



Midwives' knowledge and practice of respectful maternity care and related factors in Golestan province, Iran: A cross-sectional study

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Abstract

Background: Respectful maternity care (RMC) involves providing healthcare that upholds women's dignity, privacy, and confidentiality. It also entails protecting women from harm, supporting informed decision-making, and providing continuous support throughout labor and delivery. This study aimed to evaluate the knowledge and practices of midwives working in hospitals in Golestan Province regarding respectful maternity care.

Methods: In a cross-sectional study conducted in 2023, a total of 137 midwives working in the maternity wards of hospitals in Golestan Province, Iran, were selected through census sampling. Data were collected using the Respectful Maternity Care questionnaire, which covers emotional support, safe care, and the prevention of mistreatment. The data were analyzed using SPSS 18 and the Mann-Whitney U test, Kruskal-Wallis test, generalized linear models (GLMs), and Wilcoxon signed-rank test, with the significance level set at $P < 0.05$.

Results: The median (Interquartile range) knowledge and practice scores for respectful maternity care were 95.62 (13.04) and 90.21 (11.41), respectively. Knowledge scores were significantly higher than practice scores for the overall score ($P < 0.001$) and in the domains of providing emotional support ($P < 0.001$) and preventing mistreatment ($P < 0.001$). In the generalized linear regression analysis, the RMC knowledge score was significantly associated with education level ($B = -67.60$, 95% CI: -132.82 to -2.39, $P = 0.04$), whereas the RMC practice score was significantly associated with the overall knowledge score ($B = 246.73$, 95% CI: 152.94-340.52, $P < 0.001$).

Conclusion: Midwives demonstrated high levels of knowledge and practice regarding respectful maternity care. However, discrepancies between knowledge and practice in some domains highlight the need for interventions that facilitate the translation of knowledge into routine clinical practice.



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Highlights

What is current knowledge?

Respectful Maternity Care (RMC) is crucial in determining the quality of healthcare services. Differences in midwifery autonomy, hospital organization and regulations, presence of OB/GYN residents in the labor and delivery wards, and regional resources and cultures may contribute to variations in the level of RMC knowledge and practice among midwives working in different regions.

What is new here?

Midwives in Golestan province possess a good level of knowledge and practice of RMC. However, their practice in providing emotional support and prevention of mistreatment was lower than their knowledge. Additionally, there was no link between their knowledge of RMC and their demographic characteristics or work history.

Introduction

Respectful maternity care (RMC) involves providing care that preserves women's dignity, privacy, and confidentiality, protects women from harm, supports informed decision-making, and provides ongoing support throughout labor and delivery (1). Despite global improvements

in maternal and neonatal outcomes, ensuring high-quality care remains essential. Integrating evidence-based practices with personalized and respectful care is critical to achieving the Sustainable Development Goals of reducing maternal and newborn mortality. Approximately 50% of maternal deaths and over 60% of neonatal deaths result from poor-quality care (2).

Labor and childbirth are vulnerable periods for women, and a lack of respectful care may result in lasting negative experiences, including fear of childbirth and a preference for cesarean delivery (3,4). Furthermore, a positive association has been identified between the total RMC score and both aspirations for future fertility and the preferred fertility rate under ideal socioeconomic circumstances (5). In this regard, the World Health Organization emphasizes the importance of strengthening midwifery education to achieve higher-quality care across childbirth, reproductive health, and the overall well-being of women and children (2).

Disrespect during childbirth is a global concern (4), and women who experience such disrespect are more likely to receive low-quality care (5). Many women experience disrespectful maternity care for various reasons (6-10). Some providers consider verbal abuse justified when women do not comply with instructions, particularly during emergencies (11). One study found that only 15% of midwives had sufficient knowledge of RMC principles (12). Factors such as inadequate facilities, high workloads, and limited staff training adversely affect the provision of respectful care (13).

Evidence suggests that RMC reduces the risk of disrespect and abuse by up to two-thirds (14). Essential elements of RMC include informed consent, communication, dignity, privacy, equitable access to care, emotional support, and continuous care provided by competent and motivated professionals (15). Few studies have directly examined midwives' knowledge and practices regarding RMC (12), and the available findings are mixed. For example, midwives in Bhutan reported awareness of women's rights but often failed to respect women's choices in practice (13). In a study conducted in Nepal, maternity care providers held negative attitudes toward certain practices, such as allowing birth companions and supporting women's preferred birth positions (16). In another study, midwives demonstrated substantial perceived competence alongside self-reported RMC practices (17).

Although studies in different regions of Iran have examined midwives' knowledge and practice of respectful maternity care, their findings vary across provinces (16,17). Differences in midwifery autonomy, hospital organizational type (Public, private, or semi-private), the presence of OB/GYN residents, and regional resources and cultures may contribute to this variation (12). Building on this evidence, the present study aimed to assess midwives' knowledge and practice of RMC and examine related factors in the maternity wards of Golestan Province, Iran.

Methods

Study Design and Participants: A cross-sectional study was conducted from February to September 2023 among midwives working in the maternity wards of hospitals across Golestan Province, Iran. The inclusion criteria were an associate degree or higher in midwifery, at least one year of experience in a maternity ward, access to a smartphone, computer, or laptop, and internet access. The exclusion criteria included experiencing a significant adverse event within the previous six months (e.g., severe illness, death of a first-degree relative, or divorce), self-reported mental health disorders (e.g., anxiety or depression), or the use of related medications. We used the STROBE reporting guideline (18) to draft this manuscript and the STROBE reporting checklist (19), included as Supplement Table A, during editing.

Sampling: Initially, a census sampling strategy was adopted, and all eligible midwives working in the selected hospitals were invited to participate. The response rate was 46% ((137)/(342-50) = 137/292=46%) (Figure 1). The adequacy of the number of participants was assessed to determine whether it was sufficient to examine the association between the two primary study variables (Knowledge and practice). Because no previous studies had reported the expected correlation coefficient between these variables, the correlation observed among the first 100 participants ($r = 0.50$) was used to estimate the minimum required sample size. Assuming a significance level of 0.05 and statistical power of 80%, the minimum required sample size was estimated to be 29 participants. Recruitment continued until all eligible midwives had been approached, and a total of 137 midwives were ultimately included in the study, exceeding the estimated minimum sample size.

$$n = \left(\frac{Z_{1-\frac{\alpha}{2}} + Z_{1-\beta}}{\left(\frac{1}{2}\right) * \ln\left(\frac{1+r}{1-r}\right)} \right)^2 + 3$$

$$n = \left(\frac{1.96+0.84}{\left(\frac{1}{2}\right) * \ln\left(\frac{1+0.50}{1-0.50}\right)} \right)^2 + 3 = 29$$

Demographic and Occupational Characteristics Form: This form consists of two parts. The first part includes questions on age, educational level, marital status, and mode of delivery among participants who had children. The second part includes questions on the type of university from which the participant obtained a Bachelor's degree, years of work experience, type of hospital, the presence or absence of obstetric and gynecologic residents in the hospital, employment status, job satisfaction (Measured on a 10-point scale), interest in midwifery (Measured on a 10-point scale), and possession of a 60-hour physiological birth certificate. Because this course familiarizes midwives with the physiological process of labor, the need for psychological and emotional support during labor, and pain-reduction techniques (20), participation in the course was considered potentially relevant to midwives' knowledge and practice of RMC.

MKP-RMC Scale: This 46-item instrument assesses midwives' knowledge (23 items) and practice (23 items) across three domains: emotional support, safe care, and mistreatment prevention. The emotional support domain includes items related to establishing friendly communication and fostering mothers' autonomy and comfort. The safe care domain emphasizes confidentiality, privacy, respect for women's religious beliefs and cultures, the provision of evidence-based care, and the communication of information about the progress of labor, the care received, and interventions during childbirth. The mistreatment prevention domain focuses on maintaining women's dignity during labor and childbirth and preventing violations of their rights. Knowledge items are scored as 1 (Correct) or 0 (Incorrect/I don't know), with total scores ranging from 0 to 23. Practice items are rated on a 5-point Likert scale (1-5), yielding total scores between 23 and 115. Reverse scoring was applied to items 21-23 (21). To enable comparisons, scores were standardized to a 0-100 scale using the formula below. The face and content validity and reliability of the instrument were assessed by Moridi et al. (21). Cronbach's alpha was 0.78 for knowledge and 0.87 for practice.

$$\text{Standardized score} = \frac{\text{Raw score} - \text{Minimum possible raw score}}{\text{Maximum possible raw score} - \text{Minimum possible raw score}} \times 100$$

Data collection

Following approval by the Research Ethics Committee, the contact information of eligible midwives was obtained from the university's Vice Chancellor for Treatment. The principal investigator (M.G.) contacted potential participants by telephone to explain the study objectives, assess eligibility, and obtain oral informed consent. Eligible midwives were subsequently sent a link to the online questionnaire. An electronic informed consent form appeared on the first page of the questionnaire, and participation proceeded only after consent was provided. Nonrespondents received up to three follow-up reminders. Individuals who did not respond after these attempts were excluded from the study. The data collection process is shown in the study flowchart (Figure 1).

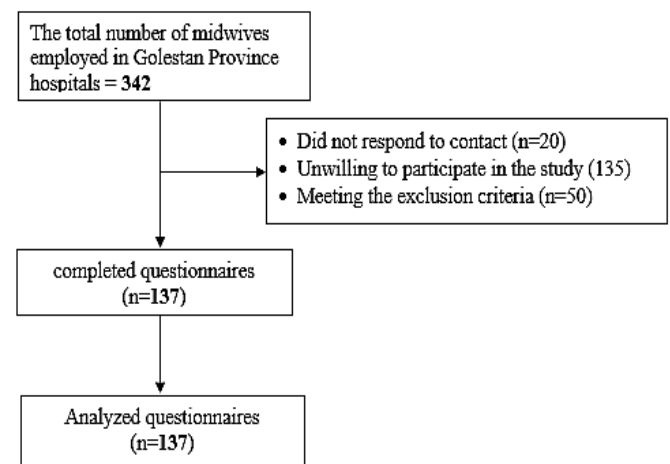


Figure 1. Flowchart depicting the study sampling process

Results

Of the 342 eligible midwives invited, 137 completed the questionnaire, corresponding to a participation rate of 46%. The demographic and occupational characteristics of the midwives are shown in Table 1. The mean age and work experience of the participating midwives were 35.3 and 10.7 years, respectively. On a 10-point scale, the mean job satisfaction score was 6.8, and the mean level of interest in the field was 8.3.

The standardized mean and median scores for midwives' knowledge and practice of RMC are shown in Table 2. Knowledge and practice scores differed significantly across all domains except "providing safe care." Detailed item-level findings are presented in Supplementary Tables B1-B3.

Spearman's correlation analysis (Table 3) suggests that greater knowledge of emotional support and safe care is generally associated with better practice in the corresponding domains, whereas knowledge of mistreatment prevention has weaker and less consistent associations with practice. Total knowledge scores were moderately and significantly correlated with total practice scores ($r = 0.45$, $P < 0.001$).

Table 4 compares total practice and knowledge scores according to demographic and occupational characteristics. The only statistically significant difference was observed between education levels for total practice scores ($P = 0.05$), with participants holding a Bachelor's degree reporting higher median practice scores, 95.65(13.04), than those holding a Master's degree, 84.90 ± 4.84 . No significant association was found between education level and total knowledge scores ($P = 0.43$).

Spearman's correlation analysis showed that demographic and occupational history characteristics generally had weak associations with both knowledge and practice of respectful maternity care (Table 5).

Age and years of work experience were not significantly correlated with any domain, with coefficients ranging from -0.17 to 0.12. Job satisfaction was modestly correlated with practice scores, reaching significance only for total practice ($r = 0.18$, $P = 0.03$). Interest in midwifery emerged as the most consistent correlate of practice, showing significant positive associations with mistreatment prevention ($r = 0.23$, $P < 0.001$) and total practice ($r = 0.19$, $P = 0.02$), as well as an association with safe care practice ($r = 0.16$, $P = 0.05$). No demographic or occupational history variable was significantly associated with any knowledge domain (Table 5).

Table 1. Description of demographic and occupational characteristics

Variables	Mean $\pm$ SD
Age (Year)	35.3 $\pm$ 2.9
Work Experience Duration (Year)	10.7 $\pm$ 9.2
Job Satisfaction (0 to 10)	6.8 $\pm$ 2.2
Interest in the Field of Midwifery (Rated on a scale from 0 to 10)	8.1 $\pm$ 3.8
Education Level	n (%)
Bachelor's Degree	128 (93.4)
Master's Degree	9 (6.6)
Type of university for obtaining a bachelor's degree	n (%)
Public	71 (51.8)
Private	66 (48.2)
Employment Status	n (%)
Permanent	85 (62.0)
Contractual	15 (10.9)
Temporary	11 (8.0)
Probationary	26 (19.0)
Type of Hospital	n (%)
Public	106 (77.4)
Private	10 (7.3)
Semi-private	21 (15.3)
Presence of O OB/GYN Residents in the maternity ward	n (%)
Yes	15 (10.9)
No	122 (89.1)
Marital Status	n (%)
Married	102 (74.5)
Single	35 (25.5)
Childbirth Experience	n (%)
Vaginal Delivery	20 (14.6)
Cesarean Section	57 (41.6)
Both	51 (37.2)
None	9 (6.6)
Having a Physiological Birth Certificate	n (%)
Yes	86 (62.8)
No	51 (37.2)

SD: Standard Deviation, OB/GYN: Obstetrics and Gynecologic, Private: Islamic Azad Universities

Table 2. Comparison of the standardized mean score of knowledge and practice of respectful maternity care among midwives

Domains	Knowledge		Practice		P-Value*
	Mean $\pm$ SD	Median (IQR)	Mean $\pm$ SD	Median (IQR)	
Giving Emotional Support	92.45 $\pm$ 11.15	100.00 (8.33)	86.29 $\pm$ 10.69	88.63 (15.91)	< 0.001
Providing Safe Care	92.06 $\pm$ 15.30	100.00 (12.52)	92.53 $\pm$ 7.57	96.44 (8.33)	0.20
Preventing Mistreatment	90.02 $\pm$ 19.95	100.00 (0.00)	83.33 $\pm$ 10.78	83.33 (16.67)	< 0.001
Overall	92.00 $\pm$ 10.28	95.62 (13.04)	88.35 $\pm$ 8.15	90.21 (11.41)	< 0.001

* Wilcoxon Signed-Rank Test

Table 3. Correlation analysis of knowledge and practice scores by domains

Knowledge Domains		Practice Domains			Overall
		Emotional Support	Safe Care	Prevention of Mistreatment	
		CC	CC	CC	-
Emotional Support	P-Value*	0.40	0.40	0.30	
		< 0.001	< 0.001	< 0.001	
Safe Care	CC	0.27	0.36	0.17	
	P-Value*	< 0.001	< 0.001	0.40	
Prevention of Mistreatment	CC	< 0.001	- 0.2	0.17	
	P-Value*	0.96	0.81	0.04	
Overall	CC	-	-	-	0.45
	P-Value*	-	-	-	< 0.001

*Spearman's Correlation, CC: Correlation Coefficient, Significance level: $p < 0.01$

In the generalized linear regression model adjusted for demographic and occupational variables, education level was the only factor significantly associated with knowledge (Table 6). Midwives with a bachelor's degree had significantly lower knowledge scores than those with a master's degree ($B = -67.60$, 95% CI: -132.82 to -2.39, $P = 0.04$). None of the other variables showed a statistically significant association with knowledge ($P > 0.05$).

After adjustment for demographic, educational, and occupational variables, the knowledge score was positively associated with practice ($B = 246.73$, 95% CI: 152.94-340.52, $P < 0.001$). No other variables were independently associated with practice ($P > 0.05$). No associations were observed for job satisfaction or interest in midwifery after adjustment for potential confounders (Table 7).

Table 4. Comparison of mean total practice and total knowledge scores according to demographic and career history variables

Variables	Category	Total Practice		Total Knowledge		P-Value* (Practice)	P-Value* (Knowledge)
		(Mean $\pm$ SD)	Median (IQR)	(Mean $\pm$ SD)	Median (IQR)		
Possession of a Physiological Birth Certificate	Yes	88.05 $\pm$ 8.53	95.65 (13.04)	91.15 $\pm$ 11.38	89.67 (12.50)	0.77	0.32
	No	88.85 $\pm$ 7.53	95.65 (8.70)	93.43 $\pm$ 7.98	90.21 (9.78)		
Education Level	Bachelor's Degree	88.59 $\pm$ 8.29	95.65 (13.04)	92.49 $\pm$ 9.04	91.30 (11.68)	0.05	0.43
	Master's Degree	84.90 $\pm$ 4.84	95.65 (23.91)	85.02 $\pm$ 20.97	86.95 (7.61)		
Type of University where Bachelor's Degree was obtained	Public	87.64 $\pm$ 7.03	95.65 (13.04)	90.77 $\pm$ 11.82	88.04 (9.78)	0.08	0.43
	Private	89.00 $\pm$ 9.08	95.65 (8.70)	93.14 $\pm$ 8.52	91.30 (10.87)		
Employment Status	Permanent	82.12 $\pm$ 8.34	95.65 (8.70)	92.58 $\pm$ 10.25	80.13 (12.50)	0.79	0.28
	Contractual	90.72 $\pm$ 6.34	95.65 (8.70)	89.85 $\pm$ 11.58	89.13 (9.78)		
	Temporary	87.35 $\pm$ 9.17	95.65 (13.04)	95.25 $\pm$ 5.65	89.13 (17.39)		
	Probationary	88.16 $\pm$ 8.22	93.47 (9.78)	89.96 $\pm$ 10.98	91.30 (8.15)		
Type of Hospital	Public	90.86 $\pm$ 8.80	95.65 (13.04)	91.83 $\pm$ 10.40	90.21 (10.05)	0.85	0.29
	Private	88.92 $\pm$ 8.12	91.30 (9.78)	90.86 $\pm$ 8.80	89.13 (10.87)		
	Semi-private	89.89 $\pm$ 6.08	95.65 (8.70)	93.37 $\pm$ 10.61	91.30 (13.59)		
Presence of OB/GYN Residents	Yes	85.50 $\pm$ 9.40	95.65 (13.04)	91.01 $\pm$ 15.88	85.86 (15.22)	0.19	0.51
	No	88.70 $\pm$ 7.96	95.65 (13.04)	92.12 $\pm$ 9.45	90.76 (10.87)		
Marital Status	Married	87.91 $\pm$ 7.87	95.65 (9.78)	92.32 $\pm$ 10.07	89.13 (10.87)	0.12	0.48
	Single	89.62 $\pm$ 8.99	95.65 (13.04)	91.05 $\pm$ 10.95	92.39 (7.61)		
Childbirth Experience	Vaginal delivery	87.33 $\pm$ 7.84	95.65 (13.4)	90.86 $\pm$ 13.81	87.50 (14.67)	0.17	0.58
	Cesarean section	88.46 $\pm$ 8.01	95.65 (8.70)	92.67 $\pm$ 9.65	89.13 (12.50)		
	Both	89.42 $\pm$ 8.31	95.65 (13.04)	91.73 $\pm$ 10.29	91.30 (9.78)		
	None	83.81 $\pm$ 8.33	91.30 (8.70)	91.78 $\pm$ 4.58	86.95 (15.22)		

*Mann-Whitney U test used for binary variables; Kruskal-Wallis test used for variables with more than two categories. Bolded p-values indicate statistical significance ($p \leq 0.05$).

OB/GYN: Obstetrics and Gynecologic

Private: Islamic Azad Universities

Table 5. Correlation analysis results for the relationship between background variables and knowledge and practice in respectful maternity care

Variables		Knowledge				Practice			
		Emotional Care	Safe Care	Prevention of Mistreatment	Total	Emotional Care	Safe Care	Prevention of Mistreatment	Total
Age	CC	0.02	- 0.03	0.11	0.12	- 0.07	- 0.17	0.05	- 0.09
	P-Value*	0.77	0.70	0.19	0.15	0.38	0.0	0.52	0.29
Work Experience	CC	0.04	0.05	0.08	0.12	- 0.05	- 0.16	0.12	- 0.05
	P-Value*	0.60	0.53	0.29	0.15	0.54	0.05	0.14	0.53
Job Satisfaction	CC	0.12	0.04	- 0.005	0.11	0.15	0.15	0.15	0.18
	P-Value*	0.14	0.60	0.95	0.18	0.07	0.08	0.06	0.03
Interest in the Field of Midwifery	CC	0.07	0.06	- 0.14	0.06	0.10	0.16	0.23	0.19
	P-Value*	0.37	0.48	0.08	0.44	0.06	0.05	0.00	0.02

*Spearman's Correlation

CC: Correlation Coefficient

Significance level: $p < 0.01$

Table 6. Generalized linear regression analysis of factors associated with respectful maternity care knowledge

Variables	Category	B	Standard Error	95% CI	P-Value
Intercept		454.26	116.51	225.90 to 682.62	< 0.001
Possession of a Physiological Birth Certificate	Yes	-16.64	18.37	- 52.66 to 19.36	0.36
	No	-	-	-	-
Education Level	Bachelor's Degree	- 67.60	33.27	- 132.82 to -2.39	0.04
	Master's Degree	-	-	-	-
Type of University where Bachelor's Degree was obtained	Public	27.15	18.61	- 9.32 to 63.64	0.14
	Private	-	-	-	-
Employment Status	Permanent	24.16	26.44	- 27.66 to 75.98	0.36
	Contractual	- 11.79	37.87	- 86.03 to 62.44	0.75
	Temporary	56.12	37.61	- 17.60 to 129.84	0.13
	Probationary	-	-	-	-
Type of Hospital	Public	- 10.79	25.45	- 60.69 to 39.10	0.67
	Private	7.69	44.53	- 79.58 to 94.97	0.86
	Semi-private	-	-	-	-
Presence of OB/GYN Residents	Yes	- 10.53	27.77	- 64.96 to 43.89	0.70
	No	-	-	-	-
Marital Status	Married	17.18	24.35	- 30.55 to 64.92	0.48
	Single	-	-	-	-
Childbirth Experience	Vaginal delivery	- 20.49	29.82	- 78.96 to 37.96	0.49
	Cesarean section	- 0.73	25.17	- 50.07 to 48.61	0.97
	Both	9.44	36.28	- 61.66 to 80.55	0.79
	None	-	-	-	-
Age		2.56	4.36	- 5.99 to 11.12	0.55
Work Experience		- 2.97	4.59	- 11.97 to 6.03	0.51
Job Satisfaction		0.64	4.51	- 8.20 to 9.49	0.88
Interest in the Field of Midwifery		-2.37	5.60	- 13.35 to 8.60	0.67

Result of the comparison between fitted model and the intercept-only model
Likelihood Ratio Chi-Square=13.10; p-value=0.729

Table 7. Generalized linear regression analysis of factors associated with respectful maternity care practice

Variables	Category	B	Standard Error	95% CI	P-Value
Intercept		5825.31	1988.06	1928.77 to 9721.85	< 0.001
Possession of a Physiological Birth Certificate	Yes	- 59.05	257.87	- 564.47 to 446.37	0.81
	No	-	-	-	-
Education Level	Bachelor's Degree	- 22.18	498.26	- 998.76 to 954.39	0.96
	Master's Degree	-	-	-	-
Type of University where Bachelor's Degree was obtained	Public	- 335.02	267.21	- 858.76 to 188.71	0.21
	Private	-	-	-	-
Employment Status	Permanent	137.48	376.00	- 599.47 to 874.45	0.71
	Contractual	794.97	549.17	- 281.37 to 1871.33	0.14
	Temporary	- 288.87	525.68	- 1319.19 to 741.44	0.583
	Probationary	-	-	-	-
Type of Hospital	Public	- 185.03	360.58	- 891.77 to 521.70	0.60
	Private	24.35	636.56	- 1223.28 to 1271.99	0.96
	Semi-private	-	-	-	-
Presence of OB/GYN Residents	Yes	- 362.49	391.81	- 1130.42 to 405.44	0.35
	No	-	-	-	-
Marital Status	Married	- 519.48	349.30	- 1204.10 to 165.14	0.13
	Single	-	-	-	-
Childbirth Experience	Vaginal delivery	120.56	432.62	- 727.37 to 968.49	0.78
	Cesarean section	127.54	357.65	- 573.45 to 828.54	0.72
	Both	- 992.75	496.11	- 1965.12 to -20.37	0.04
	None	-	-	-	-
Age		- 23.92	64.06	- 149.49 to 101.64	0.70
Work Experience		- 1.85	67.44	- 134.04 to 130.33	0.97
Job Satisfaction		90.22	63.27	- 33.78 to 214.22	0.15
Interest in the Field of Midwifery		88.67	77.87	- 63.95 to 241.31	0.25
Total Knowledge Score		246.73	47.85	152.94 to 340.52	< 0.001

Result of the comparison between fitted model and the intercept-only model
Likelihood Ratio Chi-Square=40.77; p-value=0.002

Discussion

In this study, midwives demonstrated good levels of knowledge and practice regarding respectful maternity care. The highest knowledge and practice scores were observed in the domains of "providing emotional support" and "providing safe care." By contrast, the lowest scores in both areas were observed in the domain of "preventing mistreatment."

Consistent with previous studies conducted in other regions of Iran (22,23), our findings highlight midwives' relative weakness in the domain of "preventing mistreatment." This domain emphasizes the importance of safeguarding women's dignity throughout labor and childbirth (21). Notably, unlike the other two domains, knowledge scores in this domain were not significantly associated with practice scores. Therefore, factors beyond knowledge, such as occupational pressures and environmental conditions, may contribute to midwives' lower performance in this domain.

According to our findings, job satisfaction and interest in midwifery affect both the overall practice score and the practice score in the domain of "preventing mistreatment." This finding is consistent with the studies by Haqdoost et al. (22) and Hadizadeh et al. (24), both of which indicate a direct relationship between job satisfaction and midwives' professional performance. In many regions, including Iran, the structure of the healthcare system contributes to stress and burnout among midwives, adversely affecting the quality of obstetric care provided (25,26). Overall, 72.82% of Iranian midwives experience high levels of occupational stress (27). Stress can reduce job satisfaction (28) and consequently diminish the motivation to provide RMC. Thus, although midwives may have adequate knowledge of respectful maternity care, stress and excessive workloads may prevent them from implementing it effectively.

Midwives' mean knowledge scores were higher than their practice scores in all domains except the provision of safe care. Consistent with these findings, studies involving mothers indicate that many experience various forms of mistreatment and disrespectful care (29,30). Some midwives do not regard violence against women during childbirth as mistreatment but instead view it as a means of ensuring a successful delivery (31).

The lowest-scoring item in the knowledge section was "Providing accurate information to companions about the progress of labor." Informed decision-making is essential to the provision of safe and respectful maternity care. Although midwives are eager to provide care that supports informed and participatory decision-making, they encounter several barriers. These include insufficient specific knowledge and training, fear of blame and legal repercussions, structural constraints such as limited time, and a medicalized approach to midwifery care (32).

In the practice section, the lowest-scoring statement was "I do not allow women to have companions in the delivery room." Notably, approximately two-thirds of midwives did not allow companions in the delivery room. Similarly, in the study by Shakibazadeh et al., the most common form of mistreatment reported from the mothers' perspective was in the domain of "not allowing movement, fluid intake, and having a companion" (29). Although previous research has demonstrated the numerous benefits of having a trusted companion (33), factors that may hinder a companion's presence during labor include limited awareness among staff and mothers of these benefits, insufficient space, concerns about mothers' privacy, and fear of an increased risk of infection (34).

Most midwives reported that they "provide equal care to all women, regardless of their socio-economic status, ethnicity, etc," with over 99% doing so all or most of the time. This finding is consistent with other studies (29,35). In the study by Shakibazadeh et al. (29), the least frequently reported forms of mistreatment were related to "stigma and discrimination." Meanwhile, Hajizadeh et al. found that the highest respectful maternity care score was in the domain concerning women (35). By contrast, in a study conducted by Mirzania et al. in Tehran, 53.8% of maternity care providers expressed negative attitudes toward stigma and discrimination, believing that equal services could not feasibly be provided to all women during labor and delivery. That study included midwives, obstetrician-gynecologists, and medical students, whereas the present study focused exclusively on midwives (36). However, implicit bias, which may unconsciously influence staff behavior (37), should also be considered, although it was not examined in the present study.

Midwives' age was inversely associated with the practice score in the 'safe care' domain. This domain emphasizes maintaining confidentiality and privacy, respecting women's religious beliefs and cultural practices, providing evidence-based care, and ensuring that women are informed about the progress of labor and the care and interventions they receive during childbirth (21). In the study by Moridi et al. in Tehran, age had the strongest effect on midwives' knowledge of RMC (23). The difference observed in our study may be explained by older midwives' greater reliance on traditional routines, which may sometimes conflict with RMC standards, whereas younger midwives may have received more recent training and therefore had greater exposure to contemporary RMC concepts.

Several limitations should be acknowledged. First, data were collected using a self-report questionnaire, which may have introduced social desirability and reporting biases. Future studies incorporating direct observation of clinical practice and women's perspectives on the care received would provide a more comprehensive evaluation of respectful maternity care. Second, recruitment was challenging because contact information was unavailable for some eligible midwives. In addition, reliance on telephone invitations may have reduced participation and affected the response rate. Consequently, only 137 of the 342 eligible midwives participated, yielding a participation rate of 40.1%. This relatively low response rate represents another limitation of the study.

Conclusion

The findings of this study indicate that midwives demonstrated good levels of knowledge and practice regarding respectful maternity care. Nevertheless, significant discrepancies between knowledge and practice in the overall score and in the domains of emotional support and mistreatment prevention suggest that knowledge alone is insufficient to ensure consistent implementation in clinical practice. Therefore, interventions extending beyond knowledge enhancement, including supportive organizational strategies and continuous professional development, are recommended to promote the effective implementation of respectful maternity care.

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Ethical Statement

This study was initiated after permission was obtained from the Ethics Committee of Golestan University of Medical Sciences (Ethics code: IR.GOUMS.REC.1401.601). After sufficient information regarding the study aims and procedures had been provided, written informed consent was obtained from all participants. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Participation was entirely voluntary, and participants had the right to decline participation or withdraw at any time without consequences for their work or benefits. The confidentiality of participant information was strictly maintained through data coding and anonymization. All study data were stored securely and were accessible only to authorized research personnel.

Conflicts of Interest

The authors declare no conflict of interest.

Author Contributions

MG, NB, SM, and NSG conceived the study, developed the research plan, and analyzed the collated data. MG collected the data. NB, SM, NSG, and TS participated in implementing the research plan and assisted with data collection. MG and SM prepared the first draft of the

manuscript and were responsible for submitting it for publication. All authors supported the study, reviewed and revised the article, and proposed changes. All authors participated in reviewing and revising the manuscript and ultimately approved the current version for publication.

Data Availability Statement

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Use of Artificial Intelligence

AI was used only for English-language editing, translation assistance, and manuscript proofreading. No AI tools were used for data analysis, interpretation of findings, or generation of scientific conclusions.

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