The role of midwives in implementing reproductive health services in Islamic Republic of Iran

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Abstract

Background: It is essential to study the availability of reproductive health services and the capacities of providers, to provide evidence for improving service quality.

Aims: To identify the role of midwives in the provision of reproductive health services and recommend improvements.

Methods: A national review of government health resources in the Islamic Republic of Iran was conducted to explore available reproductive health services. Through semi-structured interviews with 30 midwives, information was collected about the compatibility of services with the capacity and scope of the activities of midwives. A panel of 12 experts was assembled to develop a proposed service package. The content analysis method was applied to data analysis and interpretation.

Results: The service package developed covered 82 services that midwives can offer at the 8 healthcare facility groups. Although midwives were trained to manage a range of primary and gynaecological care services, certain essential aspects of reproductive health services were not being delivered on the frontline. These include sexually transmitted diseases and human papilloma virus management, diagnosis and treatment of common gynaecological problems, sexual education and counselling, and childbirth services. Midwives were not adequately engaged to provide reproductive health care at the secondary level.

Conclusion: There are drawbacks to the current reproductive health service delivery in the Islamic Republic of Iran. The service package designed and proposed in this study aims to strengthen reproductive health care services and planning and better integration of midwife-led programmes.

Keywords: reproductive health services, midwifery, service package, role of midwives

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Introduction

The health of women, mothers and their families is influenced by access to reproductive health services and information. The term "reproductive health services" can be defined as a set of planned interventions related to the reproductive system, which can be offered to target populations to maintain and improve their health status (*1*). Reproductive health services encompass a broad range of issues, including maternal and neonatal care; mother and infant nutrition; family planning consultation; sexual health care; prevention of infertility; and safe abortion services (*2,3*).

Providing high-quality services to individuals is essential and can lead to better health outcomes (*4*).

Healthcare planning is fundamental to the provision of comprehensive services by all categories of service providers, including doctors, midwives, and other healthcare service providers. Midwives are the first-line service providers for sexual and reproductive health. They can offer around 80% of the service elements in the reproductive health service package to target populations (*5,6*); they enable the provision of services that are appropriate for the culture and religion of individuals, and can create a conducive environment for women's empowerment. Midwives are an integral part of the reproductive healthcare delivery team, and they can play a fundamental role in attaining the Sustainable Development Goals (*7*).

Despite midwives' capacity to provide reproductive health services, there is no consensus on the totality of the professional tasks and responsibilities that they can accomplish in healthcare facilities (*8*). There is a tendency globally to provide more-accessible and patient-centred reproductive health services (*2*). It has been emphasized that the scope of midwives' practice is not limited only to pregnancy, and expanding their roles improves the quality of services (*9*). Midwives are well placed within communities, therefore, defining and expanding their roles will result in better accessibility and availability of sexual and reproductive healthcare (*10*).

In the Iranian health system, the Ministry of Health and Medical Education organizes and governs service programmes through the medical universities at both national and regional levels. The provision of a comprehensive range of reproductive health services has been emphasized broadly in health service packages, but few studies have been conducted on the role and scope of midwifery activities in the Islamic Republic of Iran (*11*,*12*). In this study, the role of midwives in reproductive service provision was reviewed to better understand their duties and potential role.

The aim of this study was to develop a reproductive service package and identify the role of midwives in the provision of services to clearly highlight the components of reproductive health service provision and the roles of midwives based on their current professional experience in the Islamic Republic of Iran.

Methods

Document review

During the first step, the service delivery guidelines for reproductive healthcare in the Islamic Republic of Iran were reviewed. An electronic online search was conducted manually by 2 of the authors through published contents of the Ministry of Health and Medical Education guidelines and related online clinical practice protocols during the period 2010–2020. The materials that were reviewed included the instructions of the Ministry of Health and Medical Education on reproductive health care, clinical protocols for service delivery, description of the duties of the midwifery workforce, educational curricula, and other relevant national documents.

Concept-based search key terms were "mother", "pregnancy", "conception", "infant", "sexual health", "STD", "HIV", "reproductive health", "child", "women's health", "newborn", "midwife", "childbirth", "labour and delivery", "menopause" and "adolescent health". Each author independently assessed the search results.

A total of 50 documents were retrieved, 35 (70%) were selected and included based on eligibility. Inclusion criteria were: documents relating to reproductive health care, at the primary and secondary care level and explaining the reproductive health service and its components.

All of the extracted service components were framed as discrete midwifery tasks in an initial (introductory) service package.

Validation process

Validation of the proposed package was conducted using the data collected from key informant interviews and opinions of the expert panel.

Key informant interview

The researchers contacted the relevant clinical units and selected participants by convenience sampling among the midwives working in these sections who had at least 5 years of work experience in health services provision. Participants were selected from different clinics in line with the range of reproductive health services. In sampling, the variability in terms of age (25–55 years), work experience (5–25 years), and being employed in various midwifery fields (prenatal, postnatal, labour, delivery room, hospital clinics, and primary health care centres) were taken into consideration.

The study aims were explained to the individuals who agreed to participate. The practitioners voluntarily consented to give time for an interview. Short face-to-face interviews were conducted by visiting the participants in their departments during their break times. Each appointment lasted 20–30 minutes. The designed package was provided to each participant, and they were asked to comment on the service package, available interventions, and the role of midwives in delivering services. They revised the package by adding services that needed to be offered but had not been included or removing items from the package. Sampling continued until there was no change in the list of services at each work section.

In total, 30 midwives who had clinical service management experience participated as key informants: 10 participants from extensive primary healthcare networks and 20 from secondary and tertiary hospitals. The revised package based on the key informants' comments was then emailed to the participants and confirmed by them.

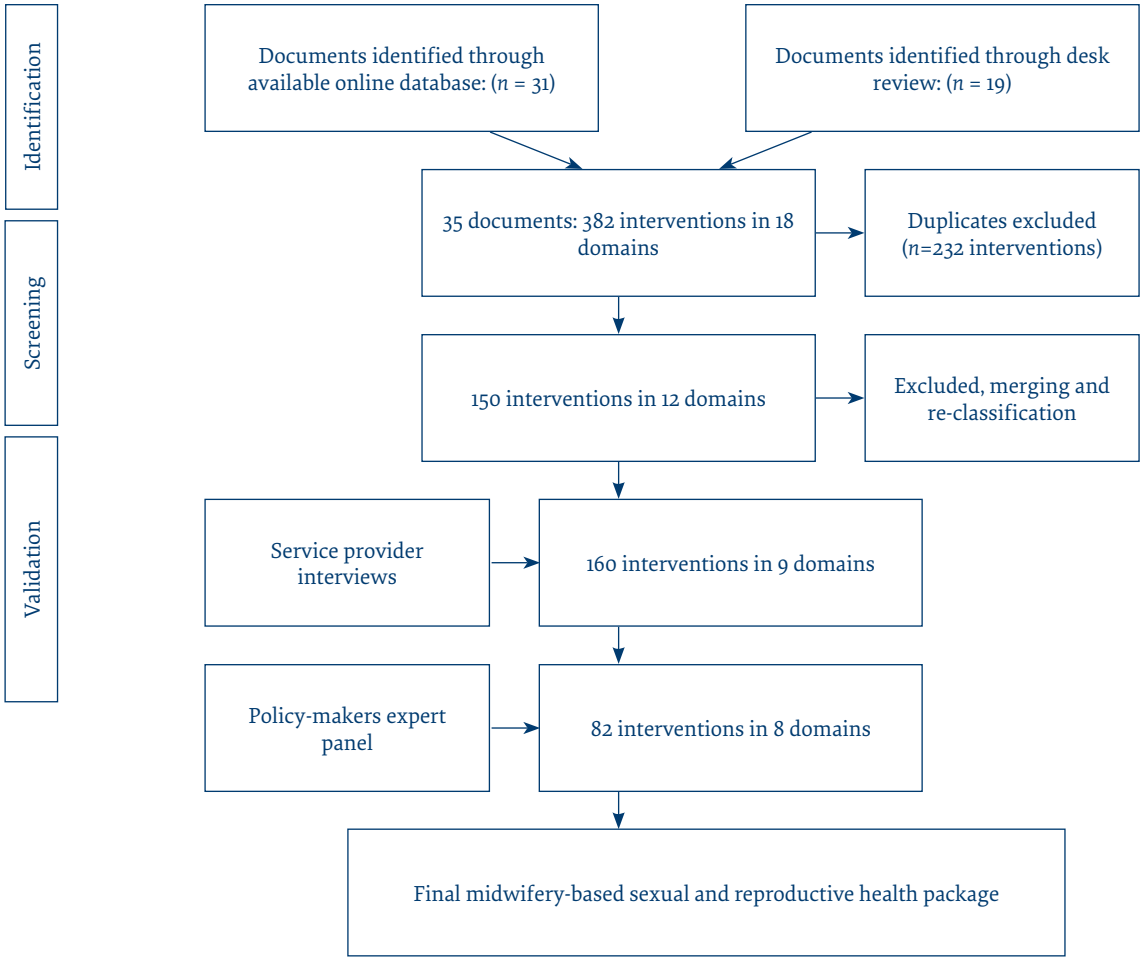
Expert panel meeting

A total of 15 experts (including planners and policymakers) in sexual and reproductive health services were invited to attend an expert panel meeting. Experts were selected by the research team from the fields of midwifery, reproductive health and management. Three of those contacted declined due to lack of time. Twelve experts (80%) (4 clinical midwives managers, 4 planners and policymakers at the health ministry level and 4 sexual and reproductive health experts at the university level) accepted our invitation. The service list prepared in the previous step was provided to all experts in advance. The panel members reviewed the services and provided their comments regarding "What is a necessary component of midwifery-led reproductive health service package?" and "What are the current service shortcomings?" and made a series of recommendations. All comments gathered from the experts were organized and reduced through categorization, and patterns of data were identified. The package that was developed was finalized with 82 services in 8 domains. Figure 1 shows the flow diagram for the search retrieval.

Data analysis

Qualitative data were analysed manually by applying the conventional content analysis method. All collected material was transcribed verbatim. The text was read as a whole and codes were assigned to every concept and meaning unit. Codes and concepts were checked by 2 authors. Extracted codes were placed in subcategories

Figure 1 Flowchart outlining search retrieval and selection process



based on similarities and differences. The main categories were then organized (13).

Data integrity

A variety of reputable sources were identified. Documents that were more comprehensive, clear, and understandable were included in the analysis. The driven codes from texts and meetings were checked by 2 authors to validate their reliability. Method triangulation was also used to increase the credibility and validity of the research findings.

Ethics

This study was part of a PhD thesis approved by the ethics committee of Tehran University of Medical Sciences protocol number IR.TUMS.FNM.REC.1399.103. All individuals completed the informed consent form for the study and participated voluntarily.

Results

A total of 42 participants, 12 policymakers and planners and 30 clinical midwives, participated in this study. The majority of the participants were women (*n* = 40). Thirteen had a specialized doctorate or PhD, 15 had a Bachelor's degree in midwifery, and 14 had a Master's degree. The average working experience was 8.2 years. Most participants were in the age group 40–50 years (*n* = 36). All participants had worked in departments related to midwifery. The people invited to the expert panel had an average of 9.7 years of management experience.

In this study, a comprehensive services package in reproductive health, taking into account the role of midwives, was developed. Data analysis led to the extraction of 8 main categories as service provision locations and 82 services as follows: primary health care centres (18 components); AIDS/HIV centres (6 components); obstetrics/gyneacology clinics of hospitals (9 components); infertility wards (5 components); obstetrics/gyneacology emergency departments (8 components); labour and delivery rooms (26 components); gyneacology wards (4 components); and neonatal wards (6 components). Table 1 shows the list of these services in different sections and the related service components for each one.

Relatively complete service components are available and are being provided, however, the current service package has its strengths and weaknesses. The participation of midwives in providing services at the community level was one of the positive points observed. They regularly attended schools health programmes and national disease monitoring programmes. However, there

Table 1 Reproductive health service package

Setting	Available tasks/interventions	Services not currently available which could be provided by midwives
Primary care – extensive primary health care network		
Primary health care centres	• Preconception consulting • Marriage education • Routine pregnancy visits • Iron and folic acid supplementation programme • Preparation for childbirth programme • Postpartum care • Youth and adolescent health • In-school care of children • HIV prevention and education • Cervical screening test • Breast examination • Menopause care • Neonatal and child development care • Immunization of mothers and infants (according to the national vaccination calendar) • Prevention of accidents in childhood programme • National programmes related to mother and child health • Family planning services • Treatment of vaginitis	• Human papilloma virus (HPV) management (diagnosis, vaccination) • Common gynaecological problem diagnosis and treatments • Pelvic examination • Sexual counselling • Safe abortion care[a] • Physiological childbirth • Vaginal birth[b] • STDs management
AIDS/ HIV centres	• Routine care of women with high-risk behaviour • Management of sexually transmitted infections • Sexual counselling • Care in sexual violence • HIV antibody testing • Patient education	
Secondary and tertiary care – public hospitals		
Obstetrics and gyneacology clinics in hospitals	• Common gynaecological problem diagnosis and treatments • Common gynaecological problems in girls • Management of sexually transmitted diseases (STDs) • Pap smear test • Breast examination • Prenatal care • Postnatal care • Pelvic floor prolapse diagnosis • Information and follow-up of women's health problems	• Sexual education and consultation • Education for puberty • Education for menopause • Women's self-care
Infertility wards	• Infertile couple's first evaluation • Care before and during outpatient procedures • Care before and during inpatient procedures • Care after infertility operations • Patient education and consultation	
Obstetrics/gyneacology emergency departments	• Triage of patients • Patient hospitalization process • Regular examinations of pregnant women • Care of nonemergency patients • The non-stress test/oxytocin challenge test • Care of outpatient emergency patients • Care of patients during hospitalization • Patient education and consultation	

Table 1 Reproductive health service package *(concluded)*

Setting	Available tasks/interventions	Services not currently available which could be provided by midwives
Labour and delivery room	• Mothers' education • Support of mothers during labour • Doula care • Nonpharmacological pain relief • Support of mothers for Entonox usage • Fill in partograph chart • Normal delivery • Episiotomy or lacerations: repair • Early postpartum care in labour • Skin-to-skin care on breastfeeding • Care of healthy neonates • Care of women with medical conditions during labour and birth[a] • Induction and augmentation • High-risk delivery care[a] • Assistance birth[a] • Operative birth[a] • Diagnostic tests • Blood and blood products infusion • Injection of drugs (antibiotics, anti-hypertensive drugs, magnesium sulphate, etc.) • Send patient for operations (caesarean section/curettage, etc.) • Resuscitation of mothers or neonates • Breastfeeding education • Discharge education • Telephone follow-up • Supporting mother re perinatal death • Safe abortion care	• Family support • External cephalic version • Alternative, complementary therapies • Water immersion in labour and birth • Physiologic childbirth • Home visits
Obstetrics/gyneacology wards	• Care for hospitalized women in the ward • Care for women before and after surgery • Education and consultation • Nursing care procedures	
Neonatal ward	• Neonatal transportation • Infant physical examination • Assessment for infant's well-being • Care of unhealthy neonates • Care of healthy neonates • Parent education	

[a]Based on the national abortion laws, midwives could have supportive roles in patient care. They can take part in interventions and consultations to reduce unsafe abortion, care for women during the interval between administration of medications and completion of abortion, and management of abortion complications. Currently, all the abortive cases are referred to hospitals.
[b]In the structure of the Iranian health network, natural childbirth is conducted by midwives in remote and rural areas at the first level of care, but this service is not possible in urban primary health centres. It is suggested to add the possibility of conducting natural childbirth to frontline services packages.

was a gap between the components of services scheduled in the national guidelines and available services in the clinical field. Unfortunately, some essential components of reproductive health care were not appropriate or continuously accessible. Services that were not provided at primary health centres included STD/HPV management, HPV vaccination, diagnosis and treatment of common gynaecological problems, sexual counselling, physiological childbirth and safe abortion care (Table 1). The participants reported inadequate insurance coverage for midwifery services, especially for the first level services, leading to the increased fragmentation of service delivery.

Low quality of education and counselling services to patients was mentioned in regard to the hospital clinic services. Patient education and counselling, especially regarding the issues of sexual health, puberty, menopause and women's self-care, were not adequate. Service deficiencies in the delivery and birthing room were reported: there was no provision for mothers to give physiological birth or birthing in water. Likewise, some services such as nonpharmacological pain relief during labour, such as aromatherapy, massage or giving birth with the support of a doula, were not accessible to women in all healthcare settings.

Midwives only educated mothers about the most common problems. Follow-up services for mothers did not continue after discharge from hospital, and continuous care was limited to telephone follow-up for high-risk pregnancies.

Discussion

Reproductive health services cover a broad spectrum of care. In previous studies, specific service packages were designed to provide affordable health interventions for a variety of healthcare recipients (adolescents, women with HIV and humanitarian refugees, etc.). Less attention has, however, been given to the activities of midwives as service providers (*14–16*). Although it has been stated that midwives play a pivotal role in reproductive health provision, the service components and tasks that midwives carry out were rarely seen as well-organized in the form of a midwifery-led service package.

This study outlines a comprehensive set of reproductive health tasks by Iranian midwives at different service delivery sites. In a similar study, Gu et al. provided a task list of services for Chinese midwives during pregnancy, delivery and postpartum, which is similar to our findings (*3*); the scope of practice for midwives in hospital wards and clinics has also been taken into consideration in our study. In a population-based survey, Worku et al. examined the available components of reproductive health services in 6 regions of Ethiopia according to type of skilled attendant (*17*). The interventions performed by midwives in that study are in line with our findings, the difference being that delivery care was available in most of the health centres in Ethiopia. Based on the Korean work guidelines, midwives perform 56 tasks in 7 areas, mostly in pregnancy and childbirth management. Sexual health education and counselling were not offered in the Islamic Republic of Iran at any level (*18*).

Comments by the study respondents show that many services that were not available in the first line of service could be provided by midwives because they have acquired the required professional qualifications. The service list could become more comprehensive by adding neglected services. Adding services to the existing service package may require additional training courses. A needs assessment study of Iranian midwives showed that they needed to improve their knowledge and skills, especially in the management of pregnancy complications and childbirth outside the hospital (*19*). These skills were not applied in the workplace, and may have been forgotten over time. Comprehensive planning to expand the services to rely more on midwives could help to fill the existing service gap. This requires that the regulations and rules support midwives to use their capabilities to the maximum (*20,21*).

Regardless of the need for legal and political support for the provision of comprehensive reproductive health services, raising public awareness about the role of midwives could be helpful (*22*). Taking reproductive health services away from hospital environments to the primary and community levels has recently gained more attention (*23–25*). Provision of services by midwives at the first-line level is cost-effective and could reduce the burden of referrals for outpatients (*26*).

Using the midwives' capacities for intervention relating to safe abortion care, prevention of sexually transmitted infections, cancer education, birth planning, early postpartum home visits, and removal of retained products of conception have also been mentioned in similar related studies (*17,27–30*). A Japanese study highlighted the role of midwives in educating fathers, helping in decision-making, gender equity, improving fertility rates and supporting infertile couples, and expressed the belief that expanding the role of midwives can provide the basis for addressing social health issues (*31*).

Service packages that are tailored to the needs of the people and the competence of the providers will be a powerful tool for policymaking and improving health outcomes (*32,33*). The package presented in this study can provide the infrastructure to improve national planning in the management of the midwifery workforce. It can be used to advance towards a more comprehensive structure for midwifery services and to standardize the responsibilities and professional roles of midwives.

This study was limited in that we could not interview all midwives working in the different cities in the country; it was conducted in Tehran, the capital of the Islamic Republic of Iran. Perhaps midwives who have the experience of working in specific environments could be more creative and innovative in defining this service package that we developed. The work of the midwives included only clinical activity at the health centres or hospitals and did not include their voluntary duties in associations, universities or communities.

Conclusion

In this study, a package of reproductive health services which takes into consideration the role of midwives was developed and its shortcomings considered. This comprehensive service package can help achieve better planning for midwifery and reproductive health.

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Competing interests: None declared.

Rôle des sages-femmes dans la mise en œuvre des services de santé reproductive en République islamique d'Iran

Résumé

Contexte : Il est essentiel d'étudier la disponibilité des services de santé reproductive et les capacités des prestataires, afin de fournir des données probantes pour améliorer la qualité des services.

Objectifs : Déterminer le rôle des sages-femmes dans la prestation de services de santé reproductive et proposer des améliorations.

Méthodes : Un examen national des ressources gouvernementales en matière de santé en République islamique d'Iran a été mené pour explorer les services de santé reproductive disponibles. Des entretiens semi-structurés avec 30 sages-femmes ont permis de collecter des informations sur la compatibilité des services avec les capacités et la portée des activités des sages-femmes. Un groupe de 12 experts a été constitué pour élaborer une proposition d'ensemble de services. La méthode d'analyse du contenu a été appliquée à l'analyse et à l'interprétation des données.

Résultats : L'ensemble de services mis au point couvre 82 services que les sages-femmes pouvaient proposer aux huit groupes d'établissements de santé. Bien que les sages-femmes aient été formées à la gestion d'une série de services de soins primaires et gynécologiques, certains aspects essentiels des services de santé reproductive n'étaient pas assurés en première ligne. Il s'agit notamment de la prise en charge des maladies sexuellement transmissibles et de l'infection par le virus du papillome humain, du diagnostic et du traitement des problèmes gynécologiques courants, de l'éducation et du conseil en matière de sexualité et des services d'accouchement. Les sages-femmes ne sont pas suffisamment engagées pour fournir des soins de santé reproductive à l'échelon secondaire.

Conclusion : La prestation actuelle des services de santé reproductive en République islamique d'Iran présente des défauts. L'ensemble de services conçu et proposé dans la présente étude vise à renforcer les services et la planification des soins de santé reproductive ainsi qu'à mieux intégrer les programmes dirigés par des sages-femmes.

دور كادر القبالة في تنفيذ خدمات الصحة الإنجابية في جمهورية إيران الإسلامية

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الخلاصة

الخلفية: من الضروري دراسة مدى توفر خدمات الصحة الإنجابية وقدرات مقدمي الخدمات، من أجل توفير الدلائل اللازمة لتحسين نوعية الخدمات.

الأهداف: هدفت هذه الدراسة الى تحديد دور كادر القبالة في تقديم خدمات الصحة الإنجابية والتوصية بتحسينها.

طرق البحث: أُجريَ استعراض على الصعيد الوطني للموارد الصحية الحكومية في جمهورية إيران الإسلامية لاستكشاف خدمات الصحة الإنجابية المتاحة. ومن خلال مقابلات شبه منظمة مع 30 فردًا من كادر القبالة، جُمعت معلومات عن توافق الخدمات مع قدرات كادر القبالة ونطاق أنشطته. وشُكِّل فريق مؤلف من 12 خبيرًا لوضع مجموعة خدمات مقترحة. واستُخدمت طريقة تحليل المحتوى في تحليل البيانات وتفسيرها.

النتائج: شملت حزمة الخدمات التي وُضعت 82 خدمة يمكن لكادر القبالة تقديمها في مجموعات مرافق الرعاية الصحية الثمانية. وعلى الرغم من تدريب كادر القبالة على إدارة مجموعة من خدمات الرعاية الأولية وخدمات الرعاية المتعلقة بالأمراض النسائية، فإن بعض الجوانب الأساسية لخدمات الصحة الإنجابية لا تُقدَّم في الخطوط الأمامية. وتشمل هذه الجوانب الأمراض المنقولة جنسيًّا، و العلاج فيما يتعلق بفيروس الورم الحليمي البشري، وتشخيص المشاكل الشائعة المتعلقة بالأمراض النسائية وعلاجها، والتثقيف والمشورة الجنسية، وخدمات الولادة. ولا يشارك كادر القبالة بالقدر الكافي في توفير الرعاية الصحية الإنجابية على المستوى الثانوي.

الاستنتاجات: ثمة عيوب في تقديم خدمات الصحة الإنجابية حاليًّا في جمهورية إيران الإسلامية. وتهدف مجموعة الخدمات المصممة والمقترحة في هذه الدراسة إلى تعزيز خدمات الرعاية الصحية الإنجابية وتحسين التخطيط لها وتحسين تكامل البرامج التي يشرف عليها كادر القبالة.

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