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Original research

Perinatal harmful cultural practices and its associated factors in Ilu Galan district, Ethiopia: A cross-sectional study

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ABSTRACT

Background: *Deeply rooted traditional habits during the perinatal period significantly threaten the health of mothers and infants. In the Ilu Galan District of Ethiopia, research on this issue remains limited. Consequently, this study was conducted to assess the prevalence and factors associated with perinatal harmful cultural practices in the area.*

Method: *Between February 3 and March 11, 2024, a community-based cross-sectional study was conducted among 407 participants selected via two-stage sampling. Data collected through interviewer-administered questionnaires were entered into EpiData 4.6 and analyzed using SPSS version 26. Binary Logistic regression identified significant factors at $p<0.05$, with model fit confirmed by the Hosmer-Lemeshow test.*

Results: *The prevalence of harmful cultural practices was 43.20% (95% CI: 38.40-48.20). It was associated with history of pregnancy complications (AOR=2.79, 95% CI: 1.50-4.87), lack of formal education (AOR=1.91, 95% CI: 1.01-3.41), and no antenatal care (AOR=1.77, 95% CI: 1.13-2.78), far from health facilities (AOR=1.72, 95% CI: 1.04-2.83) and limited media access (AOR=1.59, 95% CI: 1.01-2.49).*

Conclusion: *There was a high prevalence (43.20%) of harmful cultural practices in the Ilu Galan district. Key drivers included limited maternal education, lack of media access, absence of antenatal care, distance from health facilities, and prior pregnancy complications. Addressing these issues requires strengthening multi-sectoral collaboration focused on empowering women through education and enhancing the reach of maternal healthcare services.*

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INTRODUCTION

Perinatal harmful cultural practices (HCP) are deeply rooted traditional practices that negatively affect the health of mothers and their newborns throughout pregnancy, childbirth, and the postpartum period (1). As they are repeated over time, cultures come to embrace them as socially shared ideas, values, norms, conventions, and traditionally accepted behaviors (2,3). Cultural beliefs and behaviours may prevent women in developing countries from receiving prenatal, postnatal, and delivery care (4). Socio-cultural practices are among the reasons for non-use of maternal healthcare services, and certain societies continue to rely on home delivery (5).

Cultural traditions during pregnancy and childbirth significantly influence maternal and neonatal health outcomes both during and after delivery (6). In various settings, dietary restrictions (food taboos) and the use of herbal medicine can compromise the well-being of both the mother and the fetus (7,8). Furthermore, specific harmful practices during labor in Ethiopia, such as abdominal massage, forceful techniques to expedite placental expulsion, and induced sneezing, frequently occur alongside the risks of home delivery (9).

Despite the Ethiopian government's efforts to combat harmful cultural practices (HCPs) through education, these traditions persist due to deep-seated beliefs and a lack of awareness (10). During the perinatal period, HCPs significantly drive maternal and neonatal mortality. Specifically, unskilled home births and dangerous delivery interventions often lead to hemorrhage and sepsis. Abdominal massage during pregnancy can cause catastrophic outcomes such as uterine rupture, placental abruption, and fetal death. For neonates, early bathing increases the risk of fatal hypothermia associated with a 15.4% mortality rate in low-resource settings(11) while unhygienic cord care remains a primary source of infection (12). Although some studies have examined these stages separately, comprehensive research on the full perinatal period in the Ilu Galan district is scarce. Therefore, the present study aimed to assess the prevalence of HCPs and associated factors of HCP among post-natal women living in Ilu Galan.

METHODS

Study period, design, and area

From February 3 to March 11, 2024, a community-based cross-sectional survey was carried out in the Ilu Galan area of Oromia Region, Ethiopia, which is about 213 km west of Addis Ababa.

Population

The source population comprised all women in the Ilu Galan district who had given birth within the twelve months preceding the study. Participants were

included if they resided in the selected kebeles with their infants, while those living in the area for less than six months and who were too ill to be interviewed were excluded.

Sample Size Calculation

The initial sample size (ni) was 314, which was estimated by the single population proportion formula of $ni = \frac{\left(za_{/2}\right)^2 p(1-p)}{d^2}$, considering 71.4% prevalence (p) from previous research (1), a 95% confidence level, and a 5% margin of error (d). As the total population was 1,394 (<10,000), a finite population correction formula $nf = \frac{ni}{1+\frac{ni}{N}}$ was used. Considering a 1.5 design effect and 10% non-response rate, the final sample size was 423.

Sampling Procedure

Kebeles in the district were stratified into rural 17 and 1 urban kebele. Five rural kebeles were chosen via simple random sampling, while the single urban kebele was selected purposively. Following an enumeration that identified 521 eligible women, 407 participants were ultimately enrolled, with 16 recorded as non-respondents after three follow-up visits.

Study variable

In the present study, the outcome variable was harmful cultural practices in the perinatal period. The independent variables were categorized into three primary domains: *socio-demographic factors (age of the mather***,** place of residence, educational attainment, marital status, and maternal/paternal occupation, ethnicity, religion, household income, and access to media), *maternal Healthcare Utilization* (proximity to health facilities, history of antenatal care (ANC), use of family planning services, and postnatal care (PNC) attendance), and *obstetric factors* **(**gravidity, parity, mode of delivery, history of child mortality, birth spacing, and previous pregnancy complications).

Operational Definition

Harmful Cultural Practices (HCPs): A participant was categorized as practicing HCPs if they reported engaging in at least one of the following: abdominal massage, food taboos, or the medicinal use of "Kosso" or flaxseed (Telba). Additional criteria included practicing home delivery, delaying breastfeeding, discarding colostrum, pre-lacteal feeding, early neonatal bathing, or applying substances to the umbilical cord stump (1,6,8,10,13).

Kosso (Hagenia abyssinica) is a plant, and its leaves, fruit, and flowers have been used as a medicine to treat some diseases for a century, but there is no good scientific evidence to support these uses.

Telba (flaxseed) is a flowering plant in the family Linaceae, a seed used to treat some diseases or used as a healthy beverage.

Cultural Practices: These are socially shared beliefs, views, and behaviors adopted

and enacted by a specific community within a particular temporal context (14).

Data collection procedure

A structured, interviewer-administered questionnaire that was modified from a survey of relevant literature (1,6,8,10,13) was used to gather data through face-to-face interviews. The data collection team consisted of five BSc Midwives for data collection and two BSc Public Health for supervision, all fluent in the local language, Afan Oromo. To ensure accuracy, the tool underwent forward and backward translation between English and Afan Oromo. Before the main study, data collectors received formal training, and the questionnaire was pretested on 5% of the total sample size in a neighboring district to refine its content, structure, and language.

Data analysis

Data were entered into EpiData version 4.6 and then exported to SPSS version 26 for analysis. After cleaning and checking for completeness through frequency runs, data were summarized using descriptive statistics, including means, standard deviations, and percentages. Variables with $p \leq 0.25$ in the bivariable logistic regression analysis were included in the final model. Variables with $p < 0.05$ were considered statistically significant in the final multivariable model. Adjusted odds ratios (AOR) with 95% confidence intervals (CI) were utilized to determine the strength of these associations while controlling for confounders. Model fitness was confirmed using the Hosmer-Lemeshow test, and multicollinearity was assessed with the Variance Inflation Factor (VIF).

Ethical consideration

Ethical approval was obtained from Ambo University College of Health Science ERB. Following permission from the Ilu Galan Health Bureau, participants provided verbal informed consent. To maintain confidentiality, all personal identifiers were excluded from the data collection tools.

RESULTS

Socio-demographic characteristics

Of 423, 407 postnatal women participated, yielding a 96.20% response rate. About 190 (46.70%) of the respondents lacked formal education, and 309 (75.90%) were housewives. In addition, 232(57.00%) reported having access to media (Table 1).

Prevalence of harmful cultural practices

The prevalence of harmful perinatal cultural practices was 43.20% (95% CI: 38.40, 48.20). Specifically, 71 women delivered at home, 9 adhered to food taboos, and 7 provided pre-lacteal feeding (Figure 1).

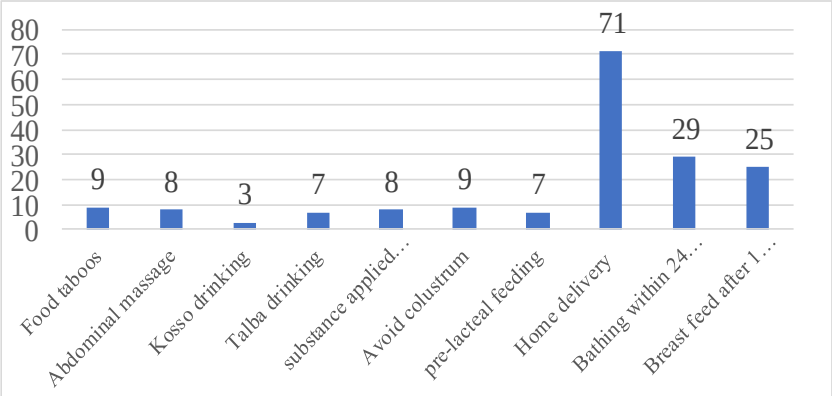

Figure 1. Perinatal harmful cultural practices among study participants

Table1. Socio-demographic characteristics of participants, Ilu Galan, Oromia, Ethiopia (n=407)

Variables	Categories	Frequency	Percentage
Age of the mothers in years	15-24	154	37.8
	25-34	178	43.7
	≥ 35	75	18.5
Marital status of the mothers	Married	391	96.1
	Divorced	11	2.7
	Widowed	5	1.2
Place of residence	Urban	190	46.7
	Rural	217	53.3
	Muslim	82	20.1
Religion	Orthodox	134	32.9
	Protestant	179	44.0
	Wakefta	12	2.9
Ethnicity	Oromo	354	87.0
	Amara	41	10.1
	Gurage	7	1.7
	Others	5	1.2
Educational status of the mothers	No formal education	190	46.7
	Primary (1-8)	128	31.4
	Secondary (9-12) and above	89	21.9
occupational status of the mothers	Housewife	309	75.9
	Governmental employed	24	5.9
	Self-employed	74	18.2
Educational status of husbands	No formal education	186	45.7
	Primary (1-8)	143	36.6
	Secondary (9-12) and above	72	17.7
Husband's occupational status	Governmental employed	18	4.4
	Self-employed	181	44.5
	Farmers	208	51.1
Access to media service in the home	Yes	232	57.0
	No	175	43.0
Monthly Income	Less than 1000 birr	148	36.4
	1000-10000 birr	241	59.2
	Above 10000 birr	26	4.4

Obstetrics characteristics

Regarding obstetric characteristics, 318 (78.12%) participants were multigravida, while 396 (97.30%) underwent normal vaginal delivery. Additionally, 169 (51.21%) reported birth intervals of less than two years (Table 2).

Table 2. Obstetric characteristics of post-natal women, Ilu Galan, Oromia, Ethiopia (n=407)

Variable	Categories	Frequency	Percentage
Gravida	Primigravida	89	21.88
	Multigravida	318	78.12
Parity	Primipara	77	18.90
	Multipara	215	52.80
	Grand multipara	115	28.30
History of the last pregnancy complication	Yes	56	13.80
	No	351	86.20
List of last pregnancy complications	Antepartum hemorrhage	14	25.00
	Hypertensive disorder	19	33.90
	Intrauterine fetal death	7	12.50
	Anemia	16	28.60
Mode of delivery	Normal vaginal	396	97.30
	Cesarean section	11	2.70
Birth interval (n=330)	Less than 2 years	169	51.21
	2 years and above	161	48.79
History of child death	Yes	44	10.80
	No	363	89.20

Maternal Healthcare Service Utilization

Regarding service utilization, 115 (28.30%) participants resided more than 5 km from the nearest health facility. While 243 (59.70%) women reported attending at least one antenatal care (ANC) session during their most recent pregnancy, postnatal care (PNC) attendance was notably lower, at only 56 (13.80%) participants (Table 3).

Table 3. Maternal health care service utilization of postnatal women in Ilu Galan, Oromia, Ethiopia (n=407)

Variable	Categories	Frequency	Percentage
Distance to the health facility	>5KM	115	28.30
	≤ 5KM	292	71.70
History of ANC follow-up in the last pregnancy	Yes	243	59.70
	No	164	40.30
Reason for no ANC follow-up (n=164)	I do not understand its function	43	26.20
	The unwillingness of my family	65	39.60
	Excessive workload	56	34.10
History of PNC visit	Yes	56	13.80
	No	351	86.20
History use of family planning	Yes	221	54.30
	No	186	45.70

Factors associated with harmful cultural practices

Bivariable logistic regression identified maternal education, residence, media access, parity, previous pregnancy complications, child mortality history, distance to health facilities, ANC follow-up, and postnatal care visits as candidates for multivariable analysis. After adjusting for confounders, maternal educational status (AOR=1.91, 95% CI: 1.01, 3.41), lack of ANC follow-up (AOR=1.77, 95% CI: 1.13, 2.78), history of pregnancy complications (AOR=2.79, 95% CI: 1.50, 4.87), distance from a health facility (AOR=1.72, 95% CI: 1.04, 2.83), and limited access to media (AOR=1.59, 95% CI: 1.01, 2.49) significantly associated with perinatal harmful practices(Table 5).

Table 5. associated factors of perinatal harmful cultural practices (n=407)

Variables	Categories	Harmful cultural practices during perinatal		COR (95%) CI	P-value	AOR (95%) CI	P-value
		Yes (%)	No (%)				
Educational status of the mothers	No formal education	99(52.10)	91(47.90)	2.04(1.20, 3.42)	0.007	1.91 (1.01, 3.41)	0.023*
	Primary education	46(35.90)	82(64.10)	1.05(0.53, 1.84)	0.867	0.92(0.50, 1.70)	0.796
	Secondary and above	31(34.80)	58(65.20)	1		1	
Place of residence	Urban	65(34.20)	125(65.80)	1		1	
	Rural	111 (51.20)	106(48.80)	2.01(1.34, 3.00)	0.001	1.56(0.98, 2.47)	0.061
Access to media	Yes	83(35.80)	149(64.20)	1		1	
	No	93(53.10)	82(46.90)	2.04(1.36, 3.03)	0.001	1.59(1.01, 2.49)	0.046 *
Parity	Primipara	28(36.40)	49(63.60)	1		1	
	Multipara	88(40.90)	127(59.10)	1.21 (0.78, 2.08)	0.483	1.61 (0.64 , 2.10)	0.619
	Grand multipara	60(52.20)	55(47.80)	1.91 (1.08, 3.45)	0.032	1.58(0.82, 3.02)	0.171
History of the last pregnancy complication	Yes	36(64.30)	20(35.70)	2.79(1.50, 4.87)	0.001	2.89(1.53, 5.46)	0.001*
	No	140(39.90)	211(60.10)	1		1	
History of child death	Yes	26(59.10)	18 (40.90)	1		1	
	No	150(41.30)	213(58.70)	0.49(0.25, 0 .92)	0.027	0.55(0.28, 1.10)	0.081
Distance of health facility	>5KM	67(58.30)	48(41.70)	2.34(1.50, 3.63)	0.001	1.72 (1.04, 2.83)	0.033 *
	≤5KM	109(37.30)	183(62.70)	1		1	
History of ANC follow-up during the last pregnancy	Yes	85(35.00)	158(65.00)	1		1	
	No	91(55.500)	73(44.50)	2.31(1.54, 3.45)	0.001	1.77 (1.13, 2.78)	0.011*
History of PNC visit	Yes	20(35.70)	36(64.30)	1		1	
	No	156(44.40)	195(55.60)	1.44(0.80, 2.58)	0.222	0.96 (0.50, 1.84)	0.893

*1= reference group, * significant association at p-value < 0.05, ANC-antenatal care, PNC-postnatal care*

DISCUSSION

The present study aimed to assess the prevalence and associated factors of perinatal harmful cultural practices (HCPs) in the Ilu Galan district, finding a prevalence of 43.20%. This result is higher than the findings of a study conducted in Egypt (15) that could be attributed to differences in caregivers' health literacy and access to health services. Furthermore, it could be due to sampling and sample size discrepancies; the Egyptian study had 200 samples. It was also higher compared to studies in South Africa (16) and Southwest Ethiopia (8), which could be due to the scope, as the previous study focused on HCP during pregnancy. However, it is lower compared to studies in Southern Ethiopia (17) and Loma District (6), which might arise from cultural and ethnic composition differences; therefore, further research should explore how ethnicity affects HCP in Ethiopia.

Additionally, women with no formal education were 1.91 times more likely to engage in harmful cultural practices than those with secondary education or higher. This finding aligns with research from the Gurage zone, Northwest Ethiopia, and Bangladesh (1,10,18). Education likely enhances a woman's ability to understand the clinical risks these practices pose to both themselves and their neonates; thus, improving maternal educational attainment is important to reduce perinatal harmful traditional practices.

Furthermore, women without media access were 1.59 times more likely to engage in harmful perinatal practices than those with access. Media exposure likely increases awareness regarding the myths, health consequences, and prevention strategies related to it. This study also revealed that a history of pregnancy complications increased the likelihood of practicing harmful cultural behaviors by 2.79 times, which is consistent with research from the Amhara region(14). Additionally, women residing more than 5 kilometers from a health facility were 1.75 times more likely to engage in these practices, which aligns with findings from Nigeria (19). This association likely stems from restricted access to professional health information and services, often exacerbated by the challenges of rural residence.

On the other hand, women who did not use antenatal care (ANC) during their previous pregnancy were 1.77 times more likely to participate in HTP than those who did. This finding is supported by a study in Southwest Ethiopia, East Gojjam, the Gurage zone, and Dire Dawa (1,8,20,21). These increased odds are most likely due to a lack of professional counseling; women who attend ANC receive important information about the consequences of hazardous practices. Therefore, strengthening quality antenatal care is suggested.

Limitations of the study

This study has a number of limitations, even though it offers generalizable findings of perinatal harmful cultural practices (HCPs) in the Ilu Galan district. First, mothers may not fully recall previous prenatal behaviors, which could lead to recall bias. Second, participants may have underreported some behaviors due to social desirability bias. Lastly, qualitative approaches, including lived experiences, peer pressure, and religious pressures, are left unexplored due to the exclusive focus on quantitative methodologies.

CONCLUSION

The study revealed a high prevalence of perinatal harmful cultural practices, significantly associated with a lack of formal education, limited media access, previous pregnancy complications, long distances to health facilities, and lack of ANC follow-up. Accordingly, healthcare providers should integrate behavioral counseling on these practices into routine antenatal care. Future research is needed to address current limitations and further explore these associations.

Declarations

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Conflict of interest

No competing interests declared

Availability of data and materials

The corresponding author can provide data upon request.

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