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Investigating impact of consulting midwives on maternal rights charter on perception of respectful maternity care and postpartum blues among postpartum women: a quasi-experimental study

Razieh Bagherzadeh¹, Maryam Chananeh², Farahnaz Kamali¹ and Khatoon Samsami^{1,2*} 

Abstract

Introduction Despite the existing reports on mistreatment and disrespectful maternal care, few studies have investigated interventions to mitigate this issue. The present study aims to assess the impact of consulting midwives on maternal rights charter on perception of respectful maternity care and postpartum blues among postpartum women in two hospitals in southern Iran.

Methodology This quasi-experimental study was conducted on 437 postpartum women (217 mothers before the intervention and 220 mothers after the intervention) and 44 midwives working in the maternity ward of two hospitals affiliated to Bushehr University of Medical Sciences in 2023–2024. The hospitals were randomly divided into control and intervention groups. The mothers and midwives were selected using convenience and census sampling methods, respectively. Initially, the first sampling phase of postpartum women was conducted. Then, midwives in the intervention group received consultation on patient rights charter in groups of 3–4 individuals over three sessions. After the intervention, the second phase of sampling of postpartum women was conducted. Data collection tools included questionnaires assessing women's perception of respectful maternity care and postpartum blues. The data were analyzed using descriptive and analytical statistical tests in SPSS 20.0.

Results After performing the intervention on midwives, the mean score of postpartum respectful maternity care from the perspectives of the mothers in the intervention and control hospitals were 91.08 ± 5.51 and 68.34 ± 10.81 respectively ($P < 0.001$). Also, the mean scores of postpartum blues in the intervention and control hospitals were 12.88 ± 4.66 and 14.85 ± 5.94 respectively ($P = 0.007$). Multivariable linear regression analysis revealed that consulting with midwives regarding the Maternal Rights Charter, led to an increase in respectful maternity care (β coefficient = 0.780, 95% C.I. = 19.796). ~ 24.541) and decreased postpartum blues (β coefficient = -0.172, 95% C.I. = -3.318 \sim -0.390) from the perspectives of the mothers.

*Correspondence:
Khatoon Samsami
kh.samsami74@gmail.com

Full list of author information is available at the end of the article



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Conclusion Consulting midwives on patient rights charter was positively correlated with mothers' perception of respectful maternity care and negatively correlated with postpartum blues, indicating the positive effect of intervention on increasing women's satisfaction and reducing postpartum blues. It is recommended that this consultation be included in midwives' continuing education programs.

Clinical trial number Not applicable.

Keywords Childbirth, Ethics consultation, Midwife, Patient rights, Postpartum blues

Introduction

The process of pregnancy and childbirth, while stressful, is also a joyful event. Maintaining this sense of joy and well-being in mothers significantly influences the initial mother-infant bond and attachment, infant development, maternal roles and marital relationships [1–3]. Passing through this stressful process and maintaining mothers' positive feelings depend not only on the mothers themselves, but also on the support of those around them, including the healthcare staff who interact with them during childbirth [3, 4].

The healthcare staff's behavior towards women is described under the framework of maternal rights charter. Since 1999, maternal rights have gained attention from global leaders, leading to the publication of Respectful Maternity Care Charter by White Ribbon Alliance [4, 5]. Adherence to maternal rights charter offers numerous benefits, including reducing medical interventions during childbirth, coping with labor pain, shortening labor duration, timely initiation of breastfeeding, having a positive childbirth experience, reducing hospital costs, speeding up recovery, reducing anxiety, creating motivation to have a better cooperation with the medical team, increasing satisfaction and strengthening trust between women and healthcare providers [6, 7].

Studies have revealed disrespectful care during childbirth, representing non-compliance with maternal rights charter, has recently increased. Studies have demonstrated the prevalence of disrespectful care during childbirth ranges from 17 to 71% in countries such as the United States, Brazil, Ecuador, the Netherlands, Spain, Africa and India [8]. An investigation conducted on a group of Iranian women revealed 3 out of 4 women (75.7%) experienced disrespectful care during childbirth [9].

Disrespectful care during childbirth could result in various physical and psychological consequences, including women's lack of trust in healthcare providers, dissatisfaction with childbirth, sleep disorders, lack of respect and understanding for one's own body, decreased sexual desire, leading to reduced fertility [10–12], poor relationship with the child, negative feelings and thoughts towards the newborn, increased breastfeeding problems, delays or reluctance to use healthcare services in the future, reluctance to have children and, if becoming

pregnant in the future, reluctance towards natural childbirth or preference for home birth, and development of postnatal psychological problems [13–16].

Mental health is one of the aspects that has received little attention during pregnancy. However, pregnancy and postpartum period are among the most vulnerable periods of a woman's life for the onset of psychological disorders due to biological, psychological and social changes [17, 18]. Postpartum blues is one of the psychological disorders that occurs within the first 10 days after childbirth, peaking between days 3 and 5. It is characterized by mild and transient mood swings, including anxiety, irritability, crying spells, negative thoughts, insomnia, difficulty concentrating, headache, lack of self-confidence, tendency to self-blame and feelings of helplessness. Typically, these symptoms gradually resolve without treatment [17, 19, 20].

Studies have reported that the prevalence of postpartum blues ranges from 13 to 76%, so that its rate is 33.1% in Asia [21] and 29–60% in Iran [22]. Postpartum blues could lead to mother's decreased interest and attention towards the newborn and, if it persists for more than two weeks, it may progress to postpartum depression [23, 24]. Postnatal depression has symptoms that are significantly more severe than those of postpartum blues and could result in adverse health outcomes for both mothers and infants, including reluctance to breastfeed, early cessation of breastfeeding, poor mother-infant interaction, infant developmental and growth disorders [25] and parental issues and decreased attachment to the newborn [26]. In severe cases, it may predispose women to suicidal tendencies and, rarely, infanticide [27].

Due to the increased disrespectful maternity care during childbirth and subsequent consequences for mothers and newborns, interventions should be implemented by midwives to enhance adherence to maternal rights charter, thereby improving women's satisfaction. Studies have indicated midwives have a satisfactory level of awareness of the maternal rights charter; however, their performance in this regard is not at a desirable level [9, 28]. This issue likely reflects midwives' negative attitudes towards adhering to the maternal rights charter [29]. Counseling is one of the interventions that could change beliefs, attitudes, behaviors and perceptions [30]. "Dilemma method of moral case deliberation" is a counseling method in

the field of ethics, which is rooted in Aristotelian ethics. Aristotle emphasized that ethical decisions are not the result of instrumental reasoning, calculation or logic, but rather arise from wise judgement, perception and experience gained through practice (*phronesis*). This approach begins by presenting ethical dilemmas experienced by participants and ends with discussing and providing potential solutions to those dilemmas. This approach provides significant strategies for changing attitudes and shaping ethical beliefs and convictions by sharing experiences and ethical challenges [31, 32].

Interventions should be evaluated to determine their effect, as every program aimed at improvement and advancement requires assessment [33]. Women, as the recipients of care and those who suffer from disrespectful care during childbirth, are an appropriate group for evaluating respectful maternity care provided by midwives. Reviewing the literature indicated most of studies have been qualitatively conducted on women's perception of their rights during childbirth, focusing on identifying factors influencing adherence to maternal rights, predominantly assessed through midwives. Few interventions have been implemented to increase women's perception of their rights [2, 34, 35]. Despite the correlation between the violation of patient rights and postpartum blues and depression, there are a limited number of studies on the impact of interventions promoting adherence to the patient rights charter on this variable [36, 37]. Therefore, interventions such as counseling midwives, if they enhance women's perception and satisfaction with respectful maternity care, could be incorporated as an interactive approach into the continuous education of those providing care to women during and after childbirth. This issue could reduce adverse childbirth outcomes, including psychological problems, thereby contributing to the achievement of the United Nations' sustainable development goals. Therefore, the present study was conducted to investigate the impact of counseling midwives on the maternal rights charter on perception of respectful maternity care and postpartum blues among postpartum mothers in two hospitals in southern Iran, 2023–2024.

Methods and materials

Study design and setting

This quasi-experimental study was conducted on 437 postpartum women and 44 midwives working in the maternity ward of two hospitals affiliated to Bushehr University of Medical Sciences (Shohada-ye Khalij-e Fars Hospital and Shahid Ganji Hospital, Borazjan) in southern Iran, from 10 May 2023 to 6 January 2024. The intervention was performed on midwives, while the outcome was assessed among postpartum mothers. The evaluated outcomes included postpartum women's perception of

respectful maternity care and postpartum blues. To prevent sharing of the trained content among the midwives, two hospitals located approximately 60 km apart were selected as the research setting. These two hospitals were randomly assigned as the intervention and control hospitals. Both hospitals were similar in terms of bed capacity, number of patients and existing routines in the wards.

Sample size and sampling method

Since the study aimed to assess the impact of consultation with midwives on women's perception of respectful maternity care, and considering that the care method used in the studied maternity wards was not a case method, all the midwives from both hospitals were included in the study using a census method. Finally, 44 midwives from both hospitals participated in the research ($n=23$ from the control hospital; $n=21$ from the intervention hospital). The sample size of postpartum women was determined based on the regression sample size formula, i.e., 10 individuals for each predictor variable. Given that there were 20 predictor variables related to postpartum women, the estimated sample size was 200 for both groups. Considering the potential withdrawal rate of 10%, the sample size was determined as 220 for both groups, i.e., in each group, 110 samples before the intervention on midwives and 110 samples after the intervention on midwives ($n=440$ in total). It should be noted that after analyzing the first phase of sampling of postpartum women (before the intervention on midwives), one questionnaire from the intervention hospital (analyzing 109 samples) and two questionnaires from the control hospital (analyzing 108 samples) were excluded due to non-completion of the postpartum blues questionnaire. In the second phase of sampling of postpartum women (after the intervention on midwives), there was no sample dropout.

Inclusion and exclusion criteria

The inclusion criteria for postpartum women were having the gestational age of 37 weeks or more at the time of delivery, at least 6 h having elapsed since delivery, being willing to participate in the study and being able to communicate in Persian. The exclusion criteria were experiencing a stressful event in the last six months, having the history of depression or any other psychological disorder based on self-report, mental retardation, delivering a newborn with congenital anomalies, hospitalization of the newborn in the intensive care unit and having less than a two-hour interval between admission and delivery.

Measures

A demographic form, women's perception of respectful maternity care (WP-RMC) questionnaire [38] and Edinburgh postnatal depression scale (EPDS) [39] were

utilized to collect the data. The demographic form included age, educational level, occupation, place of residence, religion, number of pregnancies, number of abortions, number of children, underlying diseases, time of delivery, etc.

Women's perception of respectful maternity care (WP-RMC) questionnaire was developed by Ayoubi et al. (2020), and its validity and reliability were confirmed. WP-RMC questionnaire consists of 19 items categorized into three domains of providing comfort (items 1–7), collaborative care (items 8–14), and avoidance of mistreatment (items 15–19) [38]. This scale was completed by postpartum women hospitalized in the maternity ward. In his study, Moridi used the content validity index (CVI) and content validity ratio (CVR) to assess content validity and reported mean CVI and CVR as 0.97 and 0.79, respectively. Reliability was evaluated using internal consistency, and the questionnaire stability was assessed using test-retest method. The internal consistency of providing comfort, collaborative care and mistreatment domains and overall questionnaire was obtained with the Cronbach's alpha of 0.89, 0.72, 0.77 and 0.91, respectively. Also, the intraclass correlation coefficients (ICC) of providing comfort, collaborative care and mistreatment domains and overall questionnaire were reported as 0.79, 0.82, 0.81 and 0.90, respectively [38]. The items are scored based on a five-point Likert scale (always, often, sometimes, rarely and never), ranging from 1 to 5. The questionnaire and domain scores range from 19 to 95. The obtained scores of each domain and overall questionnaire were converted into a percentage by linear transformation. Therefore, the questionnaire and domain scores ranged from 0 to 100 [40].

Edinburgh postnatal depression scale (EPDS) was developed by Cox et al. (1978) and revised in 1994. This 10-item tool is scored based on a four-point Likert scale. Items 1, 2 and 4 are scored from 0 to 3, while the remaining items are scored from 3 to 0. The total score of the questionnaire ranges from 0 to 30, with higher scores indicating more postpartum mood disturbance [39]. This tool was validated in Iran by Ahmadi Kani Golzar and Gholizadeh (2015). The questionnaire internal consistency was confirmed with the Cronbach's alpha of 0.70. Also, its construct validity was assessed in the aforementioned study. Moreover, its correlation with Beck depression inventory (BDI) was investigated and reported as moderate and positive [41]. According to investigations, this questionnaire is suitable for measuring postpartum blues in the first ten days following delivery [42]. In the present research, the questionnaire was completed on the tenth day after delivery and the participants were asked about the past ten days, i.e., mood swings related to postpartum blues were considered. The scale score ranges

from 0 to 30, with higher scores indicating higher mood disorders.

Research implementation method

Following the obtaining of the requisite ethical code and permits, the research practical stages were initiated. The researcher visited the maternity wards of the two hospitals, introduced themselves to the ward supervisor and explained the research objectives. Then, hospitalized postpartum women who had undergone natural childbirth were selected using convenience sampling method, taking into account the inclusion criteria. After explaining the research objectives, the researcher obtained informed consent form from the mothers and provided them with the demographic form and WP-RMC questionnaire. Also, the researcher explained the research process and asked women to provide two different contact numbers, so that they could be contacted for completing the postnatal depression scale. In addition, for the illiterate and elementary literate individuals, the informed consent form was read to them verbally, and their consent was obtained. Their companions were also informed. Additionally, the items on the questionnaires and the response options for each item were read aloud by the researcher, and the response option that best reflected the participant's opinion was selected. Sampling continued for four months, from 10 May to 31 August 2023, until the predetermined sample size was achieved. Then, ten days after delivery, EPDS was completed via telephone based on prior arrangements made with each participant. After filling out the questionnaires, the hospitals were randomly assigned to intervention and control groups. Following the necessary coordination, the intervention was carried out for the midwives at the intervention hospital. The intervention group, divided into three groups of three participants and three groups of four participants, received consultation sessions on patient rights charter over three days.

After the intervention, postpartum women hospitalized in the maternity wards of intervention and control hospitals were re-sampled using the same method employed before the intervention. The demographic form and WP-RMC questionnaire were provided to them. Sampling continued for three months, from 3 October 2023 to 6 January 2024, until the desired sample size was achieved. Then, ten days after delivery, EPDS was completed via telephone based on prior arrangements made with each participant. The midwives in the control group received no intervention. To uphold ethical principles, after the completion of the second sampling phase, the researchers organized a training workshop on patient rights and respectful maternity care for the control hospital.

Table 1 Summary of maternal rights charter consultation sessions

| | |
|----------------|--|
| First session | Acquaintance and greeting, creation of motivation, statement of the objectives of the meetings, review of the structure and order of the meetings, review of the history of the patient's bill of rights, and consultation on the moral concerns of the first and two dimensions (1- receiving proper care and being safe from any physical harm and psychological 2- access to information, informed consent and respect for the mother's preferences and decisions) of the Charter of Maternal Rights. |
| Second session | Counseling on the moral concerns of the third and fourth dimensions (3- preserving privacy, secrets, and information, 4- enjoying respectful behavior and preserving human affairs) of the Charter of Mother's Rights. |
| third session | Counseling on moral difficulties, the last three dimensions (5- equality and fairness in using services and freedom from any form of discrimination, 6- benefiting from health and treatment services and achieving the highest possible level of health, 7- enjoying freedom, independence and the right to participate in decision-making away from any coercion or threat) of the Charter of Mother's Rights. |

Table 2 Ten steps of intervention method

| | |
|--------------|--|
| First step | The researcher, acting as the facilitator, welcomes the group and explains the method being used |
| Second step | The researcher describes a specific personal situation, in which they faced an ethical dilemma |
| Third step | Involves formulating the ethical question, so that the researcher presents the ethical question and relevant dilemma |
| Fourth step | Participants are asked to put themselves in the position of the individual facing the ethical dilemma in order to gain better understanding of the situation |
| Fifth step | The participants examine the values and norms of the involved people to grasp the complexity of the issue and collaboratively plot a chart of perspectives, values and norms |
| Sixth step | Alternative solutions to the ethical dilemma are proposed |
| Seventh step | All available options are listed, and the participants are asked to specify which option they would choose and why, explaining the values and norms influencing their choice |
| Eighth step | Similarities and differences between individual considerations are considered |
| Ninth step | Conclusions are drawn, and an action plan is proposed |
| Tenth step | Involves evaluation, based on which in the subsequent consultation session, before presenting a new ethical dilemma, the researcher asks participants about any new experience similar to the ethical dilemma proposed in the previous session |

Intervention

The intervention was conducted in accordance with the “dilemma method of moral case deliberation”, a systematic approach to ethical decision-making. Table 1 presents scheduling and titles of the consultation sessions. The content of consultation sessions was prepared based on maternal rights charter during labor, developed by the Iranian Ministry of Health and Medical Education, as

well as a literature review. The ethical dilemmas that midwives might encounter in practice were included in each section of the content, which were then approved by four experts in the field of patient rights. It should be noted that the content is not directly explained in “dilemma method of moral case deliberation”. This content was only developed to ensure that all ethical dilemmas are covered. In each session, the ethical dilemmas encountered by midwives in maternity wards were presented as an ethical case considering the corresponding content. The “dilemma method of moral case deliberation” approach comprises ten steps (Table 2) [43]. The “dilemma method of moral case deliberation” approach was explained in detail in the study by Bagherzadeh et al. [44].

Data analysis

The data were analyzed in SPSS 20.0. First, the data were screened for outliers and missing values. There were no outliers in the primary variables. In total, 440 postpartum women participated before and after the intervention and divided into intervention and control groups. Among the postpartum mothers before the intervention, three were excluded from the study due to non-completion of the postpartum blues questionnaire. Finally, analysis was performed on 217 and 220 postpartum women from the first and second sampling phases (before and after the intervention on midwives) in the intervention and control groups, respectively. There were no outliers or missing values in the data collected in the second sampling phase. Measures such as mean, standard deviation, median, interquartile range and frequency tables were used to respond to the research questions and describe the data. Shapiro-Wilk test was utilized to assess normality of data distribution. Independent t-test was used to compare the mean scores of respectful maternity care and its domains in both hospitals, as well as in the first and second sampling phases in each hospital. The impact of intervention on women’s perception of maternal rights was investigated using linear regression analysis. First, univariable regression was conducted. For this purpose, the score of women’s perception of respectful maternity care (in the second sampling phase), EPDS score (dependent variable) and demographic variables and hospital type (intervention vs. control as independent variables) were included in the univariable linear regression. Then, variables that were correlated with the dependent variable in the univariable regression were entered into multivariable regression. The significance level was considered less than 0.05 in all cases.

Results

In this study, the findings related to 437 participants were analyzed. In total, 217 participants ($n = 108$ in the intervention hospital and $n = 109$ in the control hospital)

selected from the first sampling phase, i.e., before the intervention on midwives, were analyzed. In the second sampling phase, 110 participants selected from each hospital were analyzed (Fig. 1).

In the first sampling phase, the mean age (\pm SD) of postpartum mothers in the intervention and control hospitals was 27.48 ± 6.39 and 27.54 ± 6.51 years old, respectively.

In the second sampling phase, the mean age (\pm SD) of postpartum mothers in the intervention and control hospitals was 26.37 ± 6.75 and 28.01 ± 6.53 years old, respectively. Table 3 presents other demographic characteristics of the participants by group and sampling phase. No statistically significant difference was observed between the demographic variables of postpartum women (in the first

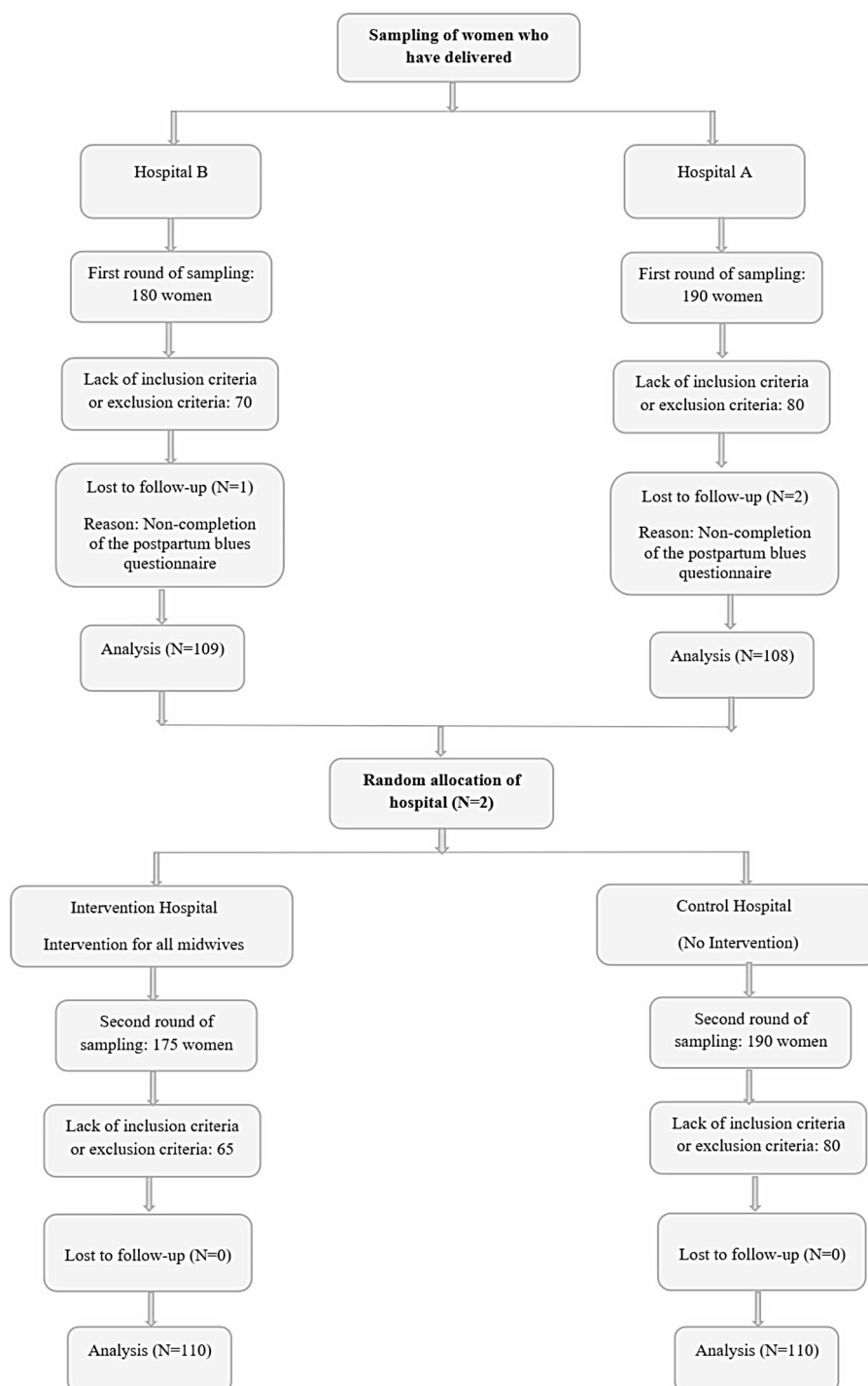


Fig. 1 Participants flow chart

Table 3 Demographic characteristics of participants in the initial and subsequent sampling rounds

| Variables | Variable levels | First phase sampling (Before intervention on midwives) | | Second phase sampling e (After Intervention on midwives) | |
|--|-----------------------------------|--|---------------------------------|--|---------------------------------|
| | | Control hospital (n = 108) | Intervention hospital (n = 109) | Control hospital (n = 110) | Intervention hospital (n = 110) |
| | | N(%) or Median(IQR)* | N(%) or Median(IQR)* | N(%) or Median(IQR)* | N(%) or Median(IQR)* |
| Education | Illiterate or elementary literacy | 16(14.8) | 22(20.2) | 16(14.5) | 19(17.3) |
| | Under high school diploma | 35(32.4) | 33(30.3) | 35(31.8) | 47(42.7) |
| | high school diploma | 34(31.5) | 39(35.8) | 25(22.7) | 33(30.0) |
| | College education | 23(21.3) | 15(13.8) | 34(30.9) | 11(10.0) |
| Job | Housewife | 95(88.0) | 99(90.8) | 93(84.5) | 99(90.0) |
| | Employed | 13(12.0) | 10(9.2) | 17(15.5) | 11(10.0) |
| Husband education | Illiterate or elementary literacy | 11(10.2) | 16(14.7) | 8(7.3) | 16(14.5) |
| | Under high school diploma | 40(37.0) | 36(33.0) | 41(37.3) | 41(37.3) |
| | high school diploma | 29(26.9) | 35(32.1) | 34(30.9) | 39(35.5) |
| | College education | 28(25.9) | 22(20.2) | 27(24.5) | 14(12.7) |
| Husband job | Unemployed | 5(4.6) | 1(0.9) | 3(2.7) | 1(0.9) |
| | Office worker | 23(21.3) | 17(15.6) | 20(18.2) | 15(13.6) |
| | Manual worker | 36(33.3) | 43(39.4) | 21(19.1) | 20(18.2) |
| | Freelance job | 44(40.7) | 48(44.0) | 66(60.0) | 74(67.3) |
| Having sufficient income | No | 58(53.7) | 56(51.4) | 30(27.3) | 52(47.3) |
| | Yes | 50(46.3) | 53(48.6) | 80(72.7) | 58(52.7) |
| Unwanted pregnancy | No | 75(69.4) | 71(65.1) | 85(77.3) | 85(77.3) |
| | Yes | 33(30.6) | 38(34.9) | 25(22.7) | 25(22.7) |
| Delivery Shift | Morning | 36(33.3) | 25(22.9) | 43(39.1) | 33(30.0) |
| | Evening | 27(25.0) | 26(23.9) | 27(24.5) | 28(25.5) |
| | Night | 45(41.7) | 58(53.2) | 40(36.4) | 49(44.5) |
| Participating in childbirth preparation classes | Yes | 16(14.8) | 14(12.8) | 11(10.0) | 12(10.9) |
| | No | 92(85.2) | 95(87.2) | 99(90.0) | 98(89.1) |
| Awareness of Patient Rights | Yes | 15(13.9) | 8(7.3) | 6(5.5) | 3(2.7) |
| | No | 93(86.1) | 101(92.7) | 104(94.5) | 107(97.3) |
| Number of pregnancies | | 2(3)* | 3(3)* | 2(3)* | 2(2)* |
| Number of live children | | 2(2)* | 2(2)* | 2(2)* | 2(2)* |
| Satisfaction with previous delivery (Score 1–10) | | 9(2)* | 10(2)* | 10(1)* | 10(1)* |

* Reported number are median and interquartile range; N=Number; IQR= interquartile range

and second phase sampling between the two control and intervention hospitals and also in each hospital between the two sampling phases).

In the first sampling phase, the mean scores of mothers' perception of respectful maternity care were 78.80 ± 7.81 and 76.27 ± 11.16 in the intervention and control hospitals, respectively. In this phase, the mean scores of postpartum blues were 15.11 ± 5.48 and 15.05 ± 6.04 in the intervention and control hospitals, respectively, showing no statistically significant difference between the two groups. Table 4 presents the mean and standard deviation of mothers' perception of respectful maternity care and its domains, as well as postpartum blues, by hospital

and sampling phase. In the intervention group, the mean score of mothers' perception of respectful maternity care in second sampling phase (after the intervention on midwives) was significantly greater than that in the first sampling phase. Also, the mean score of mothers' perception of respectful maternity care in the intervention hospital was greater than that in the control hospital. Moreover, the mean score of postpartum blues in the second sampling phase was significantly lower than that in the first sampling phase in the intervention hospital. Also, this value in the second sampling phase in the intervention hospital was lower than that in the control hospital. In the control hospital, the mean score of mothers'

Table 4 Comparison of the mean score for mothers' perceptions of respectful maternity care within each hospital and between the two hospitals

| | Hospital | First phase sampling (Before intervention on midwives) | | Second phase sampling (After Intervention on midwives) | | Before-After comparison t (P value) |
|---|--------------|--|-------|--|-------|-------------------------------------|
| | | Mean | SD | Mean | SD | |
| Providing comfort | Control | 73.47 | 14.63 | 64.25 | 12.97 | 4.963(< 0.001) |
| | Intervention | 75.13 | 11.38 | 89.38 | 8.54 | -10.492(< 0.001) |
| Comparison between two hospitals: t (P value) | | -0.941(0.348) | | -16.976(< 0.001) | | - |
| Participatory care | Control | 66.87 | 15.62 | 56.75 | 13.96 | 5.085(> 0.001) |
| | Intervention | 73.25 | 12.00 | 87.60 | 8.16 | -10.343(< 0.001) |
| Comparison between two hospitals: t (P value) | | -2.204(0.020) | | -20.007(< 0.001) | | - |
| Mistreatment | Control | 94.02 | 9.00 | 90.27 | 12.65 | 2.545(0.012) |
| | Intervention | 95.00 | 10.84 | 98.32 | 3.27 | -3.060(0.003) |
| Comparison between two hospitals: t (P value) | | -0.733(0.464) | | -6.459(< 0.001) | | - |
| Whole Questionnaire (perception of respectful maternity Care_ | Control | 76.27 | 11.16 | 68.34 | 10.81 | 5.338(0.001) |
| | Intervention | 78.80 | 7.81 | 91.08 | 5.51 | 12.012 (< 0.001) |
| Comparison between two hospitals: t (P value) | | -1.870(0.063) | | -19.661 (< 0.001) | | - |
| Post partum blues | Control | 15.05 | 6.04 | 14.85 | 5.94 | 0.258 (0.797) |
| | Intervention | 15.11 | 5.48 | 12.88 | 4.66 | 3.243 (0.001) |
| Comparison between two hospitals: t (P value) | | -0.073 (0.942) | | 2.741 (0.007) | | |

SD= Standard deviation

perception of respectful maternity care in the second sampling phase was significantly lower than that in the first sampling phase. In the control hospital, there was no statistically significant difference in the postpartum blues score between the two sampling phases.

The univariable linear regression on the data obtained from the second sampling phase indicated childbirth in the intervention hospital, educational level, sufficient income and awareness of patient rights was correlated with mothers' perceptions of respectful maternity care. Furthermore, the univariable regression results showed a statistically significant and negative correlation between satisfaction with previous childbirth, participation in physiological childbirth classes and childbirth in the intervention hospital with postpartum blues (Table 5).

The hierarchical multivariable linear regression revealed a positive correlation between childbirth in the intervention hospital and mothers' perception of respectful maternity care (in the second model, which included all the variables related to dependent variable). Also, a statistically significant and positive correlation was found between the awareness of patient rights and mothers' perception of respectful maternity care (Table 6).

Multivariable regression aimed at identifying factors influencing postpartum blues indicated a negative correlation between childbirth in the intervention hospital and mothers' postpartum blues (in the second model, which included all the variables related to dependent variable). Also, a statistically significant and negative correlation was indicated between participating in physiological childbirth classes and postpartum blues (Table 7).

Discussion

This study was conducted to investigate the impact of consulting midwives on maternal rights charter on postpartum women's perception of respectful maternity care and postpartum blues. The results indicated the mean score of women's perception of respectful maternity care in the second sampling phase was greater than that in the first sampling phase in the intervention hospital. Also, this value in the intervention hospital was greater than that in the control hospital. The results revealed the mean score of postpartum blues in the second sampling phase was lower than that in the first sampling phase in the intervention hospital. Also, the mean score of postpartum blues in the second sampling phase in the intervention hospital was lower than that in the control hospital. These results suggested that counseling sessions provided to midwives regarding respectful maternity care had a positive impact on women's perception and satisfaction and postpartum blues. The multivariable linear regression results showed intervention was positively correlated with mothers' perception of respectful maternity care and negatively correlated with postpartum blues after adjusting for potential confounding variables.

Most of the studies have been qualitatively conducted on women's satisfaction with adherence to patient rights, focusing on identifying factors influencing the adherence to patient rights. Few interventions have been implemented to enhance women's satisfaction. The intervention studies carried out in this field have mostly been multi-faceted, involving various institutions and groups. In line with the present study, Abouya et al. (2015), Asefa

Table 5 Univariable regression to investigate the factors affecting the mother's perception of respectful maternity care and postpartum blues (second round sampling: after the intervention on midwives)

| Variables | | Mother's perception of respectful maternity care | | Postpartum blues | |
|---|---------------------------|--|---------|------------------|---------|
| | | β | P value | β | P value |
| Delivery in intervention hospital | | 0.800 | < 0.001 | -0.183 | 0.007 |
| Age | | -0.083 | 0.219 | -0.066 | 0.331 |
| Number of pregnancies | | -0.016 | 0.819 | -0.109 | 0.106 |
| Satisfaction with previous delivery | | 0.004 | 0.957 | -0.185 | 0.022 |
| Education (References: Illiterate or elementary literacy) | Under high school diploma | 0.059 | 0.537 | -0.010 | 0.916 |
| | High school diploma | 0.020 | 0.825 | 0.078 | 0.409 |
| | College education | -0.247 | 0.005 | 0.136 | 0.135 |
| Be employed | | -0.094 | 0.167 | 0.040 | 0.559 |
| Husband education (References: Illiterate or elementary literacy) | Under high school diploma | -0.049 | 0.664 | 0.015 | 0.893 |
| | High school diploma | -0.030 | 0.788 | 0.119 | 0.280 |
| | College education | -0.161 | 0.110 | 0.168 | 0.094 |
| Husband job (References: Unemployed) | Office worker | -0.104 | 0.593 | 0.247 | 0.205 |
| | Manual worker | -0.046 | 0.822 | 0.205 | 0.319 |
| | Freelance job | -0.014 | 0.956 | 0.316 | 0.198 |
| Having sufficient income | | -0.162 | 0.016 | -0.017 | 0.801 |
| Unwanted pregnancy | | 0.009 | 0.899 | 0.003 | 0.962 |
| Delivery Shift (References: Morning) | Evening | 0.067 | 0.385 | 0.120 | 0.121 |
| | Night | 0.044 | 0.565 | 0.079 | 0.306 |
| Participating in childbirth preparation classes | | -0.030 | 0.660 | -0.173 | 0.010 |
| Awareness of Patient Rights | | 0.160 | 0.018 | -0.107 | 0.114 |

 β = Standardized regression coefficient**Table 6** Multivariable regression to investigate the factors affecting the mother's perception of respectful maternity care (second round sampling: after the intervention on midwives)

| Variables | | | B | β | t | P value | 95% CI for B Range |
|-----------------------------------|---|---------------------------|--------|---------|--------|---------|--------------------|
| Model 1 | Constant | | 69.051 | - | 6.749 | < 0.001 | 48.884; 89.219 |
| | Education (References: Illiterate or elementary literacy) | Under high school diploma | 2.123 | 0.072 | 0.765 | 0.445 | -3.344; 7.590 |
| | | High school diploma | 1.323 | 0.041 | 0.451 | 0.652 | -4.459; 7.105 |
| | | College education | -7.096 | -0.201 | -2.251 | 0.025 | -13.309; -0.882 |
| | Having sufficient income | | -3.269 | -0.111 | -1.671 | 0.096 | -7.123; 0.586 |
| | Awareness of Patient Rights | | 8.313 | 0.116 | 1.764 | 0.079 | -0.974; 17.600 |
| Model 2 | Constant | | 31.657 | - | 4.736 | < 0.001 | 18.482; 44.833 |
| | Education (References: Illiterate or elementary literacy) | Under high school diploma | 0.836 | 0.028 | 0.484 | 0.629 | -2.570; 4.242 |
| | | High school diploma | 0.152 | 0.005 | 0.083 | 0.934 | -3.449; 3.754 |
| | | College education | -1.875 | -0.053 | -0.946 | 0.345 | -5.783; 2.032 |
| | Having sufficient income | | 0.585 | 0.020 | 0.473 | 0.636 | -1.850; 3.019 |
| | Awareness of Patient Rights | | 7.083 | 0.099 | 2.415 | 0.017 | 1.301; 12.866 |
| Delivery in intervention hospital | | | 22.169 | 0.780 | 18.422 | < 0.001 | 19.796; 24.541 |

Model 1 Adjusted R^2 = 0.085; F for model = 5.048; P value < 0.001Model 2 Adjusted R^2 = 0.645; F for model = 67.419; P value < 0.001; R^2 change = 0.550; F change = 339.368; P value for F change < 0.001B= Unstandardized regression coefficient; β = Standardized regression coefficient; CI=Confidence interval

et al. (2020), Mihret et al. (2020) and Avan et al. (2023) implemented interventions at multiple levels, including meetings with policymakers, training of healthcare providers, supportive visits, installing wall posters to reduce mistreatment during childbirth, providing necessary infrastructure and creating mechanisms for addressing reported mistreatment by women [45–48]. Consistent

with our work, Ratcliffe et al. (2016) conducted an intervention at two levels, i.e., training pregnant women and healthcare providers, and reported that women's satisfaction with adherence to patient rights and their perception of care quality were significantly improved, while mistreatment and abuse decreased [49].

Table 7 Multivariable regression to investigate the factors affecting the postpartum blues (second round sampling: after the intervention on midwives)

| | Variables | B | β | t | P value | 95% CI for B Range |
|---------|--|--------|---------|--------|---------|-----------------------|
| Model 1 | Constant | 22.377 | - | 7.644 | < 0.001 | 16.607; 28.147 |
| | Satisfaction with previous delivery | -0.308 | -0.097 | -1.671 | 0.096 | -0.726; 0.110 |
| | Participating in childbirth preparation classes | -3.025 | -0.171 | -2.574 | 0.011 | -5.342; -0.708 |
| Model 2 | Constant | 23.844 | - | 8.078 | < 0.001 | 18.026; 29.662 |
| | Satisfaction with previous delivery | -0.149 | -0.047 | -0.679 | 0.498 | -0.580; 0.283 |
| | Participating in childbirth preparation classes | -3.088 | -0.175 | -2.658 | 0.008 | -5.387; -0.798 |
| | Delivery in intervention hospital | -1.854 | -0.172 | -2.496 | 0.013 | -3.318; -0.390 |
| Model 1 | Adjusted R^2 = 0.039; F for model = 4.445; P value = 0.013 | | | | | |
| Model 2 | Adjusted R^2 = 0.066; F for model = 5.111; P value = 0.002; R^2 change = 0.027; F change = 6.230; P value for F change = 0.013 | | | | | |

B= Unstandardized regression coefficient; β = Standardized regression coefficient; CI=Confidence interval

In the aforementioned studies, interventions were implemented, specifically training healthcare providers, highlighting the importance of educating healthcare providers in adhering to patient rights. Educating healthcare providers in all interventions related to patient rights demonstrates the importance of this approach compared to others.

Inconsistent with the present study, Rostami-Moez et al. (2021) evaluated women's satisfaction with adherence to patient rights before and after two workshops on the patient rights charter for midwifery students. The results showed no statistically significant difference in the mean scores of women's satisfaction between the pre-test and post-test in both groups. However, a statistically significant difference was observed in the psychological aspect between the two groups [50]. The reason for discrepancy between these findings and those of our research could be the method used to implement the interventions. Rostami-Moez et al. conducted workshop sessions in a lecture and question-and-answer format, whereas in the present study, the sessions were held in smaller groups using a consultative approach.

Consultation on ethical dilemmas is a practical approach for achieving better understanding of a problem and discussing participants' values and norms in the sessions. This approach primarily aims to reach a consensus decision. However, since there are multiple solutions to a given issue, it stimulates creative and critical thinking among participants. Consultation on ethical dilemmas enhances participants' ethical competencies, including knowledge, attitudes and skills that enable them to recognize ethical issues, formulate ethical questions or dilemmas and analyze situations from various perspectives, focusing on values and norms. Also, they learn how to engage in ethical dialogue and postpone their initial judgments [51]. Therefore, in counseling sessions, real ethical dilemmas relevant to the existing ethical issues in the culture and environment are addressed, and solutions are provided considering the prevailing culture and context

[43]. As a result, participation in counseling sessions encourages reconsideration and examination of ethical issues from different viewpoints, leading to the internalization of learned concepts and changes in attitudes, ultimately improving the performance of caregivers and resulting in greater satisfaction among postpartum women. The results indicated the intervention performed on midwives reduced postpartum blues. However, it is worth mentioning that although the mean values were different, the regression coefficient was not significant.

Consistent with the present study, Avan et al. (2023) conducted research in Pakistan and found that an educational-based intervention, including training of supportive measures and respectful maternity care to caregivers, familiarizing mothers with their rights and responsibilities and improving management mechanisms and accountability, decreased disrespectful maternity care and postpartum depression and anxiety [36].

In line with our investigation, Fares and Ahmed (2021) conducted research on Iraqi women and reported that mothers receiving respectful maternity care, accompanied by effective communication, experienced less postpartum depression compared to those who received conventional care [37].

Few interventional studies have investigated the impact of respectful maternity care on postpartum blues. Furthermore, most studies examining the correlation between postpartum blues and respectful maternity care have been cross-sectional. Hajizadeh and Mirghafourvand (2021), Silvéria et al. (2019) and Paiz et al. (2021) indicated disrespectful care and mistreatment during labor and delivery increase the likelihood of post-traumatic stress disorder and postpartum blues and depression [26, 52, 53]. In line with the present study, Nyirenda conducted research on Zambian women and found that certain aspects of disrespectful care, such as physical abuse, lack of privacy during examination and neglected care were correlated with postpartum depression [54].

In his research on women, Elkashif indicated receiving support from family, friends and others is of particular importance and could reduce the likelihood of postpartum depression [55]. Midwives and caregivers during labor could be categorized as important groups, as they accompany mothers during critical and risky periods.

Although the aforementioned correlational studies did not directly assess the impact of interventions on depression, they indicated a relationship between disrespectful care during labor and delivery and depression, implying that providing respectful care during the labor and delivery could mitigate the risk of postpartum blues.

Childbirth is an outstanding experience for women that could enhance self-confidence or, conversely, result in humiliation, failure and, subsequently, a decrease in self-esteem [56]. The childbirth experience, particularly the labor and delivery process, remains in women's memory as an important event. For mothers, labor and delivery serve as an opportunity for learning and recalling experiences. During this period, they remember both negative and positive actions and words. Thus, the type and manner of care provided during labor and delivery shape women's perceptions and memories. Mothers with better memories and perception of the childbirth process believe that childbirth enhances their self-confidence. In contrast, inadequate and disrespectful care creates negative experiences for mothers, which could alter their self-image and decrease their self-confidence, ultimately leading to poor psychological well-being in women [57]. When a mother is seen not only as a woman who is giving birth, but also as an individual and human being, this humanistic perspective and preservation of autonomy empowers her [56]. This sense of empowerment and increased self-esteem enable her to confront and cope with the arising challenges and unpleasant emotions, thereby reducing psychological problems such as postpartum blues and depression. On the other hand, caregivers who provide respectful maternal care are those who act responsibly throughout labor and after childbirth, paying attention to mothers' conditions and their pregnancy and health. Consequently, they recognize risk factors and early signs of postpartum blues and manage this condition by providing care and support. However, it should be noted that respectful care is not the only determinant of postpartum blues. Further studies should be conducted to accurately assess the impact of the intervention considering influencing factors.

This research faced several limitations. It was conducted in two hospitals within a single province. Therefore, generalizing the results to mothers in other healthcare centers should be done with caution. Given that the care system was task-oriented in both studied hospitals, mothers could not evaluate midwives' performance on an individual basis, instead they provided

an overall score for all caregivers. Thus, since mothers' perception of midwives' performance was assessed and compared as an overall score in each hospital, it was impossible to individually assess changes in the performance of each midwife before and after the intervention, which could lead to an over- or underestimation of mothers' perception of midwives' performance.

Conclusion

The results indicated conducting consulting sessions on adherence to patient rights for midwives could enhance postpartum women's perception of respectful maternity care, thereby reducing postpartum blues. Therefore, it is recommended that this counseling approach be incorporated into the continuing education programs for midwives to improve their performance and increase mothers' satisfaction with their childbirth. Since, in this study, mothers evaluated midwives' performance in a general manner, it is suggested that future studies examine the impact of educational interventions related to respectful maternity care by individually evaluating the midwives' performance as perceived by the mothers receiving care.

Abbreviations

| | |
|--------|---|
| EPDS | Edinburgh postnatal depression scale |
| BDI | Beck depression inventory |
| CVI | Content validity index |
| WP-RMC | Women's perception of respectful maternity care |
| CVR | Content validity ratio |
| ICC | Intraclass correlation coefficients |

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Author contributions

R.B and Kh.S contributed substantially to the conception and designed of the study. Kh.S performed the intervention. M.Ch contributed to the data collection. R.B analyzed the data. F.K and M.Ch wrote the manuscript. R.B and Kh.S prepared final version of manuscript. All authors approved the manuscript. All authors have read and approved the final manuscript.

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Data availability

Due to privacy guidelines of our university, the datasets used and/or analyzed during the current study are available via contacting the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

This paper was derived from the thesis project of a Master's student in midwifery counseling with reference no: DP/20/71/642. The ethical principles were obtained from the Ethics Committee of Bushehr University of Medical Sciences with reference no. IR.BPUMS.REC.1402.017. The study was conducted in accordance with the Declaration of Helsinki, and the participants were informed of their rights. The objectives of the research study were explained

to all participants, and they were informed that participation in the study was completely voluntary and that they could withdraw at any time without any consequence. Informed consent was obtained from the participants in the study. For individuals with illiteracy or elementary literacy, the informed consent form was read to them verbally, and their consent was obtained. Their companions were also informed. The participants were assured that their information would remain confidential and that the questionnaire would be anonymous. To preserve the confidentiality of the subjects, each participant was assigned a unique code, which was documented on the questionnaire. The patient's profile, along with the corresponding code, was meticulously stored in a separate file, which was exclusively accessible to the researcher responsible for data collection.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Author details

¹Department of Midwifery, Nursing and Midwifery Faculty, Bushehr University of Medical Sciences, Bushehr, Iran

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

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