Original Article

Assessment of knowledge and skills training needs among employed midwives in health and medical centers, compared to expected duties as a part of Health System Reform Program, 2019

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Abstract:

INTRODUCTION: As a part of healthcare providers of the Health System Reform Program, midwives are required to master the necessary knowledge and skills to meet the related demands of society. This study was aimed to assess the knowledge and skills training needs of practicing midwives of health and medical centers of Isfahan.

METHODS: This study is a descriptive cross-sectional study. The statistical target population was midwifery experts working in Isfahan health centers and the samples were selected through simple random sampling (sample size 250). Data were collected by two questionnaires to assess knowledge and skill needs. The validity of the questionnaires was confirmed by experts of the province and city health centers and medical education experts and its reliability was calculated by Cronbach's alpha (98%). Data were analyzed using SPSS 23 software and descriptive and analytical statistical methods (frequency, mean, variance).

RESULTS: The first five knowledge training priorities of employed midwives in health and medical centers, which comprise most of the means values, are pregnancy complications and abnormalities (3.64 ± 1.21); mammography and its interpretation (64.3 ± 1.30); skills and principles of parenting (3.59 ± 1.24); shortness of breath and palpitations during pregnancy (3.58 ± 1.16); and common mental disorders (3.57 ± 1.16). The most important skills training needs were Excel (1.21 ± 3.59), PowerPoint (27.1 ± 54.3), internet (3.52 ± 1.25), and parameters registration and reporting in the SIB system (3.49 ± 1.28). Employed midwives of the health and medical centers displayed a significant difference in feeling the need for training in some subjects.

CONCLUSION: Needs assessment is the foundation of purposeful training, and better training leads to improved performance of personnel and organizations. Therefore, it is imperative that reliable and documented data be utilized for promotion and improvement of in-service training programs of employed midwives of the health and medical centers of Isfahan province and also for revising university curriculums. Taking these measures would lead to the empowerment of personnel and general development of society.

Keywords:

Health care, knowledge, midwifery, skill

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Introduction

In recent years, many changes have occurred; urban areas expanded rapidly, a vast population became deprived of healthcare services, awareness of people elevated, the need for public participation and coordination among different organization emerged, the pattern of

ailments shifted from contagious to noncommunicable and cultural and social upheavals happened, and consequently, a need for healthcare system reform and empowering people in self-care for managing health problems in urban areas arose.[1] If this goal is to be realized, then the human resources should receive the necessary training and skills to generate healthcare system reform. For implementing healthcare reform, one healthcare professional is designated for every defined number of people.[2] According to the healthcare system reform program, a healthcare provider is someone with academic and professional expertise in general health, nursing, midwifery, and illness-fighting, and after passing special training courses, he/she turns into a multitasking healthcare provider called family health protector.[1-3] Many services that healthcare providers should provide for target groups require special skills that should be mastered before healthcare providing begins, and since providing these services without the necessary skills may have devastating effects, determination of training needs of these important members of healthcare system is necessary.[4] Although, in most organizations, the personnel receive classic training before initiating working, these trainings are somehow general, and therefore, the personnel remain in need of practical and special training.[5] One fundamental phase in every training program is the determination of training needs of apprentices so that they can achieve educational priorities and goals. During the last years, different studies have been performed to assess training needs of Iranian midwives, but none of them contained all duties and job descriptions of midwives (that are included in the health service packages) like the present study (or the author has failed to access them).

Daniele *et al*., 2018 performed a worldwide inquiry and showed that healthcare providers have limited knowledge about intrauterine contraceptive device (IUD/IUCD) and increasing knowledge and skills of these providers can increase the popularity of the method itself.[6] According to Hennessy *et al*. (2006), who studied midwives from different parts of Indonesia, the need for better training of midwives was apparent. In that study, training needs of midwives on 40 duties were investigated, and the results showed that in all covered regions, they lacked expertise on these duties and needed a constant and regular training. Based on the results, the authors suggested that common training programs be held for the midwives of these regions.[7] Arrish *et al*. (2016) investigated the knowledge of Australian midwives about nutrition during pregnancy and the role it plays in training pregnant women, concluded that nutritional trainings of midwives were insufficient, and suggested that in-service trainings be held for them,[8] while Mokhtari Zanjani *et al*. claimed that the midwives mostly needed trainings for new medicines, treatments, equipment and techniques, gynecological disorders,

and midwifery emergencies and concluded that holding educational courses that fit the training needs of midwives are necessary.[9] According to Khourvash,[10] Olaniro *et al*. (2014),[11] and Moladsy *et al*. (2011),[12] healthcare providers have average knowledge about AIDS and have performed poorly when they encounter these patients. Sereshti *et al*. identified the following issues as training needs priorities: English, information technology (IT), resuscitation, research method, religious and judicial laws, abnormal uterine bleeding, blood pressure disorders during pregnancy, drug therapy for newborns, and common female reproductive system infections.[13] According to Delaram *et al*., who performed a study to evaluate the expertise of midwives of Shahrekord University of Medical Sciences in pregnancy and childbirth, reproductive health concerns for women; principle and technics of nursing; and maternal, child, and infant health concluded that midwives are basically unskillful in breech birth, multiple birth, and implementing IUD.[14] Behroozifar *et al*. identified the training priorities of employed midwives of Kashan, Aran, and Bidel as gynecological disorders, and oncology; pregnancy and childbirth; internal disorders – surgery; infant ailments; and clinical skills.[15] The World Health Organization (WHO) has emphasized that health and medical systems should strengthen the role of midwives so that they can respond to emergency situations and crises.[16] Mirzakhani *et al*. (2010) concluded that newly graduated midwives are not trained for handling high-risk maternal and infant conditions, and given the importance of these situations in reducing maternal and infant mortality, it is necessary to prepare them for these situations.[17] According to Lotfipour *et al*. (2010), who assessed the training needs of midwives of Rafsanjan in the subject of pregnancy health (which included history and prenatal assessments, high-risk factors in childbirth and postnatal nurturing), educational planners, and midwifery educators all over the country need to revise educational priorities.[18]

By taking into account all these studies, it can be concluded that using needs assessment, each organization can determine the training requirements of each individual and identify and cover the educational and functional weak spots of its employees (in accordance with the current changes and upheavals).[19] At present, a plenty of needs assessment algorithms are available and are being used by educational planners, but none of them is better than the others.[4] Considering the fact that the best way to evaluate one's knowledge and skill level is "self-evaluation,"[17] in this study, needs assessment was accomplished using midwives' self-evaluations.

Methods

The present study was carried out in 2018 in Isfahan Province, Iran, and is a cross-sectional descriptive study; meaning training needs assessment was carried out via

researcher-made questionnaires. Research population was consisted of undergraduate midwives who were employed in health and medical centers for at least a year. Simple randomly collected samples came from eight regions (divining by the Deputy of Health of Isfahan University of Medical Science) each region included two or three health and medical networks. To choose samples (midwife health care providers) based on their workplaces, an inquiry was made from the information bank of healthcare facility of Isfahan province, and using sample size formula from all 559 available midwives, 238 samples were chosen and 5% of unresponsiveness (number 12) was added to 238, and hence, the sample size was designated to be 250. Samples were to meet the following requirements: being undergraduate midwife, willing to participate in the research, and having at least a year of real-life experience in a public or private health and medical centers; whether in the form of casual or permanent employment or even working to fill out compulsory medical service. Unavailable chosen samples were excluded from the research. While distributing the questionnaires, the participants were assured that the given information would remain confidential and all moral codes would be followed. Data for this study were gathered via researcher-made questionnaires.

Phase 1: Questionnaire

To reach the goals of this study, library research was carried out and all the instructions and job description of healthcare providers that are included – by the Ministry of Health and Medical Education – in the service packages of health system reform program, were carefully studied, and all the required information and abilities (that a midwife should have to be able to function properly in health reform program) were included in two knowledge and skills questionnaires. First sections of the questionnaire contained demographic information (age, years, and place of service) and the second section (knowledge questionnaire) contained the following knowledge titles: middle-aged health issues with 13 items; maternal health with 21 items; children's health with nine items; eldercare with six items; the youth, adolescents, and school health with 11 items; preventive healthcare and treatment with 18 items; education and promoting health with three items; expanding networks with six items; mental health with six items; workplace health promotion with seven items; and public administration with three items. Skills questionnaire included the following skills titles: Middle-aged health issues with nine items; maternal health with 14 items; children and infant's health with 18 items; eldercare with six items; the youth, adolescents and school health with 11 items; preventive healthcare and treatment with eight items; education and promoting health with three items; expanding networks with two items; mental health with one item; first aid with six items; and IT

with five items. At the bottom of each questionnaire, a section called other suggestions was added. Collectively, knowledge questionnaire had 103 scale items and skills questionnaire had 83 scale items. In accordance with five-point Likert scale, scale items of both questionnaires were divided to very much, very, not at all, little, and very little, and these points had 5, 4, 3, 2, and 1 score, respectively. Logical validity was determined by experts. The questionnaires were surrendered to eight professors and experts of Isfahan University of Medical Sciences and medical education deputy of health. While making sure that all necessary issues are covered in the questionnaires, based on the suggestions and hints of professors and experts, some modifications were applied, and in the end, the questionnaires were approved by these experts. Writing difficulties, phrase and words understanding, proportionality and the favorable connection of items and ambiguity (formal validity), and also structure of questionnaires and required completion time, all were checked by the help of 15 members of research community, and some adjustment was made accordingly. Finally, the two questionnaires in two areas of knowledge and skills – which covered several items – were ready. Further, as the final proof, Cronbach's alpha coefficients were calculated and found to be 0.98.

After the questionnaires were finally prepared, an introduction letter was obtained from Isfahan University of Medical Science deputy of health and 250 questionnaires were given to liaisons – who were chosen from each network – and then, during the second half of the year 2018, they distributed the questionnaires among the research population during one of the meetings (which were held in each health and medical networks periodically). Since in some cities the networks were located in remote areas, 30% of the questionnaires were e-mailed to liaisons, and he/she distributed them among the research population. It is worth mentioning that at the beginning of each questionnaire, a how to guide was attached and the purpose of these questionnaires was explained. After the questionnaires were returned, data analysis was carried out using SPSS 23(company IBM,2015) software and descriptive (frequency, mean and standard deviation) and analytical statistical values were calculated. Analysis was performed by one way repeated measurement at a significance level of 0.5

Results

To examine the training needs of midwives, 250 knowledge and skills questionnaires were distributed among 250 employed midwives in health and medical centers of Isfahan province. After 1 month, 222 questionnaires (88%) were returned. Twelve questionnaires (4.8%) were incomplete and subsequently excluded from the

study, and at the end, data were extracted from 210 questionnaires (83%) and were analyzed. Maximum age of the participants was 51 ± 7.7 years and the minimum was 22 ± 8.0 years; maximum experience was 29 years and the minimum was 1 year. 62.9% of the participants worked for private centers and 33.8% for public centers.

Frequency, analysis of variance, and mean are calculated for scale items of both questionnaires.

Knolwge training needs

Frequency results of all 103 scale items of the first questionnaire were analyzed. First five priorities of midwife healthcare providers were pregnancy complications and abnormalities (67.1%); mammography and its interpretation (66.6%); shortness of breath and palpitations during pregnancy (64.8%); principles of parenting (64.8%); and principle of genetic screening and consultation (64.8%) [Graph 1]. More than 60% of the participants needed very and very much training in the mentioned scale items. Analysis of distribution frequency of responses indicated that only less than one-fourth of them had little or very little need for training in scale items of population and geographical recognition (24.3%) and principles and guidance for middle-aged anthropometry (23.9%). These two scale items had the lowest priority.

Since studying knowledge priorities of midwives in terms of health service packages job descriptions yield more understandable results, in addition to frequency, we analyzed the mean values as well [Table 1]. Based on these results (mean, maximum, minimum, and standard deviation), the first priority for each issue per package for middle-aged heath was mammography and its interpretation (66.6%); for maternal health was pregnancy abnormalities and complications (67.1%); for child and infant health was pediatric diseases (45.4%); for eldercare was principles of managing diabetes in the elderly (33.8%); for youth was adolescent and school health, high-risk behaviors at school (49.8%); for preventive health and treatment was logical usage of medicines (59.8%); for

equation and promotion of health was awareness of new training methods (36.9%); for expanding networks was health parameters and their analysis (36.2%); for mental health was principles of parenting (64.8%); and finally for workplace health priority of knowledge training was determined to be food hygiene (40.6%).

As seen in Table 1, midwives most of all needed knowledge training for maternal health (mean 69.86) and midwives least of all needed knowledge training for health promotion (mean 8.49).

Using one-way repeated measures multivariate analysis, we tried to determine whether the difference is statistically significant or not?

The results of this test indicated that there is a significant difference between health service packages requirements and the knowledge requirements of midwives who participated in this study. As Table 2 shows, multivariate test calculated the amount of Wilks' Lambda as 0.064 and F (200 and 10) = 291.32 and $P \leq 0.05$. Put it differently, health service duties have a significant impact on knowledge requirements of midwives and the difference between them is statistically significant.

Skill needs

The extracted data from 83 scale items of the questionnaires indicated that the five first skills training priorities of midwives are mostly IT skills. More than 60% of participating midwives stated that their skills training needs are Excel (64.70%), PowerPoint (61.3%), parameter registration and reporting in the SIB system (60.5%), and cardiopulmonary resuscitation (60.3%), respectively [Graph 2]. Skills that had the least priorities were evaluation, classification, and measurements of height (16.7%), weight (17.2%) and mouth and teeth (21.6%) in the child and infant health and the expertise of registering the birth certificates of pupils (21.9%) in the youth, adolescents, and school health.
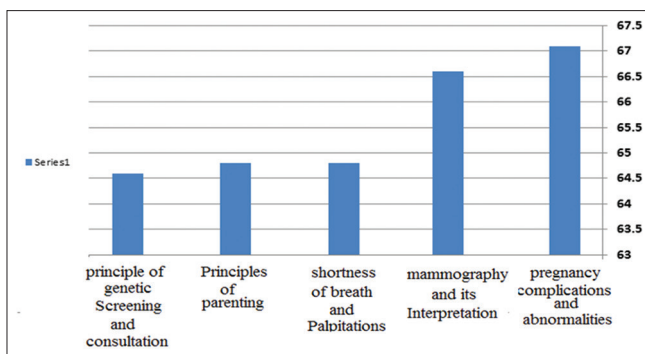
Graph 1: First five priorities for knowledge training needs of midwives based on scale items frequency
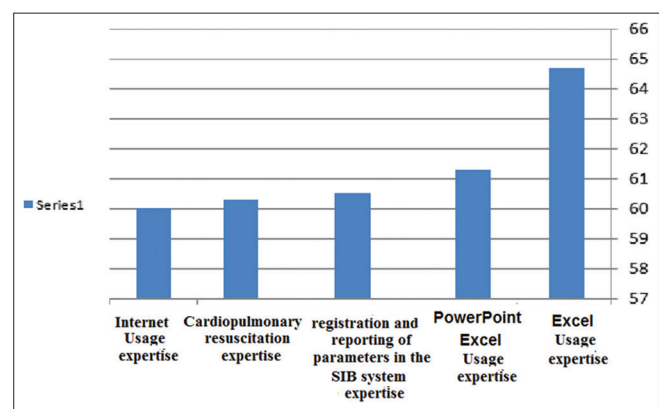
Graph 2: First five skills training priorities of midwives, according to their frequencies in scale items

Moreover, less than one-fourth of the midwives needed training for the evaluation and classification of anthropometry in the middle-aged health (22.2%); the vision assessment in the child and infant health (23.40%); the evaluation and classification and mouth and teeth measurements (24.7%) and IBM (24.9%) in the youth, adolescents, and school health.

Based on the gathered information from frequency analysis, skills training needs per scale items were gynecological evaluation and checkups for middle-aged health (50%); preparation courses for natural birth in maternal health (55.30%); evaluation, classification, and necessary measurements for cough or difficult breathing in infants and children health (41.90%); evaluation, classification, and measurements of blood pressure disorders in eldercare, (35.20%); evaluation, classification, and measurements of genetic issues in the youth, adolescents, and school health (35.70%); AIDS counseling in preventive health and treatment (39.10%); cardiopulmonary resuscitation expertness in first aid (60.30%); and using Excel software in IT (64.70%).

Studying skill training needs priorities at the level of service package duties (compared to scaled items) rendered more understandable results. Besides the frequency of the scaled items, the minimum, maximum, mean, and standard deviation, at the level of health service packages, are showed in Table 3. The means are in ascending order.

The maximum value belonged to infant health (50.45), and the minimum value belonged to mental health (2.96).

One-way ANOVA with repeated measures was utilized to determine whether there is a statistically significant difference between means or not? The results indicated that there is a significant difference between health service package duties requirements and skills requirements of participating midwives.

As Table 4 shows, multivariate test calculated Wilks' Lambda equal to be 0.061, F (10 and 200) = 306.69 and $P \leq 0.05$. In other words, descriptions of healthcare service have a noticeable impact on skills requirements of midwives and there exists a statistically significant difference between them.

Discussion

The first step in preparing a training and human resource development program is the determination of training needs of the employees who are to participate in these training programs, identifying these needs before executing these programs would result in increased effectiveness of outputs. This study was carried out to assess the knowledge and skills training needs of employed midwives in health and medical centers of Isfahan province in 2018. The results indicated that there is a vast training need for different investigated issues, which is consistent with what Hannssy (2006) found in Indonesia.[7] In the present study, the first

Table 1: Calculated descriptive statistics values of knowledge training needs of midwives for health service package issues

Issues	Mean	Maximum	Minimum	SD
Maternal health	69.86	105	21	20.52
Preventive health and treatment	59.26	90	18	17.53
Middle-aged heath	40.98	65	13	12.64
The youth, adolescents, and school health	30.16	55	11	10.94
Child and infant health	28.81	45	9	8.52
Workplace health	19.86	35	7	7.86
Mental health	19.70	30	6	6.08
Eldercare	16.83	30	6	6.28
Expanding networks	16.39	30	6	6.62
Public affairs and administration	8.66	15	3	3.72
Education and health promotion	8.49	15	3	3.46
Total amounts	313.07	515	103	82.28

SD=Standard deviation

Table 2: One-way repeated measures multivariate analysis (training needs assessment)

Effect Type of health care	Value	*F*	Hypothesis degrees of freedom	Error degrees of freedom	Significant
Pillai's Trace	0.936	291.32	10.000	200.000	0.000
Wilks' Lambda	0.064	291.32	10.000	200.000	0.000
Hotelling's Trace	14.566	291.32	10.000	200.000	0.000
Roy's Largest Root	14.566	291.32	10.000	200.000	0.000

Within subjects design: Type of health care

Table 3: Calculated descriptive statistics values of skills training needs of midwives based on health service duties

Skill	Mean	Maximum	Minimum	SD
Children and infant's health	45.50	90	18	33.16
Maternal health	92.42	70	14	33.15
The youth, adolescents and school health	96.29	55	11	0.11
The middle-aged health	30.26	45	9	15.9
Preventive health and treatment	84.22	40	8	4.8
First aid	14.19	30	6	20.6
Information technology	60.17	25	5	67.5
Eldercare	2.17	30	6	66.6
Education and health promotion	50.8	15	3	50.3
Network expansions	99.5	10	2	28.2
Mental health	96.2	5	1	21.1
Total	84.243	415	83	51.68

SD=Standard deviation

Table 4: A repeated measures analysis of variance tests

Effect Healthcare service	Value	F	Hypothesis df	Error df	Significant
Pillai's Trace	0.939	306.69	10.0	200.000	0.000
Wilks' Lambda	0.061	306.69	10.0	200.000	0.000
Hotelling's Trace	15.335	306.69	10.0	200.000	0.000
Roy's Largest Root	15.335	306.69	10.0	200.000	0.000

Within subjects design: Healthcare service

five priority of midwives for knowledge training were pregnancy abnormalities and complications (67.1%); mammography and its interpretation (66.6%); shortness of breath and palpitations during pregnancy (64.8%); principles of parenting (64.8%); and genetic screening and counseling principles (64.8%). Behroozifar *et al.* determined the training needs priorities of midwives as oncology and gynecological disorders, pregnancy and childbirth, internal disorders–surgery, infant's diseases, and clinical skills.[15] According to Bramwell R, Carter D, the knowledge of British midwives about genetic screening is very well, but their knowledge about the probability of genetic abnormalities occurrence is rather low.[20] The results of the present study somehow line up with these studies.

First five skills training priorities of participants in this study are mostly related to IT. IT has created drastic alterations in our lives and forced us to face numerous new challenges. Needless to say, to overcome these challenges employees should be educated in IT.[21] The large number of midwives who need receiving IT training indicates that this subject is absent from or insufficiently taught in their curriculums. These curriculums should be revised. First five skills training priorities were Excel (64.7%), PowerPoint (61.3%), internet (60%), parameters registration and reporting in SIB system (60.5%) (all related to IT), and also cardiopulmonary resuscitation (60.3%). Sereshti (2009)[11] also reported IT and cardiopulmonary resuscitation as training priorities. Similar to what Delaram *et al.*[14] reported, the results of the present

study indicate that midwives of Isfahan need training for gynecological evaluation and checkups in middle-aged health (50%). Holding preparation courses for natural birth (maternal health) was requested more than anything else, (55.30%) and this is the third priority that Yaghobi and Najafi (2009) identified.[22] Behroozifar *et al.*[15] identified pregnancy hypertension as the first priority in maternal health. In this study, it was determined that the first skills training priority was evaluation, classification and measurements of cough or difficult breathing (41.90%) in infant and children health (50.45) and Delaram *et al.*[14] and Ehsanpour[23] emphasized on this as well. Mirzakhani *et al.* – whose research community comprised of employed midwives in health and medical centers of Mashhad who were graduated 3 years before that study – found out 78.9% of newly graduated midwives had the ability to detect and manage children's diseases.[17] This fact on its own can indicate that executives and planners should plan for reinforcing skills that may be lost over time and as a result of insufficient experience.

Another noteworthy point of this study is that most training requirements of the midwives are related to their fields. For instance, they have more training requests for maternal health subjects compared to middle-aged health subjects. This fact suggests that they are more interested in duties related to their majors, rather than acting as a multitasking care provider.

It is worth mentioning that midwives training need priority in middle-aged care, was evaluation of blood

pressure disorders (35.20%) and in the youth and adolescents care was evaluation of genetic disorders (35.70%), but the author cannot find any study about these issues and it is suggested that another research be performed on these subjects.

In preventive health and treatment, the midwives' priority was AIDS counseling (39.10%) which was similar to what Mulaudzi *et al.*,[12] and Olarinoye *et al.*, 2014[11] reported. Khorvash *et al.*[10] from Isfahan University of Medical Sciences and Bahri *et al.*[24] from Mashhad University of Medical Sciences reported similar results. Taghizadeh *et al.* assessed training needs of graduate and sophomore undergraduate students of four medical science universities of Tehran and found out that there was a high demand for maternal death and child mortality in crisis training,[25] and the same author (2013) in an attempt to evaluate self-efficacy of midwives in offering pregnancy hygiene in crisis and concluded that they had an average level of knowledge.[26] According to Yaghobi and Najafi – who performed research at the University of Gilan – the training needs priorities of midwives were gynecological disorders, childbirth, cesarean section complications, facilitation of natural birth, and pregnancy hygiene mentioned.[22]

According to Louise *et al.*, British midwives have low knowledge about feeding with breast milk,[27] and in the present study, this the third priority of the infant and children's health package. Arrish *et al.*, who studied the knowledge of midwives about pregnancy diet and nutrition, indicated that they had insufficient knowledge and average expertise to educate pregnant females on pregnancy nutrition[8] and that the result is similar to our findings (43%).

Since this study was carried out throughout Isfahan province and both privately and publicly employed midwives participated in it, its results can be generalized. Nevertheless, the author faced some limitations. Accessing participants from all over Isfahan province was difficult, for this reason, some employees of health and medical networks were assigned as "liaisons" and they facilitated access to participants. Another limiting factor of this study was the excessive number of questions in the questionnaires, which could be subjected to tiredness and irritability. To manage these limitations, unwilling midwives and those who filled out the questionnaires incompletely were excluded from the study, and it was suggested to participants that questionnaires be complete in suitable time and during their breaks.

Conclusion

By sorting through the data, it can be referred that although all midwives gain knowledge and skills during their education and later through real-life experiences, if they are to provide care in accordance with health packages of health system reform program, they need to receive lots of extra trainings; employed midwives in health and medical centers of Isfahan province have quite correctly recognized this problem. To promote and improve the quality of training, extracting training needs from credible and documented data is essential. Using the data of this study for planning in-service training for midwives not only leads to empowerment of human resources but also contributes to general improvement and development of society. Curriculums should prepare future midwives for functioning as a part of health system (after reformations are completed). Therefore, we suggested that educational planners and experts of midwifery have complete cooperation, consultation, and collaboration with one another and revise midwifery curriculums. Curriculums are dynamic collections, which need constant revisions and supervisions. Moreover, since according to the present study, IT is one of the training needs priorities, and since health care is performed via an integrated health service system (SIB), it is necessary that this subject be added to midwifery curriculums to improve professional performance of midwives.

Conflicts of interest
There are no conflicts of interest.

References

1. Instructions for Implementing the Program for the Provision and Upgrading of Primary Health Care in Urban and Peri-urban Areas, Network Management Center; October, 2013.
2. Summary of the Program for the Development and Functioning of the Health Department of the Health Ministry, Ministry of Health and Medical Education; May, 2013.
3. Sayari AA, Kalantari N, Rafiee S. Summary of the Health Program's Development and Functioning in the Government of Tadbir-and-Omid, Department of Health, Ministry of Health and Medical Education; March, 2014.

4. Yarmohammadiyan MH, Bahrami S, Foroghi Abari AA. Appropriate model of needs assessment for measuring the organizational needs of employees working in health care networks of Isfahan province. Q J 2004; 3ᵗʰ Year,No.3:235-7.

5. Sabrakesh A, Mazinani H, Normohammadi H. Training and Development of Human Resources in Management Studies Organization on Entrepreneurship Training, No. 4 (24ᵗʰ), 6ᵗʰ Year; Winter 2011.

6. Daniele MAS, Cleland J, Benova L, Ali M. Provider and lay perspectives on intra-uterine contraception: A global review. Reprod Health 2017;14:119.

7. Hennessy D, Hicks C, Koesno H. The training and development needs of midwives in Indonesia: Paper 2 of 3. Hum Resour Health 2006;4:9.

8. Arrish J, Yeatman H, Williamson M. Australian midwives and provision of nutrition education during pregnancy: A cross sectional survey of nutrition knowledge, attitudes, and confidence. Women Birth 2016;29:455-64.

9. Mokhtari Zanjani P, Khoshe E, Chiri T, Shiri Ghidari P. Dadkhah midwifery staff at Zanjan University of Medical Sciences in connection with continuing education courses. J Med Edu Dev 2010;89:42-8.

10. Khorvash F, Mansorian M, Boroumandfar Z, Mohamadirizi S. An investigation on the association between students' knowledge and their tendency to take care of HIV patients among the students in nursing and midwifery school. Iran J Nurs Midwifery Res 2014;19:404-8.

11. Olarinoye AO, Adesina KT, Adesiyun OO, Ezeoke GG, Ijaiya MA. Knowledge and practices of PMTCT among health care providers in private hospital in Ilorin, Nigeria. J Obstet Gynaecol 2014;13:39-49.

12. Mulaudzi MV, Pengpid S, Peltzer K. Nurses' Knowledge, attitudes, and coping related to HIV and AIDS in a rural hospital in South Africa. Ethno Med 2011;5:25-32.

13. Sereshty M, Banaean Sh. Delaram M, Kazemian A, Safdari F, Shamai Z, Educational needs of midwifery graduates in health centers. Q J Educ Strateg 2011;4:31-7.

14. Delaram M, Safdari Dahcheshme F, Banayian Sh, Kazemian A, Sereshti M, Raeisi Z, Asefi F *et al*. Self-assessment of midwifery students from the ability to practice practical skills. Strateg Med Educ 2010;6:177-82.

15. Behroozifar S, Mousavi Gh A, Comparing the priorities of continuing education of midwives employed in health centers

and medical centers of the cities Kashan and Aran and Bidgol in 2007-2008. J Yazd Univ Med Sci 2010; 7(1):35-47.

16. World Health Organization. Integrating Emergency Preparedness and Response into Undergraduate Nursing Curricula. Geneva, Switzerland: World Health Organization; 2008.

17. Mirzakhani K, Jahani Shoorab N, Golmakani N, Tafazoli M, Ebrahimzadeh S, Evaluation of clinical skills of midwifery graduates of Mashhad Nursing and Midwifery Faculty, Mashhad Medical Centers, Uromiah Nursing and Midwifery Faculty. Nurs Midwifery Fac 2011;6:480-72.

18. Lotfipour Rafsanjani SM, Tork Zahrani S, Ahmadi M, Alavi Majd M. Educational needs of midwives working in Rafsanjan for care before, during and after delivery in 2010. Q J Fac Nurs Midwifery Paramedicine Rafsanjan 2010; 16ᵗʰ Year, 57: 25-31.

19. Hasanvand A. Examining the strengths and weaknesses of the evaluation system of the NAGA Managers (Command Police Department of Lorestan Province); 2008.

20. Bramwell R, Carter D. An exploration of midwives' and obstetricians' knowledge of genetic screening in pregnancy and their perception of appropriate counselling. Midwifery 2001;17:133-41.

21. Pak Tinat E, Fathizadeh A. Empowering employees: Necessities and solutions. Manage Q 2008;5:33.

22. Yaghobi Y, Najafi F. Need assessment of the continuous educational of nurses and midwives in five hospitals in the East of the Guilan. J Guilan Univ Med Sci 2007;10:35-40.

23. Ehsanpour S. Achieving minimum learning requirements from the viewpoints of midwifery students in Isfahan school of nursing and midwifery. IJME 2006;6:17-25.

24. Bahri N, Bajdi A, Latifnejad Roodsari R, Mirzaee KH, Esmaeili H, Larki M, *et al*. Prevention of maternal-childhood transmission of AIDS (hospitals educational affiliated with Mashhad University of Medical Sciences 2013. J Obstet Gynecol Infertil 2016;19:12-21.

25. Taghizadeh Z, Montazeri A, Ghoshnam M. Educational needs of midwifery students to provide maternal and maternal mortality services baby in crisis. J Fac Nurs Midwifery 2016;2: pp.54-66.

26. Taghizadeh Z,Kazemnejad A, Khoshknaz M, Abdolahi SH *et al*. Midwives' self-efficacy for providing services reproductive health in disasters, Tehran, 2011. J Fac Nurs Midwifery 2012;6(3):81-90.

27. Louise M. Wallace and Joanna Kosmala-Anderson. Training needs survey of midwives, health visitors and voluntary-sector breastfeeding support staff in England. Blackwell Publishing Ltd; 2007. Maternal and Child Nutrition, 3, pp. 25–39