midwives to maximum capability in standard tasks to take care of low risk pregnant mothers showed that more attention has been paid to treatment and intervention in the curriculum rather than to roles; thus, expected international definitions of midwives and changes in the curriculum have been recommended.¹⁴ In their study on the family physician curriculum, Ahmadi et al¹⁵ also concluded that the curriculum for family physicians and Medical Education courses had to be revised. A literature review showed that research in this field was conducted

more educational need assessment and satisfaction survey and was not a comprehensive study that to Comparison the professional role and tasks curriculum-based with the current role and tasks of midwives in Tabriz Medical Sciences University. Therefore, the study was carried out with the aim to compare the professional role and task approved in curriculum with the ongoing role and task of midwives working in the health care units.

Materials and Methods

Design, setting and participants

This cross-sectional study was carried out in urban and rural health centers of Tabriz, Iran, in 2015. All midwives working in rural and urban health care units of Tabriz health centers were recruited via census (n = 225). Inclusion criteria were: holding a Bachelor of Science (BS) degree in midwifery, having a defined duty in a family health unit, at least 6 months of on the job experience in the health care unit, and employment in one of the approved posts for midwives, including midwife in charge, family health expert, midwife, and health team midwife.

Measures and data collection

Data was collected using a researcher-designed questionnaire. The questionnaire was designed to address specialized training courses, main topics and roles and tasks contained in the national midwifery curriculum approved in 2012.

The first part asked for demographic information of the study participants (12 questions), the second part included questions related to the use of any of the main topics' specialized courses with current performance (136 main topics), and the third part included questions related to the relevancy regarding of professional roles and tasks contained in the curriculum compared with their current performance of the midwives who were being surveyed. Roles related to diagnosis (11 tasks), education (7 tasks), consulting (6 tasks) and prevention (4 tasks) that were completed by employed midwives as a self-assessment. Data included demographic information such as their age, education place, employment status, and professional work experience. Questionnaire statements were scored from 1 to 5 based on a 5-point Likert scale (where very high = 5, high = 4, medium = 3, low = 2, and very low = 1). The overall average for each scale and subscale were computed. The possible range of scores was 1-5.

Validity of questionnaire was confirmed by ten experts of midwifery and medical education, and Cronbach α ($\alpha > 0.9$) was used to assess its reliability.

Statistical Analyses

Data were presented using mean (SD) and number (%) for numeric and categorical variables. All data were analyzed by SPSS 17 (SPSS Inc, IL, Chicago, USA).

Results

Of 225 employees entered study, 195 (86.6%) completed the questionnaire in the second half of 2015. The average

age of respondents was 38.56 ± 7.34 ; the minimum and maximum were 23 and 50 years, respectively. The average job experience of respondents' was 12.13 ± 7.26 years. In terms of approved posts, 37% were working as a midwife in charge, 40.7% as a midwife, 19.5% as a health team midwife and 2.8% as a family health expert. Table 1 shows demographic information of population under study.

Main topics of specialized courses

Table 2 showed mean relevancy of specialized courses main topics in the curriculum with their current performance. In examining the relevancy of main topics of specialized courses for midwives with their current performance, the highest relevancy was found in the specialized course of normal pregnancy training, with an average of 4.21 ± 0.73 and the main topic of familiarity with training and counseling of pregnant women related to pregnancy was observed with an average of 4.30 ± 0.75 . General and specific pathology had an average of 2.22 ± 0.91 and the topic of familiarity with degeneration and cell death, and studying and observing microscopic details of tissues and abnormal organs in the body, sampling methods and abnormal tissue staining had the lowest relevancy, with an average of 2.00 ± 1.01 . The courses with the highest relevancy to midwives' current activity were: normal pregnancy internship, pregnancy and delivery 1, principles of maternal and child nutrition, newborns, newborns internship, mother and child health and fertility 4, and gynecological internship, maternal and child health internship, pregnancy and delivery 3 (see Table 2). The topics related to the courses of general and specific pathology, biostatistics, general psychology, women and family, specialized English, principles of epidemiology and disease control, management of principles and its application in midwifery, psychiatric principles in midwifery, physiopathology and surgery, and internal medicine internship had the lowest relevancy.

Table 3 demonstrated mean relevancy of professional roles and tasks in the curriculum with the ongoing roles and tasks of midwife.

Professional roles and tasks

In diagnosis, care-intervention role: As seen in Table 3, tasks related to pregnancy care under normal circumstances and referral of cases had the highest mean (3.78 ± 1.94) and effectively communicating with patients had the lowest relevancy (3.35 ± 1.07).

In the education role: training to identify risk factors in pregnancy and training tips related to contraceptives had the highest mean (4.17 ± 0.81) and training clients and companions in the field of self-care and referrals to care had the lowest relevancy (3.64 ± 0.95).

In the consulting role: consulting at the postpartum period had the lowest (3.11 ± 0.81) and consulting on family planning had the highest relevancy with current tasks (4.13 ± 0.78).

In the prevention role: planning and implementation of prenatal care to clients was the highest (3.94 ± 0.92)

Table 1. Demographic information of population under study

Variables	Categories	No.	Percent
Employment status	Project	28	14.40
	Contractual	60	30.76
	Specific work	10	5.10
	Official	84	43.10
	No answer	13	6.60
Education Place	National University	115	59.00
	Azad University	72	36.90
	International University	2	1.00
	No answer	6	3.10
Workplace	Urban	155	79.50
	Rural	40	20.50

and participation in research projects had the lowest relevancy (3.36 ± 1.25). In general, the diagnosis, care and interventional role had an average of (3.60 ± 0.82), the educational role had an average of (3.98 ± 0.78), consulting had an average of (3.95 ± 0.78) and prevention had an average of (3.77 ± 0.8), which are all consistent with the professional roles and tasks in the curriculum for midwives and current tasks.

Discussion

Results showed that specialized courses topics in the curriculum related to current job performance from the perspective of midwives employed Tabriz health units were moderate at 19.85% of the cases and high in 80.15% of the cases, which was somewhat consistent with Shirjang et al⁸ on the relevancy of the topics presented for working public health experts. They reported the relevancy rate in basic, main and specialized courses at a moderate level. The number of those who passed theoretical courses and internships can also affect the relevancy rate and should be examined in future studies. In reviewing the opinions of midwifery and nursing staff in governmental hospitals in relation to the clinical application of specialized courses, Mujahid et al¹⁶ showed that pregnancy and delivery, maternal and child nutrition, and radiology and ultrasound courses were the most widely used, while less used ones were internal medicine, surgery, rachianesthesia, and anesthesia and applied laboratory tests, which was in line with the findings of the current study. Results of the study carried out by Mirmoghtadaee and Karamalian² in Isfahan showed that the newborn internship was most widely applied in training course, and radiology and ultrasound were the least applied ones from the employed midwives' point of view, which was inconsistent with the results of this study. In our study, employed midwives believed the use of internship courses was more useful than theoretical ones, which is consistent with the opinion of graduates in Khorramabad and Qazvin's studies.^{1,11} In a qualitative study done by Kohan et al¹⁷ on the attitudes of

Table 2. Mean relevancy of specialized courses main topics in the curriculum with the current performance of midwife (Possible rang of scale:1-5)

Specialized course	General educational purposes (main topics)	The mean± SD
General and specific pathology		2.22 ± 0.91
	Familiarity with degeneration and cell death, and studying and observing the microscopic details of tissues and abnormal organs in the body, sampling way and abnormal tissue staining	2.00± 1.00
	Scientific and practical application of pathology in midwifery	2.44±1.00
Principles of community health services		3.48±0.84
	Familiar with principles of health and health care system in Iran and the world	3.37±0.93
	Familiar with personal and social health and relationship between health and community health and development	3.53±0.90
	Familiar with community-based health, community midwifery-based, midwives role in providing community health	3.53±0.93
General Pharmacology		3.44±0.92
	Familiar with pharmacology generalities (pharmacodynamics, pharmacokinetics and words definition) pharmacodynamics:recipient theory - definitions and modifications, pharmacokinetics:absorption, distribution, metabolism and excretion	3.22± 1.09
	Familiar with a various drug forms and considerations of their application	3.53±0.95
	Familiar with specific drugs family and their clinical applications	3.41±1.02
	Familiar with the important side effects and identifying the necessary measures to protect the patient (mother and fetus)	3.59±0.97
Pharmacology 2		3.76±0.89
	Familiar with different drugs groups of used in pregnancy	3.59±0.93
	Familiar with use of drugs in pregnancy and delivery and in some of gynecologic diseases	3.78±0.93
	Familiar with drug side effects and risks of drug on health of mother and fetus	3.78± 0.92
Technology and principles of nursing and midwifery and methods in operating and delivery rooms (theoretical)		3.33±1.12
	Familiar with technology and principles of nursing and midwifery and methods in operating and delivery rooms	3.38±1.14
	Familiar with environment, regulations and operating and delivery rooms equipment	3.27±1.17
Biostatistics		2.80±1.05
	Student acquaintance with the conventional methods in medical research	2.77±1.14
	The ability of students in collecting and expressing statistical information	2.85±1.06
	Student acquaintance with statistical inference in order to fully understand research papers	2.76±1.11
	Ability to carry out health and medical research	2.80±1.10
General psychology, woman and family		3.20±0.98
	Familiar and recognition Of psychology and social psychology principles and skills conjunction in applying these principles in relation to the client and family	3.23±1.00
	Sufficient knowledge on the social conditions of the living environment influencing the behavior	3.22± 1.01
	The relationship between the structure and social organization and health and treatment problems related to profession	3.13±0.99
	Familiar with order and disorder behavior	3.20±0.95
	Familiar with social and behavioral disorders, social violations and family abuse	3.28±0.98
	Familiar with social pathology, especially in women	3.16± 0.98
Principles of epidemiology and fight with diseases		3.21±0.91
	Familiar with the terminology of epidemiology and preventive medicine	3.00±1.00

Table 2. Continued

	Familiar with causes and the ways of diseases spread in the community	3.18±0.89
	Specific information about the epidemiology of some common diseases in the country (children and adults)	3.16±0.93
	Epidemiology and control of preventable diseases through vaccine	3.49± 0.84
Specialized English		3.09±1.01
	Familiar with scientific literature and terminology required and prefixes and suffixes related to medical and midwifery words	3.16±1.02
	Understanding and enjoying books and scientific journals related to profession in order to improve professionals knowledge	3.02± 1.09
Principles of mother and child nutrition		4.07±0.71
	Familiar with importance of nutrition and its role in individual health especially maternal and child health, regarding economic, social, health and culture standards	3.92±0.80
	Knowledge of proper nutrition and symptoms of malnutrition in mother and child	4.04±0.78
	Evaluation of nutritional status during pregnancy and lactation	4.14±0.76
	Nutrition education various periods of pregnancy, breastfeeding, childhood and preventing malnutrition in mothers and newborns	4.16±0.78
History, ethics, laws and rights in midwifery		3.29±0.88
	Familiar with midwifery in world and Iran and the history of midwifery development in recent centuries	2.97±1.06
	Familiar with moral and ethical standards and their application in personal and professional life	3.22±1.05
	Familiar with midwifery rules and regulations in Iran and the world and the relevant legal organizations	3.13±1.06
	Familiar with legal responsibilities of midwives	3.57±1.03
	Familiar with reproductive health rights	3.54±0.99
	Familiar with Islamic penal laws of misconduct midwifery	3.46±1.02
	Familiar with midwifery organizations, societies and associations (Iran and the world)	3.13±1.01
Law and forensic medicine in midwifery		3.23 ±0.99
	Familiarity with forensic medicine issues and law related to midwifery profession and midwives duties in this regard	3.23±0.99
Forensic medicine internship in midwifery		3.33±1.06
	Full recognition of legal cases related to midwifery and the ability to recognize legal cases from the illegal ones (abortion, etc.)	3.33±1.06
Embryology		3.61±0.93
	Familiar with stages of embryo formation and growth and development stages	3.54±0.93
	Familiar with factors affecting growth and t of the fetus in the womb	3.65±0.94
	Familiar with disorders related to the different stages of fetal development and factors affecting it	3.64±0.94
Genetics		3.27±0.94
	An understanding of the diagnosis principles of genetic diseases in uterus	3.28±0.98
	Acquiring skills needed in the implementation of ways and methods of prevention and surveillance principles (genetic disease) in the community	3.18±1.02
	Scientific and practical application of clinical and laboratory signs of midwifery	3.25±1.02
	Familiar with chromosomal abnormalities	3.37±0.96
Pregnancy and delivery 1(Normal pregnancy)		4.20±0.71
	Understanding the physiology of pregnancy, pregnancy diagnosis, understanding the basics of prenatal care, the importance of health care and nutrition during pregnancy, understanding common complaints and prevention ways, diagnosis of non-natural cases from natural ones and meeting the necessary actions	4.21±0.76

Table 2. Continued

	Health education to mother and family in physical, mental, emotional and social issues	4.20±0.75
Normal pregnancy internship		4.21±0.73
	Familiar with units providing prenatal care	4.17 ± 0.78
	Diagnosis and management of a normal pregnancy and skills at prenatal care	4.28±0.75
	Familiar with training and counseling of pregnant women related to pregnancy (pregnancy health care, common complaints, etc)	4.30±0.75
	Proper communication with mother and family	4.22±0.79
	Detection of abnormal cases supervised by trainer and taken care and related measures (referred etc.)	4.15±0.89
	Respect for human, Islamic and ethical professional rights against pregnant women, companions and staff	4.12±0.85
Pregnancy and delivery (2), Natural childbirth, safe and physiological pain-relief methods		3.81±0.94
	Sufficient knowledge about the physiological process of labor, control of the management and management and control and care of mother and fetal and neonate in all stages during natural childbirth and the postpartum period	4.02±0.98
	Familiar with pharmacological and non-pharmacological methods to reduce labor pain	3.63±1.12
	Correct diagnosis and appropriate decision to carry out the necessary care and provide essential training to mother with regard to scientific principles and ethical, social, cultural and legal	3.77±1.03
Natural childbirth internship		3.81±1.10
	Ability to manage and carry out natural delivery in women	3.74±1.21
	Ability to recognize natural childbirth from unnatural one	3.76±1.16
	Ability to do the necessary care of mother and neonate	3.91±1.08
	Ability to manage postpartum stage and control woman in labor terms such as bleeding	3.85±1.14
Pregnancy and delivery 3, unnatural pregnancy and delivery abnormal		3.80±1.17
	Diagnosis, management and care of mother and fetus in unnatural pregnancy and childbirth	3.80±1.17
Unnatural and natural childbirth internship		3.43±1.18
	Skills in carrying out natural and unnatural deliveries	3.55±1.30
	Diagnosis and care of unnatural deliveries, familiar with unnatural breech, twins, early and late deliveries	3.65±1.21
	Familiar with equipment such as fetal monitor, forceps, vacuum and its application and cesarean delivery	3.40±1.28
	Familiar with curage and curettage	3.10±1.31
Neonates internship		3.94±0.92
	Familiar with healthy and abnormal neonates examinations and care and training families	3.94±0.92
Neonates		3.96±0.83
	Familiar with states of newborns and infants in health and disease and diagnosis the needs and taking necessary actions	3.88±0.97
	Familiar with neonatal and infant diseases and disorders	3.82± 0.99
	Doing the necessary examinations in newborns and infants	3.85±0.93
	Recognizing the way of newborns and infants growth and development	3.97±0.89
	The role of breastfeeding on child health and providing training in this regard and help to prevent newborns and infants illness and mortality	4.13±0.84
	Regarding health principles and disease prevention through vaccination, and providing necessary training to mother and family	4.13± 0.85
Pregnancy and delivery 4, internal disease and surgery in pregnancy and delivery		3.68±0.86
	Recognition of basic needs and diagnosis of healthy and unhealthy states of pregnant women with Internal and surgical diseases and their effects in pregnancy and delivery and vice versa	3.61±0.95
	Identifying problems and needs of the mother and making appropriate decisions in selecting care priorities	3.71±0.91

Table 2. Continued

	The application of scientific findings in providing services to sick and vulnerable pregnant women and providing medical aid when necessary	3.69±0.91
	Identifying professional responsibilities and limits, considering ethics and Islamic principles during service delivery in order to save lives of mothers and babies and provide their health	3.70±0.91
Children diseases		3.69±0.91
	Recognizing healthy and unhealthy and disease states of child, recognizing the need and making decision to solve them	3.64±0.82
	Familiar with disorders and diseases of children, ability to do examinations and take necessary actions	3.53±0.86
	Training mother and family about the disease and necessary actions	3.65±0.83
	Considering health principles and preventive cases child health and training mother and family	3.95±1.16
Children diseases internship		3.55±0.85
	Familiar with children diseases and emergencies	3.45±0.95
	Communicate with children and parents	3.71±0.89
	Familiar with principles of treatment and care of sick child	3.50± 0.92
Medical semiotics and physical examination	Complete familiarity with the principles of physical examination and history taking and how to do physical examination	3.56± 0.91
Medical semiotics internship	History taking and physical examination and report	3.58± 0.96
Physiopathology and internal medicine 1, 2, 3		3.30±0.89
	Recognizing the basic needs and individual states in health and disease, especially in pregnant women	3.37±0.92
	The application of scientific findings and providing services and training to patients and providing medical aid and referral	3.26±0.96
	Identifying professional limits and responsibilities of and scientific and ethical norms	3.28±0.95
Physiopathology and surgical diseases		2.85±0.98
	Familiar with generalities of surgery, body fluid and acid and base balance	2.84±0.99
	Student acquaintance with the surgery of body organs (heart, digestive, urinary, etc)	2.85±1.06
Internal and surgical diseases internship		3.27±0.80
	Recognizing the basic needs and individual states in health and disease, especially in pregnant women	3.29±0.90
	Familiar with internal and surgical diseases and emergencies (the effects of disease on pregnancy and vice versa)	3.23±0.89
	Ability to recognize problems and needs of patients and make appropriate decisions in order to take the necessary actions	3.16±.094
	Identifying professional limits and responsibilities of and scientific and ethical norms	3.37±0.91
Communication, health education and counseling on mother and child health and reproductive health		3.61±0.88
	Communication principles with client	3.48±0.96
	Health education process	3.65±0.91
	Familiar with consultation process	3.66±0.95
	Application of the above in reproductive health, mother and child	3.66±0.92
Mother and child health and reproductive 4		3.80±0.75
	Promoting knowledge and attitudes about premarital, pregnancy and postpartum health	3.87±0.84
	Acquiring knowledge and attitudes to improve maternal and child health for mental and emotional health of mother and child	3.88±0.79
	Identifying needs and priorities of the planning based on health educational process	3.67±0.88
	Acquiring knowledge and attitudes about vulnerable groups such as the elderly, mothers, children, etc	3.70± 0.87
	Acquiring knowledge and attitudes about the importance of family planning methods and population	3.87±0.85

Table 2. Continued

Quality management and improvement in the maternal and child health and reproductive 5		3.34±0.97
	Familiar with management in reproductive health services	3.57±0.93
	Familiar with quality management and TQM strategy	3.11±1.15
Mother and Child reproductive health Internship		3.77±0.80
	The ability of consult with mother and family	3.77±0.92
	The ability to train mother and family and community	3.82±0.93
	The ability to examine mothers	3.88±0.82
	The ability to examine children	3.61± 0.94
	The ability to help the mother and baby and family	3.76± 0.85
Psychiatry principles in midwifery		3.34±1.02
	Familiar with definition, nature and application of psychology and common psychiatric disorders	3.28±1.05
	Familiar with changes and mental disorders in women, particularly at reproductive ages	3.40±1.06
Psychiatry principles in midwifery		3.25±1.02
	How to deal with mental disorders and referral	3.20±1.05
	Dealing with Pregnant women with mental health problems	3.34±1.04
	Familiar with mental health problems in infants and children	3.20± 1.08
Sexual function disorders		3.42±0.96
	Familiar with characteristics of sexual function and effective factors on it	3.44±0.98
	Familiar with sexual function at different ages and conditions, such as pregnancy	3.46±0.97
	Familiar with sexual function disorders	3.39±1.01
	Familiar about training and counseling in sexual behavior problems	3.40±1.01
Radiology, sinology and electro logy in Midwifery		3.17±1.07
	Familiar with radiology, radiotherapy, ultrasound, electro logy and physical therapy exercises	3.17±1.07
Management principles and their application in midwifery		3.06±1.01
	Familiarity with the basics and management of the process	3.03±1.03
	Application of management principles in managing education and services affairs in midwifery	3.08±1.03
Gynecological and infertility diseases		3.61±0.84
	Identifying women states in sickness and health conditions and reproductive system diseases and making decision on the appropriate treatment and necessary care priorities	3.59±0.87
	Ability to recognize, decide and take appropriate action	3.55±0.91
	Recognition the causes of female reproductive system disease and familiar with the diagnosis and prevention and treatment ways	3.66±0.87
	Identifying limitations and responsibilities, and considering ethical principles and Islamic norms	3.65±0.93
Gynecological diseases internship		3.78±0.84
	Ability to take history and do clinical examination in Gynecological diseases	3.84±0.91
	Ability to diagnose and treat some Women's diseases	3.80±0.88
	Ability to care client	3.72±0.93
	Familiar with the role of midwife as consular and trainer in Gynecological diseases and infertility	3.77±0.88
	Considering the professional duties and limitation in the field of clinical services with regard to ethical and religious principles	3.75±0.89

Table 3. Mean relevancy of professional roles and tasks in the curriculum with the ongoing roles and tasks of midwife

Role	Job description(task)	Mean± SD
Diagnosis, care- intervention		3.60±0.82
	Effective professional communication with patients, colleagues and officials	3.35±1.07
	Taking clients history and recording in file	3.48± 1.05
	Physical examination of the clients and recording in file	3.54± 1.05
	Requiring the necessary tests for prenatal care according to national guidelines	3.75±0.96
	Identifying needed care and interventional actions for patients	3.55±0.96
	Identifying abnormalities and timely referral to the appropriate specialist and following up referral cases	3.65±0.91
	Doing pregnancy care under normal circumstances and referring cases on the basis of instructions	3.78±1.94
	Conducting and performing safe natural delivery	3.48±1.17
	The use of authorized care methods	3.66±0.93
	An accurate record of all actions taken in the file	3.74±0.97
Identifying physical, mental and emotional needs of clients and recording in file	3.60±0.95	
Educational		3.98 ±0.78
	Training client and her companion in terms of self-care and refer for care	3.64±0.95
	Training pregnancy nutrition	4.02±0.87
	Training tips related to breastfeeding	4.11±0.84
	Training to identify risk factors in pregnancy	4.17±0.83
	Training tips related to contraception	4.17±0.81
	Training delivery preparation	3.81±0.01
Participation in continuing education programs	3.93±0.93	
Consultation		3.95±0.90
	Providing female puberty stage counseling before pregnancy	3.83±0.98
	Providing counseling for pregnancy period	4.11±0.83
	Providing counseling for postpartum period	3.11±0.81
	Counseling on sexual health	3.89±0.96
	Counseling adult health	3.33±1.04
Providing Consultations on family planning	4.13±0.78	
Prevention		3.77± 0.87
	Planning and implementation of prenatal care to clients	3.94±0.92
	Participation in screening programs	3.86±0.95
	Participation in research projects	3.36±1.25
	Vaccinating mother and newborn under supervision	3.90±0.94

students and graduates of reproductive health in terms of specialized training courses, relevancy of the curriculum with the field mission and reformation of the specialized courses, presentation were among the results. Shirjang et al⁸ studied the employees of public health and found that the general content of courses did not align accurately with the requirements of their job.

In this study, using viewpoints of midwives at the health units of Tabriz on the consistency of their role and tasks included in the curriculum with their current role and tasks, useful information can be provided for educational planners. Based on the views of employed midwives, the task of effective and professional communication with clients, colleagues and officials in terms of the diagnosis and care intervention had the lowest relevancy, which seems to be due to inadequate education in the curriculum, the diversity of tasks and a plurality of clients. Proper communication with patients can lead to getting enough information, accurate diagnosis and appropriate treatment.^{18,19} In the study of Mirhaghjou et al¹⁸ on communication skills with patients and related factors in

nursing students, it was mentioned that 60.2% of students did not receive special training regarding the necessary communication skills, while the need for these skills is emphasized from very beginning at the university. The study of Taghizadeh et al¹⁹ on applying communication skills for midwives showed that the majority had undesirable verbal and nonverbal communication skills. Communication, like other midwifery skills, requires theoretical knowledge and practical learning; thus, it is recommended that communication and communication skills topics be given more attention in the midwifery curriculum.

In the education role, the duty of training clients and caregivers in terms of self-care and referrals for care had the least relevancy with current tasks, while this responsibility is associated with midwives' job descriptions based on the ministerial training package for the population of midwives. The low relevancy is due to insufficient information of staff in the field of self-care education. In the health care system, due to the broad spectrum of the target population referred to midwives,

providing appropriate training for each group about self-care, putting more emphasis on the relevant existing course topics or adding separate topics seem necessary.

In the consulting role, postpartum consulting responsibilities had the lowest relevancy, which could be due to the referral of pregnant women to the private sector or insensitivity or poor knowledge and information or consulting skills of the staff. Lotfipour et al²⁰ also mentioned health education, postpartum education, postpartum nutrition and physical disorders after birth as training needs for midwives, which was consistent with results this study.

Mirzakhani et al²¹ evaluated the clinical skills of midwifery graduates and reported that, on average, 90% of graduates have learned diagnosis and counseling in postpartum problems in their curriculum. In a study conducted by Jacob et al on the analysis of midwives and nurses' tasks, 72% of participants stated that they were trained on postpartum care at the university.²² Given the important role of the midwife in identifying problems and preventing complications and mortality, examining the causes of low relevancy in future studies seems necessary.

In the prevention role, the lowest relevancy was in participation in research projects from the staff viewpoints, which may be due to the lack of necessary skills in this regard. In a similar study done by Shirjang et al⁸ on the relevancy of public health courses, the staff reported that it is necessary that more applied research be presented. Using colleagues' potential for cooperation in research programs is essential for the country's health system. Therefore, authorities and policy makers should take into consideration the necessity of participation by employed midwives and colleagues' motivation to willingly take part in research.

On the other hand, the least expected duty in the curriculum was considered to be in the prevention role. It should be noted that prevention is a top priority of the health system with regard to the burden of non-communicable diseases such as cardiovascular disease and cancers in third world countries and considering effective risk factors in the emergence of the diseases such as hypertension, diabetes, and hepatitis; thus, the need for transparency and more attention to theoretical and practical training in the prevention area is clear.

One of the limitations of this study is that relevancy was reviewed from the viewpoints of experts via survey. It is recommended that extensive studies on the relevancy of the roles and tasks of midwives in the curriculum with their current tasks be done multilaterally through viewpoints of experts, students, and scientific and technical experts and the graduates of the field to provide more credible and reliable results to guide educational reform.

Considering the population of this study, the results are generalizable to Tabriz health center and units.

Conclusion

The results of this study on the relevancy of specialized courses topics with current tasks of midwives working in

health care units showed that the average use of midwives was moderate on only one fourth of the training courses provided; thus, it must be revised. The recommendations for reforms include updating the curriculum as well as the content of these courses and/or designing practical activities and internships for more specialized courses.

To increase the relevancy of professional tasks and roles with the current tasks, the use of the employed midwives' comments on the revision of the midwifery curriculum and the provision of appropriate educational topics while studying for better preparation for doing assigned tasks are suggested as appropriate considerations for improvement.

Ethical approval

The ethical review committee of Tabriz Universities of Medical Sciences approved the present study and all ethical considerations observed during the study and confidentiality of information and names of the participants was emphasized.

Competing interests

The researchers declared no conflict of interest.

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