Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Fear of childbirth and its associated factors among pregnant women attending antenatal care clinic in Debre Tabor Comprehensive Specialized Hospital Debretabor, Ethiopia 2024. Mixed- methods study

Engdaw Asmare

engda1984@gmail.com

hossana health science

Ayenew Tega

werabe university

Zemenu Addis

Debark University

Mulugeta Dile

Debre Tabor University

Adanech Getie

Debre Tabor University

Tadesse Getu

Debark University

Research Article

Keywords: Antenatal care, Ethiopia, Fear of childbirth, Oslo social support, third trimester

Posted Date: September 11th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-10650574/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Additional Declarations: No competing interests reported.

Abstract

Background

Feelings of uncertainty and concern before, during, or after labor and delivery are referred to as fears of childbirth. It has an impact on women and fetuses during the antenatal, labor, and postpartum periods by compromising their physical, mental and psychosocial well-being.

Objective

To assess the fear of childbirth and its associated factors among pregnant women who visit Debre Tabor Comprehensive and Specialized Hospital Debre Tabor, Ethiopia 2024.

Methods

mixed study was conducted at Debre Tabor Comprehensive and Specialized Hospital. Systematic random sampling was fitted to select 340 women for the quantitative part while purposive sampling was applied for qualitative part to select 9 third trimester pregnant women until saturated information was obtained. Bivariate and Multivariate logistic regressions was fitted to assess the association between dependent and independent variables. Results was described by using frequency, mean, and percentages. The overall fitness of the model was checked using Hosmer–Lemeshow goodness-of-fit test. After the interview was transcribed by investigator, thematic analysis and NVIVO 14 software was used to code the important variable for qualitative data.

Results

A total of 340 pregnant mothers in the third trimester participated in this study. Among the total participants, 25% of the CI 95% (20.5%--30%) feared childbirth. A previous history of pregnancy-related complications (AOR = 4.20), current pregnancy complications (AOR = 3.96), and poor social support (AOR = 3.05) were variables associated with fear of childbirth in the multivariate analysis.

Conclusion

A quarter of pregnant women had fear of childbirth. We recommend that health care institutions and the wider community should implement interventions that address these underlying factors.

Background

Fear of childbirth is described as feelings of uncertainty and anxiousness before, during, or after delivery by thinking about future labor and delivery or experiences of others' fearful responses to childbirth and labor pain (1, 2). Pregnancy produces many mental conflicts, permanently alters women's lives and adds new parental duties. For some women, these emotions are more severe, which makes them experience anxiety associated with pregnancy and labor (3, 4).

Preparations for labor, the newborn, and the next stage of life are made throughout the third trimester of pregnancy(4). Fear of childbirth offers a special chance for the emergence of anxiety and sadness, which are thought to be the most prevalent mental illnesses in pregnancy. Premature birth, low birth weight, fetal distress, and some newborn abnormalities, such as pyloric stenosis, can all result from fear of childbirth(5).

Many women experience fear of childbirth (FOC) during pregnancy, which is most likely caused by worries about the fetus's health, changes in marital relationships, and difficulties adjusting to the role of the mother. This anxiety during the third trimester is more focused on childbirth, which may be caused by the formation of physical changes related to pregnancy and childbirth that seem to be uncontrollable(6).

Fear of childbirth has been linked to many negative effects, including the avoidance of pregnancy, termination of pregnancy, prolonged labor, increased likelihood of emergency and elective Cesarean births, postpartum depression, posttraumatic stress disorder, increased parenting stress, prolonged gaps between pregnancies and childbirths, frequent use of analgesia, and poor maternal–infant bonding(7, 8).

Different interventions designed to reduce the fear of childbirth and anxiety associated with pregnancy include additional midwifery support to discuss the birth and continuity of care, the involvement of the obstetrician in decision making, education regarding mode of birth, the involvement of the birth partner, visits to the delivery suite, and the development of a supportive birth plan (9).

In Western countries, FOC is treatable, and at least two-thirds of fear-related requests for cesearian section can be withdrawn after proper treatment, including psychoeducation, psychotherapy or special counseling (7, 10, 11).

In Africa, research conducted in Kenya revealed that the prevalence of FOC among pregnant women was 58.6%, and the prevalence of FOC was greater among primipara women than among multipara women(12). A study conducted among 152 pregnant women in Malawi reported that 39% reported feeling very little dread, 41% felt a little nervousness, and 20% felt an excessive amount of FOC (13).

In Ethiopia, a facility-based cross-sectional study performed in the West Wollega Zone revealed that the prevalence of FOC was 28.9%(14). Similarly, in research conducted in Jinka and Arbaminch town in the south nations and nationality of Ethiopia, the prevalence of FOC was 24.2% (15)and 24.5%, respectively(16).

To reach sustainable development goals, Ethiopia is doing much to reduce maternal and neonatal morbidity and mortality(17). However, little concern is given to the psychological aspects of pregnancy and childbirth. Therefore, the identification of women at risk of FOC is essential for treatment planning and women's emotional well-being before and after birth. This study assessed the prevalence of fear of childbirth and associated factors at Debre Tabor Comprehensive Specialized Hospital, South Gonder, Ethiopia.

Methods and Materials

Study area

The study was conducted at Debre Tabor Comprehensive Specialized Hospital located in Debre Tabor town. According to the data obtained from the Debre Tabor metropolitan cities plan team report, the town currently has a total population of 123706. Among those, 64474 (52.1%) are females, and 59233 (47.8%) are males.

According to Debre Tabor comprehensive specialized hospital data, it has different departments and serves an estimated 3000,000 people residing in urban and rural parts of northwestern Ethiopia per year. This hospital began delivering services to people in 1923E.C. It provides almost all the services of outpatient department and inpatient department, including mothers and child health, which provides family planning, expanded program of immunization, labor and delivery, as well as the neonatal intensive care unit (NICU). This hospital provides services for approximately 821 patients and 14 to 19 deliveries per day. There are 39 midwives, 170 nurses, and 03 obstetricians. The obstetric ward gives an average of 6480 deliveries per year. There are a total of 50 beds in the obstetric ward.

Study Design and Period

An institutional mixed study was conducted. The study was conducted from March 19–April 19, 2024.

Population

Source population

The source populations were all pregnant women visiting ANC clinics for antenatal care services at Debre Tabor Comprehensive Specialized Hospital.

Study population

All third-trimester pregnant women receiving antenatal care at the DCSH during the data collection period were included in the study population.

Inclusion criteria

All third trimester pregnant women attended ANC follow-up visits during the data collection period.

Exclusion criteria

Pregnant women having more than 1 previous cesarean delivery

Sample size determination

The sample size was calculated via a formula for a single population proportion by considering the following assumption with the assumptions: confidence interval = 95%, critical value Zα/2 = 1.96, degree of precision d = 0.05 and a 10% possible nonresponse rate. The proportion (p) = 28.9% was taken from a previous study conducted in Welega, Ethiopia (14).

$$n = \frac{\left(Z_{\frac{\alpha}{2}}\right)^2 p(1-p)}{d^2}$$ = (1.96)2(0.289(1 − 0.711))/ (0.05) (0.05) = 316

The 10% nonresponse rate is 31.6, and n = 316 + 31.6 = 348.

As the calculated sample size for the second objective (associated factors) was less than that computed for the first objective, we used the sample size calculated for the first objective. The formula for a single population proportion was as follows: the calculated sample size was 316; by adding 10% for a possible nonresponse rate, the final sample size was 348.

In addition, for the qualitative part, a total of 9 participants were interviewed, and the sample size was determined on the basis of saturation of the information.

Sampling methods and procedures:

For quantitative

A systematic random sampling technique was used. First, we found the total number of third-trimester pregnant women from the ANC registration book at DCSH in 2016 E.C. over three months, which was 4050. Therefore, the total number of third-trimester pregnant women within 1 month was 1350, and the sample size was 348 = 4. The first pregnant woman was subsequently selected via the lottery method, and data were collected via systematic random sampling methods every 4 women. The data were collected from third trimester pregnant women who underwent ANC follow-up until the required sample size was obtained.

Sampling technique for the qualitative part

The purposive sampling method was used to select women who met the inclusion criteria and who could provide detailed information. A total of 9 informants were recruited.

Variables

Dependent variables

Fear of childbirth

Independent variable

Sociodemographic **status of pregnant women**: Age, residency status, marital status, occupational status, educational status, religion, ethnicity,

Obstetric/gynecologic factors included gravidity, parity, mode of delivery, planned current pregnancy, wanted current pregnancy, problems during the current pregnancy, history of abortion, obstetrical/medical problems during the previous pregnancy, history of stillbirth, fear of medical intervention, husband support present, prolonged labor, labor pains, vaginal bleeding during childbirth, previous perianal tear, previous caesarian section, and episiotomy pain.

Social support

husband support and social support

Operational Definitions

Fear of childbirth: FOC is described as feelings of uncertainty and anxiousness before, during, or after delivery by thinking about the labor and delivery process, and WDEQ-A scores greater than 85 indicate that a woman has FOC (18, 19).

The level of FOC degree is explained by a W-DEQ sum score < 38 = Low degree of fear, W-DEQ of 38–65.9 = Moderate degree of fear; W-DEQ of 66–84.9 = High degree of fear; W-DEQ ≥ 85 = Severe degree of fear of childbirth (20).

The OSLO social support scale is a three-item scale used to assess psychosocial distress. The first item is scored out of four, and the second and third items are scored out of five.

The total sum ranges from 3–14 and is interpreted as a score of 3–8 (poor), 9–11 (moderate), or 12–14 (strong) (16, 21).

Adverse birth outcome: In this study, the presence of at least one or more of the following conditions in past pregnancies was implied. These include congenital anomalies, low birth weight, intrauterine fetal death, stillbirth, perinatal death and macrosomic (22).

Data collection tools and procedure

For the quantitative part, a data collection tool for the quantitative data was adopted after different related articles were reviewed (23–25). Mothers' Sociodemographic data, obstetric data and fear of childbirth data were included in the tool. Fear of childbirth was evaluated via the Wijma Delivery Expectancy/Experience Questionnaire (WDEQ-A) measurement tool. First, the tool was prepared in

English and translated into Amharic. The answers to each question are given on a scale from 0 to 5. The outermost answers (0 and 5, respectively) correspond to the opposite extremes of a certain feeling or thought. Finally, the questionnaire was translated back to English to check its consistency. Fear of childbirth, which was scored out of 165, was dichotomized and coded as yes if it scored ≥ 85 on the WDEQ or no if it was < 85. Items 2, 3, 6, 7, 8, 11, 12, 15, 19, 20, 24, 25 27, 31) have to be reversed to calculate the woman's FOC sum score

Two BSC midwives and two master's science with similar work experience participated as data collectors and supervisors. One day of training was given for data collectors and supervisors before data collection on the study's objective, data collection tool, procedure and how to fill out the questionnaires. The duration of the data collection was from March to April 2024.

For the qualitative part, to explore feelings of fear of childbirth, an IDI was conducted via a semi structured (open-ended) questionnaire, audio recording and note taking. The interview guideline adapted from previous literature (26, 27) was constructed by the principal investigator by using how and the overall expectations of the upcoming childbirth. This interview guide questionnaire for IDI was developed by considering the clinical relevance and image of childbirth and obtaining detailed information about their FOC. An in-depth interview was used to allow mothers to describe their labor process, which was supplemented by simultaneous note-taking. During the interviews, the mothers were asked to describe their overall expectations of the upcoming childbirth. The in-depth individual interviews were audio-recorded in a quiet room suitable for mothers. Each in-depth interview took around 30 minutes. Data collection and probing of ideas were continued to the point of saturation. Overall supervision was provided by the principal investigators.

Data Processing and Analysis

For the quantitative part,

Before data entry, the questionnaire was checked for completeness, consistency and clarity.

The data were entered into Epi Data 4.6 and exported to SPSS-26 for data analysis. At the beginning of the analysis, scores for FOC and each subscale of FOC and the associated factor were created by summing the score statements included within each subscale. The variables were then recoded and dichotomized.

The findings of the study are presented in tables and graphs. Bivariate analysis was used primarily to identify a candidate variable for further analysis at $p \leq 0.25$. The goodness of fit was checked by the Hosmer–Lemeshow statistic (0.55), and Multicollinearity was carried out to determine the correlation between independent variables by using standard error and a collinearity test with variance inflation factors (VIF = 4) < 10. The degree of association between the independent and dependent variables was assessed by using an adjusted odds ratio with a 95% confidence interval. A P value less than or equal to 0.05 was considered statistically significant.

For the qualitative part,

Data analysis was performed concurrently with data collection. The analysis begins once the first interview is conducted, and ideas and new questions are added to the subsequent interviews throughout the data collection process. The audio recordings were transcribed verbatim in the Amharic language. The transcripts were translated verbatim into English, and the translated data were coded via NVIVO 14 qualitative analysis software. Then, 19 codes with similar meanings were arranged into 6 categories for searching for themes, and thematic analysis was performed.

The coding framework was updated continuously by developing a code book to ensure that coding consistency was carried out primarily by the investigator. The investigator revised and discussed the research findings. The identified codes, according to their similarities and differences, were allocated into subthemes. Similar subthemes were grouped into themes.

Finally, the themes and codes were determined as expressions of the latent meaning of the text. During the presentation of the study findings, quotations of the participants' expressions were used.

Results

Sociodemographic characteristics

A total of 340 pregnant mothers in the third trimester participated in this study, yielding a response rate of 97.7%. The mean (± SD) age of the respondents was 28.51 (± 5.027) years, ranging from 18–44 years. The majority of the respondents309 (90.9%) reside in urban areas. With respect to the educational status of the participants, 35 (10.3%) were not formally educated, 44 (12.9%) had a primary education, 101 (29.7%) had a secondary education, and 160 (47.1%) had a college or university education. Among the participants, 161 (47.4%) were housewives, 57 (16.8%) were governmental employees, 50 (14.7%) were merchants, and 11 (3.2%) were daily laborers (Table 1). A total of 9 third trimester pregnant mothers participated in this study, and the mean (± SD) age of the respondents was 28.1 (± 3.153) years, ranging from 24–33 years. All participants resided in urban areas. More than half of the participants (55.6%) had secondary education (Table 2)

Table 1
Sociodemographic characteristics of third-trimistor pregnant women attending ANC at Debre Tabor Comprehensive Specialized Hospital, Ethiopia, 2024 (n = 340)

Variable	Frequency	Percent (%)
Age		
15–19	12	3.5
20–24	61	17.9
25–29	122	35.9
30–34	103	30.3
> 35	42	12.4
Residence		
Urban	309	90.9
Rural	31	9.1
Marital status		
Single	29	8.5
Married	284	83.5
Separated	16	4.7
Widowed	11	3.2
Maternal education		
Had no formal education	35	10.3
Primary education	44	12.9
Secondary	101	29.7
College/university	160	47.1
Religion		
Orthodox	317	93.2
Muslim	15	4.4
Protestant	8	2.4
Maternal occupation		
House wife	161	47.4

Variable	Frequency	Percent (%)
Government employ	57	16.8
Merchant	50	14.7
Ngo/private employ	41	12.1
Daily laborer	11	3.2
Student	20	5.9
Monthly income		
< 1650	14	4.1
1651–5250	109	32.1
5251–10900	129	37.9
> 10901	88	25.9

Table 2
Sociodemographic characteristics in the qualitative study of third-trimistor pregnant women visiting ANC clinics at DCSH Debre Tabor, Ethiopia 2024

S.no	Code	Age	Residence	Marital status	Educational status	Occupational status	Religion
1	P01	29	Urban	Married	College/university	Merchant	Orthodox
2	P02	32	Urban	Married	Secondary educated	House wife	Orthodox
3	P03	24	Urban	Married	College/university	Government employee	Muslim
4	P04	28	Urban	Married	College/university	House wife	Orthodox
5	P05	25	Urban	Married	Secondary educated	House wife	Orthodox
6	P06	29	Urban	Married	Secondary educated	House wife	Orthodox
7	P07	32	Urban	Married	College/university	Government employee	Orthodox
8	P08	27	Urban	Married	Primary educated	Merchant	Orthodox
9	P09	33	Urban	Married	secondary educated	House wife	Orthodox

Among the total number of participants (n = 340), 227 (66.8%) were Multigravida, and 113 (33.2%) were Primigravida. Among multigravida women, 33 (9.7%) had a previous history of abortion, 94 (27.6) delivered by spontaneous vaginal delivery, 18 (5.3) underwent operative vaginal delivery, 18 (5.3) by c/s,

28 (8.2) had previous pregnancy complications, and 22 (6.5) had a previous history of adverse birth outcomes. Among the 340 participants, 320 (94.1%) had pregnancies planned for pregnancy, 23 (6.8%) had current pregnancy complications, 13 (3.8) had a history of perineal tear, and 311 (91.5%) were pregnant with husband support (Table 3).

Table 3
Obstetric characteristics and husband support of third-trimistor pregnant women attending ANC at Debre Tabor Comprehensive Specialized Hospital, Ethiopia, 2024 (n = 340)

Variable	Frequency	Percent
Gravidity		
Primigravida	113	33.2
Multigravida	227	66.8
History of abortion		
Yes	33	9.7
No	194	57.1
Parity of the mother		
Nully para	118	34.7
Primipara	127	37.4
Multipara	95	27.9
Prior mode of delivery for parous women		
SVD	94	27.6
Vaginalis by episiotomy	97	28.5
OVD	18	5.3
C/S	18	5.3
Previous pregnancy-related complication parous women		
Yes	28	8.2
No	199	58.5
previous History of adverse birth outcome(parous women)		
Yes	22	6.5
No	205	60.3
Previous history of labor and delivery complication		
Yes	26	7.6
No	201	59.1
Is current pregnancy wanted?		
Yes	319	93.8

Variable	Frequency	Percent
No	21	6.2
Is the current pregnancy planned?		
Yes	320	94.1
No	20	5.9
Complication during the current pregnancy		
Yes	23	6.8
No	317	93.2
history of perineal tear for parous		
Yes	13	3.8
No	327	96.2
No of ANC visit for this pregnancy		
< 4	266	78.2
> 4	74	21.8
partner/husband support of pregnancy		
Yes	311	91.5
No	29	8.5

Social support of the respondents

Among the participants, 91.5% had partner/husband support (Table 4), and among the participants, 56.76% had strong social support from mothers 29.41 have moderate social support and 13.82 have poor social support.

Table 4
Multivariable logistic analyses for fear of childbirth and associated factors among third-trimistor pregnant women in DCSH, Debre Tabor Ethiopia 2024.

Variable	FOC		COR,95 CI	AOR ,95 CI	P value
	Yes	No			
Educational status of the mother					
No formal education	15	20	2.77(1.288,5.99)	2.498(0.805, 7.750)	0.113
Primary education	16	28	2.11(1.03,4.36)	1.395(0.500, 3.894)	0.525
Secondary education	20	81	0.915(0.493,1.69)	0.925(0.369,2.319)	0.86
Above secondary	34	126	1		
Prior birth experience for parous women					
Cesarean delivery	7	11	2.08(0.721,6.018)	2.532(0.58, 11.056)	0.217
Operative vaginal delivery	8	10	2.62(0.921,7.445)	2.157(0.537, 8.656)	.278
Delivery by episiotomy	21	76	0.904(0.458,1.784)	1.537(.683, 3.459)	0.299
S.vaginal. delivery	22	72	1		
Previous History of adverse birth outcome parous women					
Yes	12	10	4.14(1.68,10.213)	1.830(.546, 6.134)	.327
No	46	159	1		
Previous history of labor and delivery complication for parous women					
Yes	16	10	6.057(2.56,14.32)	1.281(0.355, 4.629)	.705
No	42	159	1		
Is current pregnancy planned					
No	13	7	6.39(2.46,16.63)	5.171(0.260,10.938)	.282
Yes	72	248	1		
Current pregnancy Complication					
Yes	14	9	5.39(2.24,12.97)	3.966(1.099,14.321)	0.035*
No	71	246	1		
History of perineal tear					
Yes	8	6	4.347(1.44,13.12)	1.371(.336, 5.591)	0.660
No	50	163	1		

Variable	FOC		COR,95 CI	AOR ,95 CI	P value
	Yes	No			
Partner/husband support or feeling of pregnancy					
No	16	13	4.317(1.98,9.409)	3.149(.907, 10.931)	.071
Yes	69	242	1		
Social support					
Poor	23	24	5.008(2.514,9.975)	3.051(1.011,9.207)	.048*
Moderate	31	69	2.35(1.32,4.16)	0.990(0.418, 2.344)	.982
Strong	31	162	1		
History of abortion					
Yes	15	18	2.93(1.36,6.29)	1.152(0.404,3.285)	.791
No	43	151	1		
Current pregnancy wanted					
No	13	8	5.58(2.22,13.98)	1.117(0.056,22.445)	.942
Yes	72	247	1		
Previous pregnancy related complication					
Yes	18	10	7.15(3.067,16.6)	4.207(1.370,12.921)	.012*
No	40	159	1		
* Indicates the presence of association (p < 0.05) in multivariable logistic regression 1 = indicates reference group					

Prevalence of fear of childbirth

Among the total participants (n = 340), the prevalence of fear of childbirth was 25%. Education of the mother, prior birth experience (mode of delivery), adverse birth outcomes, previous history of labor and delivery complications, unwanted pregnancy, unplanned pregnancy, perineal tear, no husband support, poor social support, history of abortion, and current pregnancy complications were entered into SPSS version 25 via the ENTER method. A previous history of pregnancy related complications, current pregnancy complications, and poor social support were variables associated with fear of childbirth according to the multivariate analysis (p < 0.05).

In the qualitative part of this study, fear of pain, fear of child risk, fear of maternal risk, uncertainty, fear of physical examination, poor social support and lack of transportation were significant factors associated

with fear of childbirth.

Women who had a previous history of pregnancy-related complications were four times more likely to fear childbirth than women who had no previous pregnancy related complications (AOR = 4.207, CI 95%= (1.370, 12.921)). This result is also supported by the qualitative part of the study: women who have a previous history of vaginal bleeding, prolonged labor, labor pain and gestational hypertension are more likely to be afraid of childbirth. *A 24-year-old participant (p3) stated that …… when I gave birth to my first child, I had high blood pressure and had to take an injection. I am still scared because of the high blood pressure. I check my blood pressure often, and thus far, it is fine, but I'm afraid it could happen.*

Women who experienced current pregnancy complications were four times more likely to develop fear of childbirth than were those who did not experience current pregnancy complications (AOR = 3.966, CI of 95=(1.099, 14.321), P = 0.035).

Moreover, women with poor social support were three times more likely to experience fear of childbirth than those with strong social support (AOR = 3.051, CI 95= (1.011, 9.207)) (Table 4). This result is in line with the qualitative results of this study, which revealed that women who have poor family and husband support are afraid of childbirth. *Among participants, a 24-year-old woman said that ……. Now it is my second pregnancy and my husband lives somewhere else. I live alone in a rented house; there is no one near me. Being alone makes me very sad because I do not know what will happen when labor starts.*

Similarly, in the qualitative part of this study, six categorized factors of fear of childbirth were extracted from the transcripts. Those are fear of pain, fear of child risk, fear of maternal risk, uncertainty, fear of physical examination, poor social support and lack of transportation.

Fear of pain

Fear of pain was categorized into fear of labor pain and fear of episiotomy pain. Eight women stated that fear of labor pain and episiotomy pain were factors of their fears.

… At first, I was not a feared childbirth at all, but now I'm truly afraid of childbirth because I heard many people talking about the labor pain and prolonged labor. (p1, 29 years old)

…having an episiotomy, which is very painful. I spent many days in pain because of episiotomy. (p2: a 32-year-old multiple gravid woman)

Fear of child risk

Five participants mentioned their concerns about the possible risk of fetal distress, fear of fetal death, and fetal injures.

*……. If there is malpresentation of the fetus, if I have vagenal bleeding: tearing of the uterus, injury of the baby, I fear thinking about these things (*p4, a 28-year-old child).

Fear of maternal risk

Eight participants mentioned their concerns about the possible risk of giving birth. Emergency CS, vaginal bleeding, fear of complication recurrence, and perineal injury are factors that cause childbirth fear.

*……. If there is malpresentation of the fetus, if I have vaginal bleeding, tearing of the uterus, or injury to the baby, I fear thinking about these things (*28-year-old married women).

A 25-year-old housewife pregnant mother (p5) said that…… A lot of things I hear about laboring situations that make my fear worse scare me. I have heard that many people have undergone caesarian section, and I am afraid that this will happen to me tomorrow.

Participants who had a past history of adverse birth outcomes and fear of recurrence were more likely to develop FOC

A 32-year-old mother expresses her fear as (p2) …… Things that happen in the previous pregnancy is bad I was feared because of this. I often get delirium when I is sleeping. Owing to my stress, my blood pressure increases once and then decreases. I truly long for the child. I do not want to lose my child again.

……. When I gave birth to my first child, I had high blood pressure and had to take an injection. I am still scared because of the high blood pressure. I check my blood pressure often, and thus far, it is fine, but I'm afraid it could happen. (A 23-year-old woman gravidas two)

Uncertainty

Fear of uncertainty refers to women's concerns about unpredictable phenomena, such as the timing of the onset of labor, duration of labor and delivery process.

… I am very scared when I think about giving birth. The reason is that I do not know how to give birth before. Pregnancy is difficult; I worry what will happen to me when I give birth. (A 29-year-old merchant woman)

Fear of physical examination

Three participants were afraid of physical examination, which was performed during the process of delivery by health professionals.

……The other reason that makes me fearful is that physical examination performed by health professionals, such as repeatedly putting their hands in the pelvis, is common (a 32-year-old mother expresses her fear

as).

Poor family support and lack of transportation

One participant also mentioned that poor family support was the cause of fear.

A 24-year-old G-2 woman expresses her feelings as ……. Now it is my second pregnancy and my husband lives somewhere else. I live alone in a rented house; there is no one near me. Being alone makes me very sad because I do not know what will happen when labor starts. ….Maybe because there is no one near me, I am afraid when labor started while I was at home.

Two of the participants feared childbirth due to a lack of transportation because of political instability when labor starts at night. *Other things that dread me are that because of current political instability transportation is not allowed at night, and it is very difficult if labor starts at home. (p3, a 24-year-old married woman)*

Discussion

The total prevalence of fear of childbirth among the study participants was 25%, CI 95% (20.5, 30). This finding is in line with the findings of studies conducted in southern Ethiopia, Jinka town and West Wollega, where the prevalence rates of childbirth fear were 24.5%, 24.2%, and 28.9%, respectively (14–16).

However, these results are less than those of Irish studies (28), Kenya, Karnataka (29, 30) and Turkey (31), where the prevalence of fear of childbirth was 36.7%, 58.6%, 45.4%, and 42.4%, respectively. This difference may be due to differences in cultural beliefs and attitudes, differences in the quality of the health care system, socioeconomic factors and a lack of information or misconceptions about childbirth.

On the other hand, the results of this study are high compared with those of studies conducted in different countries, such as Europeans (32), the United States (33), and the worldwide prevalence rates (4) were 11.5%, 7.7% and 14%, respectively. Disparities in the quality of prenatal and delivery care, culture and attitudes toward childbirth, differences in health institutional structure, differences in the fear of child birth tools and cutoff points used to measure the degree of fear may be causes. There are other data collection tools that have been developed and used in similar studies; therefore, comparisons between studies that use different tools should be made with caution, as various tools have different interpretations. Another reason for the difference in the results of different studies on fear of childbirth is the different sample sizes and study participants. In most studies, the study participants were pregnant women. However, in this study, the participants were all third-trimester pregnant women visiting ANC clinics.

Women who experienced current pregnancy complications were four times more likely to develop fear of childbirth than were those who did not experience current pregnancy complications (AOR = 3.966, 95% CI: 1.099, 14.321). This finding is in line with studies conducted in Turkey (34) and arbaminch (16). The possible reason may be that pregnancy complications, increased interventions during birth, cesarean delivery, depression, posttraumatic stress and disruption in mothers-infant interaction syndrome may increase their fear. Problems throughout pregnancy can have a large effect on a woman's anxiety about giving birth. All difficulties during pregnancy may give rise to worries about the health and safety of the mother and the unborn child. This may increase feelings of fear for the baby's general health as well as possible difficulties during labor and delivery.

Women who had a previous history of pregnancy-related complications were four times more likely to fear childbirth than women who had no previous pregnancy related complications (AOD = 4.207, 95% CI: 1.370, 12.921). This study is supported by studies performed in Jinka town (15), Welega (14) and eastern Ethiopia (35). The reasons could include inadequate understanding of the cause of pregnancy complications, fear of the recurrence of complications, posttraumatic stress from previous complications, and poor reproductive health services. On the other hand, previous pregnancy complications can affect a woman's trust in healthcare providers and the medical system. Women may feel less confident in the ability of healthcare professionals to manage potential complications, leading to increased fear of childbirth. The qualitative results of this study also support that women who have previous pregnancy complications fear the recurrence of complications, which is the major cause of their fears of childbirth.

The qualitative findings of this study show that women who fear labor and episiotomy pain, fear maternal risk, and fear fetal risk are more likely to develop FOC. This finding is in line with studies performed in India (26) and the western part of Sweden (36). The possible reason is that even if childbirth is a natural process, the unpredictability and uncertainty of the labor and delivery process and risks make women anxious. In addition to this lack of adequate analgesia, poor psychological support and the information they gather about the consequences of complications from their previous experiences or other women or media may increase the level of fear of childbirth.

Moreover, women with poor social support were three times more likely to experience fear of child birth than those with strong social support (AOR = 3.051, CI 95= (1.011, 9.207)). This variable is also associated with and supported by research conducted at arbaminch, West Wollega (14, 16). One possible explanation could be that when pregnant women have no great support from their family, neighbors, or healthcare professionals, their primary concern may be thinking about stressful events during the labor process. However, if they discuss ideas with family, neighbors, and medical professionals, they can believe that giving birth is an event that they can control.

Another justification is that women who have poor social support are not prepared to face childbirth and feel accompanied. It was also difficult to manage their anxiety around the delivery procedure, thereby reducing their fear of childbirth. Those women who have no strong social support experience emotional

and mental distress and develop anxiety and fear while giving birth. Similarly, the qualitative part of this study revealed that pregnant women who had poor social support from their husbands, family, and neighbors feared childbirth. This finding is in line with findings from Sweden and Iran (37, 38). The possible justification is that having a poor support system from partners, family members, friends, and healthcare providers increases fear and anxiety. Feeling supported and understood can help alleviate anxiety and fear related to childbirth.

Limitations of the study

Since fear of childbirth is a psychological event that is affected by different factors, women's psychiatric conditions were not assessed.

Conclusion

The prevalence of fear of childbirth in the study area is high. This finding indicates that health care institutions and the body of concern should emphasize decreasing and addressing the underlying causes. A previous history of pregnancy-related complications, current pregnancy complications, and poor social support are variables associated with fear of childbirth. Fear of pain, fear of child risk, fear of maternal risk, uncertainty, fear of physical examination, poor social support and lack of transportation are identified factors associated with FOC from the qualitative findings.

Special attention and counseling should be given to pregnant women who have current pregnancy complications, previous pregnancy complications, fear of pain, fear of child risk, fear of maternal risk, uncertainty, fear of physical examination and poor social support.

Abbreviations

ANC _ Antenatal Care Clinic, AOR-- Adjusted odd ratio, COR--Crude odd ratio, DCSH--Debretabor Comprehensive Specialized Hospital, FOC--Fear of Child Birth, IDI--In-depth interview, W-DEQ-- Wijma Delivery Expectation/Experience Questionnaire

Declarations

Ethics approval and consent to participate:

Ethical clearance was obtained from the Institutional IRERC of the Debre Tabor University College of Health Sciences before the commencement of the study with Ref No: DTU/R/305/2016 E.C. Responsible officials and managers at hospitals were communicated and permission letters were obtained. Before data collection, written informed consent was obtained from each study participant. Participation in the study was voluntary and the participants had the right to withdraw at any time. The researcher ensured that participant's responses were not linked to them personally.

Consent for publication:

Not applicable.

Competing interest:

No competing interest.

Funding:

No external organizations funded in this research.

Author Contribution

EA developed the project. MD, AG, AT, ZA and TG participated in the methodology and data analysis; developed the initial drafts of the manuscript; and revised the subsequent drafts. EA, MD, AT and AT prepared the final draft of the manuscript. All the authors read and approved the final manuscript.

Acknowledgment

First of all, we would like to express our sincere gratitude to Debre Tabor University, College of Health Sciences, Department of Midwifery, for giving us the opportunity to conduct and approve our research. We would also like to extend our heartfelt thanks to the administrative staff of Debre Tabor Comprehensive Specialized Hospital for their kind cooperation and support in providing the necessary information.

Availability of data and materials:

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

References

1. Nilsson C, Hessman E, Sjöblom H, Dencker A, Jangsten E, Mollberg M, et al. Definitions, measurements and prevalence of fear of childbirth: a systematic review. BMC Pregnancy Childbirth. 2018;18:1–15.
2. Wijma K, Wijma B, Zar M. Psychometric aspects of the W-DEQ; a new questionnaire for the measurement of fear of childbirth. J Psychosom Obstet Gynecol. 1998;19(2):84–97.

3. Onchonga D. Prenatal fear of childbirth among pregnant women and their spouses in Kenya. Sex Reproductive Healthc. 2021;27:100593.
4. O'Connell MA, Leahy-Warren P, Khashan AS, Kenny LC, O'Neill SM. Worldwide prevalence of tocophobia in pregnant women: systematic review and meta-analysis. Acta Obstet Gynecol Scand. 2017;96(8):907–20.
5. Hernández-Martínez C, Arija V, Balaguer A, Cavallé P, Canals J. Do the emotional states of pregnant women affect neonatal behaviour? Early Hum Dev. 2008;84(11):745–50.
6. Bennett VR, Brown LK. Myles textbook for midwives: Churchill Livingstone; 1999.
7. Dencker A, Nilsson C, Begley C, Jangsten E, Mollberg M, Patel H, et al. Causes and outcomes in studies of fear of childbirth: a systematic review. Women Birth. 2019;32(2):99–111.
8. Fisher C, Hauck Y, Fenwick J. How social context impacts on women's fears of childbirth: a Western Australian example. Soc Sci Med. 2006;63(1):64–75.
9. Hildingsson I, Nilsson C, Karlström A, Lundgren I. A longitudinal survey of childbirth-related fear and associated factors. J Obstetric Gynecologic Neonatal Nurs. 2011;40(5):532–43.
10. Sjögren B, Thomassen P. Obstetric outcome in 100 women with severe anxiety over childbirth. Acta Obstet Gynecol Scand. 1997;76(10):948–52.
11. Saisto T, Salmela-Aro K, Nurmi J-E, Halmesmäki E. Psychosocial characteristics of women and their partners fearing vaginal childbirth. Br J Obstet Gynaecol. 2001;108(5):492–8.
12. Wijma K. Why focus on ‘fear of childbirth'? Taylor & Francis; 2003. pp. 141–3.
13. Khwepeya M, Lee GT, Chen S-R, Kuo S-Y. Childbirth fear and related factors among pregnant and postpartum women in Malawi. BMC Pregnancy Childbirth. 2018;18:1–10.
14. Berhanu RD, Abathun AD, Negessa EH, Amosa LG. The magnitude and associated factors of childbirth fear among pregnant women attending antenatal care at public hospitals in Ethiopia: a cross-sectional study. BMC Pregnancy Childbirth. 2022;22(1):222.
15. Yetwale A, Melkamu E. Fear of childbirth and associated factors among pregnant mothers who attend antenatal care service at Jinka public health facilities, Jinka town, southern Ethiopia. Int J Childbirth. 2021;11(3):101–11.
16. Gelaw T, Ketema TG, Beyene K, Gurara MK, Ukke GG. Fear of childbirth among pregnant women attending antenatal care in Arba Minch town, southern Ethiopia: a cross-sectional study. BMC Pregnancy Childbirth. 2020;20:1–7.
17. Vogel JP, Betrán AP, Vindevoghel N, Souza JP, Torloni MR, Zhang J, et al. Use of the Robson classification to assess caesarean section trends in 21 countries: a secondary analysis of two WHO multicountry surveys. Lancet Global Health. 2015;3(5):e260–70.
18. Mortazavi F, Agah J. Childbirth Fear and Associated Factors in a Sample of Pregnant Iranian Women. Oman Med J. 2018;33(6):497–505.
19. Nilsson C, Hessman E, Sjöblom H, Dencker A, Jangsten E, Mollberg M, et al. Definitions, measurements and prevalence of fear of childbirth: a systematic review. BMC Pregnancy Childbirth.

2018;18(1):28.

20. Garthus-Niegel S, Størksen HT, Torgersen L, Von Soest T, Eberhard-Gran M. The Wijma delivery expectancy/experience questionnaire–a factor analytic study. J Psychosom Obstet Gynecol. 2011;32(3):160–3.
21. Kocalevent R-D, Berg L, Beutel ME, Hinz A, Zenger M, Härter M, et al. Social support in the general population: standardization of the Oslo social support scale (OSSS-3). BMC Psychol. 2018;6:1–8.
22. Tsegaye B, Kassa A. Prevalence of adverse birth outcome and associated factors among women who delivered in Hawassa town governmental health institutions, south Ethiopia, in 2017. Reproductive health. 2018;15:1–10.
23. . 23, !!!. INVALID CITATION !!!.
24. Berhanu RD, Abathun AD, Negessa EH, Amosa LG. The magnitude and associated factors of childbirth fear among pregnant women attending antenatal care at public hospitals in Ethiopia: a cross-sectional study. BMC Pregnancy Childbirth. 2022;22(1):1–10.
25. Yetwale A, Melkamu E. Fear of childbirth and associated factors among pregnant mothers who attend antenatal care service at Jinka public health facilities, Jinka town, southern Ethiopia. Int J Childbirth. 2021.
26. Sharma B, Jungari S, Lawange A. Factors Affecting Fear of Childbirth Among Urban Women in India: A Qualitative Study. Sage Open. 2022;12(2):21582440221089485.
27. Wigert H, Nilsson C, Dencker A, Begley C, Jangsten E, Sparud-Lundin C, et al. Women's experiences of fear of childbirth: a metasynthesis of qualitative studies. Int J qualitative Stud health well-being. 2020;15(1):1704484.
28. Toohill J, Fenwick J, Gamble J, Creedy DK. Prevalence of childbirth fear in an Australian sample of pregnant women. BMC Pregnancy Childbirth. 2014;14:1–10.
29. Assefa EM. Knowledge, attitude and practice (KAP) of health providers towards safe abortion provision in Addis Ababa health centers. BMC Womens Health. 2019;19(1):138.
30. Johnson AR, Kumar GM, Jacob R, Jessie MA, Mary F, Agrawal T, et al. Fear of childbirth among pregnant women availing antenatal services in a maternity hospital in rural Karnataka. Indian J Psychol Med. 2019;41(4):318–22.
31. Gökçe İsbir G, Serçekuş P, Yenal K, Okumuş H, Durgun Ozan Y, Karabulut Ö, et al. The prevalence and associated factors of fear of childbirth among Turkish pregnant women. J reproductive infant Psychol. 2024;42(1):62–77.
32. Lukasse M, Schei B, Ryding EL, Group BS. Prevalence and associated factors of fear of childbirth in six European countries. Sex Reproductive Healthc. 2014;5(3):99–106.
33. Runnals J, Vrana S. Fear of childbirth in pregnant women in the United States. J Pregnancy Reprod. 2018;2(2).
34. Sen E, Dal NA, Dağ H, Senveli S. The reasons for delivery: Related fear and associated factors in western Turkey. Nurs Pract Today. 2015;2(1):25–33.

35. Dereje A, Dheresa M, Desalew A, Tura AK. Fear of childbirth among pregnant women in Eastern Ethiopia: A community-based study. Midwifery. 2023;116:103515.
36. Nilsson C, Bondas T, Lundgren I. Previous Birth Experience in Women With Intense Fear of Childbirth. J Obstetric Gynecologic Neonatal Nurs. 2010;39(3):298–309.
37. Wulcan A-C, Nilsson C. Midwives' counselling of women at specialised fear of childbirth clinics: A qualitative study. Sex Reproductive Healthc. 2019;19:24–30.
38. Azimi M, Fahami F, Mohamadirizi S. The Relationship between Perceived Social Support in the First Pregnancy and Fear of Childbirth. Iran J Nurs midwifery Res. 2018;23(3):235–9.