Original research article

A Community Based Study on the Role of Maternal Education on Antenatal Care Services and Child Care at Various Tribal Villages, Adilabad, Telangana State.

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Abstract

Background: Educated women tend to have a greater awareness of the existence of ANC services , more aware of health problems, know more about the availability of health care services, and utilize the information more effectively than non-educated women . Moreover, higher levels of education tend to positively affect health-seeking behaviors, and education may increase a woman's control over her pregnancy and expose women to more health education messages and campaigns, enabling them to recognize danger signs and complications and take appropriate action. In this study, We tried to analyze to what level the maternal education can influence the antenatal care services and child care.

Methods: A community-based cross sectional study was conducted on 93 randomly selected mothers who have children less than 7years by using a pre-tested structured questionnaire for data collection at various tribal villages, at an average 25kms away from Adilabad town from April-October 2019 . Analysis was done using SPSS for windows version 16, Microsoft excel and Open epi website.

Results: Out of 93 study subjects, 19.3%(18) of the study subjects were not registered for the antenatal services. Higher the maternal education higher the age at pregnancy ($p<0.05$), more preference for deliveries by doctors($p<0.05$) ,more the frequency of exclusive breast feeding, long lasting breast feeding more than a year ($p<0.05$) , less number of children with wasting($p<0.05$).

Conclusion and Recommendation: This study revealed that utilization of ANC services were relatively better for the mother's educated higher than secondary school but they are still low. Educational status is important in having more health seeking behavior . In this study ,it proves that health education is more important than the mere school education which can help to improve knowledge on ANC.

Keywords: antenatal care, maternal education ,health service utilization, tribal

Introduction

Antenatal care services were considered to be key element in the primary health care delivery system of a country which aims for a healthy society. Utilization of Antenatal Care (ANC) services and maternal and child health programs were critically important in a country like India which is experiencing high infant and child mortality rate and maternal mortality rate. As per NFHS-4, Under-5 mortality rate declined in India from 74 in 2005-06 to 54 in 2015-16. Under-5 mortality rate in India was 54 in 2015-16 and in urban ,rural areas, Infant mortality rate was 34, 56 in 2015-16 simultaneously[1]. Over the past sixty years maternal health situation in the country has been staggering despite several changes in a rapidly evolving socio-economic environment. In the last decade, as per the national data, health

indicators including utilization of antenatal care services were as poor as 30% in tribal India [2].

Understanding the effect of infant and young child feeding (IYCF) practices on improving the nutritional status of children under two years of age, the World Health Organization (WHO) developed a set of core indicators to assess IYCF practices [3]. These indicators incorporated both breast-feeding and complementary feeding linked practices. Appropriate feeding practices, therefore, include timely initiation of feeding of solid and semi-solid foods from age 6 months and to improve the quantity and quality of foods children consume, while maintaining breastfeeding [4].

Previous studies conducted elsewhere on factors associated with appropriate complementary feeding practices of children aged 6–23 months show higher maternal and paternal education, better household wealth, exposure to media, adequate antenatal and post-natal contacts, child's sex and age, institutional delivery, low parity, maternal occupation, urban residence, knowledge & frequency of complementary feeding and receiving feeding advice in immunization as determinant factors for appropriate complementary feeding [5].To improve complementary feeding practice through this essential time of growth and development of the child, assessment of complementary feeding practices and its factors are vital [2].

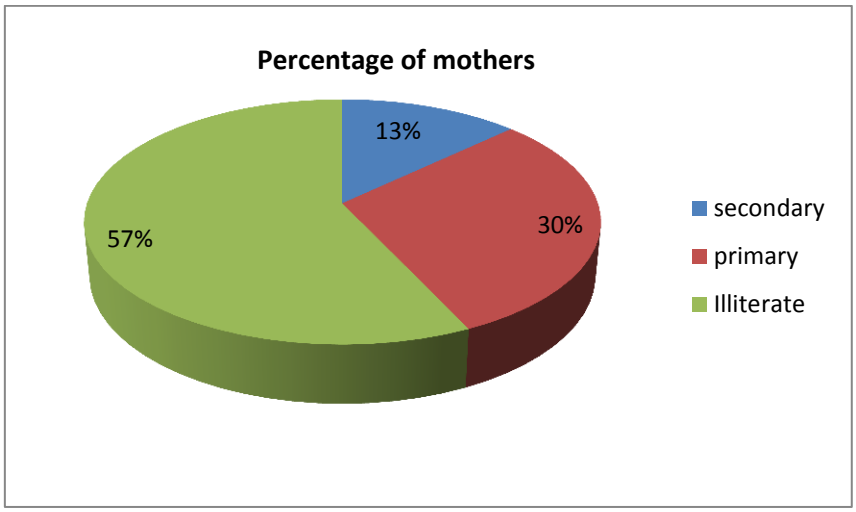
Among the various determinants of nutritional status, parent's education is probably the next most important factor after the socio-economic status. A literate mother uses scarce resources in 2 better manner for the child's welfare than an illiterate mother with higher resources does [6]. D'souza et al believe that the effect of women's education on the nutritional status of their children is exerted through their roles as providers of household health and nutrition [7]. While the relationship between the mother's education and the child's nutritional status is well documented, that between the education of father or the education of both the parents put together and the child's nutritional status is not well established .Benerji et al says that nutrition education of mothers of infants has a positive effect on the nutritional status of their children.[8]

Glewwe (1999) highlights three links through which education may affect child health [9]. Other studies have found a strong link between maternal education, social economic status and child nutritional status. This is because educated women are more likely to get steadier, higher paying jobs; to get married to men with higher education and higher income; and to live in better neighbor hoods, which have influence on child health and survival[10].

Material and Methods:
A community-based cross sectional study was conducted on mothers who have children less than 7years by using a pre-tested structured questionnaire for data collection at Arjuni , Kolamguda ,Lohara , Jamini , Mamidiguda, Nandigama, Kandala, Pothaguda , Dahiguda , Gunjala ,Linguguda , Tekdiguda , Chinna maleboregav ,Pendurluddi tribal villages, at an average 25kms away from Adilabad town from April-October 2019 . The study was conducted on 93 randomly selected women on convenience , house to house visit and taken consent. Analysis was done using SPSS for windows version 16, Microsoft excel and Open epi website.
Inclusion criteria: Mothers who have children less than 7years and Mothers who have undergone the recent pregnancy

Exclusion criteria: Mothers who doesn't give consent were excluded

Results:



Graph 1: Pie chart shows the number and percentage of mothers according to their education status

The study subjects selected for the study were mothers educated more than secondary school were 12(12.9%) ,primary educated were 28 (30%) and illiterate were 53(56.3%)

Table: 1 shows the role of maternal education on Age ,Registration for pregnancy and birth spacing

		Education			
Age	Secondary[n=12]	Primary[n=28]	Illiterate[n=53]	Total	p value
less than 21yrs	5	5	5	15	0.046*
22-30yrs	1	6	6	13	
31-35	6	17	42	65	
registration of pregnancy					
Yes	11	24	40	75	0.316
No	1	4	13	18[19.3%]	
birth spacing					
Primi	5	9	18	32	0.447
12-24m	3	15	21	39	
>24m	4	4	14	22	

The subjects selected for the study were statistically different in their age groups and education ie..higher the maternal education higher was the age at pregnancy($p<0.05$). 19.3%(12) of the study subjects were not registered for the antenatal services. The maternal education and the duration of birth spacing were not statistically associated.

Table: 2 shows the role of maternal education on number of antenatal visits, person conducting delivery and place of delivery.

		Education			
Number of antenatal visits	Secondary [n=12]	Primary [n=28]	Illiterate [n=53]	Total	p value
less than 4	9	21	45[86%]	75	0.488
above 4	3	7	8	18	
Person conducted delivery					
Dai and others	3	18	18	39(41.9%)	**0.026**
Doctor	7	9	22	38	
ANM	2	1	13	16	
Place of delivery					
Hospital	11	21	36	68	0.237
Home	1	7	17[32%]	25	

86%(45 of 53) of illiterate study subjects have less than 4 antenatal visits. Higher the education more the preference of doctor and the association is statistically significant($p<0.05$) . 32%(17) of illiterate women were delivered at home .

Table: 3 shows the role of maternal education on birth weight , number of breast feedings per day , exclusive breast feeding , time of stoppage of breast feeding.

		Education			
	Secondary[n=12]	Primary[n=28]	Illiterate[n=53]	Total	p value
Birth weight	2.75+_0.62	2.77+_0.42	2.65+_0.44	93	0.499
Pre-lacteal feeds					
Yes	1	0	6	7	0.474
No	11	28	47	86	
Number of breast feeding per day					
<8	2	6	29	37	0.004*
8 to 12	6	16	21	43	
>12	4	6	3	13	
Exclusive breastfeeding					
less than 6 months	2	6	29	37	0.025*
above 6 months	6	16	21	43	
Total stoppage of breast feeding					
<1yr	2	6	45	53	0.000001*
>1yr	10	22	8	40	

The maternal education and the birth weight of the child were not associated significantly. 7.5%(7) of the study subjects feed their children with pre-lacteal feeds. Higher the maternal education more children were feed more than 8 times in a day , stopped exclusive breast feeding upto 6 months, feed their children with breast milk for more than 1 year and the association is statistically significant.

Table: 4 shows the role of maternal education on baby hospitalization for sickness, proportion of wasting and stunted children.

		Education			
Baby hospitalization	Secondary[n=12]	Primary[n=28]	Illiterate[n=53]	Total	p value
Yes	1	1	8(15%)	10	0.270
No	11	27	45	83	
Weight/age of child					
Wasting	8	27	39[75%]	74[79.5%]	
Normal	4	1	14	19	0.026*
Height/age of the child					
Stunting	7	19	40[75.5%)	66[71%]	
Normal	5	9	13	27	
Total	**12**	**28**	**53**	**93**	0.453

15%(8 of 45) of illiterate women had hospitalized their children during sickness episodes . The children of illiterate mothers were most wasted and the association is statistically significant(p=0.026). 75% [39 of 53] children of illiterate mothers were wasted and 74[79.5%] of study subjects children were wasted. 75.5%(45 of 53) children of illiterate mother child were stunted and 66[71%] of study subjects children were stunted

Discussion:

The subjects selected for the study were statistically different in their age groups and education ie..higher the maternal education higher was the age at pregnancy($p<0.05$). 19.3%(12) of the study subjects were not registered for the antenatal services compared to Bhanwar Singh et al 28% of females not received antenatal care[11]. The maternal education and the duration of birth spacing were not statistically associated.

86%(45 of 53) of illiterate study subjects have less than 4 antenatal visits compared to 40 % of illiterate subjects have less than 4 antenatal visits in the study by Hiyeswar Borah et al[12]. Higher the education more the preference of doctor and the association is statistically significant($p<0.05$)) is similar ($p<0.001$)to the study of Rodgers O Moindi et al [13] 32%(17) of illiterate women were delivered at home which is almost similar to the study of Rodgers O Moindi et al [13] which is 25.5%(26 of 103)

The maternal education and the birth weight of the child were not associated significantly. 23.54% of high educated mothers feed their children with pre-lacteal feeds in the study of Vishnu khanal et al [14] compared it is 7.5%(7) of the study subjects feed their children with pre-lacteal feeds. Higher the maternal education more children were feed more than 8 times in a day , stopped exclusive breast feeding up to 6 months, feed their children with breast milk for more than 1 year and the association is statistically significant which is similar to the study by Tigist Kassa et al[15].

Sive et al[6], while comparing 53 children hospitalized for kwashiorkor with 106 children hospitalized for non-nutritional diseases observed that the major difference between the two

groups was the educational status of mother. Only 57% of the mothers of the children with kwashiorkor were literate as compared to 93% of the controls .In our study , 15%(8 of 45) of illiterate women had hospitalized their children during sickness episodes.

75% [39 of 53] children of illiterate mothers were wasted and the association is statistically significant(p=0.03) and is similar to the study carried out at Parbhani, Marathwada (Maharashtra), Arya et al[16] have shown that the children of literate mothers have better anthropometric measurements than children of illiterate mothers . 74[79.5%] of study subjects children were wasted compared to 28 % of children for total Telangana state according to NFHS-IV[17] and 22.1% for total Adilabad district according to NFHS-IV[18] which was comparatively very high . 75.5%(45 of 53) children of illiterate mother child were stunted compared to 33% of children in total Telangana state according to NFHS –IV[17] were stunted and 38.3% for total Adilabad district according to NFHS-IV[18] which was comparatively very high.

Conclusion and Recommendation:

This study revealed that utilization of ANC services were relatively better for the mother's educated higher than secondary school but they are still low . This study proves that literate mothers perform much better if they are educated ,motivated. Educational status is important in having more health seeking behavior. In this study , it proves that health education is more important than the mere school education which can help to improve knowledge on ANC . Providing IEC and house-hold level discussion is important for ANC service utilization in the district .

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