



Research Article

Timely initiation of breastfeeding and associated factors among mothers who have infants less than six months of age in Gunchire Town, Southern Ethiopia 2019

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Abstract

Background: Timely starting of breastfeeding is defined as the starting of breastfeeding within one hour after childbirth. Globally mothers who practiced breastfeeding within one hour were less than half in percent. In least developed countries like Eastern and Southern Africa including Ethiopia infant breastfeeding practice within one hour were low. The aim of this study was to assess timely initiation of breastfeeding and associated factors among mothers who have an infant less than six months of age in Gunchire town, Southern Ethiopia.

Methods: The study was conducted from May 1 to 28, 2019 in Gunchire town. Data were collected by using a structured face to face interview questionnaire. The community based crosssectional study was employed on 333 women. The study participants were selected by Simple random sampling techniques. The data were coded, entered, cleaned and analyzed by SPSS with windows version 21.0. Binary and multivariable logistic regression statistical model was used. Adjusted odds ratio with 95% CI was computed to see the strength of association.

Results: In this study the magnitude of timely initiation of breastfeeding was 80.5%. Governmental employed mothers (AOR=2.914, 95% CI: 1.139, 7.46), Antenatal care follow up (AOR=5.99, 95% CI: 1.29, 27.81), Baby skin to skin contact (AOR=2.4, 95% CI: 1.092, 5.34), Vaginal delivery (AOR=5.82 95% CI: 1.68, 20.14) Institutional delivery (AOR=5.5, 95 CI%: 1.66, 18.3), Good knowledge of breastfeeding (AOR=4.02, 95% CI: 1.04, 15.59) and Breast disease (AOR=0.24, 95% CI: 0.08, 0.73) were significantly associated with timely starting of breastfeeding.

Conclusion: More than two third of the mothers timely initiated breastfeeding within one hour after birth. Being governmentally employed, having Antenatal care follows up, skin to skin contact, mode of delivery, knowledge of mothers about breastfeeding and place of delivery were positively and significantly associated with timely initiation of breast feeding, whereas, breast disease was protective against timely starting of breastfeeding. Therefore, we would like to recommend Enamore woreda health office and Gunchire primary Hospital staffs work at MCH clinic to provide appropriate services and stimulate the mothers to initiate breastfeeding, skin to skin contact enhancing within the first hour of birth.

More Information

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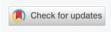
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Keywords: Timely; Initiation; Breastfeeding;

Abbreviations: ANC: Antenatal Care; AOR: Adjusted Odds Ratio; BFHI: Baby Friendly Health Initiative; COR: Crude Odds Ratio; EDHS: Ethiopian Demographics and Health Surveys; PSG: Paris Saint German; SNNPR: South Nations and Nationalities People Region; SPSS: Statistical Package For Social Sciences; TIBF: Timely Starting of Breastfeeding; UNICEF: United Nation Children's Fund; WBTI: World Breastfeeding Trends Initiative; WHO: World Health Organizations



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Introduction

Timely starting of breast sucking is the starting of breast sucking within the first hour of childbirth. It is started by skin-to-skin contact with their mothers after birth and the mothers helped to initiate breast sucking with in the first hour of birth. Timely starting of breastfeeding is one in which the

child friendly hospital initiative was founded and launched in 1992 [1,2]. The WHO and UNICEF were recommended an early start of breast sucking within the first hour of birth [3]. Whether the breast milk arrival or not it does not matter, but it is important to consider about the length of time after birth when the mother attempts to initiate breast sucking. An attempt to initiate suckling started when a mother putting



her infant directly to her breast and trying to get the infant's mouth to handle the nipple. Not only this, but also, skin-to-skin contact could also be regarded as attempting to initiate breast sucking; since the infants would naturally make a move towards the breast [4]. The WHO and UNICEF also recommended that an exclusive breast sucking for the first six months, then up to two years or beyond with an appropriate complementary feeding [5].

Early breastfeeding and skin-to-skin contact help to control the body temperature of the newborn baby and increases the chances of establishing early exclusive suckling [6]. But also, early starting of breast sucking stimulates breast milk production, increases uterine activity and reduces the risk of heavy bleeding and infection [7], fosters mother-child bonding and increases the duration of the breast sucking [2]. During the first days of life, breast sucking helps to prevent low blood sugar and low temperature. Colostrum provides the baby with a high level of antibodies, immune cells, vitamin A and other protective factors [7]. Early start of exclusive breastfeeding serves as the starting point for a continuum of care for mother and newborn that can have long-lasting effects on health and development. It is a fact that promoting early starting of breast sucking and EBF for six months after birth helps to reduce maternal and neonatal morbidity and death [5]. Delay of starting of breast sucking is greater risk of neonatal mortality [8]. This is particularly relevant and happened in Africa, where neonatal and infant mortality rate were very high [9].

Even though breast sucking has extraordinary benefits, only 43% of the newborns start breastfeeding within the first hour after birth globally. The result is even lower in developing countries. Earliest starting of breast sucking across the regions were in the least developed countries (53%), Eastern and Southern Africa (60%), Latin America and Caribbean (49%), South Asia (42%), East Asia and Pacific (41%) and West and Central Africa (35%) [10].

In Ethiopian, Ministry of Health targeted an increase in the proportion of newborn to start breast sucking within the first hour of life to 92% by 2015 as one strategy to improve child health [11]. But only 52% of newborn started breast sucking within one hour of life. Starting of breast sucking within one hour was lowest in the Amhara and Somali regions (38% and 40%, respectively) and highest in the South Nation, Nationality of People (SNNP) and Dire Dawa regions (67% and 66 %, respectively) [12]. According to Ethiopian demographic health survey 2016, Seventy-three percent of children began breast sucking within 1 hour of birth, and 92% within 1 day of birth [13]. The national study indicated that there is the existence of problems in the inappropriate practice of the timely starting of breast sucking (TIBF). Despite timely starting of suckling is very important for the continuation of exclusive breastfeeding, much of the focus is given for breast sucking advocacy. This again shows the problem of early

starting of breast sucking in Ethiopia needs further focus and intervention both in urban and rural sides of the country. To reduce child morbidity and mortality, infant suckling has been identified as one of the major intervention areas both globally and nationally.

Methods

Study setting

Gunchire town is one of the urban addresses found in the Enamore district. It is around 199 km from the capital city of Ethiopia, Addis Ababa toward southwestern and 301 km from Hawassa capital of the SNNP region and 42 km from Wolkite, the town of Guraghe zone. The town has 1 Primary hospital which was established in 2016 and 2 health posts with 8 health workers 4 in each Health Post). According to Gunchire town municipality data, Gunchire town has total populations of 65,002 people of these 49% are males and 51% females. A study was conducted from May 1 to 28, 2019.Community based cross-sectional study design was conducted among mothers who have an infant less than six months of age from kebele 01 & 02 of Gunchire town.

Inclusion and exclusion criteria

Mothers who have an infant less than six months of age and living in the study area for more than six months. While, mothers who are unable to communicate due to serious illness at the time of data collection were excluded.

Sample size determination and sampling procedure

The sample size was determined by using single population proportion formula. Based on the following assumption: The level of confidence of the study, 95%, margin of error is 5%, the proportion (P) was 0.73 which estimates the proportion of timely starting of breast feeding in Ethiopia according to EDHS 2016 [13]. Accordingly, by considering 10% for non-response rate 333 respondents were selected by Simple random sampling technique from Gunchire town 01 & 02 kebeles by proportionally allocated. There were 7 kebeles and kebele 01 and kebele 02 were selected randomly. Gunchire town 01 have 650 mothers who have an infant less than six month of age and Gunchire town 02 have 700 mothers who have an infant less than six month of age. The lists of mothers were provided by health extension workers. Number of respondents of kebele 01 were 160 and that of kebele 02 were 173.

Operational definitions

Time of initiation of breastfeeding: an infant's first intake of breast milk (or colostrum) within one hour of birth.

Good knowledge about timely starting of breastfeeding: If the mother can answer above the mean value asked to measure timely starting of breastfeeding awareness.

Poor knowledge about timely starting of breastfeeding: If the mother answers less than or equal to the mean value asked to measure timely starting of breastfeeding.



Data collection methods and procedures

The data were collected by using a structured face to face interview questionnaire administered by trained data collectors in the class arranged for data collection after the mothers were assured to be stable. The questionnaire was adapted from other similar studies and prepared in English [14]. It was translated into Amharic. Finally, it was translated back to English to check for consistency. The questionnaire contained questions that address social-demographic characteristics of respondents, health services and history of pregnancies, labor and birth related factors and knowledge of mothers measuring questions related to timely starting of breastfeeding. The outcome variable was coded as 1 if practiced breastfeeding and 0 if not breast feed with in the first hour of birth.

Data quality assurance and control

The data were pretest on 20 individuals at wolkite General Hospital. One-day training was provided for data collectors and supervisors by the principal investigator to create awareness on timely collection and data management of the basic technique of data collection, approaches and on the issue of confidentiality and privacy. To get informed consent and reliable data, a clear explanation of the purpose and procedure of the study was given to the study participants. Moreover, the data collectors were supervised daily by supervisors.

Method of data analysis

After checking the completeness and appropriateness of the data, the collected data were entered into SPSS version 21 for analysis and then the findings of this study were interpreted in the form of a figure, table, percentage, proportion and frequency. Statistical analyses including descriptive statistics, Bivariate and multivariate logistic regression analysis were conducted. First binary logistic regression was used to identify variables with potential to have an association with outcome variable and then after, variables having a p-value less than 0.25 were fitted to multivariate logistic regression model to determine the relationship between the dependent and independent variables. Adjusted odds ratio with 95% CI was computed to see the strength of association.

Results

Socio-demographic characteristics

A total of 333 mothers of children less than 6 months in Enamore woreda, Gunchire town, the Gurage Zone were interviewed with a 100 % response rate. The most common ethnic group in the study area was Gurage which account 244(73.3%). Among 141 (42.3%) of mothers were a governmental employee (Table 1). The majority of mothers, 268 (80.5%) were reported that they breastfed their newborn baby within one hour of age of birth. Among mothers, 228 (68.5%) of them were multiparous. About 199 (61.8%) visited ANC four and more times and the others 123 (38.2%) visited

ANC three and less times. Out of mothers had ANC follow up 175 (54.3%) got advice about breastfeeding during the ANC visit (Table 1). Immediately after birth 228 (68.5%) of current babies were placed on the mother's abdomen. Majority 307 (92.2%) of the baby's condition were good at birth (APGAR score \geq 7). Of the last delivered babies, 300 (90.1%) were gave birth at term gestational age. Most of babies 304 (91.3%) were gave birth through spontaneous vaginal delivery. Almost all 321 (96.4%) of the last delivery were at the health institution (Table 1).

Table 1: Socio-demographic characteristics of the study participants in Gunchire Town, Gurage zone, SNNPR, Ethiopia 2019 (*n* = 333).

Variables	Category	Frequency	Percentage (%)		
Age of mothers in years	15-19	22	6.6		
	20-24	97	29.1		
	25-29	92	27.6		
	30-34	63	18.9		
	≥ 35	59	17.7		
	Married	318	95.5		
Marital status	Others*	15	4.5		
	Gurage	244	73.3		
	Oromo	49	14.7		
EthnicityS	Amhara	28	8.4		
	Other*a	12	3.6		
	Muslim	128	38.4		
	Orthodox	108	32.4		
Religion	Protestant	80	24		
3	Catholic	12	3.6		
	Others**	5	1.5		
	House wife	66	19.8		
	Private work	109	32.7		
Occupation	Government				
	employed	141	42.3		
	NGO employed	17	5.1		
Dority	Multipara	228	68.5		
Parity	Primiparous	105	31.5		
4110 : ::	Yes	317	95.2		
ANC visit on current baby	No	16	4.8		
Normale and a ANICA Visit	≥ 4 ANC visits	197	62.1		
Number of ANC Visit	≤ 3 ANC visits	120	37.9		
A.I.: I. (6 II: (AND	Yes	172	54.3		
Advice on breast feeding at ANC	No	145	45.7		
D	Yes	23	6.9		
Breast disease	No	310	6.9 93.1		
Baby was placed on chest	Yes	228	68.5		
immediately after birth	No	105	31.5		
	Spontaneous	312	93.7		
Onset of labor	Induced	21	6.3		
N/	Yes	15	4.5		
Was there problem during labor?	No	318	95.5		
Condition of baby at birth	Good(APGAR	307	92.2		
	Score ≥ 7) Not good (APGAR	26	7.8		
	Score < 7)	-	_		
	Preterm	10	3		
Gestational age at birth	Term	300	90.1		
	Post term	23	6.9		
Sex of baby	Male	163	48.9		
,	Female	170	51.1		
Mode of delivery	Vaginal delivery	304	91.3		
,	Cesarean delivery	29	8.7		
Place of current delivery	Health Institution	316	94.9		
•	Home	17	5.1		
divorced, widow; ** waqefata, pagan; *a = Wolaita, Hadya and Siltie					



Knowledge about timely starting of breastfeeding

Out of respondents, about 264 (79.3%) have heard about timely starting of breastfeeding, but 69 (20.7%) had no information about timely starting of breastfeeding yet. About 318 (95.5%) of the respondents had good knowledge, whereas 15 (4.5%) poor knowledge about timely starting of breastfeeding (Table 2).

Factors associated with timely starting with breastfeeding

Multivariate analysis indicated that government employed mothers were 3 times more likely to start breast feeding than mothers who were housewife (AOR=2.914, 95% CI: 1.139, 7.46). Presence of ANC follow up on current baby were 6 times more likely to initiate breastfeeding (AOR=5.99, 95% CI: 1.29, 27.81) than mothers who had no ANC follow up on current baby. Baby placed on the abdomen of mothers immediately after birth (AOR=2.4, 95% CI: 1.092, 5.34) was 2.4 times more likely to initiate breastfeeding than that of babies don't placing immediately after birth. The baby who delivered vaginally (AOR=5.82 95% CI: 1.68, 20.14) was 5.8 times more likely to initiate breastfeeding within the first hour of birth than who delivered by cesarean section. Mothers who delivered their last baby at a health institution (AOR=5.5, 95 CI%: 1.66, 18.3) were 5.5 times more likely to initiate breastfeeding than that of delivered at home. Mothers who had good knowledge about breastfeeding (AOR=4.02, 95% CI: 1.04, 15.59) was 4 times more likely to initiate breastfeeding than the mothers who had poor knowledge within first one hour of child birth. Those mothers who had breast disease were 76% less likely to initiate breastfeeding than mothers who had no breast disease (AOR=0.24, CI95%: 0.08, 0.73) (Table 3).

Discussion

In this study, 80.5% of respondent mothers reported that they were initiated breastfeeding within one hour of child birth. The finding of the study was compared with studies done in Sri Lanka (83.3%), urban dwellers in Western Ethiopia (88.5%) and Dale woreda south of Ethiopia (83.7%) [15-17]. Slightly higher than the prevalence of timely starting of breastfeeding in Ethiopia (73%) EDHS 2016 [13]. This result is higher than the study done in India (31.1%), a study done at Goba woreda (52.4%), a study done at Benishangul Gumuz (53.8%), a study done at Arba Minchzuria (42.8%), a study done at Dale woreda south Ethiopia (41.6%) [18-22]. This could be because most mothers in this study had good Antenatal care visit and a high proportion of health institutional delivery than other study setting.

Multivariate analysis revealed that governmental employed mothers were three times higher than initiating breast sucking than those who were housewife. But the study conducted at Alhassa Saudi Arabia shows that educated and employed women were less likely to initiate and maintain breast sucking despite their relatively higher level of awareness [15]. It's a fact that the more the governmental hired were educated and this can influence mothers to get adequate knowledge about the benefits of initiating breastfeeding early.

Mothers who had antenatal care visits during their last pregnancy were about 6.76 times higher to initiate breast sucking within one hour after childbirth than who had no antenatal care visit during their last pregnancy. This could be happening because of mothers who had antenatal care visits during their pregnancy could access counseling sessions on the importance of timely starting of breastfeeding, and thereby be more likely to practice it. This result is supported by a study conducted in western Ethiopia, a study done in Nigeria, a study done in south Gondar, Ethiopia and Dembechadistrict, which showed that counseling on breastfeeding during antenatal visits increases the rate of timely starting of breast sucking [14,16,23,24].

ble 2: Awareness towards starting of breastfeeding within one hour of life among respondent	mothers in Enamore woreda,	Gunchire Town, SNN	IPR, Ethiopia 2019.
Variable	Category	Frequency	Percentage (%)
Did you have about TIDE wat?	Yes	264	79.3
Did you hear about TIBF yet?	No	69	20.7
0.1.1.	Yes	16	4.8
Colostrum can cause illness to a child	No	317	95.2
	Yes	309	92.8
Colostrum is important to the child.	No	24	7.2
	Yes	91	27.3
Starting of breast milk makes the infant to get liquid only	No	242	72.7
	Yes	246	73.9
Skin to skin contact is important for timely starting of breastfeeding.	No	87	26.1
	Yes	321	96.4
Only breastfeeding is enough for the baby immediately to birth.	No	12	3.6
	Yes	325	97.6
Breast milk contains all nutrients necessary for the infant.	No	8	2.4
	Yes	322	96.7
Colostrum provides the infant with the immunity to disease	No	11	3.3
	Yes	318	95.5
Squeeze out and throw away colostrum has a disadvantage for the infant.	No	15	4.5
V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Good knowledge	318	95.5
Knowledge of mothers about BF	Poor knowledge	15	4.5



Table 3: Factors associated with Timely Starting of E	Propotfooding in Engmore words	Cupabira Tours CNNDD Ethiopia 2010 (n = 222)
Table 3: Factors associated with Timely Starting of r	oreasueeding in Enamore woreda.	. Gunchire Town, Sinner, Ethiopia 2019 (7 = 555).

Variable	Category	Timely Starting o	f Breastfeeding	95	5% CI
		Yes	No	COR	AOR
Age of the mothers in years	15-19	17	5	0.694(.208-2.320)	0.571(0.12, 2.69)
	20-24	79	18	0.896(.382-2.098)	0.609(0.20, 1.86)
	25-29	71	21	0.690(.299-1.593)	0.598(0.193, 1.85)
	30-34	52	11	0.965(.376-2.472)	0.690(0.209, 2.28)
	≥ 35	49	10	1.00	1.00
Marital status	Married	259	59	2.93[1.03, 8.54]	3.094(0.739, 12.96)
	Others	9	6	1.00	1.00
Occupation of Mothers	House wife	48	18	1.00	1.00
	Private work	79	30	0.99(0.50-1.96)	0.944(0.399, 2.23)
	Government	127	14	3.41(1.57-7.37)	2.914(1.139, 7.46)*
	NGO employed	14	3	1.75(.449-6.815)	2.94(0.538, 16.08)
	Uneducated	9	6	1.00	1.00
E1 6 11 1 611 1 1	Grade 1-8	49	16	2.042(.629-6.625)	1.905(0.445, 8.15)
Educational level of Husbands	Grade 9-12	120	17	4.706(1.488-14.879)	3.784(.861, 16.63)
	Above 12	90	26	2.308(.752-7.083)	2.384(0.529, 10.74)
	Yes	262	55	7.94[2.770, 22.757]	5.99(1.29, 27.81)**
ANC visit on current baby	No	6	10	1	1
Breast disease	Yes	14	9	0.34[0.141, 0.832]	0.24(0.08, 0.73)***
	No	254	56	1	1
Skin to skin contact immediately	Yes	200	28	3.89[2.2114, 6.823]	2.414(1.092, 5.34)***
	No	68	37	1	1
Condition of the baby at birth	Good	254	53	4.11[1.799, 9.382]	2.324(0.746, 7.23)
	Not good	14	12	1	1
Mode of delivery	Vaginal delivery	255	49	6.41[2.898, 14.157]	5.82(1.68, 20.14)****
	C/S	13	16	1	1
DI (Health Institution	261	55	6.78[2.472, 18.589]	5.534(1.66, 18.3)****
Place of current delivery	Home Delivery	7	10	1	1
Did you hear about TIBF yet?	Yes	217	47	1.63[0.874, 3.038]	0.538(0.204, 1.42)
	No	51	18	1	1
Awareness of mothers about breastfeeding	Good awareness	262	56	7.02[2.401, 20.512]	4.02(1.04, 15.59)****
	Poor awareness	6	9	1	1

Babies placed on the mother's abdomen immediately after birth were 3.93 times more likely to start breast sucking after birth than babies did not put on the mother's abdomen. This might be most newborns are ready to find the nipple and latch on to the breast within the first hour of childbirth, if provided with immediate skin-to-skin contact and naturally the newborns tend toward the breast. This finding is supported by a study done at urban dwellers of western Ethiopia showed that placing the baby on the mother's abdomen immediately after birth increase practicing of timely starting of breastfeeding [16].

Mothers who gave last birth vaginally were 4.46 times more likely to initiate breast sucking within the first hour of childbirth than those delivered by cesarean section. This could be due to delaying recovery from anesthesia and discomfort to initiate breast sucking. This finding is supported by a study done in Alhassa Saudi Arabia and a study done in south Gondar, Ethiopia shows that vaginal delivery were more likely to initiate breast sucking than those delivered by cesarean delivery [14,15].

The mothers who gave birth at health institution were 6.75 more likely to initiate breast sucking within the first hour of childbirth than those delivered at home. This is because of the midwives/ Obstetrician stimulated to initiate breast sucking and tell the mothers about the importance of timely starting of suckling. This finding is supported by a study done in Goba woreda, a study done in Nigeria and a study done in south Gondar, Ethiopia showed that delivery at the health institution increases the rate of timely starting of breastfeeding [14,19,23].

This study revealed that those mothers who had breast disease were less likely to initiate breast sucking than mothers who had no breast disease. The same to this finding, according to studies done in India, breast abnormality like inverted/ retracted nipples was identified major barriers to starting of suckling identified included [25-30]. In fact, if the breast of the mothers was infected there might be high probability not initiating sucking due to the pain and also the risk to infect the baby was dramatically higher.

The mothers who had good awareness about breast sucking were 4.23 times more likely to start breastfeeding than those who had poor awareness about timely starting of breastfeeding. This is because the mother becomes and prepares herself for timely breastfeeding. This finding is supported by study in urban dwellers Western Ethiopia showed that good awareness increases the rate of timely starting of breast sucking [16,31,32]. However, small sample size, selection bias and recall bias may be introduced since



this study also included mothers who experienced childbirth up to 6 months of the data collection period.

Conclusion

More than two third of the respondents timely initiated breastfeeding. Presence of Antenatal care follow up on current baby, baby placed on the abdomen of mothers immediately after birth, vaginal delivery, institutional delivery and knowledge of breastfeeding was significantly associated with timely starting with breastfeeding. Therefore, we would like to recommend to Gunchire primary Hospital staffs work at MCH clinic recommend them to provide appropriate services and stimulate the mothers to initiate breastfeeding, skin to skin contact enhancing within the first hour of birth.

Declarations

Ethical approval and consent to participate

Ethical approval of research was obtained from the research ethical review committee of Wolkite University, college of medicine and health sciences. After an appropriate permit obtained, official letter was given to concerned stakeholders. Verbal and written informed and signed consent were obtained from each participant, and for under 16 years old from their parents, before starting to administer the questionnaire. Purpose and procedure of the study were explained and informed consent was obtained from the study participants. Any information obtained from participants during the study kept confidential. Finally, data was collected by respecting the right of others, culture, norms, and other ethical issues.

Authors' contributions

EY wrote the paper, participated in data analysis and prepare the manuscript, approved the proposal with some revisions, and revised subsequent drafts of the paper, TT participated in data collection, drafted the paper. All authors read and approved the final manuscript.

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