Explaining Challenges Experienced and Evaluation of the Working Condition of Midwives: A Mixed-method Study Protocol

azita Fathnezhad kazemi (✉ afnkazemi@gmail.com)

Islamic Azad University Tabriz Branch <https://orcid.org/0000-0002-3601-9892>

Nasibeh Sharifi

Ilam University of Medical Sciences

Study protocol

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Abstract

Background

Midwifery is one of the most important jobs in maintaining community health. Various factors can reduce job productivity and cause physical and psychological complications in midwives. The present study aims to: a) explain challenges experienced by midwives; b) evaluate the working condition in midwifery working settings.

Methods

This mixed-methods study consists of three phases. The first phase is a qualitative study explaining challenges experienced by midwives. In this phase, the subjects will be selected through purposive sampling; moreover, in-depth individual interviewing will be used for data collection. Then, the conventional content analysis approach will be employed for data analysis. The second phase will be used a cross-sectional approach for evaluating the working condition in midwifery working settings. In this regard, a multistage cluster sampling method will be used to select 293 subjects who work in the hospital and health care centers. Finally, using findings of the qualitative and quantitative phases and nominal group technique some strategies will be given to reduce challenges of the midwifery working settings.

Discussion

The present research is the first study to investigate the challenges experienced and working conditions among midwives in working settings. For the purposes of the study, a mixed-methods approach will be used which aims to develop strategies for creating suitable working conditions. It is hoped that the strategy proposed in the current study could lead to improvements in midwife's satisfaction and health care services.

Ethical code

IR.TBZMED.REC.1400.113.

Plain English Summary

Healthcare workers, in particular Midwives, are at risk from many occupational hazards and maybe Face challenging in working setting. These hazards not only affect the physical, psychological and social health care workers, but also impose heavy financial burdens on an organization. The current study provides precise information about the Workplace challenges of midwives, and the Status of working conditions. This study will be used in the mixed-methods approach with the sequential explanatory design and is comprised of three phases. The first phase is qualitative and will be explaining challenges experienced by midwives. The second phase is quantitative and will be used as a cross-sectional approach to assess the working condition. The findings of the qualitative, quantitative phases, and the

nominal group technique will be used to establish some strategies to improve midwife's satisfaction from working condition.

Background

According to historical evidence, midwives are one of the key people to help improve the health of the community, especially the mothers and children's health, and are the backbone of the obstetrics team in providing maternal and child health care and reproductive health services [1]. Midwifery is one of the important occupations and preserves the health of society and plays an important role in reducing mortality and preventing complications in women and children [2]. According to the International Confederation of Midwives, midwifery is a responsible profession that provides support, counseling and care for women [3]. Midwives and nurses make up a large proportion of health care workers worldwide, and more than 80% of women's health care is provided by midwives [4]. The profession of midwifery is one of the occupations that, based on the religious and customary beliefs of Iran, with all the physical and psychological pressures, has been assigned to women, who also have different roles depending on their position [4, 5]. Since job is one of the most important issue of every person's life, satisfaction and dissatisfaction with it can not only affect different aspects of life, but also the efficiency of health care [6]. Health organizations have a special place in society, due to the importance of their role in prevention, care and treatment, and unfavorable and unpleasant environments and hard work can cause physical and mental disorders and job dissatisfaction in hospital staff [7]. This leads to emotional rupture and indifference and reduces the quality of services provided to patient [2]. Health workers, especially in hospitals, are at high risk of health hazards at work [8]. And midwifery, as a high-risk job [9], faces many job risks and challenges [9–11] and these risks and challenges are one of the major concerns [9]. Some of these challenges are related to the complex work process of the midwifery profession, which leads to significant pressure on the professional group, and others are related to the difficulty of working and facing job risks [12, 13]. For example, work stress due to heavy workloads and long working hours [10], the emotional needs of the job, facing women with complex care needs, and working in traditional settings with a shortage of midwives, fear of punishment, lack of support and low appreciation [10, 14, 15], the loss of their social networks due to working away from home, and sometimes facing economic burden, especially when women are unable to pay, mentioned as midwifery job challenges [10, 13]. Also, the difficulty of midwifery work from the perspective of midwives working in health centers has a greater role in the occurrence of midwifery errors [16]. According to researchers, midwifery is an emotional job in which caring for women and their families, despite the social complexities, confronts midwives with anxiety, pain, fear and sadness, which make it difficult for them to work in these challenging situations [17]. And it is not surprising that low morale and job stress are of particular importance in the midwifery staff [13]. Today, work stress has become a common and costly problem in the workplace [18]. Because facing many problems leads to increased stress, dissatisfaction, apathy, frustration and job burnout of midwives and reduces their participation in providing desirable care [13, 19, 20]. And studies have declared that stressful working conditions lead to increased absenteeism, lawlessness, and staff turnover [20, 21]. According to the reports, midwives face limitations and physical and medical problems during

their work, including the risk of nosocomial infections, which in most cases are due to lack of appropriate personal protective equipment [1]. According to a study have been conducted in Nigeria, hospital staff Mentioned the 4 main predisposing factors for blood-related accidents including lack of access to protective equipment, inappropriate staff behavior, high workload, and high work speed [22]. Also, Atwama et al., reported midwives work in high-risk environments compared to other jobs, but receive less support [9]. Common occupational hazards in the obstetrics and gynecology unit include work-related stress (83.3%), needle injuries (75.6%), skin contact with bloodstains (73%), sleep disorders (42.3%), Skin reactions (37.2%) Attacks have been reported by patients (24.3%) and hepatitis (8.9%), and almost half of staff used diazepam or alcohol to cope with work stress [23]. Studies were conducted in Iran have shown the dissatisfaction of the working midwives, mostly has been in the dimensions of workplace conditions, job security, salaries, and benefits [2]. In some areas, various solutions are implemented to increase the motivation of midwives to provide quality care, such as improving working conditions and continuous monitoring and creating high educational opportunities [1]. Evaluation of the challenges and risks related to the midwifery job to design appropriate strategies to prevent accidents and burnout, which affect people's health, and examining the problems of an organizational necessity [11]. Because to achieve the health of organizations, it is necessary to pay attention to the quality of work life of employees, provide a suitable environment that meets personal needs and create a motivating environment to perform tasks, meet their job challenges and improve care. The present study was designed to explain the challenges and risks of midwives' work environment in Iran in a mixed-method study.

Objectives

The objectives of each phase are as follows:

Objectives of the first phase: qualitative study

- 1) To explain challenges experienced by midwives in working setting

Objectives of the second phase: quantitative study

- 1) To determine the job stress of midwives working
- 2) To determine the quality of working life of midwives working.
- 3) To determine Determining the job satisfaction of midwives working.
- 4) To determining the workload of midwives working.

Objectives of the third phase

5) To develop Strategies for creating suitable working conditions, to improve midwife's satisfaction.

Methods/ Design

Study design

A mixed-methods sequential explanatory design will be used to conduct this study by collecting, analyzing, and integrating the qualitative and quantitative data. The mixed-methods paradigm is based on the principles and logic of pragmatism. According to this paradigm, using qualitative and quantitative approaches results in a better understanding of the problem [24, 25]. This study will have three phases, and the qualitative and quantitative data will be collected in the first and second phases, respectively. Phase one is an exploratory qualitative study to explore challenges experienced by midwives in working setting in more detail. Phase two is cross-sectional study to assess the evaluation of the working condition of midwives such as job stress, quality of working life, and workload of their job. Phase three is about developing an evidence based and culturally sensitive guideline based on the results of phase one and two and experts' opinion using the nominal group technique (Fig.1).

First Phase: qualitative study

The first Phase is an exploratory qualitative study with a conventional content analysis approach to explore experiences challenging which midwives are facing in the work setting.

Sampling method

The research participants will be selected through purposive sampling among midwives who work in hospital or health care centers. After the process of obtaining permission to conduct research from the officials of Ahvaz, Ilam and Tabriz universities, the study will begin. Inclusion criteria including: working in hospitals and health centers, having at least one year of work experience, Absence of any illness or mental disorder. The withdrawal and non-attendance of the participants were considered as the exclusion criteria.

Data collection

Qualitative data will be collected using in-depth and semi-structured interviews, containing open questions. Before conducting the interviews, the research team reviews the questions, and the ways to obtain valid data and focus on research questions. The interviewer will pilot the interview on a subset of participants, and used this information to further refine the guide with respect to culturally sensitive and appropriate questions. The interview will begin with a key question, "What are your experiences and feelings about midwifery?", "What are the problems with your job at work?", "What do you think about the

various occupational hazards of midwifery?”, “What do you think are the difficulties in midwifery?”, “What do you think are the factors that cause problems and occupational hazards?”, and “What do you think are the factors that prevent job problems and risks?” to explore the depth of their experience. During the interview, as far as possible, the Note field will be used and non-verbal data such as tone of voice and behaviors were recorded, too. The sampling will continue until data are saturated. All interviews will be carried out in a quiet room and without someone other than the interviewees.

Data analysis

Data analysis process will be performed simultaneously with data collection using MAXQDA software version 10. The qualitative data will be analyzed using qualitative content analysis based on the Graneheim and Lundman method [26]. In this approach, the data will be analyzed through frequent text reading to obtain a full understanding of it. Then, the texts will be read word by word to extract the codes. First, the objective words that contain the key concepts will be specified. The researcher continued digging the text by taking notes from the initial analysis until the major codes will be extracted. In this process, the code labels reflecting more than one key thought will be directly extracted and specified. Then, the codes will be categorized based on their difference and/or relationships. The codes will be categorized into themes and main categories. Subcategories will be extracted based on differences and similarities.

Validation

To validate the results, at first it will be tried to establish a friendly relationship with the participants. In order to increase the accuracy of the data and for verification of the accuracy of the data, after the registration, the interviews will be given to the participants to review and confirm their stated content and, if there will be any other content, it will be added to the data. Interviews will frequently read by the corresponding author of the paper; then, the text of the interviews with the extracted codes and categories will be shared with the colleagues and their comments will be used. External monitoring will be also used to increase the reliability. By providing the initial code derived from the analysis and examples of the extraction, as external observers, the concepts will be given to other researchers who will be not related to the study in order to determine whether they also will have a similar perception of the data or no.

second Phase: quantitative study

First, a cross-sectional descriptive analytical study will be conducted to evaluation of the working condition of midwives.

Sample size and sampling method

After controlling the sample size for research purposes, the maximum sample size was calculated. So that the 95% confidence interval, 90% statistical power was considered. According to the study of Abdolmaleki et al. [27] considering the acceptable error of 5% around the mean ($m=48.86$) and the standard deviation of 14.59 for the job satisfaction scale, the required sample size is 137 people and according to the study of Komeili-Sani et al. [28], Taking into account the acceptable error of 5% around the mean ($m=183.08$), and the standard deviation of 54.07 for the job stress scale, 135 people were calculated. Also, according to the report of Hadizadeh et al. [29], the sample size of 54 people was calculated for the quality of work life scale around the mean ($m = 65.23$), and the standard deviation was 12.16. In addition, regarding the workload of nurses reported by Malekpour et al. [30], considering the acceptable error of 6% around the average score of physical need ($m = 55.83$) and the standard deviation of 22.16, the sample size of 168 people was calculated. Considering the maximum sample size based on occupational hazards and considering the design effect and 10% of sample loss, the final sample size of 290 people was calculated for each city.

$$n = \frac{(Z_1 - \frac{\alpha}{2})^2 \times s^2}{d^2}$$

After the approval of the ethics committee and obtaining permission from the officials of hospitals and health centers, sampling will be done in several stages in the target cities and the sample size will be calculated by considering hospitals and health centers in layers and according to the number. Participants who work in these centers will be considered. Teaching hospitals and a non-teaching (private) hospital will be selected from each city. To select health centers in each city, first the clusters are identified and from each cluster, one or two health centers will be randomly selected using Randomizer software. Centers will continue until the calculated sample volume is reached.

Inclusion criteria

working in hospitals and health centers, having at least one year of work experience, Absence of any illness or mental disorder.

Exclusion criteria

The withdrawal and non-attendance of the participants were considered as the exclusion criteria.

Scales and data collection

Quantitative data will be collected using 5 questioners, including:

1- sociodemographic characteristics questionnaire:

consisted of questions about the Includes age, level of education, employment status, number of years of employment, place of work, job position

2- Osipow job stress questionnaire:

as first developed by Osipow and Spokane in 1987 and consists of 60 items, each of which is answered based on a 5-point Likert scale from 4: most of the time to 0: never. These questions assess six scales including role overload, role insufficiency, role ambiguity, role boundary, role responsibility, and physical environment. In addition, the score range 60–119 is interpreted as low stress, 120–179 as low-moderate stress, 180–239 as moderate-severe stress, and 240–300 as severe stress. Based on previous studies conducted in Iran, the Cronbach's alpha coefficient for this questionnaire has been reported to be more than 80% [7, 31].

3- Work-Related Quality of Life Scale (WRQoL-2):

Work-Related Quality of Life Scale-2 (WRQoL-2), including 7 factors, 33 items. Using the Likert 5 rating (1 = very disagree, 2 = disagree, 3 = no opinion, 4 = agree, 5 = very agree), convert the score of the reverse items and then calculate the score. The scores of the scale range from 33 to 165. The higher the score of the scale, the higher the quality of work life [32].

4- Minnesota Satisfaction Questionnaire (MSQ):

The short version of the MSQ-SF assesses job satisfaction using a 5-point Likert scale ranging from one (extremely dissatisfied) to five (extremely satisfied). It consists of three subscales including intrinsic satisfaction, extrinsic satisfaction, and general satisfaction. As a whole, MSQ-SF contains 20 items, and each item represents a feature in the work environment. The possible scores for MSQ-SF range from 20 to 100 [16]. It is a reliable (0.78) and valid (Cronbach's alpha coefficient: 0.82) questionnaire in Persian language [33, 34].

5- NASA task-load index (TLX):

One of the most widely used instruments for measuring subjective mental workload is the National Aeronautics and Space Administration-Task Load Index (NASA-TLX) [35]. The NASATLX provides an overall index of mental workload as well as the relative contributions of six subscales: mental, physical, and temporal task demands; and effort, frustration, and perceived performance [36]. The psychometric characteristics of the NASA-TLX are well documented, and it has been validated and used initially by the Human Performance Group at the NASA Ames Research Laboratory as a tool for subjective evaluation of individual's workload in flight simulation, air traffic control studies, automated and manual control, and

vigilance tasks. More recently, it has been used in a variety of tasks outside of the aeronautical field including the medical domain [35].

Data analysis

The quantitative data will be analyzed with SPSS-22. Sociodemographic, job stress, Work-Related Quality of Life, MSQ, and NASA task-load questionnaires score will be described by frequency (percent), as well as mean (standard deviation) if the data are normally distributed. The relation between Sociodemographic with main variables will be determined using the independent test, ANOVA, and logistic linear regression adjusting the confounding variables in the multivariate analysis.

Third Phase: Integration of quantitative and qualitative data

To develop strategies for increasing satisfaction and improving the improving workplace conditions. The results from qualitative and quantitative studies will be delivered to 10–12 experts. Then, their feedback and comments will be taken into account, using the nominal group technique.

Discussion

Midwifery is a high-risk occupation in which the risks are higher than those in other professions [37]. In spite of the important role of midwives in maternal health care, they experience numerous challenges in the workplace which affect their ability to do the responsibilities and prevent the midwives from providing sufficient midwifery care [12, 38, 39]. A systematic review on midwifery care in low and middle-income countries declares that barriers for providing sufficient midwifery care are created by social, economic and professional factors [38]. The outcomes of these barriers are feelings of fatigue and moral distress, which in turn affects the quality of the care provide [38, 40]. A study from Tanzania identified three main barriers to providing quality care with midwives; poor-working conditions, lack of status and perceived lack of knowledge [40]. In the another study in Ghana, researchers explored and described five challenges experienced by midwives who provide maternal healthcare to childbearing women and newborns, including Lack of logistics, Inadequate infrastructure like lack of beds and physical space, Shortage of midwifery personnel, Lack of motivation, and Limited in-service training [3]. Midwives and removing the barriers they face are regarded as key for improving child and maternal health [38].

We aimed to explore and highlight the challenges the midwives face in their practice, and to investigate which measures the midwives find necessary to implement to improve them condition. This may provide actions to be taken informed by the midwives' firsthand experience of the situation. Seeing their own suggestions being taken into account may lead to increased motivation, thereby improving the midwives' working conditions, which in turn could better maternal and child health in our country.

The mixed-method approach supports the combination of opinions, approaches, and different methods if they are helpful for understanding concepts. The strategy proposed by this study may be helpful in weariness of health professionals and policy makers should be aware of challenging, problems and occupational hazard in midwifery working setting. So, it is hoped that the strategy proposed in the current study could lead to improvements in midwife's satisfaction and health care services.

Abbreviations

MSQ: Minnesota Satisfaction Questionnaire

WRQoL: Work-Related Quality of Life Scale

TLX: Task-Load Index

Declarations

Ethics approval and consent to participate

Written informed consent will be obtained from each participant. This protocol has been approved by the Ethics Committee of the Islamic Azad University, Medical Sciences, Tabriz Branch, Iran (code number: IR.TBZMED.REC.1400.113).

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Authors' contributions

A.Fnk and N.Sh contributed to the design of the protocol and to the implementation and analysis plan. A.FnK has written the first draft of this protocol article and all authors have critically read the text and contributed with inputs and revisions, and all authors read and approved the final manuscript.

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Availability of data and materials

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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Figures

Figure 1

Study diagram