

Fathers' Involvement in Breast Feeding Practices and Associated Factors among Households having Children Less than Six Months in Southern Ethiopia: A Cross Sectional Study

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Received date: Oct 26, 2016; Accepted date: Dec 30, 2016; Published date: Jan 02, 2017

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Abstract

Background: Fathers have an important but often neglected role in the promotion of healthy breastfeeding practices. Evidences show that mothers who have a supportive and encouraging partner are more likely to plan to breastfeed and to breastfeed for a longer duration. Despite this benefit, breastfeeding promotion efforts have largely targeted mothers, and to a lesser extent, grandmothers, but fathers have often been overlooked.

Objective: To assess the involvement of fathers in breastfeeding practices and associated factors among households having less than six months children in Misha woreda, Southern Ethiopia.

Method: A community based cross-sectional study involving both quantitative and qualitative approaches was conducted from March 1-30/ 2016. Bivariate and multivariable logistic regression analyses were employed to identify factors associated with fathers' involvement in breastfeeding practices. Strength of association was measured using adjusted odds ratio with 95% CI. Statistical significance was declared at $p < 0.05$.

Results: Fathers' involvement in breastfeeding practices was 72.4%. Factors that were significantly associated with fathers involvement in breast feeding practices include educational status of fathers [AOR=4.113, 95%CI=(2.010, 8.414)], monogamy matrimonial status [AOR=8.473, 95%CI=(2.982, 24.079)], visiting health facility [AOR=5.864, 95% CI=(2.703, 12.644)], having wives with good perception about fathers involvement [AOR=5.616, 95% CI=(3.124, 10.099)] and having media information source at home [AOR=1.771, 95% CI=(1.036, 3.027)].

Conclusions: Fathers' involvement in breastfeeding practices was good in Misha woreda. Predictors of fathers' involvement in breastfeeding practices were educational status, monogamy matrimonial status, visiting health facility, having wives with good perception about their husbands' involvement in breastfeeding practices and having media information source at home. Further longitudinal studies need to be undertaken to establish casual relationship between estimates.

Keywords: Fathers involvement; Breastfeeding; Ethiopia

Introduction

Breast milk is a natural food that serves as a complete source of infant nutrition, for the first six months of life. It contains all the necessary nutrients provided in a bioavailable and easily digestible form, protecting both mothers and children against illness and diseases with immunological properties [1]. WHO and UNICEF recommend all mothers should breastfeed their children exclusively for the first six months of life and addition of complementary foods at six months with continued breastfeeding till two years and above which if followed appropriately can decrease infant mortality and prevent malnutrition, especially in developing countries. It is also recommended that breastfeeding should begin within one hour after birth. In addition, early initiation of breast feeding should be promoted and prelacteal feeds should be discouraged [2]. However, fewer than 40% of infants less than six months of age are exclusively breastfed worldwide [3]. In

developing countries 39%, in Africa 35% [4] and in Ethiopia 52% of infants less than six months received exclusive breast feeding [5].

A combination of complex factors influence infant feeding decisions, including knowledge, attitudes, traditions, societal norms, and support from partners, family members, and the wider community [6]. The majority of women want to breastfeed; the challenge is that many women face barriers in their communities, their health care experiences, their workplaces, and even their own families. Everyone has a role in helping women overcome the barriers to breastfeeding success. Fathers, in particular, can be one of the most powerful allies in helping aspiring breastfeeding mothers succeed [1]. They have an important role to play in ensuring optimal child growth and development through appropriate infant and young child feeding (IYCF), regardless of the cultural setting. Experience in the field suggests that failure to include fathers in IYCF behavior change interventions may limit efficacy and effectiveness of the program. Infant and young child feeding promotion efforts have largely targeted mothers, but fathers have often been overlooked. Less targeted fathers'

actions can directly and indirectly influence mothers' ability to follow breastfeeding recommendations [7].

This is further supported by findings from qualitative studies. Focus group discussions (FGDs) and semi-structured interviews conducted separately with health providers and men and women of childbearing age as well as community elders revealed strong maternal intentions to breastfeed and good overall knowledge of the benefits of breastfeeding. However, Social pressures often overrode mothers' intentions to exclusively breastfeed, leading to mixed feeding in the early postpartum period [8]. Few studies have been done to gain an understanding into fathers' roles in infant and young child feeding in developing worlds including Ethiopia. Therefore, this study aims at assessing the involvement of fathers' in breast feeding practices and associated factors among households having children less than 6 months in Misha Woreda, Southern Ethiopia.

Materials and Methods

Study design, subjects and setting

A community based cross-sectional study involving quantitative approach was conducted on mothers with children less than six months in Misha woreda, from March 1 to 30/2016. In addition, we used a qualitative approach to explore inherent views of the participants and further build-up and supplement the results of quantitative study. Misha woreda is one of the districts in Hadiya Zone, Southern Ethiopia located 248 km away from a capital city, Addis Ababa and 212km from the regional capital town, Hawassa. More than 95% of the population is engaged in agriculture. The woreda has 35 kebeles with a total population of 157911 (Males=76903; Females=81008). Estimated number of less than 6 six month infants in woreda is 2637. There are 35 primary schools and four high schools in the woreda. The woreda has 42 health institutions (35 health posts and 7 health center) [9].

Sample size and sampling procedures

The sample size was determined using single population proportion formula with the following assumptions: a 95% confidence level, margin of error (0.05), proportion of father's involving in breast feeding practice ($p=0.5$) as there was no similar study in the country and 10% of non-response rate. Hence, the total required sample size for the study was 422.

From the 35 kebeles found in the woreda, 11 kebeles (1 urban and 10 rural) were selected using lottery method. List of households with the study subjects were identified using community health management information system (CHMIS) folder in the health post for rural kebeles and through census for urban kebele. After proportionally allocating the sample size to the selected kebeles, study participants were selected using computer generated random number. The name and address of mothers having infants less than 6 months were specified and their location was identified in collaboration with the kebele's health extension workers and health development army leaders. Identified mothers were then interviewed in their home. Mothers who were critically ill or could not talk or listen during data collection period and who were not permanent resident of the study area were excluded from the study. Purposive sampling technique was used to select husbands of mothers having children under 6 months and health workers for qualitative study.

Data collection procedures

Quantitative data were collected using pretested, structured, interviewer-administered Hadiyisa language version questionnaire. Data were collected by seven female diploma nurses while data collection process was supervised by two health officers. Questions were directed to the mothers to avoid social desirability bias that could happen if they were rather directed to the fathers. Accordingly, besides socio-economic and demographic and other questions in the data collection tool mothers were asked 11 specific questions regarding their husbands' involvement in breastfeeding. Interviews were conducted at the mother's home. Data collection was supervised at each study kebele by 2 health officers. Each day questionnaires were checked for completeness and consistency by principal investigator and supervisors.

For qualitative study, four FGDs having an average of eight participants were conducted with fathers having children under six months and two in-depth interviews with health workers who were working in maternal and child health (MCH) clinics. FGD guide was prepared for fathers and in depth interview guide for health providers to explore information on barriers of fathers' involvement on breast feeding practices. FGDs were conducted with purposely selected husbands of mothers having infants less than six months and in-depth interview with health professionals in the woreda health sectors. The FGDs were conducted with four different groups of fathers having less than six months children, the first group contained seven fathers who visited health facility with their wives, the second group included seven fathers whose wives were participated in quantitative study, the third group comprised of eight fathers whose wives did not participate in quantitative study and the last group contained randomly selected nine fathers who had less than six months children. Each discussion took an average of 60-80 minutes. Each discussion session was tape recorded and notes were taken additionally. The discussion was moderated by one public health professional whereas another public health professional took note and tape records of the discussions. The in-depth interview was conducted with two health professionals who were working in MCH clinics of Morsito and Geja health centers. It was held in quit and comfortable place. Each interview sessions were tape recorded and notes were taken. Discussion session ended when information saturation occurred.

Quality control measures

Pre-testing was done on 5% of sample size before the actual data collection in Misha woreda outside the selected kebeles in order to ensure that respondents are able to understand the questions and to check the wording, logic and skip order of the questions in a sensible way to the respondents. Amendments were made on some questions after pre-testing.

In addition, the following quality control measures were taken; questionnaire was prepared first in English and then translated to local language of Hadiyisa and back translated to English by a third person who was native to Hadiyisa and had experience in translation, data collectors were selected based on ability to speak the local language and previous experience of data collection, and data were collected after training data collectors. Further, every questionnaire was crosschecked daily by supervisors and the principal investigator to secure a problem if any.

Operational definitions

Fathers' involvement in breastfeeding practice was assessed using 11 questions (Encourage and/or accompany on health service utilization and counseling, encourage immediate initiation of breast feeding after birth, encourage colostrum feeding, discourage prelacteal feeding, encourage BF on demand day and night, encourage EBF for six months, psychologically supporting, do direct child care, do other house hold chores, provide additional food for BF mother and allow/ encourage to BF in front of others/in public places) that were directed to the mothers to avoid social desirability bias that could be indirectly introduced if the fathers themselves were directly asked. From these 11 questions directed to the mothers, variable scores of six and above were considered as good fathers' involvement while variable scores of below six were considered as poor fathers' involvement in their wives breastfeeding practices. Perception of mothers towards fathers' involvement in breastfeeding practices was also assessed using 7 questions that were directed to the mothers. The questions asked had the following components asked in such a way that whether or not fathers would; have an important role in breast feeding practice, would do direct child care, help breastfeeding mothers with house hold chores, have to support/encourage breastfeeding mothers, provide breastfeeding information, would have important role to be involved in counseling session, improve breast feeding practice. Mothers who scored four and above among the listed seven questions were considered as having good perception towards fathers' involvement in breast feeding practices while those who scored below four were considered as having poor perception towards fathers' involvement in breast feeding practices.

Statistical analysis

Data were entered into Epi data version 3.1 and exported to SPSS version 20 for window for further analysis. Descriptive statistics were used to describe the study variables. Bivariate analysis was performed to see the existence of association between fathers' involvement in breastfeeding practices and different independent variables using multivariable logistic regression model. Variables with P-value<0.25 in the bivariate analysis were considered as candidates for multivariable analysis and hence, entered into multivariable logistic regression model to control for possible confounding factors. Results were reported as odds ratio with its 95% confidence interval to see the strength of association and statistical significance was declared at p-value less than 0.05.

FGD discussion and in-depth interview data were transcribed word by word into the Hadiyisa language and then translated into English language. Then similar responses were grouped and summarized based on thematic area or the key variables of the study and results were analyzed according to their thematic area descriptively. Finally, results of the qualitative study were triangulated with the quantitative results.

Ethical clearance

The study protocol was approved by Jimma University College of Health Science Institutional Review Board. Letter of cooperation was obtained from Administration of Misha woreda health office to the selected kebeles. Verbal informed consent was taken from each study participant after clear discussion or explanation about purpose of the study, while the study subjects right to refuse to be involved in the study was at any time was ensured before the study starts.

Results

A total of 417 mothers having less than six months children in Misha woreda were included in the study yielding a response rate of 98.8%. The mean age of the mothers was 28.08 (SD+5.225) years. Majority of the mothers, (61.2%), attended primary education while (30.7%) attended secondary education and above. Majority of the mothers, (78.4%), were housewives followed by farmers accounting for 44 (10.6%). Only 34 (8.2%) and 4 (1%) mothers were government workers and merchants, respectively

The mean age of fathers was 35.64 (SD+6.023) years. About half, 209 (50.1%), of the fathers were aged above 35 years while 176 (42.2%) were in the age range of 25 to 35 and the remaining 32 (7.7%) were aged less than 25 years. Moreover, the majority, 386 (92.6%), of the fathers were monogamous and 31 (7.4%) of them were polygamous. About two-third, 258 (61.9%) of the fathers were farmers, followed by merchants and government workers both accounting for 54 (12.9%). The majority, 375 (89.9%), of the fathers were rural residents. About three fourth, 72.2%, of fathers had more than one child while less than one third, 27.8%, were first time fathers. Further, about two-third, 69.1%, of the fathers were protestant followed by Orthodox 19.9% by religion. Nearly half (42%) of the fathers attended secondary education and above while a majority, (54.7%), of them attended primary education.

Two hundred sixty six households (63.8%) had either television or radio as media for information source in their home. More than half (58.8%) households had low monthly income (Table 1).

Perception of mothers about involvement of fathers in breastfeeding and cultural factors.

Regarding mothers perception, 322 (77.2%) of mothers had good perception about involvement of fathers in breast feeding practice while the remaining 95 (22.8%) had poor perception towards fathers involvement in breast feeding practice. Two hundred eighty eight (69.1%) mothers responded that there is no any cultural norm which hinders male involvement in breastfeeding in their community while 77 (18.5%) of them responded some cultural norms hinder male involvement and the remaining 52 (12.5%) responded as they do not know about whether there exist cultural norms that hinder or not the fathers involvement in breastfeeding.

Breast feeding history

Four hundred fourteen (99.3%) mothers had ever breast fed the index child while 370 (88.7%) of them didn't give any prelacteal food or fluid and 47 (11.3%) gave prelacteals. Majority, 396 (95%), of the children received first milk (colostrum) and 340 (81.5%) children initiated breastfeeding within the first one hour after birth. Moreover, 413 (99%) mothers reported their children were currently breast feeding during data collection time out of which, 355 (85.1%) fed more than eight times a day. About two-third, 272 (65.2%) of the children were exclusively breast fed by their mothers (Figure 1).

Fathers involvement in breastfeeding practices

Regarding fathers involvement status, 302 (72.4%) of the fathers had good involvement in breast feeding practices and 115 (27.6%) had poor involvement practices (Figure 2).

Variable	Category	Frequency	Percent
Fathers age	≤ 35 Years	208	49.9
	>35 Years	209	50.1
Fathers residence	Urban	42	10.1
	Rural	375	89.9
Father religion	Protestant	288	69.1
	Orthodox	83	19.9
	Muslim	36	8.6
	Catholic	10	2.4
Father marital status	Monogamy	386	92.6
	Polygamy	31	7.4
Fathers educational status	≥ Grade 9	175	42
	Grade 1-8	227	54.4
	Illiterate	15	3.6
Mothers educational status	≥ Grade 9	128	30.7
	Grade	259	62.1
	Illiterate	30	7.2
Fathers occupation	Government	54	12.9
	Merchant	54	12.9
	Farmer	258	61.9
	Daily laborer	41	9.8
	Others	10	2.4
Mothers occupation	Government	34	8.2
	Farmer	44	10.6
	Housewife	327	78.4
	Other	12	2.9
Having media information source (TV/Radio)	Yes	266	63.8
	No	151	36.2
Household monthly income (ETB)	Low (<900)	245	58.8
	Medium (900-2000)	134	32.1
	High (>2000)	38	9.1

Table 1: Socio-demographic and economic characteristics of respondents in Misha Woreda, Southern Ethiopia, 2016.

Factors affecting fathers' involvement in breast feeding practice

Fathers' involvement in breast feeding practice was assessed for its association with selected variables. First bivariate analysis was undertaken to identify candidate variables for multivariable logistic regression analysis and variables having p-value<0.25 were considered

as candidate variables multivariable analysis. In the bivariate analysis educational status of the mothers, having TV/Radio, marital status of the fathers, educational status of the fathers, age of the father, number of children owned by father, fathers having health facility visit and mothers perception had p-value<0.25 and hence, entered into multivariable regression model. Accordingly, father educational status, fathers having health facility visit, mothers perception and having

media information source (TV/Radio) in home were significantly associated with fathers' involvement in breast feeding practices after adjusting for possible confounders using multivariable logistic regression. Fathers attending secondary education and above were 4.9 times more likely to have good involvement in breast feeding practices than those fathers attending below grade eight (AOR=4.961, 95% CI=2.483, 9.91). Those fathers who visited health facility with their wives were 5.5 times more likely to have good involvement in breast

feeding practices than their counter parts (AOR=5.472, 95% CI=2.67, 11.223). Those fathers whose wives were having good perception towards male involvement were 5.6 times more likely to have good involvement in breast feeding practices compared to their counter parts (AOR=5.616, 95%; CI=3.124, 10.099). Fathers having TV/Radio in their home had 1.8 times more odds of having good involvement in breast feeding practice than those fathers who didn't have TV/Radio in their home (AOR=1.771, 95% CI=1.036, 3.027) (Table 2).

Variables		Fathers involvement in breast feeding practice		COR (95% CI)	AOR (95% CI)
		Good involvement	Poor involvement		
Fathers educational status	Grade ≥ 9	161 (92%)	14 (8%)	8.238 (4.508, 15.054)	4.113 (2.010, 8.414)**
	Grade < 9	141 (58.3%)	101 (41.7%)	1	1
Fathers marital status	Monogamy	294 (76.2%)	92 (23.8%)	9.187 (3.975, 21.236)	8.473 (2.982, 24.079)**
	Polygamy	8 (25.8%)	23 (74.2%)	1	1
Number of children owned by the father	First time fathers	96 (82.8%)	20 (17.2%)	1.91 (1.131, 3.228)	0.681 (0.337, 1.376)
	Fathers of ≥ 2	206 (68.4%)	95 (31.6%)	1	1
Fathers health facility visit	Yes	157 (93.5%)	11 (6.5%)	10.234 (3.285, 19.829)	5.846 (2.703, 12.644)**
	No	145 (58.2%)	104 (41.8%)	1	1
Mothers educational status	Grade ≥ 9	113 (88.3%)	15 (11.7%)	3.986 (2.208, 7.195)	1.583 (0.745, 3.366)
	Grade < 9	189 (65.2%)	100 (34.6%)	1	1
Mothers perception	Good	263 (81.7%)	59 (18.3%)	6.401 (3.895, 10.519)	6.205 (3.237, 11.893)**
	Poor	39 (41.1%)	56 (58.9%)	1	1
Have TV/radio in home	Yes	218 (82%)	48 (18%)	3.623 (2.314, 10.519)	1.785 (1.005, 3.172)*
	No	84 (55.6%)	67 (44.4%)	1	1

** p<0.001, *p<0.05 Hosmer and Lemeshow test to check model fitness=0.664.

Table 2: Multivariable logistic regression model for fathers' involvement in breast feeding practices in Misha Woreda, South Ethiopia, 2016.

Discussion

The present study demonstrated that majority of the fathers had good involvement in breastfeeding practices of children by their respective mothers. Evidence shows fathers play a key role in child health and survival and higher levels of paternal support and encouragement are linked with greater maternal confidence to breastfeed. It was also observed that mothers who had a supportive and encouraging partner were more likely to plan to breastfeed and to breastfeed for a longer duration as well [10]. The result of our study revealed that 72.4% of fathers were involved in child a breast feeding practice which is higher as compared with a cross-sectional study conducted in Kathmandu district, Nepal, in which 58.7% of men encouraged their partners for exclusive breast feeding [11]. The probable reason may be the recent policy implementation on the use of health extension workers to promote nutrition including breastfeeding as part of the sixteen health extension packages of the health extension program in Ethiopia.

Health system neglecting male partners were considered as factor for fathers' poor involvement in breastfeeding practices. In this study, fathers who accompanied their wives to health facility visits were more likely to be involved in breastfeeding practice compared to their counterparts. This finding is in line with the studies conducted in Nicaragua, Nepal, Eastern Uganda, Australian and Tanzania where husbands visiting health facility along with their wives had more odds to get involved in the breastfeeding practice [12,13-16]. This finding is also similar with the finding in which spouses who accompany their partners for antenatal visits were more likely to be involved in child caring practices [17]. In addition, other research finding also showed that women who have strong social support from their partners are more likely to initiate and continue breast feeding [18]. This might be due to the fact that fathers who accompanied with their wives may get relevant health care information and counseling from health facilities which might help them to be involved in breastfeeding. Indeed, majority, 66.7%, of partners who visited health facility together with their wives participated counseling session while the remaining

received only information. This finding is further supported by qualitative finding where a 26 years old female health provider said, "..... It is better to invite and incorporate male partners in breastfeeding counseling because they can get cumulative knowledge and if fathers are involved in counseling sessions and become aware about importance of breastfeeding, they will give better support to their wives in breastfeeding and child caring practices."

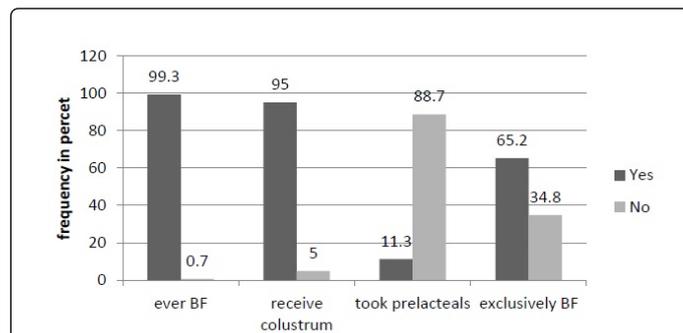


Figure 1: Breast feeding history of children under six months in Misha Woreda, Southern Ethiopia, 2016.

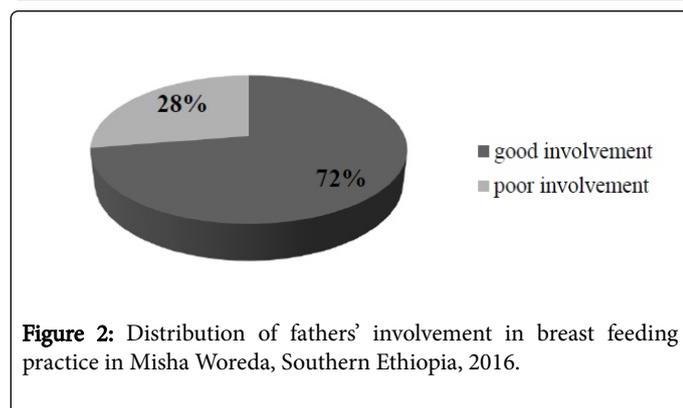


Figure 2: Distribution of fathers' involvement in breast feeding practice in Misha Woreda, Southern Ethiopia, 2016.

In this study, fathers having wives who had good perception towards their husbands involvement in breastfeeding practices were more likely to get involved in breast feeding practices. This finding is in agreement with the study conducted in Brazil in which fathers were oscillated during the pregnancy-childbearing cycle because they were prevented, by their wife and mother-in-law from participating in the breast feeding process [13]. This finding is also similar with the research finding in America in which fathers with expecting partners have been observed to be good influencers in encouraging mothers to exclusively breastfeed their infants [19]. This finding is also supported by qualitative finding. A 37 years FGD participant said, "... previously we perceive child care as women's work and sometimes grandmothers and elder female children responsibility, also grandmothers and mothers don't give chance for fathers to care for their child but now a days everyone has the responsibility to practice child care and women are also expecting fathers to give care to their children."

Educational status of fathers was another independent predictor of their involvement in breastfeeding practices of their children by their wives in that fathers who had secondary education and above were more likely to be involved in breast feeding practices of their children. This could be explained by the fact that fathers who had better education could have better information and better understanding

about the importance of breastfeeding to their children. In contrary, another study showed that men who were uneducated or had primary level education encouraged exclusive breast feeding [11].

Moreover, having TV/Radio as a source of information in the home was another predictor significantly associated with involvement of fathers in the breastfeeding practices. Fathers who had media information source in their home had higher odds of being involved in the breastfeeding practices. This finding is supported by the study finding in Zambia in which TV advertisement on exclusive breast feeding and nutritional education helped them to be involved [20]. Our finding is also in line with the study finding in Nicaragua, in which men who were exposed to radio messages and other community activities have played a role in influencing their behavior which helps them to be involved in maternal and neonatal health care practices and child caring [21]. This finding is supported by the qualitative finding where a 42 years old father said, "...while listening to radio, I heard that fathers can also care for their children. This motivated me to care for my child and I learned a lot of things that is expected from parents for their children and its importance for their children".

Another 43 years old father from FGD also stated that, "... in media I heard that infants under six months do not need any additional food and only breast milk is enough for the baby's health and development; then I discussed on the information with my wife immediately and she also told me that it was real information that she heard from health providers and lastly we agreed not to give any food/fluid until six months".

In this study monogamous fathers were more likely to be involved in breastfeeding practices compared to polygamous fathers. This finding is similar with the finding from Democratic Republic of Congo, Kinshasa, in which monogamous and co-habiting men were more likely to be involved in maternal and child health practices [22]. However, this finding is in contrary with the finding from Eastern Uganda, in which men in polygamous relationships were highly involved in maternal and child health practices than their counter parts [23]. Possible reason in our case might be mostly monogamy fathers have smooth relationship with their wives and are more likely to be available in their home, which might lead them to be more involved in child caring practices.

We acknowledge limitations for our study. Since our study focuses on mothers' perspective of fathers' involvement in breastfeeding, it may overestimate or under estimate the fathers' involvement level. It also shares the limitations of cross-sectional studies and hence it might suffer from temporal relationship establishment in establishing casual relationship between the estimates. However, our study has some strength. As Ethiopian national nutrition program is targeting children and mothers to overcome malnutrition and its negative health, social and economic consequences, this study tried to address paternal involvement in the context of child breastfeeding practices which if promoted could improve the overall health and survival of children.

Conclusions

Majority of fathers had good involvement in breast feeding practices in Misha woreda in Ethiopia. Factors such as better educational status of fathers, having media information source in the home, health facility visits of fathers with their wives and good perception of mothers towards their husbands' involvement in breastfeeding practices were significantly associated with involvement of fathers in breast feeding practices. Hence, it is important to promote fathers'

involvement in breastfeeding practices through incorporating fathers in health facility counseling, promoting their education, availing information sources and by improving mothers' perception of the role of fathers in breast feeding practices. Further longitudinal studies need to be undertaken to establish casual relationship between estimates.

Acknowledgments

The authors acknowledge Jimma University College of health sciences for funding the study. The authors deemed to verify that the received funds were only to undertake the research works and the funds didn't cover costs to publish the results in scientific journals as this is MSc thesis work to support the first author, MA, to get graduated her MPH in Reproductive Health from Jimma University, Ethiopia.

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