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Access to and uptake of contraceptives among pregnant women with disabilities in the Central Ethiopia Regional State, Ethiopia: *community-based cross-sectional study*

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Abstract

Introduction Accessing quality and equitable contraceptive services is significant for reaching the recently announced Sustainable Development Goals. In Ethiopia, women with disabilities continue to confront several barriers to accessing adequate contraceptive services. Nevertheless, little is known about contraceptive uptake and associated factors among pregnant women with disabilities in Ethiopia. This study aimed to assess the contraceptive uptake and associated factors among pregnant women with disabilities in the Central Ethiopia Regional State, Ethiopia.

Methods A community-based cross-sectional study was conducted, with 562 study participants recruited using a multistage random sampling procedure. Data were collected through face-to-face interviews using the Kobo Toolbox. A bivariate and multivariable logistic regression model was used to identify variables associated with contraceptive uptake. At $p < 0.05$, the association of variables was found to be statistically significant.

Result In this study, only 38.1% (95% CI: 33.5, 42.3) of study participants used contraceptives. The significantly associated factors were: women's age (≥ 35 years, AOR = 0.17, 95% CI: 0.07, 0.46, $p < 0.0001$), marital status (AOR = 0.21, 95% CI: 0.12, 0.64, $p < 0.0001$), women education (tertiary and above, AOR = 8.44, 95% CI: 4.2, 13.2, $p < 0.0001$), number of pregnancies (AOR = 0.28, 95% CI: 0.17, 0.45, $p < 0.0001$), lack of contraceptives awareness (AOR = 0.12. 95% CI: 0.06, 0.24 $p < 0.0001$), contraceptive service accessibility (AOR = 6.02, 95% CI: 3.8, 9.54, $p < 0.0001$), and spousal support to use contraceptives (AOR = 4.52, 95% CI: 2.85, 7.2, $p < 0.0001$).

Conclusion This finding concludes that there is a significant unmet need for contraceptive services among pregnant women with disabilities in the Central Ethiopia Regional State, Ethiopia. To enhance contraceptive uptake, it is suggested to engage husbands in health promotion initiatives, implement community-based awareness campaigns, train healthcare providers on the unique needs of women with disabilities and design disability-friendly health facilities.

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Keywords Contraception, Family planning, Uptake, Pregnancy, Women with disability, Ethiopia

Introduction

Access to high-quality and equitable contraceptive services is a significant factor in women's sexual and reproductive health [1, 2] and meeting the recently announced Sustainable Development Goals (SDGs 2030) [3]. However, underdeveloped countries continue to face challenges in meeting women's contraception needs [4]. In Ethiopia, despite the implementation of different interventions like integrating family planning into primary health care, deploying health extension workers to rural areas, and collaborating with international organizations to improve contraceptive accessibility and availability in health facilities [5, 6], the unmet need for contraception among women of reproductive age remains high, at 22% [7].

Contraception refers to the prevention of conception through the use of various devices, chemicals, medications, surgical treatment, and sexual practices [8], which enables individuals to make informed decision about their sexual and reproductive health (SRH) services [9]. According to the International Conference on Population and Development (ICPD, 1994), every couple and individual has the fundamental right to freely and responsibly choose how many children to have and how far apart to raise them, as well as the right to access safe and effective methods and to have the information they need to ensure informed choices [10]. Ethiopia's legal framework promotes contraception and reproductive health rights of women. The Federal Demographic Republic of Ethiopia's Constitution, Article 35 [9], states that "to prevent harm arising from pregnancy and childbirth and to safeguard their health, women have the right to access family planning education, information, and capacity" [11, 12]. Even though every individual has the right to enjoy life equally, women with disabilities face unique challenges in receiving quality sexual and reproductive healthcare, including contraceptives [13].

Disability contributes to amplified vulnerability and marginalization in SRH services [14]. Women with disabilities need tailored sexual and reproductive health education to empower them to make informed decisions, just like women without disability [15]. All too often, people with disabilities were assumed to be asexual and did not require access to or knowledge of contraception [16]. Women with disabilities have been overlooked, lack social attention, and confront numerous challenges in accessing sexual and reproductive health services [14]. Furthermore, the burden of poor sexual and reproductive healthcare falls disproportionally on women with disabilities, which implies they have the least access to sexual and reproductive healthcare [17, 18].

Women with disabilities still encounter several challenges to accessing quality contraceptive services, such as inaccessible health facilities, a lack of ramps and disability-sensitive service rooms, inadequate information about contraceptive options, healthcare providers' limited awareness about contraceptive needs, societal misconceptions on contraceptive desire of WWD, and a shortage of resources to support inclusive contraceptive service [16, 18, 19]. Health facilities' infrastructure is designed with the assumption of a non-disabled person, leading to significant accessibility challenges for WWD, and long waiting times for service add another layer of difficulty [20, 21].

In sub-Saharan Africa, the pooled prevalence of contraceptive use among women with disabilities was 25.61% [22] and 29.6% in Ethiopia [23]. Other studies in Ethiopia found that contraceptive use among women with disabilities was relatively low, with 13.1% in Gondor [24], 24.5% in the north-shewa zone [25], 27.2% in Mekelle [26], 31.1% in Addis Ababa [27] and 33.7% in Arba Minch town [28]. The associated factors related to contraceptive use among WWD were age, religion, marital status, educational status, employment, freedom to visit health facilities independently, awareness and understanding of various contraceptive options, exposure to media, financial constraints, nearby health facilities, and customer trust in service confidentiality [24, 26–29].

Although a few studies have been conducted in Ethiopia on contraceptive use and related barriers among women with disabilities (WWD), there are notable differences in the findings. The existing studies have shown significant differences in the prevalence of contraceptive use across different places and types of disabilities, as well as variations in the associated factors. The study findings may help in addressing contraceptive needs, developing tailored interventions, and improving the accessibility of contraceptive services for women with disabilities.

Therefore, this study aimed to assess the prevalence of contraceptive uptake and identify associated factors among pregnant women with disabilities in the Central Ethiopia Regional State, Ethiopia.

Methods

Study design and period

A community-based cross-sectional study was employed from December 2023 to February 2024 in the Central Ethiopia Regional State, Ethiopia.

Study setting

The Central Ethiopia Regional State is a regional state in Ethiopia and was formed from previous Southern

Nations, Nationalities, and Peoples' Region on August 19, 2023. The region includes seven zones and three special districts. The region comprises Guragem Hadiya, Silt'e, Halaba, Kambata, and Yem zones, as well as Kebena, Mareko, and Tembaro special woredas'. The overall population is predicted to be 6,430,235 according to the National Statistical Agency population projection report (2023/24). Of them, 3,243,411 (50.44%) are female and 3,186,824 (49.56%) are male. Approximately 100,000 people are living with disabilities, of whom 50% are female [30].

Source and study population

The source population included all pregnant women with disabilities residing in the designated study area during the study period, while the study population consisted of the selected pregnant women with disabilities who were included in the study through the sampling procedure. The primary study project was explicitly designed to investigate pregnancy intendedness among women with disabilities. Consequently, only pregnant women were included in the study. However, this manuscript presents findings from one section that exclusively assesses the prior experience and barriers related to contraceptive use among pregnant women with disabilities in the study area.

Sample size determination

A single population proportion formula was applied to determine sample size, using a 65.6% estimated proportion of contraceptive use based on prior studies [31]. With a 95% confidence level (z = 1.96), a 5% margin of error, a 1.5 design effect, and accounting for a 10% nonresponse rate, the final sample size was calculated as 572 participants.

Sampling procedure

A multistage random sampling procedure was used to recruit study participants. Three zones were selected randomly from the Central Ethiopia Regional State. Subsequently, four districts were selected at random from each zone. Lastly, six kebeles were chosen at random from each district. In all, seventy-two kelebes were taken into account in this study. The kebele is the smallest administrative unit of the Ethiopian government, which represents the entire population. The sample size was proportionally allocated to each kebele. The registration book kept by health extension workers in each kebele contained the list of all pregnant women with disabilities in the selected kebele. Finally, study subjects were recruited using simple random sampling techniques.

Inclusion and exclusion criteria

Pregnant women with vision, hearing, speech, or physical impairment who were permanent residents (for more than six months) of the selected kebele at the time of data collection were included. However, the study excluded very ill women as well as those suffering from cognitive impairments. Women with cognitive impairment may have limited understanding of questions or difficulty remembering past events, leading to inaccurate responses.

Data collection

Face-to-face interviews were used to collect data using a pretested structured questionnaire. The questionnaire was developed in English and translated to the local language by experts. The questionnaire addressed demographics, variables related to reproductive health, and the use of contraceptives. The data collection tool was developed based on published literature and conceptual frameworks [32–36] and was piloted with 5% of the study sample at the Siliti zone to ensure question clarity and verify that the questionnaire effectively captured the research objective. The Kobo Toolbox application was used to collect and clean the data. Data collectors were given an orientation to the Kobo Collect app and how to deploy questionnaires to mobile devices, collect data, and send the collected data to the central Kobo Toolbox account, with or without mobile data.

Data analysis

The data were checked for completeness by the Kobo Toolbox application and exported to Statistical Package for the Social Sciences (SPSS) version 26 for further analysis. Descriptive statistics were used to calculate the frequencies and proportions in the tables and figures. A bivariate and multivariable logistic regression model was used to identify variables associated with contraceptive uptake. Multicollinearity is used to assess the correlation between predictor variables. The Hosmer-Lemeshow test was employed to determine model fitness. The multivariable logistic regression model incorporated all the significant factors from bivariate analysis ($p < 0.25$). The strength of the associated factors and outcome variable was quantified using an adjusted odds ratio (AOR) with a 95% confidence interval. At $p < 0.05$, the association of variables was found to be statistically significant.

Variables definitions

Outcome variable: Contraceptive use is defined as using at least one modern contraceptive method, such as barrier methods, oral hormonal pills, injectables, implants, or intrauterine devices (IUCDs).

The explanatory variables comprised demographic and reproductive characteristics, as well as factors related to service delivery and health facility attributes.

Availability and accessibility of service refer to the presence, readiness, and ease of utilizing contraceptive services that are tailored to the needs of women with disabilities.

Ethical approval and consent to participate

The study was ethically approved by Wachemo University Research and Ethics Committee and the Central University of Tamil Nadu's Research Advisory Committee, as referenced in WCU-IRB 0021/23. The study participants were informed regarding the study's purpose, potential risks and benefits. Each study participant provided informed consent, and the data was kept anonymous to protect confidentiality.

Table 1 The study participants sociodemographic characteristics in the Central Ethiopia Regional State, Ethiopia 2024 ($N = 562$)

Variable	Categories	Frequency	Percentage
Age	< = 24	61	10.9
	25–29	187	33.3
	30–34	194	34.5
	>= 35	120	21.4
Marital status	Married	450	80.1
	Single	63	11.2
	Others*	49	8.7
Women's education level	No formal education	283	50.4
	Primary and secondary	253	45.0
	Tertiary and above	26	4.6
Husband education level	No formal education	100	22.2
	Primary and secondary	307	68.2
	Tertiary and above	43	7.7
Religion	Protestant	374	66.5
	Orthodox	110	19.6
	Muslin	75	13.3
	Other**	3	0.5
Women employment	Employed	374	66.5
	Gov't employed	45	8.0
	Self-employed	143	25.4
Husband's employment	Employed	141	31.3
	Gov't employed	60	10.7
	Self-employed	249	44.3
Residence	Rural	459	81.7
	Urban	103	18.3
Impairment status	Hearing	57	10.1
	Vision	134	23.8
	Speech	19	3.4
	Extremities/physical	352	62.6

* Divorced, widowed, separated ** Catholic or apostolic

Results

Sociodemographic characteristics of study participants

A total of 562 participants responded to the questionnaire, resulting in a response rate of 98.2%. The mean age was 30 years (SD = 3.6). The majority were married (80.1%), and nearly half (50.4%) had no formal education, while 45% had primary or secondary education. Most participants (66.5%) were housewives, and 65.1% had four or more children (see Table 1 for detailed characteristics).

Contraceptive use and reproductive health characteristics

Most study participants (73.3%) have heard about contraceptives from different sources of information. Three hundred fifty-seven (63.5%) study participants responded that the contraceptive services were not accessible or available to pregnant women with disabilities. Nearly half (52.5%) of respondents reported that their husbands support them in using contraceptive methods. Regarding health facilities, four hundred two (71.5%) reported that negative care provider attitude and knowledge and three hundred ninety-one (69.6%) long waiting times for service were barriers to accessing contraceptive services, as presented in Table 2.

The magnitude of contraceptive use

This study revealed that only 38.1% of study participants reported using contraception (95% CI: 33.5, 42.3), indicating that contraception use was relatively low in the study population. In contrast, the majority, 61.9%, did not use any contraceptive methods (Fig. 1). The most popular contraceptive method was injectable, followed by hormonal pills (Fig. 2). The self-reported reasons for non-use of contraceptive methods among women were inaccessibility services (physical barriers to health facilities, lack of disability-sensitive transportation), disability-unfriendly health facility structure (lack of wheelchair ramps, elevators, accessible examination room), healthcare providers' attitude and knowledge, fear of side effects (previous negative experience and misconceptions about contraception), community negative attitude (cultural or social myths, stigma), and spousal pressure (limited women's autonomy, mutual decision-making, Fig. 3).

Factors associated with contraceptive use among women with disabilities

In this study, binary and multivariable logistic regression was used to identify the associated factors with contraceptive use among women with disabilities. All variables with a p-value less than 0.25 in the binary analysis were considered in the final model. After adjusting the potential confounders in the multivariable logistic regression, women's age (≥ 35 years, AOR = 0.17, 95% CI: 0.07, 0.46) $p < 0.0001$), marital status (AOR = 0.21, 95%

Table 2 Study participant's contraceptive use and reproductive health characteristics in the Central Ethiopia Regional State, Ethiopia ($N=562$)

Variables	Categories	Frequency	Percentage
Number of pregnancies	Prim gravida	230	40.9
	Multi gravida	332	59.1
Experience of unplanned pregnancy	Yes	148	44.7
	No	184	55.3
Ever heard about contraceptives	Yes	412	73.3
	No	150	26.7
Source of information	Radio/TV	25	6.07
	Newspaper/magazine	17	4.2
	Health professionals	281	68.7
	Neighbours/relatives	89	21.8
Contraceptive service accessible or available	Yes	205	36.5
	No	357	63.5
The contraceptive method used	Hormonal Pills	68	32.1
	Injectable	74	34.9
	Implants	64	30.2
	IUCD	6	1.9
	Barriers	2	0.9
With whom the decision was made	Me	99	46.5
	Jointly with husband	78	36.6
	With care providers	32	15.0
	With relatives	5	1.9
Partner support contraceptives use	Yes	295	52.5
	No	267	47.5
Plan to have more children	Yes	138	24.6
	No	424	75.4
Nearby health facilities are accessible	Yes	147	26.2
	No	415	73.8
Care providers' negative attitudes and knowledge	Yes	402	71.5
	No	160	28.5
Long waiting time for service (over 1–2 hrs)	Yes	391	69.6
	No	171	30.4

CI: 0.12, 0.64), women education (tertiary and above, AOR = 8.44, 95% CI: 4.2, 13.2 $p<0.0001$), number of pregnancy (AOR = 0.28, 95% CI: 0.17, 0.45 $p<0.0001$), lack of contraceptive awareness (AOR = 0.12. 95% CI: 0.06, 0.24 $p<0.0001$), contraceptive service accessibility (AOR = 6.02, 95% CI: 3.8, 9.54 $p<0.0001$), and spousal support to use contraceptive (AOR = 4.52, 95% CI: 2.85, 7.2 $p<0.0001$) were significantly associated with contraceptive use among women with disabilities as presented in Table 3.

Discussion

Assuring universal access to contraceptive services, information, and education for women is significant to achieving SDG 3.7's target. This study aimed to assess contraceptive use and associated factors in pregnant women with disabilities. In this study, only 38.1% (95% CI: 33.5, 42.3) of women with disabilities used contraceptive services in the Central Ethiopia Regional State, Ethiopia. When compared to previous studies, which found 29.6% in Ethiopia [23], 33.7% in Arba Minch [28], 27.3% in the Sidama National Regional State [37], 33.27% in the Gonder Zone [29], 26.1% in Uganda [38], and 25.61% throughout sub-Saharan Africa [22], this finding is relatively higher. However, this finding is lower than other study results: 44.4% in Ethiopia [39], 48% in the Netherlands [40], 73.0% in Rajasthan India [41], and 70.1%, 73% in the United States of America [42, 43] and 65% global contraceptive estimated prevalence [44]. This discrepancy may be attributed to variations in sociodemographic characteristics of study participants (education, economy, and residence), study methodologies, sample size, societal attitudes and cultural norms towards contraception, accessibility and availability of healthcare facilities, including the presence of disability-friendly service and transportation, variation in national health policies priorities and targeted interventions [16, 37, 45, 46].

The findings of this study revealed that the age of the respondents was significantly associated with contraceptive use, and as age increases, the chance of contraceptive uptake decreases. When compared to age groups less than or equal to 24 years, the odds of contraceptive use were 65% lower in age groups 30–34 and 85% lower in age groups more significant than 35 years. Another study in Bahir Dar City confirms these findings [47]. One possible explanation is that older women have a lower chance of getting contraceptive information due to age differences. Furthermore, societal conventions and perceptions indicate that older women are less likely to use contraceptives. This belief, together with community disapproval, has a significant influence on individuals' decisions about contraceptive use [48, 49]. Inversely, other studies revealed that the probability of contraceptive uptake increases as age increases [27]. The possible reason for conflicting findings is variations in the participant demographics and socioeconomic level, study time, sample size, and study area, contributing to the inconsistent results.

The study found that marital status was significantly associated with contraceptive use. When compared to married women, the odds of contraceptive use were lower among single women by 79% (AOR = 0.21, 95% CI: 0.12, 0.64, $p<0.0001$) and among divorced, separated, or widowed women by 57% (AOR = 0.43, 95%CI: 0.29, 0.95, $p=0.037$). The findings conclude that married women are

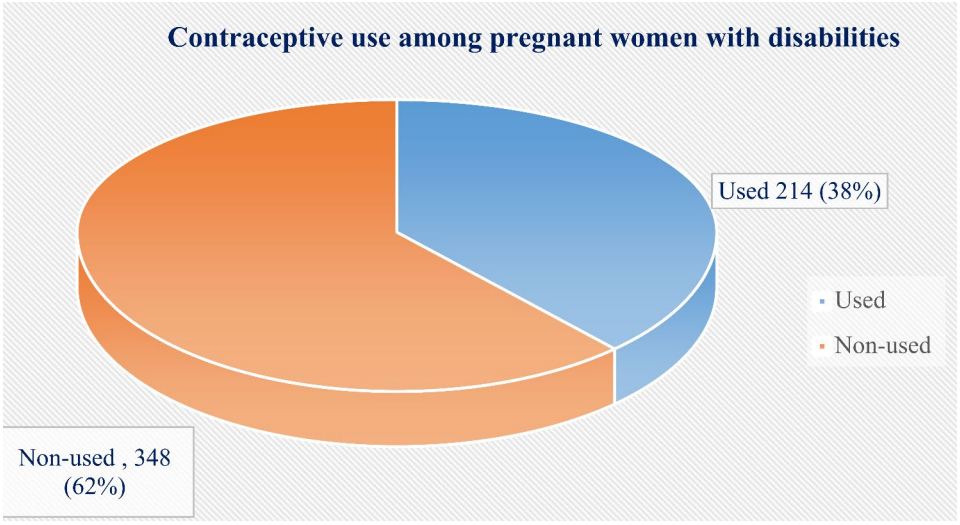

Fig. 1 The prevalence of contraceptive use among pregnant women with disabilities in the Central Ethiopia Regional State, Ethiopia. (*N* = 562)

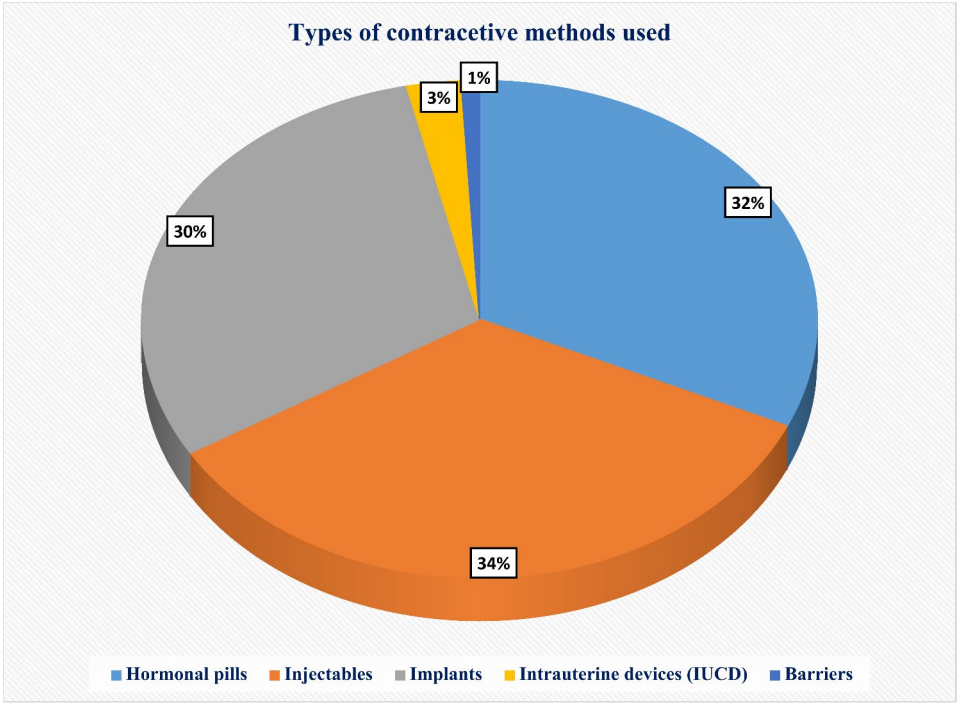

Fig. 2 Types of contraceptive methods used among pregnant women with disabilities in the Central Ethiopia Regional State, Ethiopia. (*n* = 214)

more likely than their counterparts to use contraception. This finding aligns with results from earlier studies conducted in Ethiopia [22, 23, 26, 28]. One possible explanation is that married women may have greater social support and acceptance, making it easier for them to access contraceptive services.

Women's education was found to be a significantly associated factor with contraceptive use among women with disabilities. Those who attended tertiary and above education levels were eight times more likely to use contraceptive services as compared to their counterparts (AOR = 8.44, 95% CI: 4.2, 13.2, $p < 0.0001$). This result is comparable to previous studies' findings, which similarly highlight the pivotal role of education in improving contraceptive use in Ethiopia [22, 24, 25] and Uganda [50]. One possible reason might be that women with higher educational levels may have good access to health information, awareness, and knowledge about SRH that helps them to make decisions timely and use contraceptive services.

The number of pregnancies was significantly associated with contraceptive uptake. When compared to

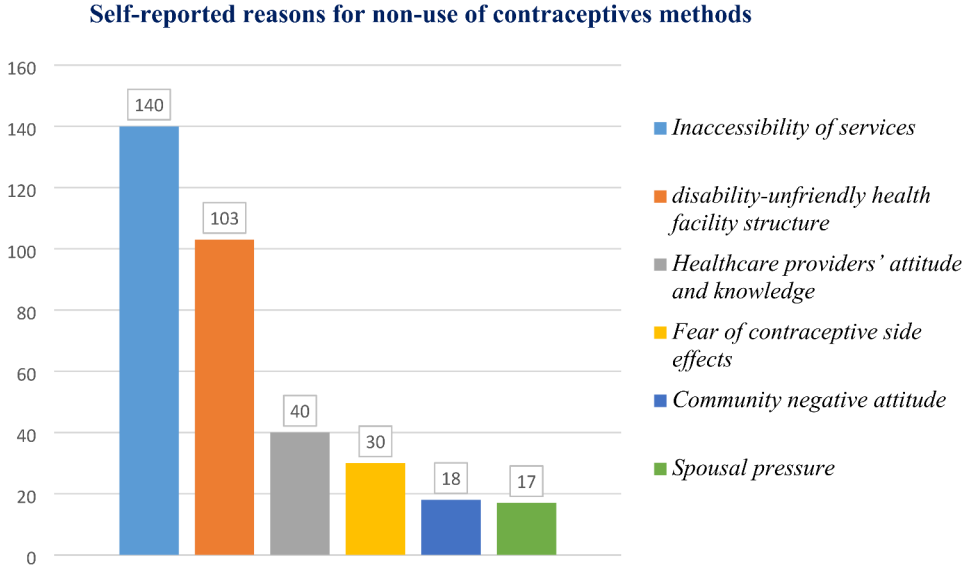

Fig. 3 Self-reported reasons for non-use of contraceptive methods among pregnant women with disabilities in the Central Ethiopia Regional State, Ethiopia ($n = 348$)

multigravida women, prime gravida women were 72% less likely to use contraceptives (AOR = 0.28, 95% CI: 0.17, 0.45, $p < 0.0001$). This finding is supported by a study conducted in Gondor, Ethiopia [29]. One probable explanation is that multigravida women might have more access to information on sexual and reproductive health issues, which raises awareness and knowledge of contraception services. Inversely, prim gravida women may have fewer opportunities to get preconception education and counselling, resulting in lower contraceptive use.

This study showed that respondents who did not have contraceptive awareness were 88 per cent less likely to use contraceptives than their counterparts (AOR = 0.12. 95% CI: 0.06, 0.24, $p < 0.0001$). This finding aligns with previous studies conducted in Ethiopia [25, 28, 29, 51]. The consistency of these findings emphasizes that contraceptive use is dependent on women's awareness and knowledge of these services. Thus, it is critical to use every resource available to increase women's knowledge and awareness of contraceptive methods.

In this study, participants who reported that contraceptive services were accessible were six times more likely to use contraceptives than their counterparts (AOR = 6.02, 95% CI: 3.8, 9.54, $p < 0.0001$). This finding is supported by previous studies in Mekelle and Sidama Region Ethiopia [26, 51, 52]. One possible reason is that if the service is accessible and available for women with disabilities, they may use it in the same way that non-disabled women do.

The current study reported that having discussions with spouses or families and getting support was found to be significantly associated with contraceptive uptake among women with disabilities. Respondents who received support from their families were four times more likely to use contraceptives as compared to their counterparts (AOR = 4.52, 95% CI: 2.85, 7.2, $p < 0.0001$). This finding aligns with studies conducted in Ethiopia [23, 29]. This finding highlights that spouse or family support plays a crucial role in facilitating access to sexual and reproductive healthcare services for women with disabilities [53]. A supportive family environment improves self-confidence, reduces disability-based discrimination and stigma, and addresses financial needs, thereby enhancing contraceptive uptake among women with disabilities [54].

Study strength and limitation

The study's findings provide scientific evidence about contraceptive use and associated factors, which could have significant implications for the accessibility and availability of contraceptive services. However, the study has certain drawbacks. Because of its cross-sectional nature, it is impossible to establish causation links between exposure and outcomes. Since data was collected from pregnant women about their past contraceptive use, there is a chance for recall bias. The enrolment of only pregnant women with disabilities limits the generalizability of the result. Furthermore, the exclusively quantitative nature of the study limits understanding of women's lived experiences and perceptions related to contraceptive use.

Implications and scope of future research

The study findings suggested that the contraceptive services, initiatives, and programmes must be reinforced and customized to address the special requirements of women with disabilities at the grassroots level, with

Table 3 Factors associated with contraceptive use among pregnant women with disabilities in the *Central Ethiopia Regional State, Ethiopia* (*N* = 562)

Variable	Contraceptive used		95% CI for Exp. (B)		*p*-value	
	No (*N*, %)	Yes (*N*, %)	COR	AOR		
Age						
< = 24	34 (6.0)	27 (4.8)	1.00	1.00		
25–29	133 (23.7)	54 (9.6)	0.51 (0.28, 0.92)*	0.18 (0.07, 0.45)**	0.000	
30–34	98 (17.4)	96 (17.1)	1.2 (0.69, 2.20)	0.35 (0.14, 0.86)**	0.022	
>= 35	83 (14.8)	37 (6.6)	0.56 (0.29, 1.06)	0.17 (0.07, 0.46)**	0.000	
Marital status						
Married	252 (44.8)	198 (35.2)	1.00	1.00		
Single	61 (10.9)	2 (0.4)	0.42 (0.01, 0.17)*	0.21 (0.12, 0.64)**		0.000
Others [&]	35 (6.2)	14 (2.5)	0.51 (0.27, 0.97)*	0.43 (0.29, 0.95)**		0.037
Women education level						
No formal education	200 (35.6)	83 (14.8)	1.00			
Primary and secondary	140 (24.9)	113 (20.1)	1.94 (1.36, 2.77)*	1.85 (1.3, 2.72)**	0.002	
Tertiary and above	8 (1.4)	18 (3.2%)	5.42 (2.27, 12.96)*	8.44 (4.2, 13.2)**	0.000	
Women employment						
Unemployed	244 (43.4)	130 (23.1)	1.00	1.00		
Gov't employed	20 (3.6)	25 (4.4)	2.35 (1.26, 4.38)*	1.5 (0.78, 2.97)	0.22	
Self-employed	84 (14.9)	59 (10.5)	1.32 (0.88, 1.96)	1.06 (0.69, 1.60)	0.79	
Number of pregnancy						
Prim gravida	177 (31.5)	53 (9.4)	0.32 (0.22, 0.46)*	0.28 (0.17, 0.45)**	0.000	
Multigravida	171 (30.4)	161 (28.6)	1.00	1.00		
Awareness of contraceptives						
Yes	208 (37.0)	204 (36.3)	1.00	1.00		
No	140 (24.9)	10 (1.8)	0.07 (0.04, 0.14)	0.12 (0.06, 0.24)**	0.000	
Contraceptive service accessible or available						
Yes	63 (11.2)	142 (25.3)	8.92 (6.02, 13.22)*	6.02 (3.8, 9.54)**	0.000	
No	285 (50.7)	72 (12.8)	1.00	1.00		
Spousal support contraceptive use						
Yes	146 (26.0)	149 (26.5)	3.2 (2.2, 4.5)*	4.52 (2.85, 7.2)**	0.000	
No	202 (35.9)	65 (11.6)	1.00	1.00		
Nearby health facilities						
Yes	66 (11.7)	81 (14.4)	2.6 (1.8, 3.8)*	2.4 (0.5, 3.9)	0.76	
No	282 (50.2)	133 (23.7)	1.00	1.00		
Long waiting time for service						
Yes	258 (45.9)	133 (23.7)	0.57 (0.39, 0.83)*	0.98 (0.62, 1.57)	0.95	
No	90 (16.0)	81 (14.4)	1.00	1.00		

[&]widowed, divorced * $P < 0.25$ ** $P < 0.05$ indicates significant statistically

particular emphasis on meeting the **SDG** 3.7 target by 2030. Additionally, qualitative studies or longitudinal researchers are advised to investigate individual experiences and contraceptive utilization among women with various disabilities.

Conclusion

Only 38.1% of pregnant women with disabilities used contraceptives. This finding concludes that there is a significant unmet need for skilled and sensitive contraceptive services among pregnant women with disabilities in the Central Ethiopia Regional State, Ethiopia. To enhance contraceptive uptake, it is suggested to engage husbands in health promotion initiatives, implement community-based awareness campaigns, train healthcare providers on the unique needs of women with disabilities and design disability-friendly health facilities.

Abbreviations

AOR	Adjusted Odds Ratio
COR	Crude Odds Ratio
ICF	International Classification of Functioning
IUCD	Intrauterine Devices
ICPD	International Conference on Population and Development
IRB	Institutional Review Board
SDGs	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
SRHR	Sexual and Reproductive Health and Rights
UHC	Universal Health Coverage
WCU	Wachemo University
WHO	World Health Organization

WWD Women with disabilities

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s40834-025-00340-z.

Supplementary Material 1

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Author contributions
AA: conceptualization, proposal writing, investigation, data curation and analysis, methodology, software, validation, writing the original draft, reviewing, and editing. YM: Investigation, data curation, methodology, software, validation, and visualization. SB: project administration, resources, software, validation, visualization, and supervision. NG: conceptualization, project administration, resources, software, validation, visualization, and supervision.

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Data availability
All data about this paper are included within the manuscript.

Declarations

Consent for publication
not applicable.

Competing interests
The authors declare no competing interests.

Ethical approval and consent to participate
The study was ethically approved by Wachemo University Research and Ethics Committee and the Central University of Tamil Nadu's Research Advisory Committee, as referenced in WCU-IRB 0021/23. The study participants were informed about the study's purpose as well as the potential risks and benefits. Informed consent was obtained from each study participant, and confidentiality was ensured by keeping the data anonymous.

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