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PREVALENCE OF EXCLUSIVE BREAST FEEDING AND ASSOCIATED FACTORS, A CROSS SECTIONAL STUDY IN SAIDU SHARIF, DISTRICT SWAT.

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ABSTRACT

BACKGROUND: Exclusive breast feeding is defined as "the infant is only receiving breast milk without any additional food or drink, not even water. This study was aimed to determine the prevalence and factors associated with the promotion or decline of exclusive breast feeding up to six months.

OBJECTIVE: To determine the prevalence of breast feeding upto the age of 6 months in children aged 7 to 24 months in Union Council Saidu Sharif Swat. To determine the factors associated with promotion or decline of breast feeding in Union Council Saidu Sharif Swat.

MATERIAL & METHODS: This study was conducted in Union Council Saidu Sharif Swat. A total of 548 mothers was included in the study. List of all household of Union Council Saidu Sharif, District Swat was obtained from local census office. Families were randomly selected and data was taken from all those members who mothers were having babies from the age of 7 to 24 month at the date of interview. Descriptive statistics in terms of percentages, frequencies and proportions for categorical variable using Chi square test. Univariate and multivariate logistic regression model was used to know the association between characteristics of the participants and exclusive breast feeding. Odds ratio, 95 % CI and P-value was calculated using the SPSS version 20.

RESULTS: Average age of mothers at the time of interview was 27.1. Majority of the mothers (51%) belong to the age group from 23 to 35 years. The prevalence of exclusive breast feeding in a representative sample of union council Saidu Sharif Swat was 21.7%. Compared to those with no exclusive breast feeding, those who had exclusive breast feeding were more likely to be older, educated, unemployed, educated and employed husbands, less number of children, nuclear family, female child, more number of breast feeding (> 8), lower duration of each breast feeding and higher demand of breast feeding in 24 hours, child has lesser duration of diarrhea and chest infection and low income. However, none of these factors were significantly associated with exclusive breast feeding on chi square, univariate and multivariate analysis ($P > 0.05$).

CONCLUSION: In this study, the prevalence of exclusive breast feeding in Saidu Sharif Swat was less (22%) than the national level (38%). Furthermore, none of the determinants enquired in the study were significantly associated with exclusive breast feeding on chi square, univariate and multivariate logistic regression analysis. Breast feeding back-up programs by the government and partners should give particular consideration to those females who are not exercising exclusive breast feeding.

KEY WORDS: Exclusive Breast Feeding, Maternal & Child Health, Primary Health Care

INTRODUCTION

The World Health Organization (WHO) define 'exclusive breast feeding' as "that infant only receives breast milk without any additional food or drink, not even water (other than medications and vitamins)[1]. Breast feeding is an optimal

infant feeding behavior that offers considerable benefit to both mothers and infants. For this reason it has been endorsed by various health organizations[1-3]. Besides being nutritionally superior to infant formula, human breastmilk also contains immunoglobulins and antibodies that protect the infant from infections during the first few months of life when the infant's immune system is not well developed[4-6]. In an effort to improve the public's health and to give children a healthy start in life, the American Academy of Pediatrics and other international organizations (e.g., the World Health Organization and UNICEF) have issued statements; as well as instituted variety of programs, all in favor of promoting, protecting and supporting breast feeding[2,4,7-11]. The activities resulting from the statements and programs of these professional and international organizations have subsequently reversed the downward trend in breast feeding rates that existed worldwide prior to the last quarter of the last century[12-15].

During the previous couple of decades, a growing attention in the preferment of exclusive breast feeding as the finest nurturing technique for neonates has been noted. It has been possible due to inspiration by rising scientific proof on the vital role of exclusive breast feeding in decreasing newborn illness and death. Lack of exclusive breast feeding is associated undernourishment of children which is responsible for more than half of all child deaths [16]. Exclusive breast feeding is considered to be vital for infants' survival. Without a doubt, of the 6.9 million below 5 years children who were declared deceased worldwide in 2011, an anticipated 1 million lives could have been saved by humble and available practices like exclusive breast feeding[17]. As a result, 6 months of exclusive breast feeding was suggested by WHO and UNICEF and then nurturing of supplementary foods and continuance of breast feeding up to 24 months or further.

Traditions, aggressive advertisement from formula, the negative role of mothers in law, lack of attention from higher responsible authorities and the trend of only curative approach of health services delivery rasher than the primary health care approach, are considered to be responsible for the low prevalence of exclusive breast-feeding[18]. As a result its prevalence in Pakistan is the lowest in the world and especially in the region[18]. However some factors are contributing to promote exclusive breast feeding as induction of Lady Health Workers (LHWs) of National program and midwives of Maternal & Neonatal Child Health (MNCH) both working for mother and child health in community, developing trend of higher education in females and nuclear families along with some NGOs working for health[18].

There is paucity of studies regarding prevalence of exclusive breast feeding and its associated factors in the province of Khyber Pakhtunkhwa (KP). This study was aimed to determine the prevalence of exclusive breast feeding and its associated factors. It was anticipated that the finding of this study will improve the health status of children by taking measures for increasing awareness among mothers specially and in masses generally for promotion of exclusive breast feeding up to 6 months of age.

MATERIAL AND METHODS

A Cross sectional study was conducted in Union council Saidu Sharif, District Swat among all mothers having babies from 7 to 24 months of age at the date of interview. Ethical approval was obtained from Ethical Committee of Khyber Medical College. Permission from the District Health Officer (DHO) Swat was taken for study. Inclusion criteria included all mothers having babies from 7 to 24 months of age at the date of interview. A simple random sampling method was used. List of all household of union council saidu sharif, District Swat was obtained from local census office. Houses was randomly selected and data was taken from all those household members who were mothers having babies from the age of 7 to 24 months at the date of interview; making a total sample size of 597. Consent was taken from the participants on a

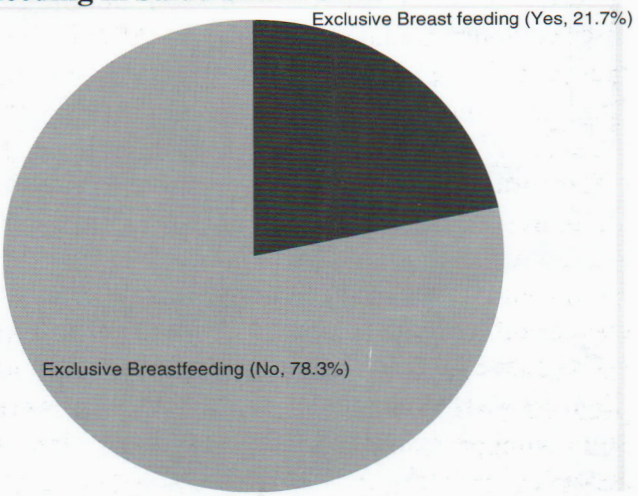
consent form written in Urdu and pushtu and after explaining to them the whole purpose and method/ procedure of study. For the purpose of data collection a face to face interview questionnaire was used as data collection instruments.

Descriptive statistics: percentages, frequencies and proportions for categorical variable using Chi square test. Univariate and multivariate logistic regression model was used to know the association between characteristics of the participants and exclusive breast feeding. Odds ratio, 95 % CI and P-value was calculated using the STATA 13.1. The dependent variable was exclusive breast feeding and the independent variables included age of mother (years), education of mother, work status of mother, education of husband, work status of husband, number of children, structure of family, gender of child, number of breast feeding/24hr, duration of each breast feeding, demand of feeding/24 hr, child has diarrhoea episode and chest episode and average total monthly income.

RESULTS

Totally of 548 mothers were included in the study after carefully sorting out them for inclusion criteria. Average age of mothers at the time of interview was 27.1 years (ranging from 16-50 years). Majority of the mothers (51%) belong to the age group of 23 to 35 years. Two hundred and eight (38%) of mothers were illiterate while 25 (5%) were graduates or above. Only 37 (6.8%) of the mothers were on job while remaining 511 (93.3%) of them were jobless. Meanwhile husbands of 362 (66.1%) mothers had jobs while 186 (34%) were jobless. Average total monthly income, per house hold was 18847 PKR. Structure of 181 (33%) families was nuclear and 367 (67%) were joint families. Two hundred and fifty six (47%) mothers had o to 2 number of children, whereas 239 (43.6%) had 3 to 5 and 53 (10%) had 6 or more number of children. 290 (53%) had more than 8 times of breast feeding, and 227 (41%) had more than 10 minutes of duration for each breast feeding. 161 (29%) had diarrhea and 238 (43%) had chest infection..

Figure 1: Percentage of exclusive breast feeding in Saidu Sharif Swat



The prevalence of exclusive breast feeding in a representative sample of union council Saidu Sharif Swat was 21.7%. Compared to those with no exclusive breast feeding, those who had exclusive breast feeding were more likely to be older, educated, unemployed, educated and employed husbands, less number of children, nuclear family, female child, more number of breast feeding (> 8), lower duration of each breast feeding and higher demand of breast feeding in 24 hours, child has lesser duration of diarrhea and chest infection and low income. However, none of these factors were significantly associated with exclusive breast feeding (P > 0.05).

Figure 2: Histogram of age of mother over exclusive breast feeding

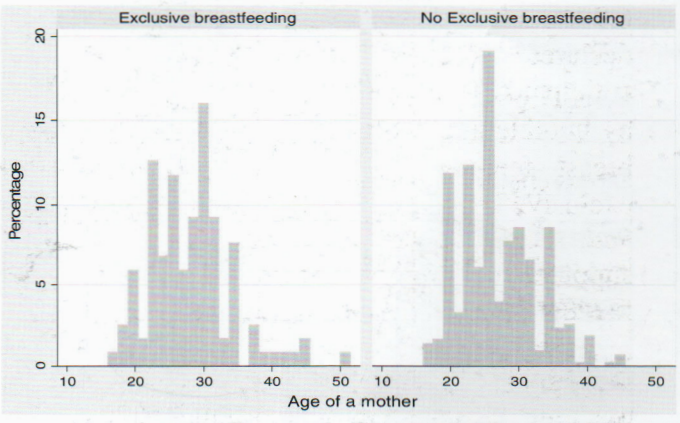
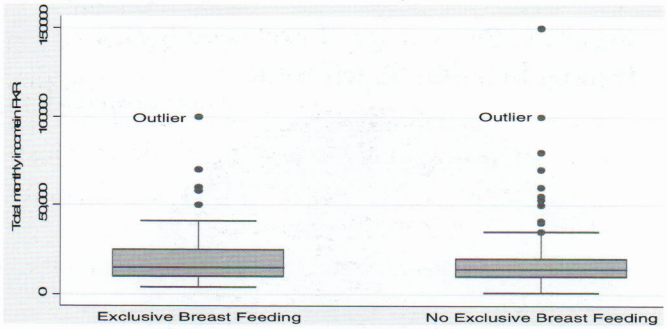


Figure 3: Box plot of total monthly income over exclusive breast feeding



Both univariate and multivariate logistic regression (exclusive breast feeding coded as "0"and no exclusive breast feeding was coded as "1") showed that none of the factors were significantly associated with exclusive breast feeding (P > 0.05). After adjustment for potential confounders the association attenuated but there was no significant changes compared to the univariate analysis (Table 1).

Table-1: Multivariate logistic regression of the participants characteristics associated with no exclusive breast feeding

		Odds ratio (95% CI)	P-value
Age of mother (years)	<24	ref	
	25 to <35	0.68 (0.38 to 1.21)	0.188
	≥ 35	0.53 (0.22 to 1.30)	0.167
Education of mother	No	ref	
	Primary	1.90 (0.95 to 3.78)	0.068
	Middle	0.81 (0.43 to 1.53)	0.514
	Matric	1.43 (0.71 to 2.85)	0.316
	Fsc	0.93 (0.37 to 2.33)	0.874
	Bachelor or above	0.92 (0.30 to 2.83)	0.886
Work status of mother	Unemployed	ref	
	Employed	1.80 (0.65 to 4.96)	0.261
Education of husband	No	ref	
	Primary	1.20 (0.49 to 2.94)	0.690
	Middle	1.10 (0.54 to 2.56)	0.796
	Matric	0.70 (0.37 to 1.36)	0.295
	Fsc	0.60 (0.24 to 1.51)	0.280
	Bachelor or above	0.93 (0.39 to 2.18)	0.859
Work status of husband	Unemployed	ref	
	Employed	0.81 (0.50 to 1.32)	0.400
Number of children	0 to 2	ref	
	3 to 5	0.77 (0.44 to 1.34)	0.359
	6 or above	1.16 (0.44 to 3.07)	0.768
Structure of family	Nuclear	ref	
	Joint	0.61 (0.36 to 1.04)	0.068
Gender of child	male	ref	
	female	0.87 (0.57 to 1.35)	0.534
No of breastfedding/24hr	<8	ref	
	>8	1.25 (0.55 to 2.83)	0.591
Duraion of each breast feeding	5 to 10 min	ref	
	> 10 min	1.86 (1.10 to 3.13)	0.02
Demand of feeding/24 hr	<8	ref	
	>8	0.49 (0.20 to 1.20)	0.117
Child has diarrhea episode	No	ref	
	Yes	1.42 (0.86 to 2.37)	0.175
Child has chest episode	No	ref	
	Yes	0.98 (0.63 to 1.52)	0.918
Income status	<20000	ref	
	21000 to 50000	0.83 (0.47 to 1.47)	0.524
	>50000	0.93 (0.31 to 2.80)	0.903

DISCUSSION

Exclusive breast feeding was defined as "exclusive breast feeding for the first six months of life and even inclusion of water in the feeding of the infant was considered no exclusive feeding". According to this definition, exclusive breast feeding prevalence was 22% in the community of this one Union Council of Swat. Furthermore, none of the determinants enquired in the study were significantly associated with exclusive breast feeding on chi square, univariate and multivariate logistic regression analysis.

Exclusive breast feeding is the best feeding technique for babies in the first half year of their life and has a shielding role against child illness and death. All mothers having babies from 7 to 24 months of age at the date of interview were included in this study [19]. Even this best feeding technique has not been unanimously received and practiced and the rates of exclusive breast feeding are decreasing, particularly in the developing world All mothers having babies from 7 to 24 months of age at the date of interview[19]. In the existing study, prevalence of exclusive breast feeding was lesser (22%), compared to national level (38%)[20]. The Pakistan Demographic and Health Survey (PDHS) statistics were from the entire country which includes samples from city and countryside areas and areas where international organizations are promoting exclusive breast feeding practices in the community. In comparison, this study was conducted in an area with high levels of mother's illiteracy. This possibly will be one of the reasons why prevalence of exclusive breast feeding was lesser in my study. Furthermore, the higher prevalence in PDHS may be due to the

fact that the sample might be younger compared to our sample.

In addition, other causes for less prevalence in the existing study may include lack of support from family members, lack of advice from health staffs during antenatal care visits and deliveries in non-baby friendly institutions. The baby friendly hospital initiative was established by WHO and UNICEF in 1991 as a hospital-based intervention to boost breast feeding rates. In baby friendly hospitals, breast feeding is supported, practiced, protected and promoted[7].

While comparing our results with regional studies we found that the prevalence is low. In Gujrat, India Chudasama et al. reported prevalence of exclusive breast feeding to be 37%[21]. Analogous results were achieved from another study from India among countryside women in Tamil Nadu where the prevalence was 34%[22]. Results were again not similar although both the study sites were countryside and both countries have parallel type of cultural practices. Analogous to the current study no statistically significant differences were documented amongst those who exclusively breastfed and those who do not with respect to any socio-demographic variables in the study.

The strength of the current study was that this was a community based representative study conducted in the household of the participants. Such kind of studies have the added advantage of reflecting the true prevalence of the condition under study compared to hospital based studies which may under or over report. Furthermore, majority of the participants responded to all of the questions and hence was more representative. In regards to the limitations the current study was conducted in one union council where there is a tertiary care hospital and is in proximity to the main city. Inferences to rural and underdeveloped areas could not be drawn from this study. Similarly these findings should be observed in the context of one union council and hence should not be extrapolated to the whole of the district.

CONCLUSION

The current study warns us that even though there is no relation with its determinants, the prevalence of exclusive breast feeding is very low which needs to be addressed. Auxiliary studies are needed to investigate numerous other elements which may have relation with exclusive breast feeding. Adding up, other psychological factors which include emotional symptoms, peer problems, or social behavior, parent's marriage or the mother's satisfaction with her relationship with her partner or child may be explored. Anthropological questions including the influence of conflict, work place/condition, culture, tradition, and environment need to be answered.

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