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ASSESSMENT OF THE ASSOCIATION OF POSTPARTUM DEPRESSION AND PATTERNS OF INFANT FEEDING PRACTICES AMONGST POSTNATAL MOTHERS IN A TERTIARY CARE HOSPITAL, IN CENTRAL INDIA.

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ABSTRACT Breast milk provides the best and the complete nourishment for the baby during the first six months of life [1]. During the first six months, exclusive breast feeding should be practiced [2][3]. Appropriate Infant and Young Child Feeding (IYCF) practices are essential for optimal growth, cognitive development, and overall well-being in early vulnerable years of life [4]. Poor infant and young child feeding practices have been identified as a major contributor to the high burden of childhood morbidity and mortality in many countries [5]. According to a number of studies, psychosocial agents are a better predictor to anticipate the duration of exclusive breastfeeding, compared with demographic factors. Pre-partum anxiety and depression, which can lead to post-partum anxiety and depression, have an effect on breastfeeding cessation. Based on a number of other studies, there is an inverse association between breastfeeding frequency and maternal anxiety level [6].

KEYWORDS : breast milk, exclusive breastfeeding, optimal growth, cognitive development, maternal mental health, pre-term, post-partum depression, anxiety.

INTRODUCTION

Breast milk is the life line for the newborns. It is the best gift a mother can give to her baby. It is a critical aspect of caring for infants and young children [7][8]. Appropriate feeding practices stimulate bonding with the caregiver and psycho-social development. In India more than 1 million infants have been dying every year because of improper breastfeeding practices [9].

Exclusive breastfeeding compared with not breastfeeding, protects against hospitalization for diarrhoea and lower respiratory tract infection [4][7][8]. Poor infant and young child feeding practices have been identified as a major contributor to the high burden of childhood morbidity and mortality in many countries. Although breastfeeding has been recognized as the optimal method of infant feeding for the first 6 months of life, many mothers in both developed and developing countries do not breastfeed [10]. Postpartum depression can disrupt care-giving activities, including infant feeding practices, resulting in child malnutrition [11].

Postpartum depression ranges from nonpsychotic depressive episode of mild to moderate severity, beginning in or extending into the first postnatal year [12]. Maternal mental health issues like depression is an increasing public health concern in low-income countries because of its high prevalence and wide-ranging implications for the health of the mother and infant [13].

METHODOLOGY:

This is a cross-sectional study carried out in Post-natal ward of a Tertiary care hospital of rural Maharashtra. Duration of the study was 1 month, from April 2017 to May 2017.

Total 40 post-partum mothers were eligible for the study. Purposive sampling method was used and the patients were selected as per their health and post-delivery status. Those mothers whose babies were shifted in Neonatal intensive care unit (NICU) were excluded from the study. Mothers who were already known case of mental health issues were excluded.

The mothers were asked about the infant feeding practices by using a pre-tested and pre-structured questionnaire. Early initiation of breastfeeding within 1 hour after delivery, exclusive breastfeeding during hospital stay and percentage of bottle feeding were recorded. Maternal mental health status was assessed using the Global Mental Health Assessment Tool (GMHAT/PC).

Data was entered using Microsoft Excel 2007 and all the responses after tabulation were analyzed using SPSS Software version 20.0.

RESULTS:

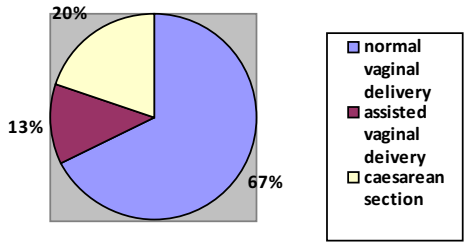
In this study maximum numbers of mothers (47.5%) belong to age-group 21-25. About 45.0% (18) belonged to class-IV as per Modified B.G. Prasad's Classification. 37.5% studied up to primary level whereas 7.5% were illiterate. 77.5% (31) were housewives. Majority, 31 (77.5%) belonged to Hindu society. 75.0% belonged to rural area. **(Table. 1)**

Table:-1 Frequency distribution of socio-demographic profile of mother.

Variables	Frequency (N = 40)	Percentage	
Mother's age	≤ 20	5	12.5%
	21 - 25	19	47.5%
	26 - 30	13	32.5%
	31 - 35	3	7.5%
Family type	Nuclear	21	47.5%
	Joint	19	52.5%
Socio-economic class	Class I	1	2.5%
	Class II	8	20.0%
	Class III	12	30.0%
	Class IV	18	45.0%
	Class V	1	2.5%
Education	Illiterate	3	7.5%
	Primary	15	37.5%
	Secondary	6	15.0%
	Higher secondary	13	32.5%
	Graduate and above	3	7.5%
Occupation	House wife	31	77.5%
	Farmer	5	12.5%
	Other	4	10.0%
Religion	Hindu	31	77.5%
	Buddhism	6	15.0%
	Muslim	3	7.5%
Geographical setting	Rural	30	75.0%
	Urban	10	25.0%

Out of the 40 participants, 67% of the women had normal vaginal delivery, 20% had assisted vaginal delivery and 13% had caesarean section. **(Figure. 1)**

Figure:-1 Distribution of mode of delivery depicted in percentage.



Regarding the infant feeding practices, the indicators were early initiation of breastfeeding which is found to be 30.0% (12) of the babies were initiated with breastfeeding 1 hour after delivery, 55.0% (22) babies were exclusively breastfed, means no prelacteal feeds were given. 72.5% (10) of babies out of 40 were bottle fed. 25.0% (29) of mothers had difficulty in breastfeeding for the initial 2-3 days. **(Table.2)**

Table:- 2 Frequency distribution of infant feeding practices by the mothers.

Variables		Frequency	percentage
Early initiation of breastfeeding	Within 1 hour	12	30.0%
	After 1 hour	28	70.0%
Exclusive breastfeeding	Yes	22	55.0%
	No	18	45.0%
Difficulty in breastfeeding	Yes	29	25.0%
	No	11	75.0%
Bottle feeding	Yes	10	72.5%
	No	30	27.5%

The following table shows the association between maternal depression and early initiation of breastfeeding, which is found to be highly significant with p value = 0.001 (p= <0.05). (Table.3)

Table:-3 Association of maternal mental status with early initiation of breastfeeding.

Maternal mental status N=40	Early initiation of breastfeeding after delivery (N= 40)		Chi-square (X^2)	p-value
	Within 1 hour	After 1 hour	**11.465**	**df=1**
Depression	1	20		
No depression	10	9		**0.001**

Table:-4 Association of maternal mental status with exclusive breastfeeding.

Maternal mental status	Exclusive breastfeeding (N=40)		*Chi-square* (X^2)	p-value
	Yes	No	22.481	df=1
Depression	3	16		
No depression	19	2		0.000

It is also found that mothers who were found to be having depression were most likely to have problem with exclusive breastfeeding and the chi-square test result if found to be very highly significant, with p=0.000. **(Table. 4)**

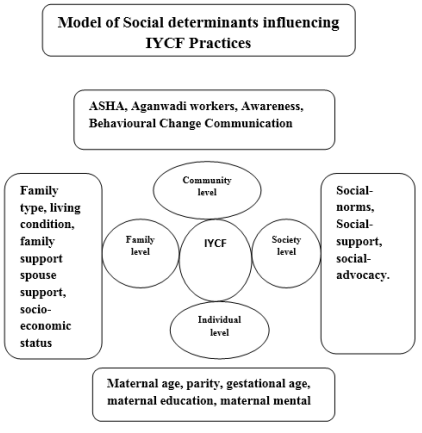


Figure:2 A model diagram of psycho-social determinants of IYCF.

The above diagram **(Fig.2)** shows the determinants of infant feeding practices prevailing in the society and distortion of which can affect the practices.

DISCUSSION:

Vimal Kumar Sharma and team[14] developed the Global Mental Health Assessment Tool- Primary Care (GMHAT/PC) which is a computer-assisted interview, to assist general practitioners and other health professionals to make a quick, convenient, and comprehensive, standardized mental health assessment. It has proved to be a reliable and valid tool in various studies. Its use by other health professionals may help in detecting and managing mental disorders in primary care and general health settings more effectively.

This study was a pilot study to test the association between infant feeding practices with maternal mental health using the Global mental Health Assessment tool (GMHAT/PC). So far no studies have been conducted using the GMHAT-PC to study association between maternal depression and infant and young child feeding practices. However, this pilot study was done to the test the feasibility for use of GMHAT/PC in community settings too to study maternal mental health status.

CONCLUSIONS:

It is concluded from the study that mothers who have mental health issues are likely to have inappropriate infant feeding practices. Maternal mental health issues need to address well and mothers who are at the brim of antenatal and post-partum depression should be properly counseled by the concerned physician and be given full support by the family members and relatives.

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