

Educational Needs Assessment of Midwives in the Covid-19 Pandemic; A Case Study of North Khorasan Province

Abassi Z.¹ *PhD*, Rezaeian S.M.² *MSc*, Rashidi Fakari F.¹ *PhD*, Khodabandeh F.¹ *MSc*, Ghorbani M.¹ *MSc*, Shamsabadi A.R.³ *PhD*, Jazayeri Nezhad N.¹ *MSc*, Nazari S.*¹ *PhD*

¹ Department of Midwifery, Faculty of Medicine, North Khorasan University of Medical Science, Bojnurd, Iran

² Department of Midwifery, School of Nursing and Midwifery, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran

³ Department of Health Information Technology, Esfarayen Faculty of Medical Sciences, Esfarayen, Iran

Abstract

Aims: Getting infected with Covid-19 in pregnant women has more serious risks than their non-pregnant counterparts. On the other hand, the information of midwives in this matter is not enough and it seems that training in this field is necessary. Therefore, the present study was carried out with the aim of assessing the educational needs of midwives in the conditions of the newly emerging disease of Covid-19.

Instruments & Methods: This cross-sectional descriptive study was conducted from May to June 2020 on 283 midwives in North Khorasan province who had access to the Internet and communication software. Subjects were selected by available sampling method. Information was collected using the form of individual-social characteristics and a needs assessment questionnaire designed based on health protocols to fight against Covid-19, which was prepared electronically. Data were analyzed using SPSS 24 software.

Findings: Midwives needed training in all areas including pregnancy (3.66±0.70), childbirth (3.60±0.90), postpartum care (3.62±0.90), breastfeeding (3.64±0.90), mental health (3.69±0.80), sexual intercourse (3.61±0.90) and personal protection (3.31±1.06). Pamphlets (48.4%) were the most common source of midwives' information and receiving information about Covid-19 through online education systems (44.88%) was the best preferred source among midwives.

Conclusion: The greatest educational need of midwives in North Khorasan province during the Covid-19 pandemic is the need for educational topics in the field of mental health and the least educational need is related to the field of personal protection.

Keywords

Midwife [<https://www.ncbi.nlm.nih.gov/mesh/68008880>];
Pregnancy [<https://www.ncbi.nlm.nih.gov/mesh/68011247>];
Covid-19 [<https://www.ncbi.nlm.nih.gov/mesh/2052179>]

*Corresponding Author

Tel: +98 (58) 32297097

Fax: +98 (58) 31513014

Post Address: North Khorasan University of Medical Sciences, Shahriyar Street, Bojnurd , Iran.

Postal Code: 9453155166

Email: s4.nazari@gmail.com

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Introduction

In late December 2019, a novel coronavirus, named 2019-nCoV (SARS-CoV-2), caused a pneumonia outbreak from Wuhan (Henan seafood market) to the whole of China, which has now become a major public health threat in the world [1, 2]. On January 12, 2020, the World Health Organization (WHO) provisionally named the new virus as the 2019 novel coronavirus (2019-nCoV) [1]. On January 30, 2020, the World Health Organization declared the 2019-nCoV a pandemic as a public health emergency of international concern [3].

According to the announced global statistics, the death rate of 3.4% has been recorded for this disease [1]. This disease has imposed an unprecedented stress on the people of the world, especially the health care workers [3].

Pregnant women are one of the high-risk groups whose health is at risk if they get infected with Covid-19. Therefore, prevention and control of Covid-19 among pregnant women is a major concern [4]. Since health care workers and midwives who take care of patients with Covid-19 often do not have enough information about this [5] and due to the limited clinical experience in the field of Covid-19 management in pregnancy [6] management of pregnant mothers with Covid-19 is somewhat challenging. Therefore, it is highly recommended to implement a training program to improve the competencies of health workers and midwives in the field of how to manage Covid-19 in pregnancy, as well as for pregnant mothers to prevent the disease and reduce psychological burden. Educational needs assessment is the first step for empowering human resources in performing human tasks and improving the performance of organizations, and its purpose is to identify and solve functional problems of organizations [6, 7].

In this regard, it is very important to investigate and determine the educational needs of midwives [8], because after the educational needs assessment, people can be trained if necessary and their knowledge and skills can be increased in order to reduce high-risk cases [9]. Regardless of the educational needs, any educational intervention will actually be a waste of benefits [10, 11].

Therefore, the present study was carried out with the aim of assessing the educational needs of midwives in the conditions of the newly emerging disease of Covid-19.

Instrument and Methods

This cross-sectional descriptive study was conducted from May to June 2020 on midwives in North Khorasan province. The sample size was considered to be 300 people according to the population prevalence estimation formula and samples were selected by available sampling method.

The inclusion criteria included access to the Internet and communication software (WhatsApp and Telegram) and willingness to participate in the research. The exclusion criterion was not answering all the questions in the questionnaire.

The information was collected using the individual-social characteristics form (including age, work experience, education level and employment status) and the needs assessment questionnaire designed based on the health protocols of fighting against Covid-19.

The needs assessment questionnaire had 7 areas, including pregnancy (9 items), childbirth (8 items), postpartum care (3 items), breastfeeding (2 items), mental health (4 items), sexual intercourse (2 items) and personal protection (3 items) during the Covid-19 pandemic. Scoring was based on a 5-point Likert scale from "very much" (5 points) to "very little" (1 point). A higher score in each area indicated the need for training in that field. Three questions with the content of "identifying the first three educational priorities", "source of receiving information during the Covid-19 epidemic" and "preferring the method of receiving education (face-to-face, virtual and online, pamphlets and instructions)" were also included at the end of the questionnaire.

Content and face validity were used to determine the validity of the questionnaire, so that the questionnaires were given to 10 faculty members and after collecting their opinions, corrections were made. Also, Intraclass Correlation Coefficient (ICC) of 0.70 was obtained. Then, the final questionnaire was prepared as an electronic version.

After obtaining permission from the Ethics Committee of North Khorasan University of Medical Sciences (IR.NKUMS.REC.1399.136), the electronic version of the questionnaire was provided to the midwives of the province through the educational clinic and communication tools (WhatsApp and Telegram).

At the beginning of the questionnaire, while explaining the purpose and method of conducting the study, the subjects were assured of the confidentiality of the information.

Sampling continued until reaching the sample size of 300 people, 17 questionnaires were removed due to incomplete information and analysis was done on 283 questionnaires.

Data were analyzed using SPSS 24 software. Descriptive statistics methods including frequency and percentage, mean and standard deviation were used to describe the social-individual characteristics and the needs assessment score.

Findings

The mean age and the mean work experience of the midwives were 32.4 ± 4.3 and 9.2 ± 2.1 years, respectively. Most of them had a bachelor's degree

(79.2%) and the employment status of more than a third of midwives (36.7%) was formal.

Midwives needed training in all areas, so that the most training needs of midwives were in the field of mental health and the least training needs were in the field of personal protection (Table 1).

Table 1) The mean scores of the areas of needs assessment in the studied midwives

Area	Mean±SD
Pregnancy	3.66±0.70
Childbirth	3.60±0.90
Postpartum care	3.62±0.90
Breastfeeding	3.64±0.90
Mental health	3.69±0.80
Sexual health	3.61±0.90
Personal protection	3.31±1.06

Pamphlets and educational booklets (48.4%) were the most common source of midwives' information about the Covid-19 disease. Receiving information about Covid-19 through online education systems (44.88%) was the best preferred source among midwives.

Discussion

Pregnant women are one of the high-risk groups during the Covid-19 pandemic that if they get this disease, their health and that of their fetus will be exposed to many risks.

the present study was carried out with the aim of assessing the educational needs of midwives in the conditions of the newly emerging disease of Covid-19.

According to the results of the current research, the most educational need of midwives in the Covid-19 pandemic was the need for educational topics in the field of mental health and the least educational need related to the field of personal protection.

In Alikhani et al.'s study, the level of awareness of treatment and non-treatment personnel regarding the disease of Covid-19 was desirable and middle [12]. Also, in the study of Modi et al., the general awareness of the Covid-19 disease in Mumbai city for all subgroups of the society, including the medical staff, was reported to be good [13], which is consistent with the results of the present study.

In Nasirzadeh et al.'s study, during the Covid-19 pandemic, more than half of the family members studied had stress, anxiety, and depression [14]. In the study by Izanloo et al., pregnant mothers were exposed to mental health problems (anxiety, depression, and sleep disorders) during the covid-19 epidemic [15]. According to the results of the Abedzadeh-Kalahroudi study, pregnant mothers had a lot of stress and anxiety during this period [16]. This finding is consistent with the results of the present study, which shows that midwives

have the greatest educational need in the field of mental health of pregnant mothers.

The results of Pennanen-Iire et al.'s study showed that the covid-19 pandemic indirectly affects the sexual performance of people. Therefore, this research has considered increasing the awareness of service providers in the field of sexual health consequences related to the covid-19 epidemic as a basic need [17], which is consistent with the results of the present study. Other studies are also consistent with our study [18-21].

According to the results of the studies and the spread of the pandemic disease of Covid-19 all over the world, a planning and preparation is needed and the training of health care service providers should be prioritized regarding the prevention and control of the consequences of Covid-19 in pregnancy.

Among the limitations of the present study, we can mention the method of collecting information using electronic methods, which led to the incomplete completion of a small number of questionnaires. Another limitation of the present study was that the study was conducted in North Khorasan province, which makes it difficult to generalize the results to other regions. Therefore, it is suggested that the training needs assessment of midwives of the whole country be studied in future studies.

Based on the results of the study and the current conditions of the society, it is suggested to increase the information of midwives about the Covid-19 disease and its consequences, especially the mental health of pregnant women, through virtual training, so that the healthcare system does not suffer in this field.

Conclusion

The greatest educational need of midwives in North Khorasan province during the Covid-19 pandemic is the need for educational topics in the field of mental health and the least educational need is related to the field of personal protection.

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M. (Fifth author), Methodologist/Assistant Researcher (5%); Shamsabadi A.R. (Sixth author), Researcher/Statistical Analyst (5%); Jazayeri Nezhad N. (Seventh author), Main Introduction Writer/Assistant Researcher/Discussion Writer (5%); Nazari S. (Eighth author), Introduction Writer/Methodologist/Main Researcher/Statistical Analyst/Discussion Writer (30%)

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References

- 1- Farnoosh G, Alishiri G, Hosseini Zijoud SR, Dorostkar R, Jalali Farahani A. Understanding the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease (Covid-19) based on available evidence-a narrative review. *J Mil Med.* 2020;22(1):1-11. [Persian]
- 2- Guo Y-R, Cao Q-D, Hong Z-S, Tan Y-Y, Chen S-D, Jin H-J, et al. The origin, transmission and clinical therapies on coronavirus disease 2019 (Covid-19) outbreak—an update on the status. *Mil Med Res.* 2020;7(1):11.
- 3- Lai C-C, Shih T-P, Ko W-C, Tang H-J, Hsueh P-R. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. *Int J Antimicrob Agents.* 2020;55(3):105924.
- 4- Lu W, Wang H, Lin Y, Li L. Psychological status of medical workforce during the Covid-19 pandemic: A cross-sectional study. *Psychiatry Res.* 2020; 288:112936.
- 5- Muñoz-Vilches MJ, Salas-Coronas J, Gutierrez-Izquierdo MI, Metz D, Salvador-Sánchez J, Gimenez-Sanchez F. Health professionals' knowledge on Chagas disease in the province of Almeria, Spain. *Rev Esp Salud Publica.* 2013;87(3):267-75. [Spanish]
- 6- Liang H, Acharya GJAoegS. Novel corona virus disease (COVID-19) in pregnancy: What clinical recommendations to follow? *Acta Obstet Gynecol Scand.* 2020;99(4):439-42.
- 7- Alavian, F, Alavian K. Pregnancy and Covid-19: Physiology, some challenges, and solutions. *Iran J Obstetrics, Gynecol Infertil.* 2021;24(1):99-111. [Persian]
- 8- Nazari S, Hajian S, Abbasi Z, Majd HA. Postpartum care promotion based on maternal education needs: A mixed study. *J Educ Health Promot.* 2021;10:261.
- 9- Banaei M, Ghasemi V, Saei Ghare Naz M, Kiani Z, Rashidi-Fakari F, Banaei S, et al. Obstetrics and neonatal outcomes in pregnant women with covid-19: A systematic review. *Iran J Public Health.* 2020;49(1):38-47.
- 10- Hajifoghaha M, Nahidi F, Alizadeh S, Golezar S, Dabiri F, Mokhlesi S-S, et al. Midwives' educational needs in Iran: A narrative review. *Iran J Nurs Midwifery.* 2019;25(1):1-6.
- 11- Salehi A, Ahmad Shirvani M, Mousavi Nasab N, Shahhosseini Z. Development and psychometry of an instrument to measure the educational needs of health care providers in prenatal screening. *J Mazandaran Univ Med Sci.* 2018;27(156):117-28. [Persian]
- 12- Alikhani A, Talarposhti MA, Moosazadeh M, Kakoei H. Evaluation the level of awareness of Razi Ghaemshahr teaching hospital staffs towards about the prevention of ways transmission of disease Covid-19 and related factors in 2020. *J Nurs Educ.* 2021;10(2):13-22. [Persian]
- 13- Modi PD, Nair G, Uppe A, Modi J, Tuppekar B, Gharpure AS, et al. Covid-19 awareness among healthcare students and professionals in mumbai metropolitan region: a questionnaire-based survey. *Cureus.* 2020;12(4):e7514.
- 14- Nasirzadeh M, Akhondi M, Jamalizadeh nooq A, Khorramnia S. A survey on stress, anxiety, depression and resilience due to the prevalence of Covid-19 among Anar City households in 2020: A short report. *J Rafsanjan Univ Med Sci.* 2020;19(8): 889-98. [Persian]
- 15- Izanloo Z, Hosseini Keshtan M, Amirshaghaghi F. Investigation the general health status of pregnant women during the pandemic period of covid-19; with focus on the level of physical activity. *Sci J Rehabil Med.* 2021. [Persian]
- 16- Abedzadeh-Kalahroudi M, Karimian Z, Nasiri S, Khorshidifard MS. Anxiety and perceived stress of pregnant women towards Covid-19 disease and its related factors in Kashan (2020). *Iran J Obstetrics, Gynecol Infertil.* 2021;24(5):8-18. [Persian]
- 17- Pennanen-Iire C, Prereira-Lourenço M, Padoa A, Ribeirinho A, Samico A, Gressler M, et al. Sexual health implications of Covid-19 pandemic. *Sex Med Rev.* 2021;9(1):3-14.
- 18- Shorey S, Valerie C. Lessons from past epidemics and pandemics and a way forward for pregnant women, midwives and nurses during COVID-19 and beyond: A meta-synthesis. *Midwifery.* 2020;90:102821.
- 19- Erland E, Dahl B. Midwives' experiences of caring for pregnant women admitted to Ebola centres in Sierra Leone. *Midwifery.* 2017;55:23-8.
- 20- Denslow S, Fromewick J, Scott K, Bossingham J, Cass B, Hodge B, et al. COVID-19 needs assessment and support for primary care practices in Western North Carolina. *HCA Healthc J Med.* 2020;1:16.
- 21- Ashiru-Oredope D, Chan AHY, Olaoye O, Rutter V, Babar Z, et al. Needs assessment and impact of COVID-19 on pharmacy professionals in 31 commonwealth countries. *J Pharm Policy Pract.* 2020;13(1):1-11.