Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year

Fillorenes Ayalew Sisay, MSc; Abeba Belay Ayalew, MSc; Besfat Berihun Erega, MSc; Wassie Yazie Ferede, MSc; Assefa Kebie Mitiku, MSc; Eyaya Habtie Dagnaw, MSc; Tegegne Wale Belachew, MSc; Temesgen Dessie Mengistu, MSc; Begizew Yimenu Mekuriaw, MSc; Yonas Zenebe Yiregu, MSc; Tigist Seid Yimer, MSc

BACKGROUND: Both maternal and neonatal mortality were high in the immediate postnatal period. Men's involvement is essential to improve maternal, neonatal as well as the health of their children in the postpartum period. However, reproductive health has long been seen as a woman's concern, and as such, it continues to be a significant difficulty, particularly in developing countries including Ethiopia. Despite this, Limited studies were done to assess the predictors of male involvement in postnatal care in Ethiopia. Therefore, this study aimed to assess male partner involvement in postnatal care service in the South Gondar zone, North West Ethiopia in 2024.

OBJECTIVE: This study assessed male involvement in Postnatal care services of their partners and its predictors in South Gondar Zone, Ethiopia.

METHOD: A community-based cross-sectional study was conducted from October —November 30/2023. Four hundred seventeen participants were recruited by using the multistage sampling technique. The data were collected through face-to-face interviews using a pretested and semi-structured questionnaire. Multivariable logistic regression analyses were computed to identify factors associated with the outcome variable. Adjusted odds ratio with a 95% confidence interval was computed to determine the level of significance.

RESULTS: The overall magnitude of male partner involvement in postnatal care service was 23.7%. Urban residence, College and above education, men whose wives' occupations were students, Good knowledge about PNC, and, joint health care decisions were the main predictors of male involvement in postnatal care service.

CONCLUSION AND RECOMMENDATION: The magnitude of male involvement in postnatal care was low. The finding highlights the importance of women's empowerment, awareness creation joint decision-making, and increasing men's educational levels are essential to increase the involvement of male partners in postnatal care service.

Key words: involvement, male partner, postnatal care

Introduction

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. In this figure, sub-Saharan Africa alone is accountable for 66% of those deaths.[1] According to the 2016 Ethiopian Demographic and Health (EDHS) report, Ethiopia has one of the highest maternal mortality ratios

† Co-authors.

From the Department of Midwifery (Sisay, Ayalew, Erga, Ferede, Mitiku, Dagnaw, Belachew, Mengistu, Mekuriaw, Yiregu and Yimer), College of Medicine and Health Sciences, Debre Tabor University, Debretabor, Ethiopia

Patient consent: *Purpose of the research:* To assess the magnitude of male involvement in postnatal care service utilization and associated factors among fathers whose wives had delivered children in the last twelve months.
Voluntary Participation: You have the full right to refuse to participate in this research. You also have the full right to withdraw from this study at any time you wish. You can also decide if you only want part of the study.
Risk: Risk/ Discomfort: The risks of participating in this study are very minimal, but you may feel some discomfort, especially on spending time of 30 minutes. I hope you will participate in the study for the sake of the Benefit of the research result.
Benefits: At this moment you may not get any direct benefit by being involved in this study but the information you provide is very important to solve problems associated with postnatal care.
Procedures: Each participant will fill out a short questionnaire.
Confidentiality: The information you will provide us will be confidential. There will be no information that will identify you in particular.

The authors reports no conflict of interest.

Corresponding author: Fillorenes Ayalew Sisay, MSc. flornceayalew@gmail.com

2666-5778/$36.00

http://dx.doi.org/10.1016/j.xagr.2025.100459

AJOG Global Reports at a Glance

Why was this study conducted?

Men's involvement is essential to improve maternal, neonatal as well as the health of their children in the postpartum period. However, reproductive health has long been seen as a woman's concern, and as such, it continues to be a significant difficulty in developing countries including Ethiopia. Despite this, Limited studies were done to assess the predictors of male involvement in postnatal care in Ethiopia. Therefore, this study aimed to assess male partner involvement in postnatal care service in the South Gondar zone, North West Ethiopia in 2024.

Key findings

The overall magnitude of male partner involvement in postnatal care service was 23.7%. Urban residence, educational status, wives' occupation, knowledge, and joint decisions about postnatal care were the main predictors of male involvement in postnatal care.

What does this study add to what is already known?

This study was to determine the prevalence and the main predictors of male involvement in PNC service in Ethiopia

globally (MMR) of 412 maternal deaths per 100,000 live births.[2] Ethiopian Demographic and Health Survey (EDHS) 2016 also showed that infant and neonatal mortality rates were 48 and 29 per 1000 live births respectively.[2]

Focused antenatal care, institutional delivery, and postnatal care (PNC) were important to reduce both maternal and neonatal mortality.[3–5] The 1994 International Conference on Population and Development (ICPD), held in Cairo, recommended males to be involved in the reproductive health of their wives or partners. It also encouraged reproductive health care programmers to adopt a more holistic approach that includes men and focuses on couples rather than focusing on women alone. In addition, male involvement in maternal health is now being advocated as an essential element of the World Health Organization (WHO) initiative for making pregnancy safer. Male involvement in maternal health care services including PNC is vital to improve both their partner's and children's health.[6]

The postnatal period is critical to the health and survival of a mother and her neonate. Lack of care at this time may result in death or disability as well as missed opportunities to promote healthy behaviors, affecting women, newborns, and children. The postpartum period was important for counseling on birth spacing and family planning methods. WHO recommends that women who have delivered in a health facility should receive PNC for at least 24 hours after delivery. If a birth is at home, the first postnatal contact should be as early as possible within 24 hours of birth. Three additional PNC contacts were recommended on day 3, between days 7 to 14 after birth, and 6 weeks after birth. It is important to reach women before they are at risk for unintended pregnancy with information about the return of fertility, their options to space or limit future pregnancies, and the benefits to their own and their newborn's health.[7] A large proportion of maternal and neonatal deaths occur during the first 48 hours after delivery. Therefore, prompt postnatal care (PNC) for both the mother and the child is important to treat any complications. WHO recommends that all women receive a check of their health within 2 days after delivery. However, in Ethiopia, only 17% of women reported having received a PNC checkup in the first 2 days after birth.[2] One of the determinate factors of PNC utilization is male involvement because males are decision-makers and they control the overall income of the family.[8,9] From the above figure, we can conclude that the magnitude of PNC was low in Ethiopia and male involvement is one of the determinant factors of PNC utilization. Moreover, as far as our knowledge is concerned, few studies were done to assess male involvement in PNC in Ethiopia. Therefore, this study was conducted to assess the magnitude of male involvement in postnatal care service utilization and associated factors among fathers whose wives had delivered children in the last twelve months in the south Gondar zone, Ethiopia, 2023.

Methods

The study was conducted in South Gondar Zone four districts (Tach Gayint Woreda, Fogera Woreda, Ibnat, woreda, and Debere Tabor Town). South Gondar is a Zone in the Ethiopian Amhara Region. 468,238 households were counted in this Zone, which results in an average of 4.38 persons per household.

South Gondar zone is bordered on the South by East Gojam, on the Southwest by West Gojam and Bahir Dar, on the West by Lake Tana, on the North by North Gondar, on the Northeast by Wag Hemra, on the East by North Wollo, and the Southeast by South Wollo. There are 18 districts (10 rural and eight urban) in this zone. There are 140 private clinics, 403 health posts, 96 health centers, 7 primary hospitals, and 1 general hospital in the zone. All health centers and hospitals provide antenatal care (ANC), labor delivery, and PNC services. According to the 2011 Central Statistical Agency(CSA), the South Gondar zone has a total population of, 2,239,077 (female 1,103,490 male1, 135,587).

Study design and period

A community-based cross-sectional study was conducted from October −to November 30/2023 using a quantitative approach.

Source and study population

Source population: All male partners reside in the South Gondar zone whose wives gave birth within the last year and who had postnatal care follow-up

Study population: All men partners reside in the selected kebeles of the South Gondar zone whose wives gave birth within the last year and had postnatal care follow-ups.

Inclusion and exclusion criteria

Men who resided for at least six months in the south Gondar zone selected districts and whose wives gave birth within the last 12 months were included and men who were critically ill and unable to communicate during the data collection period were excluded from the study.

Sample size determination

the sample size was calculated by using the assumption of a single population proportion formula considering the prevalence of male involvement in postnatal care service in the Motta district was 20.8%.[10] With a 95% confidence interval, 5% Margin of error, 10% nonresponse rate, and design effect of 1.5.[20] Hence, the final sample size was found to be 417.

Sampling method and procedure

A total of ten districts or woreda were found in the South Gondar Zone of which four of them were selected by lottery methods and by Simple random sampling technique, a total of 14 kebeles were selected. Based on the number of men whose wives gave birth in the last 12 months and had PNC follow up in each kebeles from the data taken from the health extension workers proportional allocation was done for each kebeles finally the data was collected by systematic random sampling technique (Figure 1).

Data collection tools and procedures

Data were collected using a pretested and semi-structured interviewer-administered questionnaire developed by reviewing various literature ([22−34]). The questionnaire had four parts. The first part regards the socio-demographic characteristics of participants, the second part concerns to reproductive history of participants, and the third part regards male involvement in PNC. The fourth part is about, Awareness, knowledge, and attitude on PNC.

Male involvement was measured by ten yes/no questions. (These are, discussing with health professionals about, PNC service and complications occurring in the postpartum period, discussing with a spouse about PNC service, physical support, discussing postpartum contraception, emotional support, sharing decision-making power on PNC service with the spouse, financial support, help in domestic activities, accompanying spouse for PNC service and looking after children. Those who scored up to or above the mean were regarded as having involvement in postnatal care.[10,11]

A total of five-health extinction workers were assigned to collect the data and two BSc midwives were assigned for supervision. Data collectors described the purpose of the study and interview process by emphasizing privacy and confidentiality to the participants before starting the interview process. After checking the filled questionnaires for any missing items and correctness, the data were collected and signed by supervisors. Besides this, there was continuous follow-up and supervision by the principal investigator throughout the data collection period.

Operational definition

Postnatal care: Postnatal care is the care provided to the mother and their babies within 42 days after delivery.[12]

Male partner: a male who has/had a spouse through formal marriage or informal union.[10]

Male involvement: male involvement is measured by the total number of 10 questions with yes/no responses. After computing the mean score of involvement questions, it was categorized as not involved in Post Natal care services and involved in Post Natal care services based on the mean score. Then Respondents who scored below the mean were regarded as having low involvement in postnatal care services while those who scored up to or above the mean were regarded as having high involvement in postnatal care services.[10,11]

Male partner accompanied in PNC service: A male partner who accompanied his spouse to the PNC clinic on at least one PNC visit, excluding the first 6-hour PNC visit.[10]

Knowledge of men about PNC: The knowledge of men on PNC was measured by the total number of 5 questions. After computing the mean score of knowledge questions, it was categorized as poor knowledge and good knowledge based on the mean score.

Good knowledge: Men were considered to have good knowledge of PNC if they had answers greater than or equal to the mean score of knowledge questions.[11]

Knowledge of postpartum obstetric danger signs: Knowledge of danger signs. Those male partners who had replied three or more maternal or neonatal danger signs or complications.[10]

Attitude towards PNC service: The attitude of the respondents towards PNC service was evaluated by using five questions. The questions were designed using a Likert scale format with three answer alternatives; ranging from agree, not sure, and disagree.

Favorable attitude: respondents who scored the mean score or above were considered to have a favorable attitude towards PNC services.

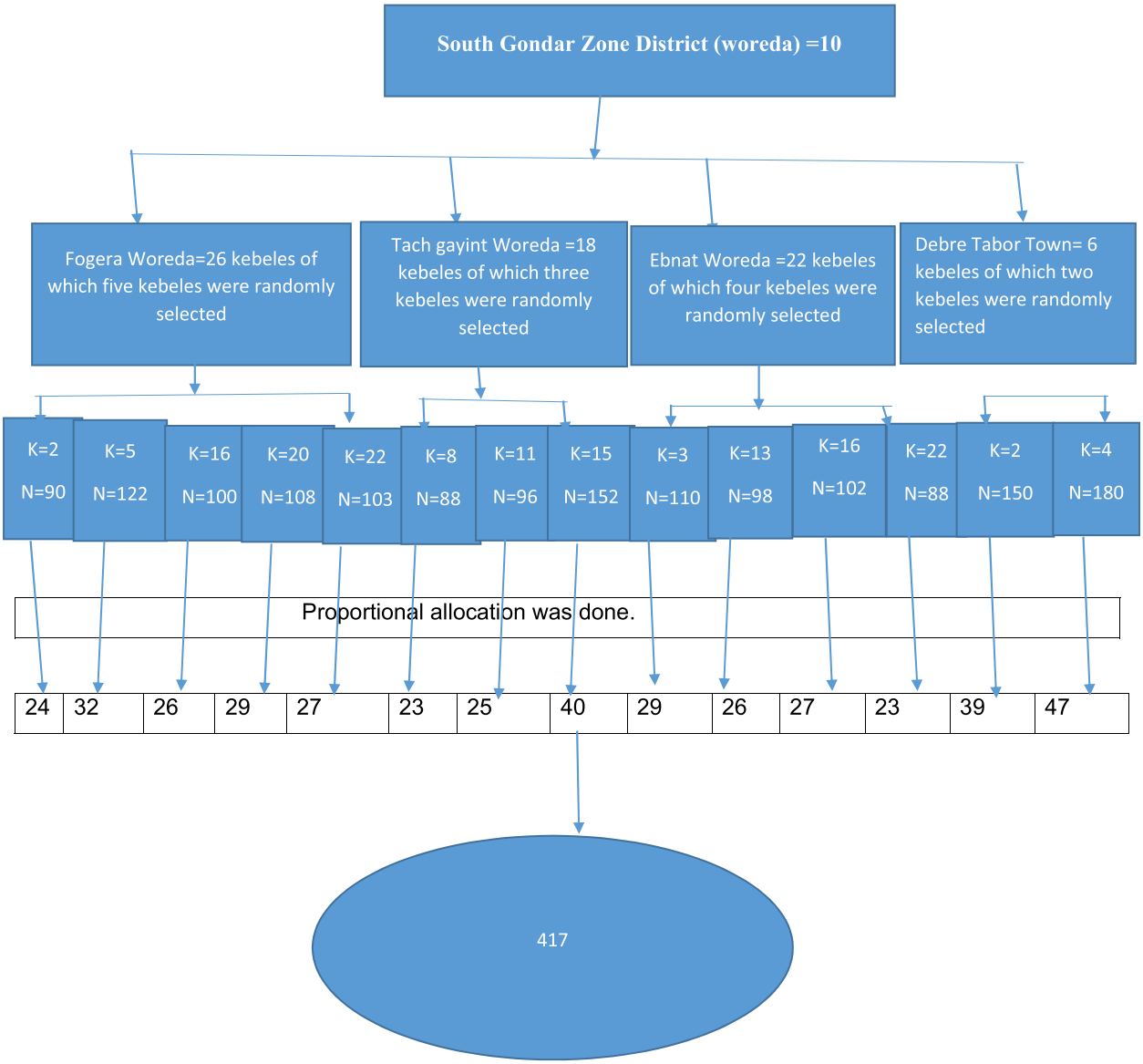
Results

A total of 412 men participated in this study with a response rate of 98.8%. The respondents' age ranged from 25 to 53 years with a median age of 34 years. More than half 217 (52.7.%) of the study participants were in the age group 25 to 34 years. Most (98.5%) of men were orthodox Christians and more than one quarter, 131 (31.8) of study participants had completed secondary education. Regarding occupation, about 160 (38.2%) were government employe (Table 1).

Reproductive characteristics of the study participants

Among the study participants, 173 (42%) of them had two live children and more than half of 230 (58.8%) of men and their wives had 2 to 3

FIGURE 1
Sampling procedure about male involvement in PNC service among men whose wives gave birth in the last one year in South Gondar zone 2024



Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025.

deliveries. Regarding the age of the last child, Less than half 181 (43.9%) of men had children greater than six months old, and about 239 (58%) of the study participants had their last child was female. Among the study participants about, 37 (9%) of their wives had complications in the last pregnancy. Among 37 respondents about, 15 (40.5%) of their wives develop Excessive vaginal bleeding in the last pregnancy (Table 2).

Awareness of married men about PNC

Of the total respondents, 202 (49%) of men had awareness about PNC. Among this majority, 123 (61%) of study participants, heard from health professionals (Figure 2).

Knowledge of men about postnatal care

In this study, one−fourth of 50(24.8%) of respondents had good knowledge about postnatal care. About, 81 (40.1%) of men responded that the postnatal period was more dangerous to the life of the mothers and their babies (Table 3).

Attitude men towards PNC

In this study, 41 (20.3%) of men had positive attitudes about postnatal care. Among those more than half 128 (63.4%) of men disagree that PNC

TABLE 1
Socio-demographic characteristics of study participants in South Gondar zone Ethiopia, 2024 (n = 412)

Variables	Frequency	Percent
Age (years)		
25–34	217	52.7
35–44	138	33.5
≥ 45	57	13.8
Religion		
Orthodox	406	98.5
Muslim	5	1.2
Protestant	1	0.3
Residence		
Urban	159	38.6
Rural	253	61.4
Ethnicity		
Amhara	393	95.5
Others	19	4.5
Educational status		
No education	96	23.3
Primary	62	15
Secondary education	131	31.8
College and above	123	29.9
Monthly income (ETB)		
High	178	43.2
Medium	120	29.1
low	114	27.7
Occupational Status		
Govt. employ	160	38.8
Private employ	135	32.8
Farmer	64	15.5
Daily laborer	23	5.6
Merchant	30	7.3
Living with your spouse		
Yes	365	88.6
No	47	11.4
Age of spouse's		
15–24	62	15.1
25–29	172	41.7
30–34	120	29.1
35–39	58	14.1

Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025. *(continued)*

service can minimize the morbidity and mortality of babies (Table 4).

Culture related factors

Of 412 respondents 74(18%) of respondents perceived that PNC is a women's affair and 62(15%)) considered the PNC clinic as a place only for women. Nearly one-fourth of 116 (28.2%) men had a culture of discussion with their partner about PNC service utilization. About, 92 (22.3%) of respondents reported that some misconceptions and myths influence the involvement of the male partners in PNC service utilization.

Health service-related characteristics

More than half (58%) of respondents had health facility access within 30 minutes and only, (27.7%) of respondents had transport access to the health facility. About, (16.3%) of respondents had a good welcome by the health professionals when they visited. About, (28.4%) of men respond that healthcare providers are not allowed to the room other than health workers to ensure privacy.

Male partner involvement in PNC service utilization

In this study, the magnitude of male involvement in PNC was 23.7% with a 95% CI (21.6–29.9). Nearly one-fourth (22.8%) of men accompanied their partner to the health facility for PNC service utilization. The most common reasons for male partners who did not accompany their partner were lack of knowledge about PNC and, the postpartum complications, being preoccupied with work, a belief that the PNC is an issue for women only, and women not being allowed to accompany their partner (Table 5).

Factors associated with husband involvement in PNC service utilization

In binary logistic regression: Residence, education, wives' occupation, wives' education health care decision, Number

TABLE 1
Socio-demographic characteristics of study participants in South Gondar zone Ethiopia, 2024 (n = 412) *(continued)*

Variables	Frequency	Percent
Spouse's education		
No education	111	26.9
Primary	119	28.9
Secondary	124	30.1
College and above	58	14.1
Spouse's occupation		
Housewife	112	27.2
Government Employed	133	37.1
Private employee	63	15.3
Student	36	3.9
Farmer	68	16.5

Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025.

of live children, knowledge about PNC, knowledge about danger signs, attitude, and income were found to be a p-value of <0.2 and entered into the multivariable analysis.

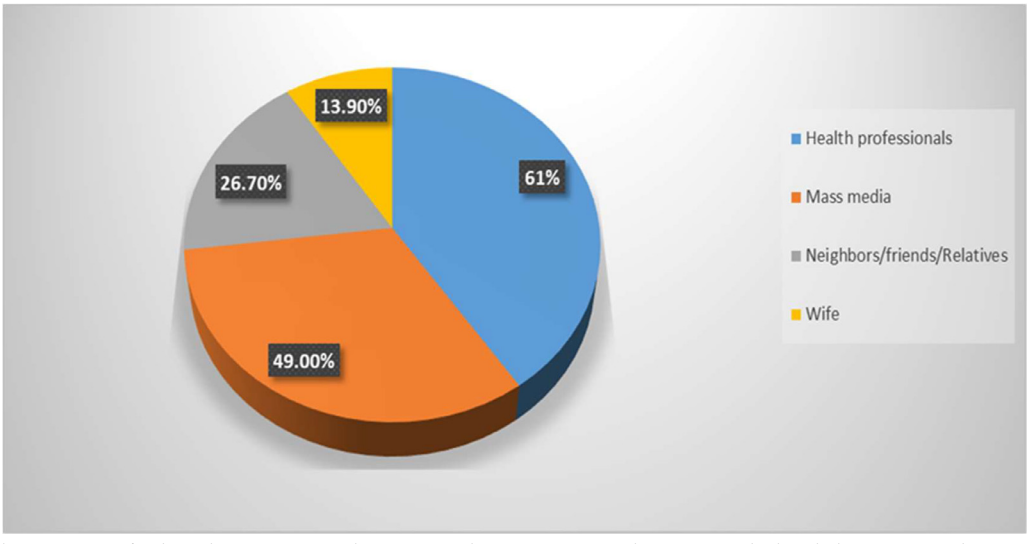
Finally, educational status, residence, wives' occupation, good knowledge About PNC, and health care decisions were significantly associated with male involvement in PNC in the multivariable analysis.

Male partners living in urban areas were 2.5 times more likely to be involved in PNC service utilization than their counterparts ([AOR = 2.48, 95% CI = (1.22−4.76)]

Men who had attained secondary education were 2.2 times more likely to be involved in PNC service utilization than Men who had no formal education (AOR=2.23, 95% CI: 1.42−7.34). Men who had attended college and above education were 3.8 times more likely to be involved in PNC service utilization than those who had no formal education (AOR=3.82,95% CI:1.74 −7.52).

Male partners whose wives' occupation was government-employed were 2.6 times more likely to be involved in PNC utilization than housewives ((AOR=2.56, 95CI:1.12−6.51). Furthermore, Maleparteners whose wives' occupation was a student were 14 times more likely to be involved in PNC service utilization than housewives (AOR=13.94,95% CI:6.73−26.32). The result also suggested that male partners who had good knowledge of PNC service were 2.4 times (AOR=2.43,95 CI:1.18−4.24) more likely to be involved in PNC service utilization as compared to those who had poor knowledge of the service Moreover, male partners who make health care decision jointly with his wives were 4.6 times more likely to involved in PNC service utilization than their counterparts. (AOR= 4.56,95% CI:2.10 −9.97) (Table 6).

FIGURE 2
Source of information about PNC among men whose wives gave birth in the last year in South Gondar zone, Ethiopia, 2024



Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025.

TABLE 2
Reproductive characteristics of study participants in South Gondar zone Ethiopia, 2024 (n = 412)

Total number of deliveries your wives had	Frequency	Percent
1. 1	124	30.1
2. 2−5	230	55.8
3,≥5	58	14.1
Number of live children		
1. 1	118	28.6
2. 2.	173	42.0
3. ≥3	121	29.4
Age of your last child		
1. <6 month	231	56.1
2. >6 month	181	43.9
Sex of last-child		
1. Male	173	42.0
2. Female	239	58.0
Wives had complications in the last pregnancy		
Yes	37	9.0
No	375	91.0
List of Complications that happen in the last pregnancy		
Excessive vaginal bleeding(n=37)		
1. Yes	15	40.5
2. No	22	59.5
Severe Headache		
1. Yes	6	16.2
2. No	31	83.8
Blurred Vision		
1. Yes	8	21.6
2. No	29	78.4
Convulsions/Loss of Consciousness		
1. Yes	3	8.1
2. No	34	91,9
Swollen Hands/Face		
1. Yes	4	10.8
2. No	33	89.2
High-grade Fever		
1. Yes	5	13.5
2. No	32	86.5
Rise blood BP		
1. Yes	7	18.9
2. No	30	81.1

Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025. *(continued)*

Discussion

The overall magnitude of male partner involvement in PNC service utilization was 23.7% with a 95% CI (21.6−29.9). This finding is in line with the findings of a study done in Ethiopia (20.8%),[10] and Ghana(20%).[13] The similarity of this study from Ethiopia might be due to the similarity in the study population and socio-demographic characteristics. The similarity of this study from Gahana might be due to the similarity in the study population.

However, the result of this study is lower than a study done in Nigeria (56.3%),[11] Indonesia (50%),[14] Chitwan (33.8%),[15] and, Ghana (31.7%).[16] The possible explanation for this difference from the studies conducted in Nigeria might be due to differences in socio-demographic characteristics: In the study done in Nigeria, the majority of respondents had completed Tertiary education(74.3%), However; in this study, 23.3% of respondents have no formal education. Another reason might be due to the difference in knowledge status about PNC: the majority of men had Good Knowledge about PNC (66.6%) but in this study, onely 24.8% of men had good knowlodgy

The possible explanation for the difference between this study from Chitwan might be a difference in the study population: unlike this study studies done at Chitwan were among women. Another reason might be due to the difference in income. In the study done in Chitwan Half (50%) of the respondents had high income. However, in this study, 27.7% of respondents had low income. However, studies done in Kenya showed that men who had high incomes were more involved in PNC than women who had low incomes.[17] The possible explanation for this difference from the studies conducted in Ghana might be due to the different study settings. Unlike this study, the study done in Ghana was institutional-based. The possible explanation for the difference in this study from Indonesia might be due to the difference in knowledge status about PNC: In the study done in Indonesia the majority of men had Good Knowledge about PNC

TABLE 2
Reproductive characteristics of study participants in South Gondar zone Ethiopia, 2024 (n = 412) *(continued)*

Total number of deliveries your wives had	Frequency	Percent
Malodorous Vaginal discharge		
1. Yes	3	8.1
2. No	34	91.9
The number of minutes taken to reach health facility		
1. <30 minute	239	58.0
2. ≥ 30 minute	173	42.0
Decision about PNC service		
1. Husband	115	27.9
2. Wives	58	14.1
3. both wives and husband	239	58.0
Are there any other family members staying Within your house other than your wife and children?		
Yes	185	44.9
No	227	55.1
Safe motherhood news listened to by husband		
Yes	294	71.4
No	118	28.6
Type of marriage		
Monogamy	411	99.8
Polygamy	1	0.2

Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025.

(56.7%) but in this study, only 24.8% of men had good knowledge. However, Studies showed that men's Knowledge about PNC can increase their involvement.[18]

Based on the findings of this study, residence was associated with the involvement of men in PNC: Male partners living in urban areas were 2.5 times more likely to be involved in PNC service utilization than their counterparts. This finding was supported by the study conducted in Ethiopia.[10] This might be due to Men who were from urban residences being able to access information about PNC services and postnatal complications from different sources like newspapers, TV, and the internet. Men who had attained secondary education were 2.2 times more likely to be involved in PNC service utilization than Men who had no formal education.

In this study educational status of the husband was associated with the involvement of men in PNC. Men who had attained secondary education were 2.2 times more likely to be involved in PNC service utilization than Men who had no formal education.

Furthermore, Men who had attended college and above education were 3.8 times more likely to be involved in PNC service utilization than those who had no formal education. This result

TABLE 3
Knowledge of study participants in South Gondar zone Ethiopia, 2024 (n = 202)

Variable	Category	Frequency	Percent
Did you know the availability of health services for Postnatal care for your wives and your babies within the first six weeks after delivery	Yes	66	32.7
	No	136	67.3
The postnatal period was more dangerous to the lives of the mothers and their babies than pregnancy and delivery	Yes	81	40.1
	No	121	59.9
A woman and her baby must go to the health facility for postnatal care	Yes	46	22.8
	No	156	77.2
know the PNC complications of the mother and Neonet	Yes	30	14.9
	No	172	85.1
The appropriate time to begin PNC is immediately after delivery	Yes	60	29.7
	No	142	70.3

Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025.

TABLE 4
Attitude of study participants in South Gondar zone Ethiopia, 2024 (n = 202)

Variables	Category		Frequency	Percent
PNC service is important	Agree		50	24.8
	Not sure		41	20.3
	Disagree		111	54.9
PNC service can minimize morbidity and mortality of mothers	Agree		54	26.7
	Not sure		40	19.8
	Disagree		108	53.5
PNC service can minimize morbidity and mortality of babies	Agree		44	21.8
	Disagree		34	16.8
	Not sure	124		61.4
Male involvement is important for PNC improvement	Agree	68		33.7
	Not sure		87	43.1
	Disagree		47	23.2
The mother should have a PNC follow-up within 42 days	Agree		51	25.2
	Not sure		81	40.1
	Disagree		70	34.7

Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025.

TABLE 5
Husband involvement in PNC utilization in South Gondar zone, North East Ethiopia, 2024 (n=412)

Variables		Frequency	Percentage
Discusses PNC service with their partner	No	299	72.6
	Yes	113	27.4
Discusses family planning with their partner	No	329	79.9
	Yes	83	20.1
Discusses PNC service and complications during the postpartum period with a healthcare provider	No	327	79.4
	Yes	85	20.6
Provided physical support for his wife during the postnatal period	No	310	75.2
	Yes	102	24.8
Provides emotional support to their partner for PNC service utilization	No	260	63.1
	Yes	152	36.9
Provides financial support to their partner for PNC service utilization	No	248	60.2
	Yes	164	39.8
Accompanied their partner to the health facility to PNC service	No	318	77.2
	Yes	94	22.8
Looks after children	No	236	57.3
	Yes	176	42.7
Helps domestic tasks	No	265	64.3
	Yes	147	35.7

Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025.

TABLE 6
Factors associated with male partner involvement in PNC utilization among men whose wives had given birth in the last one year in the South Gondar zone Ethiopia, 2024 (n=412)

Variables	Male Involvement in PNC		COR (95% CI)	AOR (95% CI)
	Yes	No		
Educational status				
No education	21	75		1
Primary	30	32	2.42 (1.15–4.85)	1.55 (0.567–4.18)
Secondary	88	43	2.45 (1.69–5.70)	2.23 (1.42–7.34)*
College and above	93	30	6.07 (4.42–11.74)	3.82 (1.74–7.52)*
Spouse Occupation				
Housewife	37	75	1	1
Goven"t employee	87	46	8.29 (4.78–14.38)	2.76 (1.11–6.81)*
Private employee	25	38	1.29 (.70–2.39)	.621 (0.24–1.58)
Farmer	23	45	.72 (.31–2.23)	.689 (0.19–2.80)
Student	20	16	16.45 (2.38–24.92)	13.94 (6.73–26.32)**
Residence				
Rural	108	145	1	1
Urban	101	58	1.95 (1.18–2.89)	2.48 (1.22–4.76)*
Men's knowledge about PNC				
Poor knowledge	40	112	1	1
Good knowledge	31	19	2.95 (1.19–5.34)	2.43 (1.18–4.24)**
Healthcare decisions				
Husband	20	95	1	1
Both	138	101	3.93 (2.01–6.19)	4.56 (2.12–9.97)**
Wife	25	33	2.53 (1.45–4.41)	2.1 (0.88–4.4)

* Significant at *p*-value <0.05; ** Significant at *p*-value <0.001.

Sisay et al. Determinants of male involvement in postnatal care service utilization among men whose wives gave birth in the last year. Am J Obstet Gynecol 2025.

was supported by the study in Ethiopia[10] and Kenya.[19,20] This might be due to educated men having more access to information from different sources like the Internet, schools, and newspapers. However, this is in contrast with the study done in Nigeria which found that the level of husband involvement decreases when the educational level increases. To rule out this association further qualitative studies were required.

The novel finding in this study was wives' occupational status: Male partners whose wives' occupation was government-employed were 2.6 times more likely to be involved in PNC service utilization than housewives. Furthermore, Male partners whose wives' occupations were as students were 14 times more likely to be involved in PNC service utilization than housewives. This might be due to employed and student women having access to media and the chance to get updated information from other staff members and classmates and share that information with their husbands. Women who were students might also get information from their teachers and share information with their husbands. This might be also due to employed women participating in decision-making about PNC.

The result also suggested that male partners who had good knowledge of PNC service were 2.4 times more likely to be involved in PNC service utilization as compared to those who had poor knowledge of the service. This result was supported by the study done in Ethiopia,[10] Bangladesh[21] and Nigeria.[22] This might be due to When men know how they and their families can benefit from PNC services, they are more likely to be involved in the uptake of the services.

Moreover, male partners who make health care decisions jointly with their wives were 4.6 times more likely to be involved in PNC service utilization than their counterparts. This result was supported by a study done in Kenya.[19] This might be due to couples who make Decisions jointly with their wives sharing necessary information about PNC service and postnatal complications.

Conclusion

In this study, the magnitude of male partner involvement in PNC service

was low as compared with other studies. Residence, Husband's educational status, wife's occupational status, knowledge about PNC, and joint health care decisions with wives were important predictors of male partner involvement in PNC.

Recommendation

To the policymakers. Better to give more attention to men's education and empower women**.**

To the regional health bureau and educational bureau. It is better to encourage men to have better academic involvement and achievement to improve their knowledge through better exposure to information from social media, other staff members from the workplace, and social networks.

To the zonal health office. It is better to make efforts to increase communities' awareness and knowledge about male involvement by providing information through mass media and educative campaigns to improve men's knowledge and attitude towards PNC.

For health workers. Strengthen information to create awareness and increase the level of knowledge about PNC through health education at PNC.

It is better to provide appropriate counseling about, an advantage of PNC during labor delivery and PNC, especially for men who live in rural areas and have no formal education.

For further researches. Further qualitative study is needed to explore factors associated with pale partner involvement in PNC**.**

CRediT authorship contribution statement

Fillorenes Ayalew Sisay: Writing – original draft, Project administration, Methodology, Investigation, Formal analysis, Conceptualization. **Abeba Belay Ayalew:** Formal analysis, Data curation. **Besfat Berihun Erega:** Writing – review & editing, Formal analysis, Conceptualization. **Wassie Yazie Ferede:** Validation, Formal analysis. **Assefa Kebie Mitiku:** Writing – review & editing, Data curation. **Eyaya Habtie Dagnaw:** Writing – review & editing, Supervision. **Tegegne Wale Belachew:** Writing – review & editing, Funding acquisition. **Temesgen Dessie Mengistu:** Formal analysis. **Begizew Yimenu Mekuriaw:** Validation. **Yonas Zenebe Yiregu:** Resources, Formal analysis. **Tigist Seid Yimer:** Validation, Formal analysis, Data curation, Conceptualization.

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.xagr.2025.100459.

REFERENCES

1. Organization WH. Trends in maternal mor- tality 2000 to 2017: estimates by WHO, UNI- CEF, UNFPA, World Bank Group, and the United Nations population division. USA:ICF;2018.

2. Demographic E. Health Survey (EDHS). Key Indicators Report, Central Statistical Agency Addis Ababa, Ethiopia. Rockville, Maryland, USA: The DHS Program ICF; 2016.

3. Shija AE, Msovela J, Mboera LE. Maternal health in fifty years of Tanzania independence: challenges and opportunities of reducing maternal mortality. Tanzan J Health Res 2011;13(5):15–6.

4. Regassa N. Antenatal and postnatal care service utilization in southern Ethiopia: a population-based study. Afr Health Sci 2011;11(3):3–5.

5. Carvajal–Aguirre L, Amouzou A, Mehra V, et al. Gap between contact and content in maternal and newborn care: An analysis of data from 20 countries in sub–Saharan Africa. J Glob Health 2017;7(2):51–3.

6. Assaf S, Davis L. Does Men's Involvement Improve the Health Outcomes of Their Partners and Children? DHS Analytical Studies No. 64. Rockville, Maryland, USA: ICF; 2018.

7. Organization WH. WHO recommendations on postnatal care of the mother and newborn. United Nations population division: World Health Organization; 2014.

8. Zeleke LB, Wondie AT, Tibebu MA, et al. Postnatal care service utilization and its determinants in East Gojjam Zone, Northwest Ethiopia: A mixed-method study. PLoS One 2021;16(8):e0256176.

9. Mon AS, Phyu MK, Thinkhamrop W, et al. Utilization of full postnatal care services among rural Myanmar women and its determinants: a cross-sectional study. F1000Res 2018;7:71–80.

10. Abie A, Belay G, Asmare E, et al. Male partner involvement in postnatal care service utilization and associated factors: A community-based cross-sectional study in Motta district, Northwest Ethiopia. PLoS One 2023;18(1):e0276477.

11. Sa A. Predictors of male involvement in post-natal care services of their partners in a metropolitan city in North-Central Nigeria. Texila Int J Public Heal 2020;8:27–34.

12. Chemir F, Gelan M, Sinaga M. Postnatal care service utilization and associated factors among mothers who delivered in Shebe Sombo Woreda, Jimma Zone, Ethiopia. Int J Womens Health Wellness 2018;4(2):20–1.

13. Craymah JP, Oppong RK, DA Tuoyire. Male involvement in maternal health care at Anomabo, Central Region, Ghana. Int J Reprod Med 2017;2017:112–3.

14. Guspianto G, Ibnu IN, Veruswati M, Asyary A. Predictors of Male Involvement in Postnatal Care in Jambi, Indonesia: A Cross-Sectional Study. Published online. 2022 May 23.

15. Chapagain S, Thapa T, Joshi A. Husband's involvement in postnatal services among married women of Bharatpur metropolitan city, Chitwan. Eurasian J Med Investig 2019;4(1):1–5.

16. Abiiro GA, Gyan EK, Alatinga KA, et al. Trends and correlates of male participation in maternal healthcare in a rural district in Ghana. Sci Afr 2022;16:e01180.

17. Ongolly FK, Bukachi SA. Barriers to men's involvement in antenatal and postnatal care in Butula, western Kenya. Afr J Prim Health Care Fam Med 2019;11(1):1–7.

18. Comrie-Thomson L, Webb K, Patel D, et al. Engaging women and men in the gender-synchronized, community-based Mbereko+ Men intervention to improve maternal mental health and perinatal care-seeking in Manicaland, Zimbabwe: A cluster-randomized controlled pragmatic trial. J Glob Health 2022;12:7–9.

19. Wanyama IN, Ndunyu L, Guyah B, et al. Determinants of Male Partner Involvement in Antenatal and Postnatal Care in Bumula Sub-County, Kenya. Eajahme 2021;5(5):53–60.

20. Tokhi M, Comrie-Thomson L, Davis J, et al. Involving men to improve maternal and newborn health: a systematic review of the effectiveness of interventions. PLoS One 2018;13(1):e0191620.

21. Zakaria M, Khan AZR, Ahmad MS, Cheng F, Xu J, editors. Women's perception of male involvement in antenatal, childbirth and postnatal care in urban slum areas in Bangladesh: A community-based cross-sectional study. Healthcare; 2021: MDPI.

22. Falade-Fatila O, Adebayo AM. Male partners' involvement in pregnancy-related care among married men in Ibadan, Nigeria. Reprod Health 2020;17:1–12.