

Fathers' Attitudes Toward Mothers with Infants and its Association with Exclusive Breastfeeding in a Rural Community of Karnataka

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Abstract

Male participation in reproductive and child health improves breastfeeding rates. The role of fathers in breastfeeding may be crucial in improving exclusive breastfeeding (EBF) rates. This study explored the fathers' attitudes and support and its association with EBF in mothers with infants attending a rural primary health center in Karnataka. A cross-sectional descriptive study was conducted on mothers with infants visiting a rural primary health center between December 2020 and February 2021. A pretested semi-structured questionnaire was used to collect data to ascertain the exclusivity of breastfeeding and other sociodemographic factors. The fathers' attitudes and support toward mothers during and after pregnancy were measured on a 5-point Likert scale. Quantitative variables were expressed in median and interquartile ranges, and qualitative variables were expressed using percentages and proportions. The association was determined using the Chi-square test and Spearman's correlation test. The data were collected using Epi Data and analyzed using Epi info v 3. A total of 169 mothers participated in the study. The self-reported EBF was 148 (87.1%). The fathers' attitudes and support to the mothers were found to be more favorable during the antenatal period in 97% of the women. The fathers' attitudes and support in the antenatal period and after delivery were not associated with the mothers' exclusivity in breastfeeding. The present study concluded that there is no association between the fathers' attitudes and support before and after the delivery of the infant and mothers' exclusivity in breastfeeding.

Keywords: Breastfeeding, exclusive breastfeeding, fathers, infants, mothers, support

INTRODUCTION

Breastfeeding is vital as it is an infant's sole nourishment for the first 6 months of life. The breastfeeding duration and exclusivity determinants include demographic factors such as maternal age, maternal education, ethnicity, obesity, and maternal smoking. The attitudinal attributes of higher maternal efficacy and maternal attitudes play an important role in determining and contributing positively to breastfeeding duration and exclusivity.^[1] Exclusive breastfeeding (EBF) can be defined as feeding infants with only breastmilk without other liquids such as water, herbal preparations, or any food during the first 6 months of life except for vitamin and mineral supplements and medications, as indicated by healthcare personnel.^[2] Adopting appropriate EBF may reduce up to 13% of deaths in children under 5 years. Healthy growth can be assured if the child is exclusively breastfed during the first

6 months. The EBF rates improved substantially from 46.4% in the NHFS-3 survey to 54.9% in the NFHS-4 survey. However, the World Health Organization (WHO) aims to achieve global breastfeeding rates to more than 50% by 2030 according to the Sustainable Development Goals (SDG).^[3] A review article on male participation in projects in low- and middle-income countries showed that the involvement of males in support of expecting mothers would significantly improve EBF rates.^[4] In the Indian context, a marginal increase in the EBF rate from 46.4% in NHFS-3 to 54.9% in NFHS-4 has been seen.^[5] The

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role of fathers in supporting mothers concerning breastfeeding up to the first 6 months of the infant may be important in improving breastfeeding rates in general. However, few studies have explored the role of the father/spouse's support in mothers with infants concerning EBF. Studies have shown that the father or spouse's role in breastfeeding may significantly improve the mother's nursing quality.^[6] A study by Sherriff N *et al.*^[7] in 2014 showed that the father's support was a decisive factor in breastfeeding. A study in New Zealand showed that the practical and emotional support of the fathers was significantly associated with the successful establishment of breastfeeding patterns in mothers.^[8] A study by McIntyre E and Clifford J showed that mothers' social support with skills and positive attitudes toward breastfeeding played a vital role in mothers' breastfeeding patterns.^[9] A qualitative study by Hansen E, Tesch L, and Ayton J showed that fathers' views on breastfeeding profoundly influence mothers' intentions to breastfeed their babies exclusively.^[10] However, these studies did not examine the fathers' attitudes and support to mothers with infants, especially concerning EBF. The current study explores the role of the fathers' attitudes and support to mothers during and after pregnancy and its association with EBF among these mothers with infants attending a rural primary health center in Karnataka. The study's objectives were to determine the association between EBF and attitudes of the father's support to mothers with infants attending a rural primary health center in a coastal region of Karnataka.

MATERIALS AND METHODS

A cross-sectional descriptive study was conducted on mothers with infants (<1 year of age) visiting a rural primary health center's outpatient department between December 15, 2020 and February 15, 2021.

Data collection tool development

A pretested, semi-structured questionnaire was specially designed for the study. The questionnaire contained 20 potential attitudes indicating the fathers' support among mothers. These questions on attitude were derived deductively from the authors' extensive literature review. The fathers' attitudes regarding supporting the mothers during and after the pregnancy were listed, and subject experts were contacted to ascertain the content and face validity of the study tool.

The study was validated by five doctors working in a medical college, of whom two were fathers who currently were taking care of an infant, two were mothers with infants, and one was an obstetrician. After face and content validation, the pretested semi-structured questionnaire was used to collect data about the mother and the child. The questions included the age of the mother and child, birth order, sex, mode of delivery of the child, and 20 items regarding "father's support" in EBF. The study carried a written information sheet and oral informed consent to the participating mothers. Participation in the study was voluntary. The questionnaire was translated into the Kannada language and was pilot-tested on 15 mothers with infants.

Details regarding the study tool

The attitudes and support of the fathers to the mothers during and after the pregnancy were graded on a 5-point Likert scale (4 points for strongly agree, 3 points for agree, 2 points for neither agree nor disagree, 1 point for disagree, and 0 points for strongly disagree) during the three periods. These 20 questions were further divided into antenatal, natal, and postnatal experiences of the mothers with infants. The study tool contained five questions on support for breastfeeding antenatally, seven questions on EBF experiences during delivery and immediate Post partum among mothers, and six on expected breastfeeding support in general to the mothers with infants postnatally up to 2 years.

The scores of the attitudes were arranged in order of appearance- Antenatal support, EBF support for the first 6 months, breastfeeding support during delivery and the immediate post-partum period up to 6 months, and expected support beyond that provided by the spouse. The scores of the fathers' attitudes and support on the Likert scale were added and graded for the antenatal period as favorable (score of ≥ 10) and less favorable (score of ≤ 9), EBF up support to 6 months as less favorable (score of ≤ 13) and more favorable (score of ≥ 14), and breastfeeding beyond 6 months as less favorable (score of ≤ 11) and more favorable (score of ≥ 12).

Ethical considerations

The study protocol was submitted to the institution's scientific committee. Ethical clearance was obtained from the institution's ethics committee, vide number INST.EC/EC/004/2020-21 dated 21.1.2020. Permission to collect data was obtained from the District Health Officer, the primary health center's medical officer, and the state's medical education department. Mothers with infants were approached, and data were collected after obtaining oral informed consent. Consecutive recruitment of consenting mothers meeting the inclusion criteria was done using purposive sampling at the rural primary health center. This instrument was administered to the mothers to avoid socially desirable answers by the fathers to the persons in question (fathers). The survey explicitly referred to the father's role in the EBF experience of the mother with the infant, which was her last baby. The study excluded any mothers with infants who were HIV positive.

Sample size calculation

The sample size was estimated to be approximately 166 mothers based on the Karnataka state NFHS-4 factsheet that showed that only 40% of the fathers knew the importance of breastfeeding, an essential determinant of the father's support in breastfeeding.^[5]

$$N = \frac{P(1-P)}{e^2}$$

P is the expected true proportion (0.4), and e is the relative precision for small populations (10%). n was adjusted for the population of 300 mothers with infants less than 1 year (given the COVID-19-related restrictions prevailing during the time

of the study) visiting the rural primary health center during the study period of 3 months using the formula

$$(\text{adjusted}) = \frac{(N \times n)}{(N + n)}$$

The responses were entered and analyzed using EPI info v 7 software. Qualitative variables of parents' educational levels, fathers' attitudes toward breastfeeding, socioeconomic status, birth order, gender of the children, type and place of delivery, and exclusivity of breastfeeding were expressed as percentages and proportions. Quantitative variables such as the infant's and parents' age were expressed as mean and standard deviation. The association of fathers' attitudes toward breastfeeding support was determined using the Chi-square test or Fischer's exact test and Spearman's correlation test. A *P* value of < 0.05 was considered significant.

OBSERVATIONS AND RESULTS

Breastfeeding practices among the study population

A total of 169 mothers participated in the study. The mean age of the mothers in the study population was 26.35 ± 3.8 years. The married life of the mothers was 3 (2–6) years with two (1–2) children. The infants of the mother were about 5 (3–7) months of age. Approximately 107 (62.9%) were female infants. Furthermore, 82 (48.2%) of the children were first-order births, and a birth order of 2 or more was seen among 88 (51.8%). Forty-one (23.8%) were normal deliveries. In total, 169 (95.9%) mothers breastfed the previous baby too. Thirty-six (21.1%) mothers initiated breastfeeding within the first hour post delivery, and prelacteal feeds were given in 25 (14.7%). In total, 129 (75.0%) mothers were below the poverty line. Furthermore, 148 (87.1%) infants were exclusively breastfed for the first 6 months. Children weaned either earlier or later than 6 months (21 (12.9%)) were weaned with milk powder.

Attitudes and support of fathers of mothers with infants during antenatal, natal, and postnatal periods

The fathers' attitudes and support toward the mothers are given in Table 1. The fathers' attitudes and support toward the mothers during the antenatal period were the highest (148 (87.6%)) for encouraging them to go for antenatal visits, followed by attending antenatal check-ups (144 (85.2%)) and accompanying her to the healthcare facility during delivery (139 (82.2%)). The fathers' attitudes in the postnatal period were the highest for on-demand breastfeeding of the infants, especially at night (132 (78.1%)), followed by discouraging the mothers from giving prelacteal feeds to the infant (126 (74.6%)), discouraging the mother from feeding the infant with formula during the first six months of delivery (120 (71.0%)), and encouraging feeding the child only breast milk during the first 6 months after delivery (120 (71.0%)), as seen in Table 1.

Association of fathers' attitudes and support to the mother during antenatal, natal, and postnatal periods and exclusive breastfeeding up to 6 months

The support and attitudes of the fathers to the mothers during

the antenatal period (164 (97.0%)) and breastfeeding in the first 6 months (137 (81.1%)) were found to be more favorable to the support and attitudes of the fathers to the mothers breastfeeding beyond 6 months period (80 (47.3%)). However, the association of attitude and support of the fathers to the mothers was not significantly associated or correlated to the EBF of the infants, as seen in Table 2. Specific fathers' attitudes toward mothers with infants that may have influenced the breastfeeding rates were not further analyzed as no statistical significance was observed in bivariate analysis.

DISCUSSION

The study explored the association of the fathers' support and attitude toward mothers with infants and its association with the EBF rates among mothers attending a primary health center in a rural coastal region in Karnataka. The EBF rates in the present study were higher than those in the study by Karande S Perkar S in 2012 on EBF rates conducted in Mumbai (34.9%).^[9] The EBF rate in the current study was 75%, comparable to the EBF rate of 69.4% as per NFHS-4 in Karnataka.^[11,12] In the present study, less than half of mothers (21.2%) initiated breastfeeding within 1 hour of delivery, which was much lower compared to the nationally representative data (41.5%) of the National Family Health Survey (NFHS-4).^[13]

The study by Karande S and Perkar S also showed that the infant feeding attitude score was significantly correlated to the score of the husbands' attitudes and support to the mothers, showing that their attitudes did support breastfeeding.^[8] However, the fathers' attitudes showed no bearing on the time duration of EBF among the mothers, similar to the findings in the present study.^[11] A systematic review conducted by Mahesh PKB *et al.*^[14] showed that fathers' involvement in promoting breastfeeding had favorable outcomes in EBF up to 4 months of age and six other outcomes related to breastfeeding, contrary to the present study results. Moreover, the present study showed that with the recent developments in the Integrated Child Development Scheme, even women with less education are becoming aware of optimum micronutrient intake among their children (formula feeding), similar to the study conducted by Mittal N and Meenakshi JV.^[15]

The study by Yanti ES and Damayani AD showed that the fathers' financial and emotional support was not related to success in EBF, which was similar to the findings of our study.^[16] This phenomenon may be attributed to the fact that fatherhood in the Indian context is carried out in a "non-patriarchal" manner, exercising household power at the same level as the mother and sharing household chores and childbearing activities.^[15] The study findings are comparable to those of qualitative research done by Tampah-Naah AM, Kumi-Kyereme A, and Amo-Adjei J, which showed that household chores and family influences were few of the challenges faced by mothers toward EBF in Ghana.^[17] A study by Panahi F, Rashidi Fakari F, and Nazarpour showed that the fathers' support for breastfeeding

Table 1: Fathers' attitudes and support toward mothers during and after pregnancy (n=169)

Fathers' attitudes and support	Strongly agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)
Antenatal period					
My husband encouraged me to attend antenatal visits during my pregnancy	148 (87.6)	12 (7.1)	2 (1.2)	4 (2.4)	3 (1.8)
My husband attended the antenatal check-ups with me during my pregnancy	144 (85.2)	11 (6.5)	7 (4.1)	5 (3.0)	2 (1.2)
My husband accompanied me to the hospital during delivery	139 (82.2)	17 (10.1)	6 (3.6)	6 (3.6)	1 (0.6)
My husband considers breastfeeding our child a priority	143 (84.6)	15 (8.9)	4 (2.4)	6 (3.6)	1 (0.6)
My husband encouraged early (within 1 hour of delivery) initiation of Breastfeeding	103 (60.9)	5 (3.0)	4 (2.4)	51 (30.2)	6 (3.6)
Exclusive breastfeeding support in the first 6 months					
My husband discouraged me from feeding any pre-lacteal food to my baby	126 (74.6)	14 (8.3)	1 (0.6)	25 (14.8)	3 (1.8)
My husband discouraged me from feeding our child with formula in the first six months of delivery	120 (71.0)	6 (3.6)	5 (3.0)	35 (20.7)	3 (1.8)
My husband encouraged me to feed our child only my breast milk during the first six months after delivery	120 (71.0)	22 (13.0)	4 (2.4)	22 (13.0)	1 (0.6)
My husband encouraged breastfeeding on demand, especially at night	132 (78.1)	8 (4.7)	6 (3.6)	20 (11.8)	3 (1.8)
My husband was involved in direct childcare of the child (changing the diaper, lulling the child to sleep) during the first 6 months of the child.	99 (58.9)	33 (19.7)	2 (1.2)	30 (17.9)	4 (2.4)
My husband supported me mentally while breastfeeding our child	79 (46.7)	8 (4.7)	2 (1.2)	64 (37.9)	16 (9.5)
My husband assisted me with other household chores (e.g., cooking, washing clothes, cleaning dishes, and general housekeeping) during breastfeeding; our child	85 (50.3)	12 (7.1)	3 (1.8)	57 (33.7)	12 (7.1)
Breastfeeding support beyond 6 months					
My husband provided me with financial support during pregnancy and post-childbirth	92 (54.4)	31 (18.3)	26 (15.4)	18 (10.7)	2 (1.2)
My husband provided me additional food for me when I was breastfeeding our child	63 (37.3)	3 (1.8)	2 (1.2)	76 (45.0)	25 (14.8)
My husband does not mind me feeding our child in a public place	57 (33.7)	5 (3.0)	2 (1.2)	76 (45.0)	29 (17.2)
My husband does not feel embarrassed when I breastfeed in a public place	54 (32.0)	3 (1.8)	5 (3.0)	75 (44.4)	32 (18.9)
My husband did not insist that I join my workplace once the paid leave provided by the employer was over.	84 (49.7)	35 (20.7)	37 (21.9)	9 (5.3)	4 (2.4)
My husband approves of breastfeeding your child until this child is two years of age	55 (32.5)	2 (1.2)	1 (0.6)	82 (48.5)	29 (17.2)

Bold represents the highest percentage

Table 2: Association of attitude and support of the fathers to the mothers and exclusive breastfeeding of the infants (n=169)

The attitude and support of the fathers in the antenatal period to the mothers and exclusive breastfeeding of the infants	Exclusive Breastfeeding n (%)		Table value [#]	P	Correlation co-efficient [†]	P	
	No	Yes					
Antenatal period	Less favorable (n=5)	4 (80.0)	1 (20.0)	0.22	0.507	-0.36	0.64
	More favorable (n=164)	143 (87.2)	21 (12.8)				
Exclusive breastfeeding support in the first 6 months	Less favorable (n=32)	30 (93.8)	2 (6.2)	1.597	0.257	0.097	0.209
	More favorable (n=137)	117 (85.4)	20 (14.6)				
Breastfeeding expected support beyond 6 months	Less favorable (n=89)	81 (91.0)	8 (9.0)	2.695	0.114	0.126	0.102
	More favorable (n=80)	66 (82.5)	14 (13.0)				

Bold represents the highest percentage, P value of <0.05. [#]Table value for Fischer's exact test. [†]Correlation coefficient- Spearman's correlation

showed a marked improvement in the mothers' breastfeeding practices in the intervention group compared to the control group, where although there was a decrease in fathers' support in breastfeeding, no changes in mothers breastfeeding practices were seen.^[18] However, our study did not show any association between fathers' attitudes toward supporting mothers with infants and the exclusivity of breastfeeding.

The present study has a few limitations. The study was done during the COVID-19 pandemic, which may have affected the attendance

of the mothers attending the PHCs. Given job uncertainties, the spousal support during the COVID-19 pandemic may have adversely affected the fathers to support the mothers during and after pregnancy, thereby affecting the study results.

CONCLUSION

The current study showed no association between fathers' support and attitudes and EBF rates among mothers with infants attending a rural PHC in Karnataka.

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Conflicts of interest

There are no conflicts of interest.

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