Research Paper Medical Science

Health related practices of mothers for their infants enrolled in 'Growth and Development Clinic' in an Urban Slum

*Dr Sujata Pol **Dr Sagar Patil ***Dr Pallavi Shelke ****Dr R.M. Chaturvedi

* Asst. Prof, DeptOf Community Medicine, LTMMC & GH, Sion

** Medical officer-PHC, Ashagad

*** Asso. Prof DeptOf Community Medicine, LTMMC & GH, Sion

**** Prof.& Head,Dept Of Community Medicine, LTMMC & GH, Sion

ABSTRACT

Background: The poor environmental conditions in urban area are major cause of morbidities in infant group. Many studies reported decline in morbidities in infants due to healthy practices by the mother and have emphasized the importance of exploring the same. 3

Growth & Development Clinic (GD Clinic) at Urban health Centre (UHC), Dharavi, Lokmanya Tilak Municipal Medical College and General Hospital (LTMMC & GH), Sion provides Preventive, Promotive and Curative services to under-five Children and their mothers. The mothers are given health education regarding Breastfeeding, Complementary feeding, Hygiene, Immunization, danger signs of various illnesses, Contraception, etc. Thus Growth and Development (GD) clinic at Dharavi plays major role in educating mothers the healthy practices for their infant. Hence, it was decided to conduct study on health related practices of mothers attending Urban Health Centre.

Objectives:

1) To find the socio-demographic factors that influence mothers to enrol their infants in Growth and Development clinic.

2) To study effect of services offered at GD Clinic on practices by mothers for their infants like feeding, immunization and regular weight checkup etc.

3) To find association between GD clinic utilization by mothers and health status of infants.

Material & Methods:

Study design: Observational health centre based study.

Study area: Urban Health Centre, Dharavi, LTMMC &GH, Sion.

Study tools: A pre-designed pretested semi structured proforma, weighing machine, measuring tape, WHO Growth chart and Immunization card.

Sample size: A total of 95 Mothers of children below one year of age.Mothers of all infants who availed GD services in study duration were 45.The mothers who availed other services but not GD clinic at UHC were 50.

Study Duration: September to November 2010.

Results: The socioeconomic status and age of an infant were found to have significant influence on enrollment of infants in GD clinic. The mothers utilizing GD clinic had better health practices related to feeding, immunization etc as compared to the mothers not utilizing GD clinic. The present study finds significant association between utilization of GD clinic and health status of infants.

Keywords : Growth and Development Clinic, Feeding practices, Immunization, health status.

Introduction

The Urban Health Centre (UHC) is situated in the heart of Dharavi which is one of the largest urban slums in the World. Dharavi covers parts of Sion, Bandra, Kurla and Kalina suburbs of Mumbai, India. Modern Dharavi has a population of between 600,000 and over 1 million people.1Each year almost 11 million children in low- and middle-income countries die before they reach their fifth birthday.2 About two-third of the under-five children of our country are malnourished. Among them, 5-8% are severely malnourished while rest fall in the group of mild or moderate malnutrition.3Nationwide data suggests decline in infant mortality from 57% in 2005-06 to 47 % in 2012.4,5 However,NFHS 3 report concluded Infant and young child feeding practices in particular continues to be a serious challenge to reduce malnutrition among children.5Poor environmental conditions & overcrowding is the experience of almost every resident of Dharavi, the biggest urban slum in our country.6 Such conditions increase the chances of infectious diseases like ARI, acute gastrointestinal infections& also tuberculosis especially in small children. Additional to this, there is very poor knowledge regarding breast feeding & weaning practices in people of slum and all this make children more vulnerable in terms of morbidity and mortality. Few studies emphasized the importance of studying practice of mothers regarding infant feeding and nutritional status of under-five children.3 The rational approach to health promotion—that information given by health workers during clinic based or community based contacts will bring about a change in health behavior—is still an integral part of primary health care strategies. There are very few clinics established with this purpose & those established are not evaluated to ascertain their effectiveness. Growth and Development Clinic at UHC, Dharavi, run by one of the medical institute in Mumbai is one of such clinic which provides Preventive, Promotive and Curative services to under-five Children. The mothers are given Health Education regarding Breastfeeding, Com-

plementary feeding, Hygiene, Immunization, danger signs of various illnesses, Contraception, etc. This clinic offers medicine free of cost to sick infants brought by the mothers. Clinic also provides an opportunity to monitor maternal health and intervene if required (besides health education iron, folic acid, calcium supplement is offered to the mother). Beneficiaries of the clinic are the mothers and infants who are resident of Dharavi and avail the facilities of UHC. This study was an attempt to assess health related practices of mothers for their infants attending different OPDs at Urban Health Centre.

Methodology

This was an observational, health Centre based study conducted at UHC (Dharavi), LTMMC & GH, Sion during a period from 01/09/09 to 28/02/10. Those infants visiting Growth &Development Clinic for more than once during 01/09/09 to 30/11/09 were included in the study. Forty five mothers with such infants who visited GD Clinic during that period were considered for the study. For comparison, first 50 mothers with infants who availed other services like Pediatric OPD & Immunization clinic, but not enrolled for GD clinic, were also considered. Mothers of all those 95 infants availing different services at UHC were interviewed using a pre-designed, pretested semi-structured proforma. Health related practices such as Exclusive Breast feeding, timely immunization and regular weight checkup by mother were studied. They were asked the details about socio-demographic factors, birth history, and frequency of common illnesses. Height & weight of each child were also recorded at the same time. Grades of malnutrition were determined using Growth Charts (WHO). Data so obtained was analyzed using SPSS version 15. Chi square test was applied as 'Test of significance'.

Operational Definitions:

Literate: If he or she could read and write with understanding in any language.[7]

Below poverty line: When the income of family was found to be below Rs. 635 per capita per month {Based on B. G. Prasad Classification for Socio-economic status (updated on July 2008)[8]

Underweight: Child whose weight for age is below minus 2 SD from median of reference population.[5]

Results:

Majority of the mothers were Muslim (69.4%) followed by Hindu (25.2%).Table 1 shows socio-demographic Profile of GD Group & Non-GD Group. It was comparable with respect to Religion & Occupation of mother. More than half of the mothers belonging to below poverty line enrolled their infants in GD (69.6%) while only 40% of those above poverty line did so. The difference was statistically significant ($p<0.05$) Significant number of mother above age of 26 years enrolled their infants in GD clinic (64%)as compared to mothers below 26 years (28.8%). Though the proportion of literate mothers was more in GD Group (86.7%) than non GD Group (78.0%), the difference was not statistically significant.

Among those 95 mothers, 94.7% (90) had delivered in the hospital (Private & Govt.) & only 5 of them delivered at home. All those 5 delivered at home did not utilize GD service. Of them, 22 mothers (23.2%) gave history of feeding pre-lacteal to their new borns. Most common pre-lacteal feed was honey (36.4%) and less common were sugar water (22.7%) & cow's milk, buffalo's milk, plain water, etc. Overall exclusive breastfeeding was reported by 64% of the mothers. Eighty four percent mothers from GD Group fed colostrum to their babies' while 75.5 % mothers from Non-GD Group did so. 84.4% of the mothers from GD group practiced exclusive breastfeeding for six months, whereas, only 66.7% of Non GD group did so. ($p>0.05$) [Table2]

Ninety five percent of the children enrolled in GD clinic were given all vaccine doses till date while only 76% of those not utilizing GD service were given same and the difference was statistically significant.($p<0.05$) [Table3]. Besides, it was found that 90% (i.e.18 out of 20) infants above 9 months of age & attending GD Clinic were completely immunized (i.e. received all vaccines up to measles) compared to 61.5% (8 out of 13) infants not attending GD Clinic.

Most of the mothers (73.3%) utilizing GD service knew weight of their infant and were regular for infant's weight checkup whereas only 32.0% of those not utilizing GD service practiced in same way. Difference was statistically significant ($p<0.05$)[Table4].

Twenty eight of the babies not attending GD Clinic (56.0%) were underweight as against 33.3% of those attending GD Clinic were so. The difference was statistically significant ($p<0.05$) [Table5].

There was increasing trend in illness episodes in children of Non GD group (60%) as compared to children of GD group (30.1%) [Table 6]

Discussion

Present study finds that the facilities at Urban Health Centre were predominantly used by Muslim religion followed by Hindu. Data analysis reveals that only socio economic status and age of mother were significant influencing factors for enrollment of infant in GD clinic. Mothers from lower socioeconomic class often prefer availing government health care system as these are available at low cost or free. As age increase, mothers experience more no of issues. Thus they become aware of surrounding health facilities for their younger ones. This may be reason for higher proportion of infants of elderly mothers enrolled their infants in GD clinic as compared with young mothers. The rate of giving prelacteals to newborn is low as compared to other studies conducted at Kolkata and Karnataka where more than 50% mothers practiced the same.[8,10] Bannapurath et al reported it in nearly all newborns(100%).[11] The rate of exclusive breast feeding in present study was high when compared to community based studies done at Kolkata.[8]There is high acceptance of exclusive breast-feeding (84.4%) among mothers attending GD Clinic. Similar findings were observed by Bhavesh Modi. He found majority of mothers attending Well Baby Clinic (76%) mothers practised exclusive breast-feeding at Vadodara.[9].In GD Clinic all mothers were explained the importance & motivated for exclusive breast feeding right from first day of registration by nurses& doctors.

The rate of institutional deliveries was high in participants of the study. This may be because this area is urban and surrounded by many health facilities. It was 87.2% in Kolkata as reported by S. Chatterjee.[8]

In GD Clinic, all mothers of infants were asked to follow up every month so that any deterioration in health & nutritional status can be detected at earliest. The mothers were asked to follow up with child every month irrespective of health complaint. It assured the continuous flow of information from health care staff to the mothers about healthy practices. All this contributed to high level of timely intervention during ill health. The child, therefore, received prompt treatment like giving ORS in case of acute gastrointestinal diseases which prevented the progress of dehydration. This explains the significant association of better health status of an infant & utilization of GD Clinic service.

There were significantly more number of mothers utilizing GD service who were aware about factors associated with child's health i.e. weight gain & timely immunization as per schedule. In GD Clinic, mothers were being told about the importance of the weight as a health parameter, and also importance of immunization in preventing common diseases.

Vaccination coverage was satisfactorily good in children attending GD services. Similarly B. Modi reported 100% vaccination coverage in the children attending Well Baby Clinic

at Vadodara.[9] Numbers of illness was less common in the children utilizing GD services. The present study thus, ascertained positive efficacy of GD services on health related practices of mothers for their infants.

Recommendations:

1. The study was primarily done for the assessment of the local Growth &Development Clinic under limited resource setting with limitation of time. Longitudinal studies on a larger scale with replication of similar health model (GD Clinic) are recommended. The other stake holders of the GD Clinic like medical officers, community health workers, planners were not involved in this study but they can be also enrolled then, to make the evaluation study more useful for development and running such type of model clinics in other areas.
2. Enrolling more number of infants at early age, ensuring their compliance, periodic monitoring & evaluation of the records in GD Clinic are necessary to obtain more benefits. Early enrollment can be achieved by targeting women at ANC Clinics. There is a need of explaining them about the availability of GD Clinic & its importance for the child.
3. More areas especially difficult one should be covered by increasing number of GD Clinics. Steps to establish such setups even at peripheral health institutes need to be undertaken.

Table 1
Association of Socio-demographic factors with utilization of GD Service [N= 95]

Socio-demographic details	GROUP			
	GD		Non GD	p value
Religion	Hindu	10	14	p>0.05
	Muslim	32	34	
	Others	3	2	
Occupation of mother	Housewife	43	50	p>0.05 Using Mid - P exact test
	Working	2	0	
Educational status of mother	Illiterate	6	11	p>0.05
	Literate	39	39	
Socio-economic Status *	Below poverty line	16	07	p<0.05
	Above poverty line	24	36	
Age of mother in years	20-25	13	32	p<0.05
	26 and above	32	18	

*12 mothers were not aware about the income of their husband; hence socio-economic status couldn't be calculated.

Table 2
Association of utilization of GD Service &mother's infant feeding practices (N=50)

Utilization of GD clinic by mother	H/o Exclusive Breastfeeding in infants* Yes No	
Yes	27(84.3)	5(15.60)
No	12(66.6)	6(33.3)
Total	39	11

*Children above 6 months of age were considered. p>0.05

Table 3
Association between utilization of GD services and immunization status [N=95]

Utilization of GD clinic by mother	Complete immunization in infants Yes No
Yes	43 (95.6) 02 (04.4)
No	38 (76.0) 12 (24.0)
Total	81 14

X^2 = 5.736 p value < 0.05

Table4
Association between utilization of GD services & mother's awareness about infants weight gain [N=95]

Utilization of GD Service	Mother's awareness about infant's weight gain	
	Yes	No
Yes	33(73.3)	12(26.6)
No	16(32)	34(68)
TOTAL	49	46

X^2= 14.59 p-value < 0.05

Table 5
Association between utilization of GD services and Nutritional status of an infant [N=95]

Utilization of GD services	Normal by weight	Underweight
Yes	30 (66.7)	15 (33.3)
No	22 (44.0)	28 (56.0)
Total	52	43

X^2= 4.039 p value < 0.05

Table 6
Correlation between utilization of GD Service & no of illnesses in infants (N=95)

Utilization of GD services	No of illness episodes in infants ≤ 2	3-4	5-6	≥ 6	Total
Yes	21(46.6)	10(22.2)	7 (15.5)	7 (15.5)	45
No	9 (18)	11 (22)	10 (20)	20 (40)	50

X^2=11.40, p< 0.05

*Figures in parenthesis indicate percentage in all Tables.

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