

# Respectful maternity care and associated factors among mothers who gave birth at public health institutions in South Gondar Zone, Northwest Ethiopia 2021

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## Abstract

**Introduction:** Respectful maternity care is essential for improving maternal and neonatal health. Lack of respectful maternity care during childbirth services is one of the deterrents to women seeking facility-based deliveries. It is a health system failure and a violation of women's rights. There is limited data on respectful maternity care during childbirth and maternity care in Ethiopia, particularly at rural health facilities. But studies have shown that many women from rural areas were more likely to report disrespect and abuse than urban residents.

**Objective:** This study aims to assess respectful maternity care and associated factors among mothers who gave birth at health institutions in the South Gondar zone, northwest Ethiopia, 2021.

**Methods:** A multicenter institutional-based cross-sectional study design was conducted among mothers who gave birth at South Gondar Zone public health institutions, from 1 February to 30 March 2021. Six hundred twenty-two study participants were selected by using systematic random sampling. The data were collected through face-to-face interviews using a pretested and semi-structured questionnaire. Data were entered into Epi-Data version 4.6 and exported to SPSS version 23 for analysis. A multivariable logistic regression analysis was performed to identify factors associated with the outcome variable. An adjusted odds ratio with a 95% confidence interval was computed to determine the level of significance.

**Result:** A total of 611 participants were included in the study with the response rate of 98.2%. The study revealed that only 39.4%, of (95% confidence interval: 35.4–43.2) women received respectful maternity care. Completed secondary education (adjusted odds ratio: 2.47, 95% confidence interval: 1.35–4.50), having antenatal care follow-up (adjusted odds ratio: 0.098, 95% confidence interval: 0.03–0.34), planned pregnancy (adjusted odds ratio: 3.21, 95% confidence interval: 1.69–6.08), cesarean section delivery (adjusted odds ratio: 0.47, 95% confidence interval: 0.25–0.89), and daytime delivery (adjusted odds ratio: 1.9, 95% confidence interval: 1.33–2.72) were significantly associated with respectful maternity care.

**Conclusion and Recommendation:** Only two out of five women received respectful maternity care during childbirth. Completed secondary education, having antenatal care follow-up, pregnancy intended/wanted, daytime delivery, and cesarean section delivery were identified factors. Therefore, giving emphasis to creating awareness of care providers on the standards and categories of respectful maternity care, improving care provider–client discussion, monitoring, and reinforcing accountability mechanisms for health workers to improve respectful maternity care during labor and childbirth were recommended.

## Keywords

labor and childbirth, public health institutions, respectful maternity care, south Gondar zone

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## Introduction

Respectful maternal care (RMC) refers to the right of every woman to the highest attainable standard of health, which includes the right to dignified, respectful health care at all health systems around the world for a childbearing woman throughout her pregnancy, during labor, and delivery, and the postnatal period.<sup>1</sup>

RMC is a universal human right that is due to every childbearing woman in every health system.<sup>2,3</sup> However, many women across the world experience disrespectful, abusive, or neglectful treatment during childbirth in health institutions.<sup>4</sup> Evidence from the Sub-Saharan African countries has reported low levels of RMC during childbirth. In a direct observation study in Malawi, 58.2% of women lacked privacy during labor and delivery.<sup>5</sup> Disrespectful maternity care during childbirth is high in Ethiopia.<sup>6</sup> Women faced at least one form of disrespect and abuse (D&A) during childbirth up to 98% in southeastern Nigeria, Enugu, and 78% of women in Addis Ababa, Ethiopia, respectively.<sup>7,8</sup>

Based on a comprehensive review of the evidence by Bowser and Hill (2010), laboring mothers may face various forms of disrespectful and abusive treatment during childbirth at a facility.<sup>9</sup>

Globally in 2017, an estimated 295,000 women worldwide have lost their lives due to easily preventable pregnancy and childbirth-related complications, 94% of which are contributed by low-income countries. Sub-Saharan Africa and Southern Asia accounted for around 86% (254,000) of the estimated global maternal deaths. In this figure, sub-Saharan Africa alone is accountable for almost two-thirds or 66% (196,000) of those deaths.<sup>10</sup> According to the 2016 Ethiopian Demographic Health Survey (EDHS) report, Ethiopia has one of the highest maternal mortality ratios (MMRs) globally of 412 maternal deaths per 100,000 live births.<sup>11</sup>

Most maternal death is due to a lack of access to skilled, routine, and emergency obstetric care.<sup>12</sup> For this reason, maternal mortality is high in countries where the proportion of births attended by skilled providers is low.<sup>13</sup> The proportion of women who are giving birth at health institutions with trained birth attendants in Ethiopia is not more than 28%. According to the 2016 EDHS report, in Amhara region only 27% of mothers are delivered in health facilities, and the remaining 73% of mothers are delivered at home which causes increased maternal and neonatal mortality.<sup>11</sup>

Lack of respectful maternity care is one of the main reasons for the underutilization of maternal health services and a large proportion of women continue to avoid facility care; it has become evident that D&A attitudes of some health care providers toward women are one of the important barriers for women to access maternity care. It is a health system failure and a violation of women's rights.<sup>14-16</sup>

Experiencing or fearing encountering abuse and embarrassment by health care professionals during labor and delivery can discourage women from using health care facilities during subsequent deliveries.<sup>17</sup>

Despite an attempt to apply RMC globally for good mother and newborn outcomes, a D&A high has been reported worldwide. Studies done in Ghana (39.5%) and India (62.3%) reported that non-confidential care happened during childbirth. This study was supported by the study in Ethiopia where 74% reported mistreatment during childbirth.<sup>18-20</sup>

One of the strategies designed to reduce MMR has led to an emphasis on skilled birth attendance at health care facilities.<sup>14</sup> RMC is crucial in achieving Reducing the global MMR to less than 70 per 100,000 live births by 2030, the first target of the Sustainable Development Goal (SDG).<sup>21</sup> The proportion of births attended by skilled health personnel and increased utilization of institutional deliveries in the absence of D&A is a critical progress indicator explicitly adopted for this target.<sup>13,21</sup> Ethiopia had a plan to decrease the MMR from 420 to 199/100,000 and neonatal mortality rate of 29 to 10/1000 live births between 2015/2016 and 2019/2020 to achieve the SDG. As a means to reach this target, provision of RMC is also a key intervention to bring out of reach women to health facilities for maternity care services and to achieve their 2020 goals.<sup>22</sup> However, there is a lack of evidence and key indicators on the actual burden of D&A on women during childbirth at health facilities in the country, except for a few reports published years of age.<sup>23-25</sup> There is limited data on RMC during childbirth and maternity care in Ethiopia particularly at rural health facilities since studies were focused on urban health facilities. Hence, urban health facility studies alone are insufficient for identifying contributing factors that are correlated with disrespectful care during childbirth. A study shows respondents who were from rural areas were more likely to report D&A than urban residents.<sup>25</sup> Therefore, this study was conducted to assess RMC and associated factors among mothers who gave birth at public health institutions in South Gondar Zone.

## Methods

### *Study design, period, and area*

A multicenter institutional-based cross-sectional study design was used to assess the status of RMC during Labor and Childbirth and associated factors among women who gave birth in public health institutions of South Gondar Zone, Northwest Ethiopia from 1 February to 30 March 2021. The study was conducted in South Gondar zone public Health institutions in the Amhara region, Northwest, Ethiopia. The capital of the south Gondar zone, Debre tabor town, is about 103 km away from Bahirdar (the capital city of Amhara regional state) and about 666 km away

from Addis Ababa (the capital city of Ethiopia). According to the south Gondar zone administrative bureau, the zone has a total population of 2,609,823 of which 1,304,911 are females. In the zone, there are 18 Woredas of which 13 are rural and 5 urban in which there are 8 governmental hospitals, 96 public health centers, 140 private clinics, and 403 health posts. All health centers and hospitals provide 24 h of delivery service.

### *Source population and study population*

**Source population.** The source population was all mothers who gave birth in the South Gondar Zone public Health institutions.

**Study population.** The study population was all mothers who gave birth in the South Gondar zone selected from public health institutions during the data collection period and selected by systematic random sampling.

### *Inclusion and exclusion criteria*

**Inclusion criteria.** All mothers who gave birth in the South Gondar zone selected public health institutions during the study period.

**Exclusion criteria.** Women who were referred from other health institutions after giving birth to those selected health institutions were proposed as exclusion criteria, but we did not get such participants during the data collection period.

### *Sample size and sampling procedure*

The sample size was calculated by using single population proportion formula by considering assumptions like 95% confidence interval (CI), 5% margin of error, and magnitude of respectful maternity care among women during childbirth from the previous study was taken 57% ( $p=0.57$ ) done at Bahirdar town, Northern Ethiopia.<sup>24</sup> By considering a 10% non-response rate and design effects of 1.5, the final sample size was 622.

A simple random sampling technique was utilized to select 1 tertiary hospital, 2 primary hospitals, and 20 health centers. The sample was allocated proportionally to all selected public health institutions based on the two-monthly average number of women who gave birth in each institution for the year 2020.

A systematic random sampling technique was used to select study participants from the mothers who gave birth in public health institutions of the South Gondar zone until the required sample size at each public health institution was obtained. Data were collected from every third woman who gave birth during the study period at each selected health institution. The sampling interval  $k=3$  was calculated by dividing the source population by the total sample size and this interval was used in all health institutions to

select study participants. For each of the public health institutions, the constant number  $K$  was also calculated and it was the same  $K=3$ . This interval was used in all public health institutions to select study participants. The first sample was selected randomly by lottery method among the first three participants (one randomly selected) then every third unit was taken to get the required sample size from each institution.

### *Data collection tools and procedure*

Data were collected using a pretested semi-structured questionnaire. It was prepared by the principal investigator based on literature reviews, and from the Maternal and Child Health Integrated Program (MCHIP) as part of their respectful maternity care tool kit.<sup>23-28</sup> The instrument was first arranged in English and converted into the local language Amharic and back to English by free language specialists. The tool consists of four sections: the first part contains socio-demographic characteristics of the respondents, the second part of the questionnaire contains obstetric characteristics of the participants, the third part contains provider-related factors, and the fourth part contains categories of RMC that women got during facility-based childbirth. The data were collected by 16 BSc midwifery professionals who are working outside the study hospitals. The data collection process was supervised by 3 MSc midwifery professionals and 19 persons were recruited.

Data were collected using face-to-face interviews, semi-structured, and pretested questionnaires. Data collectors described the purpose of the study and interview process, by emphasizing privacy and confidentiality.

A postpartum exit interview was conducted with women who have just given birth in the facilities. Each eligible woman was approached privately in a separate room from the maternity ward but within hospital grounds. After checking the filled questionnaires for any missing items and correctness, it was collected and signed by supervisors. Besides this, there was a continuous follow-up and supervision by the principal investigator throughout the data collection period.

The training was provided for data collectors and supervisors for half-day about the purpose of the study and techniques of data collection. The trained data collectors were supervised during data collection. Pretest was done on 5% of the sample size (31 women) before the actual data collection at Andabet primary hospital and Tsedoye health center. The collected data were reviewed and checked for completeness, clarity, and consistency, and on spot corrective measures were taken by both data collectors and supervisors.

### *Data processing and analysis*

Data were entered using Epi-Data version 4.6 and exported to SPSS version 23 software package for analysis after cleaning data for inconsistencies and missing values. Both

**Table 1.** A socio-demographic characteristic of mothers who gave birth at public health institutions in the south Gondar Zone, Amhara region, North West Ethiopia, 2021 (N=611).

Characteristics	Categories	Frequency	Percentage
Age in groups	15–19	58	9.5
	20–24	148	24.2
	25–29	214	35
	30–34	106	17.3
	35 and above	85	14
Place of residence	Rural	334	54.7
	Urban	277	45.3
Religion	Orthodox	490	80.2
	Muslim	104	17
	Protestant	17	2.8
Marital status	Single	54	8.8
	Married	538	88.1
	Others <sup>a</sup>	19	3.1
Ethnicity	Amhara	580	95
	Tigre	19	3.1
	Other ethnicity <sup>b</sup>	12	1.9
Educational status	Unable to read and write	169	27.6
	Able to read and write	94	15.4
	Primary (1–8) completed	47	7.7
	Secondary (9–12) completed	165	27
	Collage and above	136	22.3
Mother's occupation	Housewife	219	35.8
	Private employee	66	10.8
	Government employee	75	12.3
	Merchant	96	15.7
	Student	81	13.3
	Farmer	74	12.1
	Average monthly income	Less than 2282	347
	More than 2282	264	43.2

<sup>a</sup>Divorced and widowed.

<sup>b</sup>Oromo and Gurage.

descriptive and analytical statistical procedures were utilized. Bivariable logistic regression was carried out to see the association of each of the independent variables with the outcome variable. A variable with a p-value of < 0.25 was a candidate for a multivariable logistic regression model.

Model goodness of fit was evaluated using the Hosmer–Lemeshow test ( $p=0.77$ ). Then, adjusted odds ratio (AOR), its 95% CI, and p-value of < 0.05 in the multivariable analysis were considered to determine a statistically significant association. Finally, results were compiled and presented using tables, graphs, and texts and it was discussed using the odds ratio and 95% CI.

## Result

### Socio-demographic characteristics of the respondent

A total of 611 women have participated in this study with a response rate of 98.2%. Among the participants, 35%

were within the age group of 25–29 years, with a median age of 27 and an interquartile range (IQR) of 21–30 years. Out of the total respondents, 580 (94.9%) were Amhara by ethnicity, and 490 (80.2%) were Orthodox Christianity religion followers. Regarding the marital status of the mother, 538 (88.1%) of them were married and 219 (35.8%) were housewives. Out of the total respondents, 347 (56.8%) of them had a monthly family income of < 2282 Ethiopian birr. Of the total respondents, 334 (54.7%) were rural residents (Table 1).

### Obstetric-related characteristics of women

The result of this study indicated that the majority of respondents 410 (67.1%) were multiparous and 558 (91.3%) had antenatal care (ANC) follow-up. Of the total respondents, 465 (76.1%) gave birth with spontaneous vaginal delivery and 56 (9.2%) were given birth by Cesarean section. Of the total respondents, 568 (93%) were live birth, and 473 (77.4%) participants were attended by midwife health care professionals. Not Companions

**Table 2.** Obstetric characteristics of mothers who gave birth at public health institutions in the south Gondar Zone, Amhara region, Northwest Ethiopia, 2021 (N = 611).

Characteristics	Categories	Frequency	Percentage
Number of parity	Primi-para	201	32.9
	2–3	273	44.7
	≥4	137	22.4
Pregnancy intended/wanted	Yes	521	85.3
	No	90	14.7
Antenatal care follow-ups	Yes	558	91.3
	No	53	8.7
Place of antenatal care follow-ups	Health center	383	68.6
	Primary hospital	53	9.5
	Referral hospital	82	14.7
	Private clinic	40	7.2
Number of ANC follow-ups	Once to twice	171	28
	Three times	221	36.2
	Four and above	166	27.2
Current place of delivery	Public health center	203	33.2
	Primary hospital	150	24.5
	Public referral hospital	258	42.2
Provider conducting delivery	Nurse	4	0.7
	Midwife	473	77.4
	Doctor	48	7.9
	Emergency Surgeon	86	14.1
Sex of provider	Male	369	60.4
	Female	242	39.6
The current mode of delivery	SVD	465	76.1
	Cesarean section	56	9.2
	AVD	90	14.7
Outcomes of delivery	Alive	568	93
	Stillbirth	43	7
Facing complications during labor and delivery	No	548	89.7
	Yes	63	10.3
Type of complication	Hemorrhage	20	3.3
	Hypertensive disorders	18	2.9
	Other complication <sup>a</sup>	25	4.1
Time of delivery	Day time	293	48
	Nighttime	318	52
Total hour of stay at health facilities	12 h or less	484	79.2
	13–24 h	45	7.4
	25 h and above	82	13.4
Companions during delivery	Yes	432	70.7
	No	179	29.3

ANC: antenatal care; SVD: spontaneous vaginal delivery; AVD: assisted vaginal delivery.

<sup>a</sup>Infection, obstructed labor, premature rupture of membrane.

during delivery for 179(29.3%) of childbirth women and 482 (79.2 %) were 12 h or less total stay at health institutions (Table 2).

### Status of respectful maternity care

Out of the 611 respondents interviewed, only 39.4% (95% CI: 35.4, 43.2%) of the women received RMC, but a significant

number of women 60.6% had experienced at least one form of disrespect and abusive care during childbirth (95% CI: 56.8–64.6). Among the participants, ~86.1% received discrimination-free care followed by confidential care by 85.4%, but 24.5% did not receive consented care. From the categories of Friendly care, 8.8% did not receive information about pain relief measures and 115 (18.8%) complained that health care professionals did not call me by my name.



**Table 3.** Categories and types of respectful maternity care reported by mothers during childbirth at public health institutions in the south Gondar Zone, Amhara region, Northwest Ethiopia, 2021 (N=611).

Category of RMC	Types of RMC	Yes%	No%
Friendly care	I felt that health workers cared for me with a kind approach	566 (92.6%)	45 (7.4%)
	The HWs treated me in a friendly manner	563 (92.1%)	48 (7.9%)
	The health workers were talking positively about pain and relief	557 (91.2%)	54 (8.8%)
	The health workers showed her/his concern and empathy	565 (92.5%)	46 (7.5%)
	All HWs treated me with respect as an individual	558 (91.3%)	53 (8.7%)
	The HWs speak to me in a language that I can understand	562 (92%)	49 (8%)
Abuse free care	The health provider called me by my name	496 (81.2%)	115 (18.8%)
	The HWs responded to my needs whether or not I asked	501 (82%)	110 (18%)
	The health provider slapped me during delivery for different reasons (R)	502 (82.2%)	109 (17.8%)
Timely care	The HWs shouted at me because I haven't done what I was told to do (R)	502 (82.2%)	109 (17.8%)
	I was kept waiting for a long time before receiving service (R)	516 (85.5%)	95 (15.5%)
	I was allowed to practice cultural rituals in the facility	515 (84.3%)	96 (15.7%)
Discrimination free care	Service provision was delayed due to the health facility's internal problem (R)	512 (83.8%)	99 (16.2%)
	Some the health workers do not treat me well despite some personal attributes (R)	539 (88.2%)	72 (11.8%)
Consented care	Some health providers insulted me and my companions due to my attributes (R)	536 (87.7%)	75 (12.3%)
	Providers introduce themselves and greet you and your companion	491 (80.4%)	120 (19.6%)
Confidential care	Providers encourage you and your companion to ask questions	557 (91.2%)	54 (8.8%)
	Provider responds to your question with politeness and truthfulness	566 (92.6%)	45 (7.4%)
	Providers explain what was being done and what to expect throughout labor and delivery	566 (92.6%)	45 (7.4%)
	The provider gives periodic updates on the status and progress of your labor	562 (92%)	49 (8%)
	Providers allow you to choose a birth position as you want	550 (90%)	61 (10%)
	Health care providers obtain permission/consent of you before any procedure	562 (92%)	49 (8%)
Detention free care	Health care provider discusses your private information in a way that others could not hear	533 (87.2%)	78 (12.8%)
	Your body (private parts) was not seen by other people (apart from health providers) during delivery	525 (85.9%)	86 (14.1%)
Detention free care	The discharge does not postpone until hospital bills were paid	515 (84.3%)	95 (15.7%)
	Don't been forced to stay against your will	501 (82%)	110 (18%)

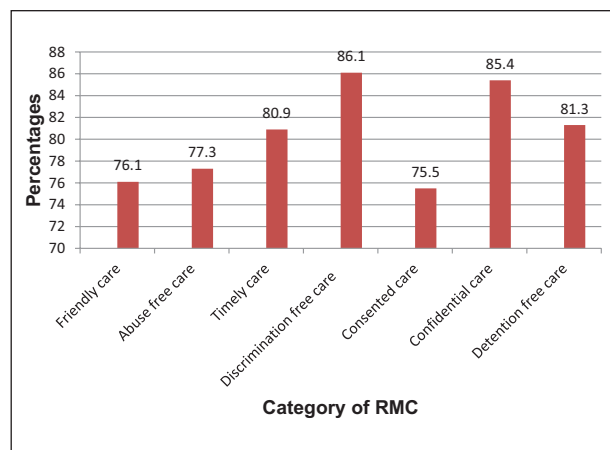
RMC: respectful maternal care; HW: health care workers; (R): items are reverse coded.

The most common category of respectful maternity care identified by women in this study was providing discrimination-free care (86.1%) followed by providing confidential care (85.4%).

A significant number of women complained that some health care professionals shouted at them during childbirth (109; 17.8%) and some health care professionals (110; 18%) not responded to my needs whether or not I asked. About 562 (92.6%) of women care providers responded to their questions with promptness, politeness, and truthfulness, and 550 (90%) of them explained what is being done and what to expect throughout childbirth. Providers allow you to choose your birth position as you want. Service provision was delayed due to the health facilities' internal problems in 99 (16.2%) participants (Table 3 and Figure 1).

### Factors associated with respectful maternity care during childbirth

The result of the bivariable analysis showed that the respondent's educational status, age, average monthly income, sex of provider, pregnancy intended/wanted, ANC visit, number of parity, time of delivery, current mode of delivery, place of delivery, and companions were factors that are found to be a p-value of 0.25 or less is a candidate for the multivariable logistic regression model. On multivariable logistic regression analysis, five variables—educational status, ANC visit, pregnancy intended/wanted,



**Figure 1.** Prevalence of different categories of RMC during childbirth at public health institutions in the South Gondar Zone, Amhara region, Northwest Ethiopia, 2021.

mode of delivery, and time of delivery—were significantly associated with RMC at a  $p$ -value of  $<0.05$ .

The odds of RMC were 2.47 times (AOR: 2.47, 95% CI: 1.35–4.50) higher among women who completed secondary education compared to those who are unable to read and write. This study revealed that women whose current pregnancy was wanted were 3.21 times more likely to get RMC than those with unwanted pregnancy (AOR = 3.21, 95% CI: 1.69–6.08).

This study identified that those women who gave birth at daytime were 1.9 times (AOR = 1.9, 95% CI: 1.33–2.72) more likely to receive respectful care as compared to those who gave birth at night time. Respondents who did not have ANC follow-up were 90.2% less likely to have RMC than those respondents who had ANC follow-up (AOR = 0.098, 95% CI: 0.03–0.34). This study identified that those women who gave birth by cesarean section were 53% less likely to have RMC (AOR: 0.47, 95% CI: 0.25–0.89) as compared to those women who gave birth by spontaneous vaginal delivery (Table 4).

## Discussion

This study identified the prevalence and factors associated with respectful maternity care during institutional-based childbirth in South Gondar Zone, at the health institution level. This study revealed that the prevalence of respectful maternity care was reported by 39.4% (95% CI, 35.4–43.2) of women, with abusive maternity care reported by 60.6% (95% CI, 56.8–64.6). The current study indicated that overall, only one-third of women received RMC during labor and childbirth at public health institutions in the South Gondar Zone, Amhara region, Northwest Ethiopia. The result of this finding is lower than the studies conducted in Addis Ababa (82.4%),<sup>23</sup> Bahirdar (57%),<sup>24</sup> and Ethiopia (49.4%).<sup>6</sup> This variation might be due to the

difference in the study area. A study done in Addis Ababa and Bahirdar was limited to the town health facility. Respondents who were from rural areas were more likely to report D&A than urban residents.<sup>24</sup>

In addition, the study of this finding is lower than the findings of other studies conducted in Tanzania (85%)<sup>29</sup> and a facility-based cross-sectional study in Kenya (80%).<sup>27</sup> The possible explanation might be due to differences in socio-demographic characteristics: The majority of the respondents had completed a primary education in Tanzania (61%) and in Kenya (46.9%); however, in this study, majority of the respondents were unable to read and write (27.7%). Another possible explanation might be the status of the participant's level of understanding about the service, service quality, and the ability of participants to report RMC might be differing.

However, the result of this finding is in line with the cross-sectional study that was conducted at health institutions in the West Shewa Zone, Oromia region, Central Ethiopia,<sup>30</sup> and Harar hospitals, eastern Ethiopia<sup>28</sup> as they revealed 35.8% and 38.4% RMC, respectively. This might be due to similarities in socio-demographic characteristics of the respondent. The majority of the respondents were housewives (79.3%) and unable to read and write (39.5%) in Harar, and also most of the respondents were housewives (35.6%) in the West Shewa zone study.

In addition, the study of this finding is higher than the study conducted in Addis Ababa where 21.4% of respondents received respectful and non-abusive care.<sup>25</sup> The variation in the study might be due to the difference in the study population. The study participants in Addis Ababa were health professionals.

The odds of receiving RMC were 2.47 times higher among women who completed secondary education than those who were unable to read and write. This result is supported by a study done in Addis Ababa public health facilities.<sup>23</sup> This might be due to the educational level increase, awareness about delivery care also increasing, and educated people always practice their rights better than non-educated people. Another possible explanation might be that educated patients may be more able to understand their health needs, follow instructions, advocate for themselves and their families, and communicate effectively with health providers.

This study revealed that women with their current pregnancy intended and wanted were 3.21 times more likely to receive RMC than those with unintended and unwanted pregnancies. The finding of this study was also supported by studies done in Central Ethiopia, Harar hospitals.<sup>28</sup> The possible reason may be women are unhappy, worried, or ambivalent about giving birth and raising their newborn, which may affect their view of their delivery care experience and RMC if the pregnancy is unplanned. Another possible explanation might be Pregnancy is wanted and intended; the mother receives continuous emotional

**Table 4.** Factors associated with respectful maternity care during labor and childbirth at public health institutions in the south Gondar Zone, Amhara region, Northwest Ethiopia, 2021 (N=611).

Variables	Received RMC service		COR (95% CI)	AOR (95% CI)
	Yes	No		
Age				
15–19	18 (30%)	42 (70%)	1	1
20–24	58 (40.8%)	84 (59.2%)	1.61 (0.84–3.07)	1.02 (0.49–2.08)
25–29	99 (45.4%)	119 (54.6%)	1.94 (3.31–19.51)	1.44 (0.73–2.86)
30–34	47 (44.3%)	59 (55.7%)	1.86 (1.05–3.58)	2.06 (0.59–4.45)
35 and above	19 (22.4%)	66 (77.6%)	0.67 (0.32–1.43)	0.86 (0.37–2.02)
Educational status				
Unable to read and write	53 (31.7%)	114 (68.3%)	1	1
Able to read and write	38 (40.4%)	56 (59.6%)	1.46 (0.86–2.47)	1.71 (0.92–3.15)
PEC	13 (26%)	37 (74%)	0.75 (0.37–1.54)	0.96 (0.42–2.21)
SEC	85 (51.8%)	79 (48.2%)	2.31 (1.48–3.62)	2.47 (1.35–4.50)*
College and above	52 (38.2%)	84 (61.8%)	1.33 (0.83–2.14)	1.13 (0.62–2.05)
Average monthly income				
Less than 2282	118 (34%)	229 (66%)	1	1
More than 2282	123 (46.6%)	141 (53.4%)	1.69 (1.22–2.35)	1.45 (0.93–2.25)
Pregnancy intended/wanted				
No	14 (15.6%)	76 (84.4%)	1	1
Yes	227 (43.6%)	294 (56.4%)	4.19 (2.31–7.60)	3.21 (1.69–6.08)**
ANC visit				
Yes	238 (42.7%)	320 (57.3%)	1	1
No	3 (5.7%)	50 (94.3%)	0.08 (0.03–0.26)	0.098 (0.03–0.34)**
Parity				
≥4	40 (29.2%)	97 (70.8%)	1	1
2–3	127 (46.5%)	146 (53.5%)	2.10 (1.36–3.27)	1.83 (0.89–3.74)
Primi-para	74 (36.8%)	127 (63.2%)	1.41 (0.88–2.25)	1.65 (1.72–3.80)
Time of delivery				
Night time	102 (32.1%)	216 (67.9%)	1	1
Day time	139 (47.4%)	154 (52.6%)	1.91 (1.37–2.65)	1.9 (1.33–2.72)**
Mode of delivery				
SVD	199 (42.8%)	266 (57.2%)	1	1
Cesarean section	16 (28.6%)	40 (71.4%)	0.54 (0.29–0.98)	0.47 (0.25–0.89)*
AVD	26 (28.9%)	64 (71.1)	0.54 (0.33–0.88)	0.58 (0.35–0.98)*
Place of delivery				
Health center	97 (47.8%)	106 (52.2%)	1	1
Primary hospital	53 (35.6%)	96 (64.4%)	0.60 (0.39–0.93)	0.73 (0.44–1.19)
Referral hospital	91 (35.1%)	168 (64.9%)	0.59 (0.40–0.86)	0.78 (0.51–1.19)
Sex of provider				
Female	77 (31.8%)	165 (68.2%)	1	1
Male	164 (44.4%)	205 (55.6%)	1.71 (1.22–2.40)	1.38 (0.94–2.04)

RMC: respectful maternal care; COR: crude odds ratio; AOR: adjusted odds ratio; CI: confidence interval; PEC: primary education (1–8) completed; SEC: secondary education (9–12) completed; ANC: antenatal care; SVD: spontaneous vaginal delivery; AVD: assisted vaginal delivery.

\*Significant at p-value < 0.05.

\*\*Significant at p-value < 0.001.

support from her husband and family, which improves the outcome of childbirth and RMC.

This study identified that those women who gave birth during daytime were 1.9 times more likely to receive

respectful maternity care as compared to those who gave birth at night time. This study was in agreement with a study done in Bahirdar, northern Ethiopia,<sup>24</sup> at Health institutions in the West Shewa Zone, Central Ethiopia,<sup>30</sup>



and a study done in Kenya.<sup>31</sup> The possible explanation might be due to the reality that during daytime there is adequate staffing and resources available than at night time and also very weak leadership and supervision from senior health workers and managers during nighttime.

Respondents who did not have ANC follow-up were 90.2% less likely to receive RMC than their counterparts. This finding is in line with the study conducted at public hospitals in Central Ethiopia, Harar.<sup>28</sup> The likely reason may be due to the client's better understanding and experience of a healthier delivery, because of awareness of the services and close relations with the health care provider during the ANC follow-up, which is crucial in building confidence in the service provided in the facility. Another possible explanation is that ANC follow-up might give mothers a continuum of care from the antenatal to the postpartum period which will grant mothers all the necessary information about birth preparedness and information related to the current pregnancy.<sup>32</sup>

This study identified those women who gave birth by Cesarean section and instrumental vaginal delivery were 53% and 42% less likely to receive RMC, respectively, as compared to those women who gave birth by spontaneous vaginal delivery. The finding of this study is consistent with a cross-sectional study conducted in Addis Ababa public health facilities<sup>23</sup> and Bahirdar, Ethiopia.<sup>24</sup> This might be due to the mother suffering from pain and increased maternal and fetal complications in assisted vaginal delivery. Women who have a cesarean delivery are more likely to suffer from physical pain after childbirth and have longer and more difficult postnatal recovery, both conditions that also affect their psychological well-being.<sup>33</sup>

## Limitations

This study has some essential limitations that the interpretation of the findings should be held in mind. It was best to study respectful maternity care through observational data collection techniques and qualitative study.

The social desirability bias may occur. Each eligible woman was approached privately in a separate room from the maternity ward but within the hospital grounds to reduce social desirability bias.

## Conclusion

In general, only two out of five women received RMC. Nearly three out of five women had experienced at least one form of disrespect and abusive care during childbirth. Completed secondary education, having ANC follow-up, intended and wanted pregnancy, daytime delivery, and cesarean section delivery were the factors that are significantly associated with those respectful maternity care during childbirth. We recommended that the government of Ethiopia considers integrating key elements of RMC into

appropriate laws, rules, protocols, and standards. RMC has also been included in Basic and Emergency Obstetric Care training sessions focused on increasing awareness of family planning methods to prevent unplanned pregnancy. In addition to this, educating women during ANC follow-up on what to expect during childbirth including the right to information, informed consent, and refusal, privacy, confidentiality, and respect for her choices and preferences, including companionship during labor and delivery, helps to improve RMC. Besides this, public health institutions and other stakeholders should increase the number of RMC trained providers and strengthen monitoring and evaluation mechanisms to reduce disrespectful maternal care during the night time on maternity ward service providers and effective enforcement of accountability mechanisms for upholding RMC rights, to avoid mistreatments and support them in a friendly manner.

## Declarations

### *Ethical approval and consent to participate*

The ethical clearance letter was obtained from the ethical review committee of the school of midwifery on behalf of the Internal Review Board of the University of Gondar, College of medicine and health sciences (ethical approval number PG/091/26/1876/13) to the concerned office and then a letter of support was obtained from south Gondar zone health office. Written informed consent was obtained from the individual participants. Moreover, the purpose, procedures of the study, advantages, and disadvantages were told to the participants. All the participants in the study participated voluntarily and their information was kept confidential. Participants have been informed that they have the right to withdraw at any time. Any information given by participants was kept confidential and participants did not write any personal identification such as name or phone cell number. Finally, written informed consent was obtained before data collection.

### *Consent for publication*

Not applicable.

### *Author contribution(s)*

**Wassie Yazie Ferede:** Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Resources; Software; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing.

**Temesgen Worku Gudayu:** Conceptualization; Formal analysis; Methodology; Software; Supervision; Writing – original draft; Writing – review & editing.

**Dereje Nibret Gessesse:** Conceptualization; Formal analysis; Methodology; Software; Writing – original draft; Writing – review & editing.

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### Competing interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Availability of data and material

When ethical approval was obtained from the institutions, we agreed and signed not to publish the raw data retrieved from the information of the mother. However, the data sets collected and analyzed for the current study are available from the corresponding author and can be obtained at a reasonable request.

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### Supplemental material

Supplemental material for this article is available online.

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