







# Evaluation of woman-centred care status by Iranian midwives and providing strategies to improve women-centred care: A sequential explanatory mixed method study protocol

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## Abstract

**Aim:** The present study aimed to evaluate the status of WCC provided by Iranian midwives.

**Design:** A sequential explanatory mixed method study protocol.

**Methods:** The present study was conducted in three phases: quantitative, qualitative and mixed. The first phase is a cross-sectional study that will be performed on midwives working in health centres, public and private hospitals in Iranian. The second phase is a qualitative study, in which purposeful sampling will be used, meaning that the midwives who are part of the extreme cases according to the results of quantitative phase and are willing and able to express their own experiences regarding WCC will be selected. Also, pregnant and parturient women under their cover will also be interviewed. Finally, in the mixed phase, we will use a combination of two quantitative and qualitative studies, a literature review and expert opinion using a Delphi method to provide strategies to improve and promote WCC in midwives.

**Results:** Achieving this goal is expected to provide positive outcomes such as strengthening the midwives professional relationship with women and reducing health care costs. No Patient or Public Contribution.

## KEYWORDS

continuous care, mixed method design, WCC, woman-centred care, women's preferences

## 1 | INTRODUCTION

Mothers play an important and undeniable role in family and community cohesion. The issue of maternal health has been one of the important goals of the health care system (Hamal et al., 2020). Improving the health of mothers and infants has remained as one of the uncompleted agenda of the Millennium Development Goals and a high priority area in the sustainable development goals (Nelson, 2021).

Based on the definition of the World Health Organization (WHO), the concept of maternal health refers to "women's health during pregnancy, childbirth and postpartum". It exposes many women to statistically significant but preventable complications, so that it can lead to maternal mortality if not properly managed (World Health Organization, 2014). Therefore, the global strategy emphasizes access to essential interventions at the right time and a skilled and trained workforce for improving maternal health (Koblinsky et al., 2016). In

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this regard, the participation of midwives in pregnancy, childbirth and postpartum care, as the first health professionals, is essential for the maternal and neonatal health (Bagheri et al., 2021).

Based on the International Confederation of Midwives (ICM), midwives are recognized as responsible and accountable professionals who work with the cooperation and participation of women to provide support, care and advice during pregnancy, childbirth, and postpartum period (Fullerton & Thompson, 2013). The results of a study conducted by Nove et al. in the Lancet Global Health using the Lives Saved Tool to estimate the number of preventable mortalities by 2035 showed that global coverage of midwifery interventions compared to current coverage prevents 67% of maternal mortalities, 64% of neonatal mortalities, and 65% of stillbirths and saves 4.3 million people lives annually by 2035. However, it requires increasing access to trained and skilled midwives providing care to women at the global level (Nove et al., 2021).

It should be noted that although coverage and access to maternal health services to midwives has increased significantly in some developed countries, maternal mortality rates are still statistically significant (Mirghafourvand et al., 2021). In this regard, the main issue that has been less addressed seems to be the quality of care provided by midwives (Khosravi & Babaey, 2022). The content and quality of these services have not improved with sufficient speed (O'Dowd, 2021).

## 2 | BACKGROUND

Over the last 40 years, a clear shift towards patient-centred care has been observed in the medical sciences to improve the process of providing health care. This term has manifested itself in midwifery services under the name of woman-centred care (WCC) (Fontein-Kuipers et al., 2018). WCC as a framework has received high level of attention in a wide range of midwifery practices, particularly in the United Kingdom and Australia (Bradfield et al., 2019).

The main indicator of quality in midwifery services is WCC, which is the core of midwifery practice in the contemporary time (Brady et al., 2019). The word "midwife" means being with a woman, which is the foundation and basic principle of the philosophy and practice of midwifery (Bradfield et al., 2019).

There is little research that focuses specifically on the structure or function of WCC, despite the importance of providing WCC in the midwifery profession (Brady et al., 2019; Cole et al., 2020; Crepinsek et al., 2022). In this regard, the results of a study conducted by Crepinsek et al. (2022) to review documents from 142 countries showed that the phrase "WCC" was used in only 3.5% of the documents (Crepinsek et al., 2022).

The concept of WCC first emerged from a movement in the 1970s and 1980s to support feminists (Leap, 2009). It was first introduced in the Winterton Report and changing childbirth in the United Kingdom (Aston & Lee, 1995). There is currently no universally accepted definition of WCC (Brady et al., 2019). However, in the midwifery profession, the widely accepted definition of WCC has been

provided by Leap (2009). Based on this definition, WCC includes principles such as women's choice, control, continuous care, and the self-determination right by women themselves before pregnancy, during pregnancy, childbirth, and after childbirth (Leap, 2009). It is defined as a consciously chosen philosophy and tool for managing the care of women. In this care, a common relationship is established between a woman as a human being and a midwife as a professional through solidarity, interaction and recognition and respect for specialized fields (Fontein-Kuipers et al., 2016).

A phenomenological study was conducted in Australia on 31 midwives who worked in different care models to determine the characteristics of WCC. The characteristics of WCC included the protection of women's rights, advanced communication skills, facilitating conscious decision-making, continuous care, creating an appropriate atmosphere, empowerment, and considering individual and therapeutic characteristics of women (Lunda et al., 2018). This is one of the most common desires of women during pregnancy, labour and after it is considered and supported by the midwife who is in contact with her (Hundley et al., 1997).

The International Confederation of Midwives in Australia in 2019 has described WCC in four specialized areas, including safety, respect, right to choose and access, all of which have an equal value (Dahlen et al., 2022). Midwives are the main providers of care before pregnancy, during pregnancy, childbirth, and after childbirth, reflecting their key role in WCC. This is how midwives' mental experiences of WCC are discovered including individual beliefs, normative beliefs and their control beliefs, which have a particular importance (Armitage & Conner, 2001; Fontein-Kuipers et al., 2016).

Despite the emphasis on providing WCC in developed countries, according to studies reviewed by the researcher so far, the status of WCC provided by Iranian midwives has not been examined by standard tools. Thus, to improve the cares before pregnancy, during pregnancy, childbirth, and after childbirth and thus improve the health of mothers and children, it seems that investigating the current status of WCC and the views of midwives using a mixed approach is effective in providing supportive strategies to improve and promote WCC.

## 3 | STUDY AIM

Evaluation of the status of WCC provided by midwives in Iranian and to provide strategies to improve WCC.

## 4 | METHODS

### 4.1 | Study design

The present study is a mixed methods research conducted with an explanatory sequential approach. Explanatory sequential approach is a mixed method that first collects and analyses quantitative

data and then qualitative data to explain or generalize quantitative data (Creswell & Clark, 2017). The present study will include three phases, including quantitative, qualitative and mixed phases. The mixed phase will use a combination of two quantitative and qualitative studies, a literature review and expert opinion using a Delphi method to provide strategies to improve and promote WCC in midwives (Figure 1).

## 4.2 | Study phases

### 4.2.1 | Phase 1 (quantitative phase)

#### *Specific objectives*

1. Evaluating the status of WCC in midwives of Tabriz
2. Evaluating the relationship between some sociodemographic factors and WCC in midwives of Tabriz
3. Evaluating the content validity and face validity of WCCS-MSR
4. Evaluating the construct validity of WCCS-MSR
5. Evaluating the test-retest reliability and internal consistency of WCCS-MSR

This phase is a descriptive-analytical cross-sectional study that will be conducted on midwives working in health centres, public and private hospitals in Tabriz. Census sampling method will be used in this phase. The goals and method of study will be fully explained to all eligible midwives and if they are willing to participate in the study, written informed consent will be obtained from them. Then, sociodemographic characteristics questionnaire and Woman-Centred Care Scale- Midwife Self Report (WCCS-MSR) will be completed unanimously.

#### *Inclusion criteria*

1. Midwives working in health centers, public and private hospitals in Tabriz
2. Living in the Tabriz city
3. Having at least a bachelor's degree

#### *Exclusion criteria*

1. History of depression
2. Taking the antidepressants, including tricyclics (amitriptyline, clomipramine, dosulepin, doxepin, imipramine, lofepramine, nortriptyline, trazodone), serotonin reuptake inhibitors (Citalopram, fluoxetine, progestin, and sertraline), serotonin and noradrenaline reuptake inhibitor (Reboxetine and venlafaxine)
3. Occurrence of a stressful event such as divorce, death of a first-degree family member and diagnosis of an incurable disease for a family member during the last 3 months

#### *Scales and data collection*

To collect quantitative data, socio-demographic characteristics questionnaire and WCCS-MSR will be used and data will be collected face to face.

*Socio-demographic information questionnaire.* This questionnaire includes questions such as age, marital status, income, educational level, employment sector, employment status, years of practice, hours worked per week, and having a physiological birth certificate.

*Woman-centred care scale- midwife self report (WCCS-MSR).* This tool includes 40 items assessing the level of WCC by midwives. The questionnaire includes five areas of meeting the unique needs of women; balances the woman's needs within the context of the maternity service; ensures midwifery philosophy underpins practice; uses evidence to inform collaborative practice; and works in partnership with the woman. The questionnaire items are scored on a 7-point Likert scale. The validity and reliability of this tool have been proven in the Australian midwifery population. The answers range from very untrue of me (score 1) to very true of me (score 7). The minimum score in this questionnaire is 40 and the maximum score is 280. Higher scores indicate a higher level of WCC (Davis et al., 2021).

#### *Validation of the WCCS-MSR*

Based on the studies conducted by the psychometric research team, the desired tool was not found in Iran. At the beginning of the work, the necessary permission will be obtained from the developer of the tool. Forward & Backward Translation, content, face and construct validities will be used to determine the validity of the WCCS-MSR.

For translation validity, in the first step, the desired tool will be translated from English to Persian by a fluent people in both languages (at least two people). In the second step, the original versions will be compared and the existing discrepancies will be corrected, and the final version will be created by integrating the original versions. In the third step, the translated version will be re-translated into original language of the questionnaire. In the fourth step, the final questionnaire, which was translated from the target language into the original language, will be reviewed. It will be done by three to four translators (one language specialist, one questionnaire translator, one who is familiar with the concepts, and one coordinator) who are fluent in both languages and the final version will be prepared in Persian (Afrasiabifar et al., 2006).

To evaluate the content validity, both quantitative and qualitative methods will be used. For this purpose, questionnaire will be submitted to 10 experts. After obtaining the opinions of the experts, the necessary changes will be applied in the tool. The content validity is calculated quantitatively based on the opinions of the specialists and experts and by calculating content validity ratio (CVR) and content validity index (CVI).

To determine the face validity of the tool, qualitative and quantitative methods will be used. In the qualitative method, target population opinions are used. To receive the target group opinions, an interview with samples (10 midwives) is performed to find the difficulty in understanding the items and words and the relevance of the items, and the probability of ambiguity, and misconception of the items. Face validity is measured quantitatively using the item impact method. For this purpose, a 5- point Likert scale

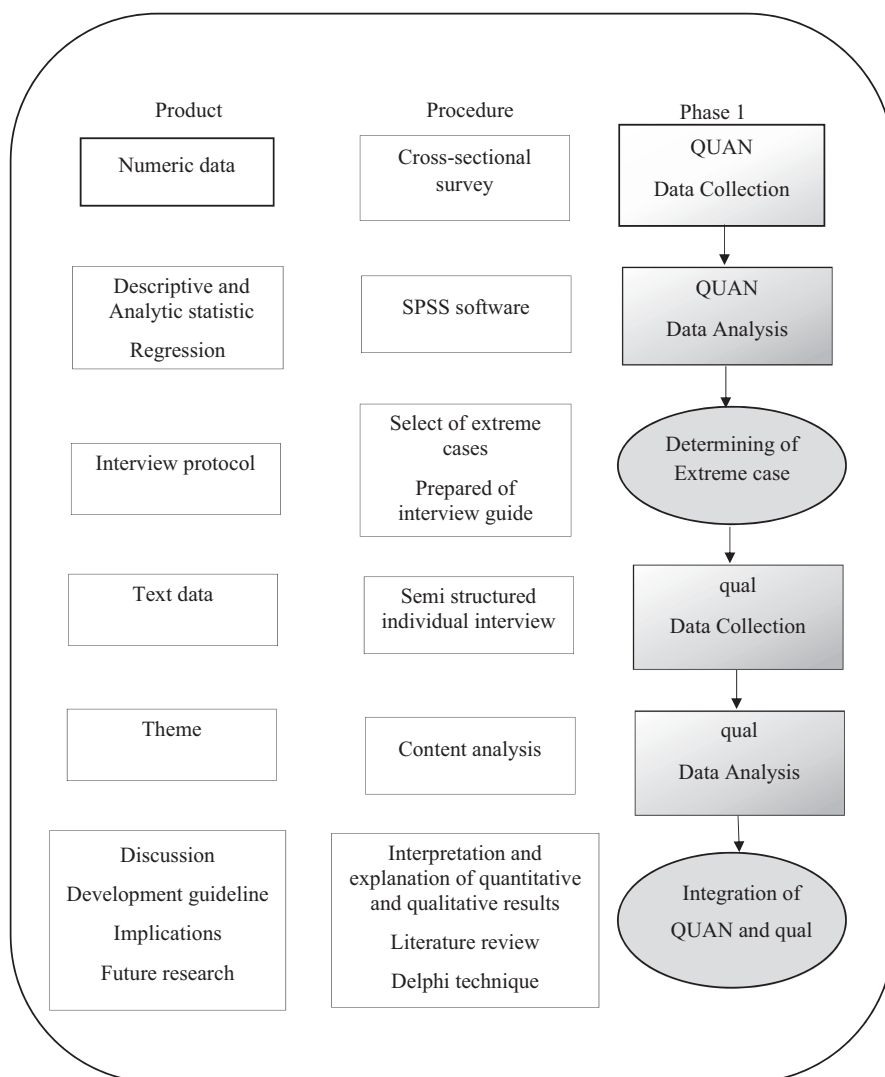


FIGURE 1 Study visual diagram.

is considered for each of the items: completely important (score 5), important (score 4), moderately important (score 3), slightly important (score 2), and not important at all (score 1). Then, the questionnaire will be submitted to the target group to determine the face validity. After filling out of the questionnaires by the target group, the face validity is calculated using the item impact formula ( $\text{Impact Score} = \text{Frequency (\%)} \times \text{Importance}$ ). Impact score above 1.5 is approved (Frequency: The percentage of mothers who answered to a particular Likert in the desired item, and Importance: The Likert number chosen by the mothers; Mosier, 1947).

The construct validity is measured using explanatory and confirmatory factor analysis (Smith, 2005). Also, by performing pre-test and retest, the reliability of two dimensions of reproducibility ( $\text{ICC} = \text{Intra Class Correlation}$ ) and internal consistency (Cronbach's alpha coefficient) will be determined (Bravo & Potvin, 1991).

#### Sample size required for scale psychometrics

Quoted by Coakes & Steed, Darwish Poorkakhki states that at least 5 samples per scale item, or 100 samples in total, are required for scale factor analysis (Darvishpour et al., 2005). Nunnally and Bernstein (1994) propose 10 samples per scale item for factor

analysis. In this study, 5 samples were considered per scale item, which according to the number of 40 items in the WCCS-MSR, 200 samples are required.

#### Analysis

SPSS-24 software will be used to analyse the quantitative data. Descriptive statistics, including frequency (percentage) and mean (standard deviation) will be used if the data are normal, and median (quarters 25–75) will be used, if the data are abnormal, to describe woman-centred care. To determine the relationship between WCC score and sociodemographic characteristics, first bivariate tests including Pearson correlation, independent t-test and one-way analysis of variance will be used. Then, multivariate linear regression test with backward strategy will be used to control confounding variables.

#### 4.2.2 | Phase 2 (qualitative phase)

##### Specific objective

1. Exploring midwives' perceptions of WCC and the barriers and facilitators to achieving it

2. Exploring the perception of pregnant and parturient women about WCC by midwives

### Study design

The research method in the qualitative phase study is qualitative content analysis with a conventional approach. The main advantage of qualitative content analysis based on the conventional approach is to obtain direct information from the study, without imposing a predetermined categories or theories (Speziale et al., 2011).

### Inclusion criteria

1. Willingness to participate in the study
2. At least 18 years old
3. Use of pregnancy and childbirth services during pregnancy

### Exclusion criteria

1. Women with planned caesarean delivery
2. Women with high-risk medical conditions

### Sample size and sampling method

According to the mean total score of WCC that will be obtained in the quantitative section, the extreme cases will be selected, so that on both sides of the total score of WCC, midwives who obtain 10% of upper and lower bounds of the total score of WCC will be selected as the extreme cases. Purposeful sampling will be used. It means that the midwives who are extreme cases and willing and able to express their own experiences with WCC will be selected. Sampling will also be performed on pregnant and parturient women who use pregnancy and childbirth services at health centers. The current study is based on the attitudes and experiences of midwives, but since woman-centred care is based on interaction and two-way communication between midwives and women, in addition to interviewing midwives, we will also interview with pregnant and postpartum women under their cover. Because in a two-way communication, one side of the communication (women), cannot be ignored (Fontein-Kuipers et al., 2018).

### Data collection

In-depth and semi-structured individual interviews with open-ended questions will be used to collect qualitative data. In conducting the interview, the researcher encourages participants to freely express their opinions and experiences of the topics raised in the guideline (Graneheim & Lundman, 2004). Before performing the qualitative stage, the questions in the interview guideline are designed based on the results of the first or quantitative study and the related factors identified in the questions. The ways to obtain valid data and the ways to focus on research questions with members of the research team will be reviewed and interview will start with predetermined questions and it will continue with asking in-depth and exploratory questions based on the type of answer to each question to find out the depth of the topic such as What do you mean? Why? Explain more, or Would you give an example so that I can understand what you mean?

During the interview, the researcher will record non-verbal data such as tone of voice, facial expressions and position of the participants in a special sheet with stating the time and place of the interview. Sampling will continue until the information saturation (until no new information or code is received).

### Analysis

In the present study, qualitative content analysis with a conventional approach will be used to analyse the data. In this approach, data analysis starts with reading the entire text repeatedly to gain a complete understanding of them. Then, the texts are read word by word to extract the code. First, the text objective words, which seem to contain the main concepts, are identified.

The researcher will take the notes from the initial analysis, and this continues until the emergence of the codes. During this process, code labels that represent more than one main idea are identified. These items are extracted directly. Then, the codes are categorized based on their differences or similarities. Ideally, the number of categories should be between 10 and 15 to be large enough to classify a large number of codes. The created classes are used to organize and group code into meaningful categories. In the present study, the conventional content analysis method will be used according to the steps proposed by Graneheim and Lundman (Graneheim & Lundman, 2004). By using this method, in addition to the obvious content of the interview texts, their hidden content and concepts with different levels of abstraction can also be obtained. In the present study, to evaluate the accuracy of qualitative studies, four criteria of credibility, dependability, confirmability, and transferability will be used (Busha & Harter, 1980; Shenton, 2004). MAXQDA software will be used to organize interview texts and codes.

## 4.2.3 | Phase 3 (Providing strategies to improve women-centred care)

### Specific objective

Providing strategies to improve and promote WCC in providing midwifery services.

### Data collection

To provide strategies for improving and promoting WCC by midwives, a comprehensive review of existing literature related to supportive strategies for improving WCC will first be performed. Then, strategies to promote and improve WCC will be designed by providing the results of two quantitative and qualitative studies to experts and controlled feedback of responses and opinions received using the Delphi method. The Delphi method will include 6 steps as follows:

**Step 1.** A panel of experts to participate in the activities will be selected, and reason and logic of the study will be explained to them and they will be requested to participate in the study.

*Step 2.* Each of them will be asked to give his or her opinions on the determined issue or topic to present a list of value judgements.

*Step 3.* The answers will be collected and they will be merged in the form of one questionnaire to be used in the first round of the study. Then, the members of the same group will be asked to rank their statements based on importance or priority.

*Step 4.* When the first round participants' questionnaires were collected, the data are analysed statistically. Then, the items will be re-designed based on the obtained ranks and will be prepared in the form of another questionnaire to be used in the second round.

*Step 5.* The second round questionnaire and a statistical summary of the first round will be sent to the members of the same group and they will be asked to answer the second questionnaire questions.

*Step 6.* The fifth step is repeated for the third round questionnaire. The respondents whose opinions are outside of the quarter of the third round results are asked to explain the cause of change in their opinions. At the end of third round, examiner prepares a report of the ranked comments and opinions and specifies the extent of the changes in the opinions. Then, agreed opinions along with other relevant recommendations received from participants are summarized and provided to stakeholders to make relevant decisions (Brady et al., 2017).

### 4.3 | Ethics approval and consent to participate

This study was approved by the Ethics Committee of the Tabriz University of the Medical sciences, Tabriz, Iran [code number: IR.TBZMED.REC.1401.051]. During the study, written consent will be obtained from all participants in both quantitative and qualitative phases. Participants will be assured that their information and names will be kept confidential in the results report. It will also be explained that they are allowed to leave the study at any stage of the study.

## 5 | DISCUSSION

Based on the WHO, access to the highest standard of health care is a natural right of all human beings (Beek & McFadden, 2019). Midwives have always been pioneers in providing care to women during childbearing in all periods of before pregnancy, pregnancy, childbirth and after childbirth, which play an important role in the well-being and health of women (Eri et al., 2020).

In general, midwifery care is provided with two approaches, including biomedical approach and midwifery-centred approach. The biomedical approach refers to a model of care that focuses on the control of women by the physician and with the application of medical interventions to manage risk (Bayly, 2017). Since the beginning of the twentieth century and with the advances of science and

technology, the biomedical approach has prevailed over midwifery models (Goer, 1995).

Although some experts often attribute the reduction in maternal and neonatal mortality rates to advances in medical technology, the results of contemporary studies indicate that maternal mortality is reduced by improving the control of gynaecological diseases and adherence to diet and lifestyle modifications rather than unnecessary interventions in childbirth (Cheng et al., 2014). In this regard, the results of a cohort study on 42,268 women showed that although the benefits of new technologies in midwifery care are generally welcomed, some researchers argue that continuous monitoring of the process, which should occur naturally, sends conflicting messages to women. As a result, they consider pregnancy and childbirth as a high-risk event and may lead to feelings of inadequacy in women and deprive them of control, right to choose and decision-making about the natural process of childbirth (Richards et al., 2013).

The results of studies on social support during pregnancy and after childbirth showed that supported women had lower anxiety, more control and a greater sense of satisfaction with their care, which was associated with a better physical and psychological outcomes for the mother and infant (Dagger et al., 2007; Sandall, 1995). Other benefits included fewer interventions during labour, less duration of the second stage of labour, less use of epidural anaesthesia, reduced caesarean delivery, and less episiotomy (Dagger et al., 2007; Petrovska et al., 2017). Despite the growing popularity of WCC, its philosophy in midwifery services is largely unknown (Dagger et al., 2007; Petrovska et al., 2017; Sandall, 1995).

### 5.1 | Strengths and limitations

The proposed study has several strengths. To our knowledge, our study is the first study that uses the mixed method approach to strengthen quantitative analysis with qualitative evaluations of the perception of midwives and pregnant and parturient women and finally to provide strategies to improve and promote WCC. It is expected that the results of this study to lead to a better understanding of the issue, important clinical achievements, and improve outcomes for both women and the health care system. Census sampling will be used in this study. The use of standard tools in the quantitative section and case interviews with pregnant women and women in the postpartum period in addition to midwives in the qualitative section are other strengths of this study. Also, focusing on examining the status of WCC, this study highlights the potential and capabilities of midwives in providing care focuses on women's needs and provides useful information about potential barriers to providing and accessing appropriate care that can lead to new evidence in the design of interventions and the development of health care guidelines. On the other hand, the present study had such limitations as the possibility of potential bias due to the tendency to give favourable social responses with self-reporting criteria and also, not calculating criterion validity due to the lack of gold standard for measuring WCC.



## 6 | CONCLUSION

Examining the status of WCC and providing strategies in this regard are vital strategy in maintaining the normality of the delivery process, reducing unnecessary interventions, and delegating control of care and delivery to women themselves. Hence, achieving this goal is expected to provide positive outcomes such as strengthening the midwives professional relationship with women, improving the quality of women's reproductive life, reducing health care costs, and improving maternal and neonatal outcomes.

### AUTHOR CONTRIBUTIONS

Mojgan Mirghafourvand, Roghaiyeh Nourizadeh, Sakineh Mohammad-Alizadeh-Charandabi, Maryam Vaezi, Shahla Meedya and Sepideh Mashayekh-Amiri contributed to the design of the protocol. Mojgan Mirghafourvand and Sepideh Mashayekh-Amiri contributed to the implementation and analysis plan. Mojgan Mirghafourvand and Sepideh Mashayekh-Amiri 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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### CONFLICT OF INTEREST STATEMENT

The authors declare that they have no competing interests.

### DATA AVAILABILITY STATEMENT

All data generated during this study are included in this published article.

### ETHICS STATEMENT

This study was approved by the Ethics Committee of the Tabriz University of Medical Sciences, Tabriz, Iran [code number: IR.TBZMED.REC.1401.051]. During the study, written consent will be obtained from all participants in both quantitative and qualitative phases. Participants will be assured that their information and names will be kept confidential in the results report. It will also be explained that they are allowed to leave the study at any stage of the study.

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