

Scope of Practice of Forensic Midwifery: An Integrative Review

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ARTICLE INFO	ABSTRACT
<p><i>Article type:</i> Review article</p>	<p>Background & aim: Forensic midwifery is a new major which has been established in response to the need of endangered women for forensic services and also the lack of service provision in this domain. However, there are ambiguities in the definition of this major and its scope of practice. The present study was conducted to investigate the scope of practice in forensic midwifery.</p> <p>Methods: In this integrative review, the articles related to the subject of interest were searched in several database including PubMed, Scopus, CINAHL and Google Scholar. All kinds of publications including reviews and standards, qualitative, quantitative, or mixed methods studies were included in the review regardless of the publication date. The data related to the scope of practice in forensic midwifery were extracted using a wide and in-depth analysis, in addition to using an expert panel for validation. To do the analysis, every concept representing scope of practice was coded and similar codes were classified into themes.</p> <p>Results: The search process resulted in retrieval of 43 articles. Based on the reviewed papers, the scope of practice in forensic midwifery divided into four categories including the practices related to reproductive issues, violence, malpractice in obstetrics and gynecology profession, and the improvement of the professionalism in midwifery domain.</p> <p>Conclusion: Considering the potentials of forensic midwifery, the graduates of this major could have an important role in the protection of women's rights in forensic situations.</p>
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Introduction

The presence of midwives at mothers' bedside to help with labor has a long history (1, 2). The mothers' need to receive care and recommendations for childbirth has extended to pregnancy and postpartum periods over time. Accordingly, some people started to take the responsibility for providing these services during the mentioned periods (1, 3). Over time, people rescuing women during their labor as the most important period of life gained their trust and accompanied them during their entire life, from

puberty and even earlier until the reproductive age, pregnancy, menopause, and thereafter. These individuals took responsibility for providing various services to improve the quality of life from different aspects (4).

The fulfillment of these needs requires the presence of advanced practitioners, who could provide affordable, high-quality, and accessible services to special groups (5, 6). In the modern world, these experts are midwives who receive various trainings to provide extensive services to

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women and families (7). Depending on the social context, definitions, and laws, the services provided by midwives or nurse-midwives vary across a broad spectrum (8) to satisfy the current and growing needs of women (9, 10).

Forensic medicine is one of the services that can be provided by midwives in certain situations (11). This field facilitates the provision of services for the women, who are the victims of rape/domestic violence or have experienced medical errors or malpractice and intentional or unintentional injuries during pregnancy from legal aspects (12). Therefore, the improvement of education in forensic field is a matter of paramount importance since it not only leads to the establishment of client trust but also resolves the legal issues (13-15). To date, forensic medicine specialists and forensic nurses have had the responsibility to provide care in such situations (12).

Forensic nursing is one of the developed roles that have an effective role in protecting patient rights and improving the health outcomes, especially in the vulnerable groups of society (12, 16). There is an increasing demand for forensic services, especially among women. The midwives are the first-line care providers witnessing forensic evidence; accordingly, they have a great opportunity to provide this group with comprehensive care (17).

New orientations and roles have been created for midwives and nurses all around the world (17, 18). Using the basic skills and knowledge of midwifery, the midwives could be respondent to the financial and executive challenges for providing health services, fulfillment of patient expectations, satisfaction of need for better healthcare, lack of specialized and affordable human resources in special clinical conditions, and coordination of health services, especially for women (14, 19, 20).

Considering the needs for such services, forensic midwifery was established in Iran, and after years of effort, it was launched as a sub-branch of the Master of Midwifery. The main focus of forensic midwifery is the health and legal issues in the field of gynecology and midwifery. According to the course syllabus of the Master of Midwifery, the students are introduced to such concepts as the application of modern technology in forensic medicine, sociology, social pathology

of women, judicial rules and criminology, and violence against women and children (21). Although a primary curriculum has been developed, there is no accurate definition of the scope of practice in forensic midwifery (17). Ambiguity in the assigned role and lack of an accurate definition are among the most important confronted challenges in this field of study (22).

There are various barriers to the development of a new role, including financial barriers and interference with other professions (23). Role ambiguity, as a confronted problem for new specialties, could be caused by the lack of sufficient clarification or establishment of a proper relationship with relevant personnel, as well as the nondetermination of the goals and boundaries of the new role (24). This ambiguity could be a barrier to its application and be associated with negative outcomes for the personnel, patients, and organizations (25). Service unclarification, lack of an official professional path, and disproportion between the provided education and societal needs would demotivate the students to further study or continue the new majors (26).

Nobody can independently determine the boundaries of services for the providers of primary healthcare. In a multidisciplinary team, the boundaries of performance are constantly changing in order to enable responding to the extending and newly rising healthcare needs (27). On the other hand, the provision of service description and clarification of communication lines and associated goals would be an effective help in establishing a correct and desirable working condition (28), advancing the profession, and achieving internal and external rightfulness (29).

Based on the Midwifery Outlook Document, the first special goal of this discipline is to achieve an appropriate occupational position for all graduates of midwifery based on the approved duty descriptions. The only way to achieve this goal is that all midwifery graduates, including those majoring in forensic midwifery, would be provided with a clarified duty description to define the position and job duties of these people. With this background in mind, the present study was conducted to determine the scope of practice in forensic midwifery by finding the roles defined

in the present literature. Regarding this, the aim of this review was to explore and synthesize all

practices that a forensic midwife could do after graduation from forensic midwifery.

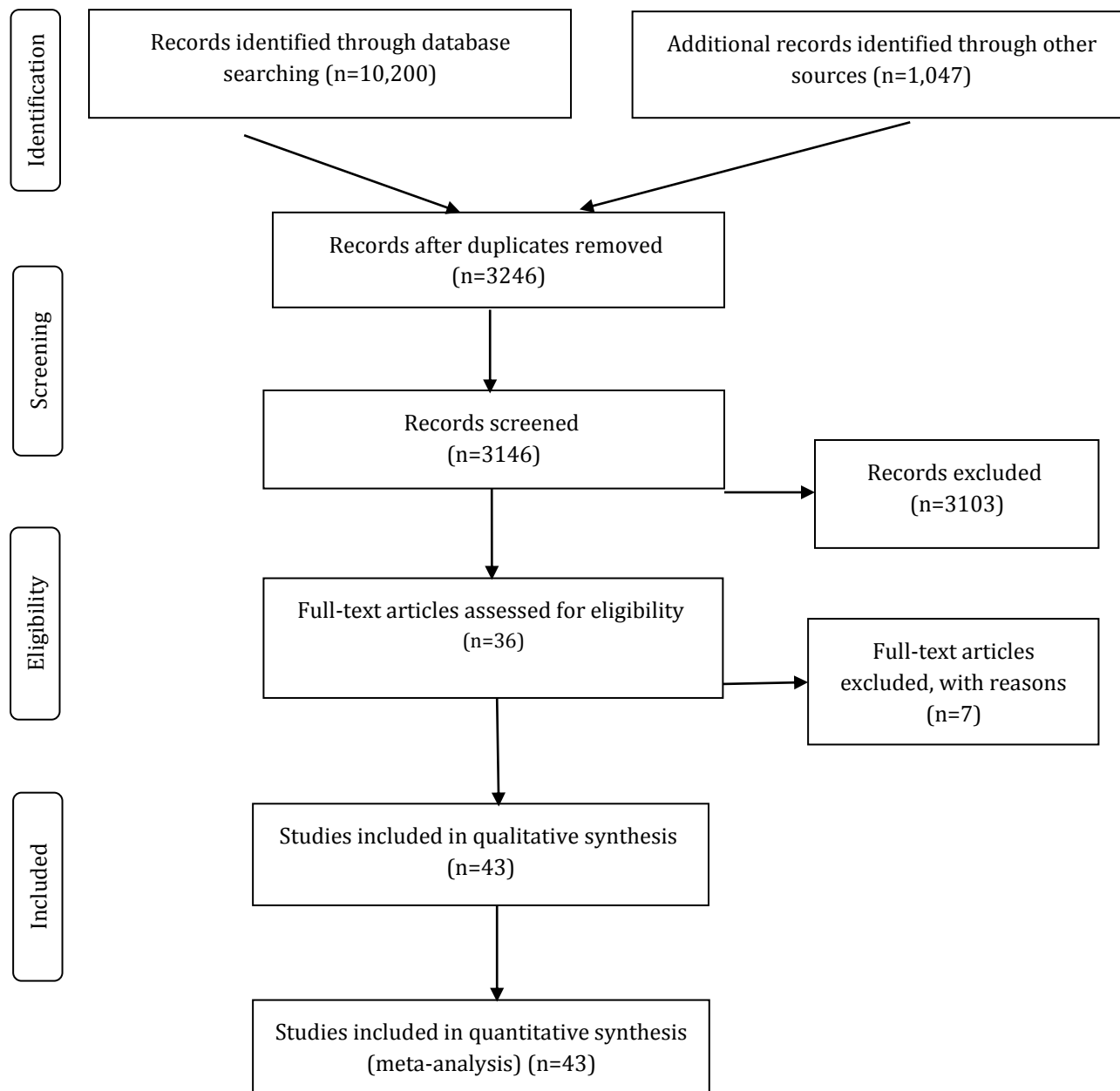


Figure 1. PRISMA flow chart of the search and screening process (84)

Materials and Methods

An integrative review method was undertaken to address the scope of practice in forensic midwifery in various fields. This method was employed to perform a comprehensive synthesis of the existing knowledge as it involves the systematic searching of all related literature (30).

The search strategies were developed by two authors. Almost all data were achieved from published documents. For the purpose of the study, an extensive and in-depth searching process was performed using such databases as IAFN, Ovid, Scopus, CINHAL, Web of Science, PubMed, ScienceDirect, and WHO, as well as books related to forensic medicine. The search was accomplished using the following keywords: "Midwifery", "Forensic medicine", "Forensic nursing", "Pregnancy-related legal issues", "Delivery and postpartum", "Sexual violence", "Domestic violence", "Child abuse", and "Medical malpractice". No publication time limit was considered for searching the articles because the goal was to achieve the maximum number of roles. All kinds of relevant publications, including original articles, review and conceptual papers, standards, guidelines, and books in English and Persian languages, were included in the review process.

Because of the nature of the concepts that we were searching, the research strategy was a little different in this study. While reviewing the papers, the researcher searched for the data related to the objective role, duty, or performance of forensic midwives. The titles and abstracts of 11,247 papers were independently screened for relevance by three researchers using EndNote software (version 17). Afterward, the full-text versions of the retained articles were studied and screened. Finally, a total of 43 articles were included in the review after the implementation of a consensus discussion (Figure 1).

Data abstraction and synthesis and quality appraisal: The researcher critically appraised the retained articles using the Mixed Methods Appraisal Tool (31). Based on this tool, all articles had a score of > 75 (showing the number of assessment items the article had addressed); accordingly, no articles were excluded due to poor quality. According to the

aims of the review, a data extraction tool was developed, and relevant data were extracted from the included papers for analysis. The data extraction and coding were carried out by the authors. To perform coding, in each phrase, a role or duty that was related to the midwifery area and should be performed by a healthcare provider or a forensic medical expert was extracted. Subsequently, the emerged themes and subthemes were identified and discussed by the team until reaching a consensus. The data were synthesized into an integrated summary of findings in the form of main themes and subthemes. Finally, a total of four major themes consisting of different subthemes were determined (30).

Expert panel: Given the importance of the issue, three expert panels were held to review and evaluate the major themes, subthemes, and items. The expert panels were composed of a total of 22 faculty members (each panel included 6-8 people) of reproductive health, law, midwifery, and forensic medicine, as well as the graduates and students of forensic midwifery. The study was approved by the Ethics Committee of Tehran University of Medical Sciences, Tehran, Iran (IR.TUMS.REC.1395.2630). An effort was made to protect the principles of honesty, trustworthiness, and secrecy in publishing the information and consider confidentiality during the collection and analysis of the data achieved from literature review and panels of experts.

Results

The review of the included articles resulted in the emergence of four major themes about the scope of practice in forensic midwifery.

The themes included practices related to pregnancy issues, violence against women and children, malpractice in the midwifery profession, and promotion of professionalism in forensic medicine (Table 1).

Practices related to pregnancy issues

Items, such as membership in various commissions about maternal and fetal mortality and planning for maternal and fetal services and their comprehensive evaluation, were some of the practices attributable to forensic midwives. These items formed the main class of policy making and planning in

relation to pregnancy, delivery, and infertility. Collection of the necessary documents and evidence about the relationship between trauma and abortion or preterm delivery, diagnosis of pregnancy symptoms, previous abortion, and delivery in case of complaints, and counseling for therapeutic abortion were

some of the items constituting the subtheme of providing direct pregnancy, delivery, and infertility services. As indicated in Table 1, these two subthemes formed the main theme of "practices related to pregnancy issues" (Table 2).

Table 1. Categories of scopes of practice in forensic midwifery

Major scope of practice related to	Field
Reproductive issues	Policy and planning related to the issues of pregnancy, childbirth, and infertility Provision of services in the field of pregnancy, childbirth, and infertility
Violence against women and children	Policies and plans on violence Provision of services for the victims of violence
Medical malpractice	Prevention (before) Consultation (after)
Promotion of professionalism	Education Research

Table 2. Description of midwifery practices in relation to reproductive issues

Field	Practices description
Policy and planning	Membership in maternal mortality committees (33, 50)
	Membership in maternal and neonatal policy and surveillance committees with the aim of preventing morbidity and mortality (34, 50, 51)
	Reporting and gathering legal and biological documentation on deaths related to abortion, underlying diseases in pregnancy, and failure of the health care and treatment system to submit to the relevant agencies (34, 50, 52, 53)
	Membership in committees on abortion therapy (34, 54, 55)
	Provision of education for health professionals to improve their knowledge and awareness of the existing laws and guidelines regarding maternal morbidity and mortality (56, 57)
	Consultation on abortion treatment needs (51, 58)
Service provision	Diagnosis of the symptoms of pregnancy, abortion, or previous childbirth in complaint cases (12, 34, 59-61)
	Estimation of the timing and age of fetal intrauterine or neonatal death (e.g., viability, live or dead birth, intrauterine death or death after giving birth, cause of death) (12, 61)
	Collection and evaluation of the evidence on the relationship between trauma and abortion or preterm labor (1, 11, 62, 63)
	Provision of legal consultation about assisted reproductive technologies and adoption (64, 65)

Practices related to violence against women and children

According to the results of the present study, forensic midwives can play various roles to help prepare the health and judicial systems for dealing with the victims of violence. These roles were merged into the subtheme of policymaking and planning in relation to violence. It is also expected that forensic midwifery can facilitate the provision of such

services as counseling, physical examination, and sample and legal evidence collection, as well as managing referral and follow-ups for the victims of domestic violence, sexual abuse, and child abuse. These items could be merged into the subtheme of providing direct services to the victims of violence. Eventually, these two subthemes constituted the main theme of "practice related to violence against women and children" (Table 3).

Table 3. Description of midwifery practices in dealing with violence-related issues

Field	Practices description
Policy and Planning	Assistance in regulating /reviewing policies related to the prevention and management of violence and abuse and the protection and support of the victims of violence (66-68) Contribution to the development of clinical guidelines and standards for screening, care, referral, and follow-up of violence and abuse victims (16, 50, 69-71) Contribution to the compilation of staff job descriptions at different departments and levels in response to violence and abuse (38, 50, 69-72) Organization of statistics and information on violence and abuse (38, 50, 69-72) Enhancement of social awareness about the services and laws related to violence (67, 71, 73, 74)
Service Providing in Domestic Violence cases	Implementation of history taking and physical examinations, investigation of injuries caused by violence, registration of violence-related injuries and other evidence of violence, and forensic photography of injuries (38, 71, 75-78) Provision of emotional and psychological support for the women (38, 71, 75-78) Identification of appropriate strategies to reduce the risk of violence for each individual and provision of proper guidance for the victims of domestic violence based on laws and regulations (38, 71, 75-78) Assessment of the risk of violence for children (38, 71, 75-78) Working with social emergency institutions to report violence (38, 39, 71) Provision of follow-up care after violence according to the available clinical guidelines (12, 73, 79) Comprehensive documentation of violence, referrals, and treatments provided (12, 77)
Service Providing in Sexual Assault cases	Implementation of history taking, comprehensive physical and genital examination, and forensic photography of injuries (11, 12, 70, 71, 75, 76, 80, 81) Examination of the hymen to find the effects of penetration (11, 80) Preparation and preservation of the blood, urine, body (e.g., vagina, anus, and mouth) samples of the victim for toxicological examinations, acid phosphatase, and transgene DNA and collection and maintenance of clothing and other documents (11, 12, 70) Assessment of the risk of sexually transmitted diseases, AIDS, and pregnancy and prescription of drugs for the prevention of sexually transmitted diseases and pregnancy according to the clinical guidelines (50, 71, 75, 76, 80) Treatment of first and second genital injuries (caused by sexual violence) (12, 50, 71, 75, 76, 80) Prescription or referral of a victim for the prophylaxis of AIDS and hepatitis (12, 50, 71, 75, 76, 80) Consultation and referring patients to receive other mental support if necessary (12, 50, 71, 75)

midwifery profession" (Table 4).

Practices related to the management of medical malpractice in midwifery profession

Based on the results, legal documentation in the field of midwifery and gynecology and provision of counseling in legal offices and judiciary were some of the important practices that can be implemented by forensic midwifery to prevent medical malpractice. In addition, the membership and cooperation of forensic midwives with forensic medicine commissions, and consideration of the chain of documents, samples, and evidence in complaint and malpractice cases were some of the practices related to the role of forensic midwives in dealing with malpractice issues. Eventually, the role of forensic midwives in preventing and confronting medical malpractice formed the main theme of "practices related to the

management of medical malpractice in

Improvement of professionalism in forensic midwifery

Public education about violence and its types, effects, and prevention methods, provision of education on professional laws and regulations for the midwives and gynecologists, and service provision as an academic, research, and education member in academic centers were the roles that formed the subtheme of education in forensic midwifery. Furthermore, the role of forensic midwives as researchers in their field of expertise by providing and executing research projects (at the national and international levels), cooperation with research centers, implementation of periodic monitoring and evaluation for studying the effect of the programs, and provision of services for fulfilling the therapeutic needs formed the research-related roles in the field of forensic midwifery. Eventually, the two subthemes of

education and research in forensic midwifery led to the development of the main theme of

“improvement of professionalism in forensic midwifery” (Table 5).

Table 4. Description of midwifery practices related to malpractice

Practices Description
Membership in Forensic Medical Commission Medical System Organization in case of malpractice related to midwifery (11, 12, 82)
Documentation and preparation of documents related to the professional field of obstetrics and midwifery and monitoring the documentation process and the accuracy of the documentation (12, 83)
Identification of errors and malpractice in hospitals and health centers to prevent errors and complaints (12, 44, 77, 82)
Education of professional rules and regulations to midwives and gynecologists and provision of consultation for midwives\obstetricians (51, 70)
Participation in hospital risk management teams (51, 70)

Table 5. Description of midwifery practices related to the promotion of professionalism in forensic midwifery

Practices Description
Design and implementation of workshops, seminars, and training congresses (12)
Provision of education for other interdisciplinary teammates on forensic midwifery (12, 77)
Involvement as a member of the academic, educational, and research staff at academic and research centers (12, 77)

Discussion

The present study was the first attempt targeted toward clarifying the practice area of forensic midwifery as a new major. To achieve the exploratory goals of the study, an integrative review was performed. The review of the included studies led to the identification of four main themes related to the practice areas of forensic midwifery. The four themes included practices related to pregnancy issues, violence against women and children, malpractice in midwifery profession, and improvement of professionalism in forensic midwifery. In other countries, these services are provided by various experts under different titles.

In a study performed by Polack (2004) in Germany to determine the main roles of clinical forensic medicine, sexual forensic medicine was introduced as the basis of forensic medicine. Sexual forensic medicine involves such issues as the virginity testing of girls, illegal abortion, issues related to the sexual disability of men and women, interpretation of medical findings after sexual assault, and pregnancy-related issues (determining the age of pregnancy, miscarriage, and illegal

abortion). However, these services are

currently provided by clinical forensic medical specialists (32).

According to the results of the present study, the theme of "practices related to pregnancy issues" was formed to answer specific legal questions about pregnancy and women's care, such as maternal and fetal mortality (33, 34), diagnosis of pregnancy, abortion, delivery (11, 32), or therapeutic abortion (35), and application of modern assisted reproduction methods in cases with infertility (33). Currently, specialists in forensic medicine in Iran respond to questions about pregnancy, delivery, and infertility. Forensic midwives can better facilitate the provision of integrated services and responding to the raised legal questions in this field.

Fertility is one of the basic rights of humans. Midwives are frequently in contact with women of reproductive ages; therefore, they are completely familiar with the problems of this group (36). Regarding this, forensic midwives could be appropriate people for providing counseling to infertile couples because not only are they knowledgeable about the problems and raised legal and ethical issues in relation to using assisted reproductive methods (37) but also they have expertise in the health domain of this practice.

One of the most important practice areas in

forensic midwifery in many countries is dealing with violence against women and children (38). In a study conducted in South Africa, Abdul (2006) emphasized the role of emergency nurses in dealing with and managing the victims of violence as a practice area for forensic nurses (39). In another study, Welch and Mason (2007) mentioned the principle of providing comprehensive and integrated care for the victims of domestic violence, sexual abuse, and child abuse (40). Based on a body of evidence, the best time for the diagnosis of domestic violence is during pregnancy. Midwives are in contact with the women of reproductive age and their children on a frequent basis due to providing specialized services to women (41).

The presence of midwives is helpful not only because of their specialized knowledge and skills for providing services for the women who are victims of violence but also owing to their sufficient legal insight, knowledge, and skills. Accordingly, they can successfully fulfill the principle of providing comprehensive care to the victims of violence. The roles described under the subtheme of practices related to violence against women and children are the same roles that are performed by sexual assault nurse examiners and forensic nurses (42). However, the difference is that forensic midwives could cover some roles that could not be performed by forensic nurses, such as the implementation of vaginal and rectal examination and evaluation of the risk of pregnancy and sexually transmitted diseases (7).

Midwifery and gynecology are among the professions that face high complaints due to the high probability of medical malpractice and incidence of various problems, such as maternal death and neonatal death or injuries during delivery (43). The practices related to medical malpractice in midwifery was formed in response to the gap in this field for providing services. In a qualitative study, Robertson and Thomson (2014) reported that support from colleagues or midwifery managers aware of the rules and process of complaints without a verdict, counseling for coping with professional problems, and increasing the miswive' awareness about the legal process, would

improve the outcomes of medical malpractice complaints.

Therefore, forensic midwives could effectively help the women to cope with medical malpractice by playing such roles as providing counseling, giving professional testimony in case of medical complaints, visiting the centers and hospitals with a gynecology ward to supervise the process, and checking the accuracy of documentation and risk management. Accordingly, they can decrease the rate of complaints regarding malpractice in this profession and improve the complaint outcomes (43). The role of a forensic midwife in dealing with the issues related to malpractice in midwifery profession is in line with the role of a legal nurse consultant (44). The difference is that considering the problems and issues that have led to malpractice and complaint in midwifery profession, the provision of comprehensive and appropriate services requires specialized knowledge in midwifery, along with having legal knowledge and insight. Therefore, a well-trained forensic midwife could improve the situation of a malpractice and its consequences.

The improvement of professionalism in forensic midwifery, as a newly raised specialty, can be accomplished by the fulfillment of educational and research roles in different centers. The International Association of Forensic Nursing has introduced education, research, supervision, and leadership as the standard areas of practice for forensic nurses (45). According to Polack (2004), the development and recognition of a new major or orientation in forensic medical science require the presence of a sufficient number of graduates from that major and the introduction of the new major to different centers and organizations (32).

Considering the novelty of forensic midwifery, the implementation of collaborative research projects, besides introducing this major, would improve the sense of pride and trust in the graduates and students majoring in this field (46). Based on different studies, the evaluation of the executed programs and their feedbacks (47), provision of education for the personnel, especially by an expert in the same profession, implementation of constant

educational sessions and workshops, and implementation of research and use of their results (48, 49) would improve the professional performance. Trained forensic midwives are competent people that could help improve and develop the profession of forensic midwifery by educating and researching in this field. This research entailed some limitations, such as the lack of access to non-Farsi and non-English sources and unavailability of some of the sources on the Internet.

Conclusion

The scope of practice in forensic midwifery consists of a range of roles that could be accomplished in various fields related to the general midwifery practice.

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Conflicts of interest

Authors declared no conflicts of interest.

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