

**KNOWLEDGE, AWARENESS AND EXTENT OF MALE
PARTICIPATION IN KEY AREAS OF REPRODUCTIVE AND CHILD
HEALTH IN AN URBAN SLUM OF DELHI**

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ABSTRACT

Knowledge, awareness and the extent of male participation in key areas of reproductive and child health were assessed among 400 couples in an urban slum of Delhi through a semi-structured interview schedule. It was found that vasectomy was adopted by only 1.8 percent of the males and another 13.8 percent were using condoms at the time of the survey. While 57 percent of the husbands felt the need for a proper antenatal care, only 5.7 percent ensured rest and 9.5 percent ensured increased diet to their wives during pregnancy. More than half of the men interviewed, did not feel the need to disclose the symptoms of sexually transmitted diseases to their wives. In majority of the cases, husbands did not accompany their wives (88.5%) to seek treatment for their children's illness. While 25 percent of the husbands ensured weaning at the appropriate age, 18 percent ensured providing ORS to their children. Wives were consulted on reproductive matters by 21 percent of the husbands and in most cases (54 %), the discussions were initiated by the husbands only. The present findings indicate rather a poor male participation (56 %) in reproductive and child health matters among the study population and it ranges from 5 to 10 based on a 20-point scale developed for the purpose.

Keywords: Urban slum, Male participation, Reproductive and child health, Contraception.

World Health Organization (WHO) defines reproductive health as a "State of complete physical, mental and social well being in all matters relating to reproductive system, its function and progress¹." Men's shared responsibility in reproductive health may prove as an effective strategy in improving the reproductive health status of the community.

The same has been repeatedly stressed and advocated at several national and international fora.

The 1994 International Conference on Population and Development (ICPD) stressed that special efforts should be made to emphasize on men's shared responsibility and promote their active involvement in (i) responsible parenthood; (ii) sexual and reproductive behaviour including family planning, maternal and child health; (iii) prevention of RTI/STI including HIV; (iv) prevention of unwanted and high-risk pregnancy; (v) shared control and contribution to family's income; (vi) children's education, their health and nutrition; (vii) recognition and promotion of equal values between children of both sexes; and (viii) instill among children the attitude of respect towards women and girls from the earliest possible age². One of the goals set at the ICPD includes encouragement of men's responsibility for sexual and reproductive behavior and to increase male participation in family planning³. The UN Fourth World Conference on Women also stated "there is need to motivate men to ensure the conditions necessary for women in exercising their reproductive rights⁴." In India, as a follow-up action of the ICPD, the Reproductive Child Health programme was launched throughout the country on 15 October 1997⁵.

Men play important and dominant roles not only in decisionmaking but also physically, socially and most notably in sexual relationships⁶. To bring about equity in gender relations, male participation or male-shared involvement in reproductive health is of utmost importance. India has patriarchal societies and usually men are the main decision makers in all aspects of life, both in urban and rural families. However, sense of shared and responsible relationship in all aspects of reproductive and child health among men is lacking which needs to be vigorously promoted. Researches in India have found to enhance both use of antenatal care and contraception. Male participation is not simply a question of who will use the family planning methods, men or women. Rather, it is a question to what extent men can and will extend their support such as (a) for safe, voluntary, healthy and responsible sexual relationships; (b) discuss openly with their partners about the high fertility risks and inconveniences; (c) provide support to their partners during pregnancy (by sharing household work etc); (d) possess the knowledge and awareness of certain important aspects of women's reproductive

health needs; (e) assist women in both normal and difficult deliveries (such as arranging emergency transport); and (f) participate meaningfully in children's well being (such as ensuring proper immunization)⁷.

There are multiple slum clusters in Delhi with localized communities where most of the women were illiterate and dependant on their husbands for their health related decision-making. Many of the above issues related to reproductive and child health among such communities have never been systematically studied. The present study was therefore undertaken to assess men's knowledge, awareness and extent of their participation in the key areas of reproductive and child health in one of the largest urban slums of Delhi.

MATERIALS AND METHOD

The area selected for the study was Sangam Vihar, an urban slum, located in South Delhi, with an approximate population of 100,000. Most of the them were labourers, who were daily-wage earners migrated from adjoining States of Uttar Pradesh, Rajasthan, Haryana and Bihar. Hindus constitute the predominant religious group followed by Muslims. Most of the families consisted of single eligible couples. The study population comprised couples in the reproductive age group (15-45 years) having at least one child below 5 years of age.

Data were collected from a sample of 400 randomly selected couples through personal in-depth interviews using the pre-tested semi-structured interview schedules. With regard to male's involvement in key areas of reproductive and child health such as age at marriage, use of contraception, safe motherhood, sexually transmitted diseases, immunization, acute respiratory tract infections, diarrhoea etc. were studied. Field survey was carried out during June to November 2002.

Statistical analysis of the data was carried out using the SSPS software after thorough scrutiny and editing. Univariate and multivariable frequency tables were prepared. A composite indicator on overall male participation was also developed and values were calculated for different components of RCH programme based on a maximum and minimum male participation score of 20 and 0 respectively.

FINDINGS

Demographic and Socio-economic Characteristics of Couples

Majority (88.58%) of the study population was found to have come from rural areas. About 78.5 percent was from the Hindu community and the remaining 21.5 percent from the Muslim community. Most of the husbands (about 60%) were between 25 and 34 years with a mean age of 29.87 years and the wives (about 71%) were between 20 and 29 years with a mean age of 25.45 years. 83 husbands (20.6%) and 17 wives (4.3%) had education up to secondary level. High illiteracy among females (66.5%), about three times more than the males (23.5%) was observed. Majority of the husbands (59.4%) were unskilled and semi-skilled labourers. The mean age at marriage for women and men were 17.40 ± 2.68 years and 21.79 ± 3.53 years respectively. About 19.5 percent of the men were married after the age of 24 years. It was further revealed that majority of these late marriages amongst men were mainly due to remarriages following the death of the first wife. The average monthly household income of the respondents was Rs. 3,373.

Family-size Preferences among Men

Majority of the males (59%) and females (74%) favoured a small family of two children. However, 18 percent had five or more children at the time of the survey. The average number of currently living children (3.13 ± 1.73) was significantly higher than the desired number of children (Table 1).

TABLE 1
MEN'S PREFERENCE ON THE CURRENT AND DESIRED FAMILY SIZE

No. of Children	Currently Living Children		Desired no. of Children			
	Couples		Husband		Wife	
	n	%	n	%	n	%
1	68	17	16	4	12	3
2	96	24	236	59	296	74
3	84	21	112	28	64	16
4+	152	38	36	9	28	7
Total	400	100	400	100	400	100

Son Preference among Males

The analysis of the desired sex composition of children revealed that among both male and female respondents, majority wanted one or two sons. About 58.3 percent of male and 74 percent of the females desired to have one son. On the other hand, about 40 percent of the men and 20 percent of the women desired two sons. Further, 63 percent of the husbands desired sons even when their wives were not interested. About one-tenth (9.3 %) males considered girls as burden. The study revealed that 81.5 percent of the husbands preferred at least one male child. The main reason given by the majority of respondents was family lineage (58.7%) followed by economic support (53.7%) or to perform (34.5%) last rites (Table 2).

TABLE 2
REASONS FOR SON PREFERENCE AMONG HUSBANDS

Reasons for Wanting Sons	No. of Men	Percent
Religion	50	12.5
Old age	128	32.0
Family lineage	235	58.7
Economic support	215	53.7
Girls are burden	37	9.25
Last rites	138	34.5
No Response	74	18.5

Husband-Wife Communication

Husbands were asked a series of questions to assess their attitude on husband-wife communication and the role and rights of couples in deciding reproductive goals. It was seen that only 21 per cent of the men had any discussion with their wives about the number of children they should have. More than half of the men (58%) admitted that they could discuss the matter only after birth of the second child and in majority of the cases (54%), it was the husband who initiated the discussion. Decision on all aspects of reproductive processes such as when to have the first child, the number of children, the choice of contraceptive methods, adopting a contraceptive, the time of adoption and length of its use, unwanted pregnancy and abortion or taking wife and children to hospital etc. were primarily taken by husbands (Table 3). Women alone had little right to take independent decisions on all these matters.

TABLE 3
DECISION ABOUT REPRODUCTIVE BEHAVIOUR IN THE FAMILY

Who Decides About	Husband Alone	Wife Alone	Together	Others	Don't Know
When to have the first child	116 (29)	13 (3.3)	109 (27.3)	51 (12.8)	111 (27.8)
No. of children	144 (36)	5 (1.3)	172 (43.0)	22 (5.5)	57 (14.3)
Decision to adopt contraceptive	171 (42.8)	-	181 (45.3)	10 (2.5)	38 (9.5)
Choice of contraceptive method	172 (43)	-	185 (46.3)	10 (2.5)	33 (8.3)
When to adopt and continue its use	157 (39.3)	-	185 (46.3)	10 (2.5)	48 (12.0)
Abortion of unwanted pregnancy	187 (46.8)	-	175 (43.8)	6 (1.5)	32 (8.0)
Taking wife to hospital	223 (55.8)	-	144 (36)	6 (1.5)	27 (6.8)
Taking children to hospital	232 (58.0)	-	140 (35)	6 (1.5)	22 (5.5)

(Figures in parentheses indicate percentage)

Family Planning

Awareness among Men about Family Planning Methods

Men were asked to name various contraceptive methods; it was found that awareness regarding female sterilization was 100 percent followed by oral pills (98.25 %) and male sterilization (77 %) (Table 4).

TABLE 4
KNOWLEDGE, AWARENESS AND CURRENT USE OF FAMILY PLANNING METHODS

Family Planning Method	Knowledge*		Current Use*	
	No. of Men with at least One Response	%	n	%
Female sterilization	400	100	28	7
Male sterilization	308	77	7	1.75
Non-scalpel Vasectomy	11	2.75		
Cu-T	279	69.75	37	9.25
Oral Pills	393	98.25	5	1.25
Total more than 100 because of multiple		I		
Rhythm	101	25.25	NR**	
Withdrawal	175	43.75		
Condoms	381	95.25	55	13.8

**NR: No response

Attitude towards Family Planning.

Majority of the husbands (84%) were in favour of permanent method of family planning. Out of those males who favoured a permanent method, 33 percent of the couples were actually using some family planning method, 7 percent wanted to use a spacing method and only 5 percent (husbands) were actually inclined for a permanent method (sterilization). Among those currently using family planning methods, majority of the couples (77%) were using permanent methods to limit family size and only 23 percent were using spacing methods to limit the family size. There was hardly any awareness among respondents, both male and female, about use of condoms for prevention of STIs.

Reasons for Not Using Contraceptive Method by the Males

The reason for not using a male method was either the dislike of the existing method (48.6%) or opposition from wife (34.4%) or fear of sterilization (26.3%).

TABLE 5
REASONS FOR NOT USING CONTRACEPTIVE METHOD BY THE MALES

Reasons	No. of Men	Percentage *
Unaware of Family Planning method	-	-
Against religion	65	26.31
Opposed to Family Planning	4	0.01
Wife opposed because who will earn for the family if male is in bed ridden	85	34.41
Other family members (in-laws) opposed	15	0.06
Do not like existing methods	120	48.58
Afraid of sterilization	65	26.31
Worried of side-effects (kamjori—weakness)	91	36.84
Health does not permit	15	0.06
Not applicable (male using method)	153	38.2
Total	247	*

Multiple response- Total of percentage may exceed 100)

It was found during the survey that many wives themselves opposed their husbands to undergo sterilization as they believed that the husband, being the main bread earner for the family, might get bed ridden following sterilization.

Male Involvement in Safe Motherhood

WHO estimates that 5,85,000 women die each year of complications of pregnancy, childbirth and unsafe abortion which means about one death every minute⁸. Millions of pregnancies are unintended and women in thousands die as a result of pregnancy related complications⁹. These deaths could be minimized through care and support by husbands and making them aware and sensitive to the antenatal, natal and post-natal care of the wife. Table 6 summarizes male's involvement during all these periods. It was seen that 43.5 percent of the husbands were not involved in any of the safe-motherhood activities. The

rest (56.5%) were partially involved in at least one of the activities. The most neglected part of pregnancy care was providing IFA tablet (5.5%) and ensuring adequate rest (5.75%) to the wives. About 39 percent of the husbands were not involved in any activity during labour. Most of the deliveries were conducted in their respective homes by Dais (Traditional Birth Attendants). Only 16 percent husbands accompanied their wives to the hospital. The fear about the loss of daily wage was identified as the main reason for poor participation by men during labour. Another reason was the hostile attitude of the hospital staff to people accompanying the women admitted for delivery.

TABLE 6
THE EXTENT OF MALE INVOLVEMENT DURING ANTE-NATAL,
NATAL AND POST-NATAL ACRE

ANC Activities	No. of men	Percentage *
ANC Check-up done (atleast one)	231	57.75
Took her for TT injection	41	10.25
Ensuring IAF tablets were taken	22	5.50
Ensuring green vegetables	38	9.50
Ensuring rest for wife	23	5.75
Not to allow heavy work	37	9.25
Not involved	174	43.5
Natal Activities		
Presence of husband during labour	149	37.3
Brought medicines	9	2.3
Called Dai	150	37.5
Accompanied to hospital	65	16.3
Not involved	156	39.1
Post-natal Activities		
Presence during delivery	244	61.0%
Ensuring breast-feeding	110	27.5%
Ensuring necessary treatment	264	66.0%
Ensuring rest	163	40.75%

(Multiple response)

Many of the women in the course of survey have commented that their husbands would advice rest but did not do any thing to ensure rest after delivery.

Awareness of Abortion, its Legal Status and Approval

In case of unwanted pregnancies, majority of the husbands (78.8%) expressed that they would accept the child; only 6.8 percent opted for abortion in such a situation. Though majority of them (94%) was aware that abortion is legal, 62 percent of the husbands had not approved abortion. The reason given by them was mainly on moral and religious grounds. Concern on women's health for not approving abortion was cited by only 10 percent of the men (Table 7).

TABLE 7
KNOWLEDGE AND ATTITUDE OF MEN TOWARDS ABORTION

Knowledge and Attitude regarding Abortion	Percentage
Percentage aware that the abortion is legal	93.8
Percentage who approve abortion	
Approve	35.0
Do not approve	62.0
Can't say	3.0
Reasons for not approving of abortion	
It is a sin	22
Children are God's gift	12
Health reasons/side-effects	10
Illegal	12
It is killing an unborn child	32
Elders do not approve	12
Action taken by the couple on unwanted pregnancy	
Accept it	78.8
Abort it	6.8
No response/uncertain	14.5

Male Involvement in Child Care

Seeking treatment for their children by the husbands alone (1%) was not a common practice. In majority of the cases (88.8%), wives were found doing this job. Only 27.3 percent of the men knew about ORS and when and how it should be given. About 54 percent of the men were aware of at least one of the dangerous signs of pneumonia and 41.3 percent were aware of the right age at which weaning is to be started (Table 8).

TABLE 8
ACTIVITIES PERFORMED BY THE HUSBAND
IN ENSURING GOOD CHILD HEALTH

Activities performed by the husband	Frequency	Percentage*
Taking child to immunization (with wife)	55	13.8%
Giving ORS to child when child has diarrhoea	73	18.3%
Ensuring weaning at the appropriate age	191	47.8%
Serving food to children till they are grown-up	8	2%
Ensuring proper hygiene	48	12.5%
Ensure proper diet	35	8.8%

Majority of the husbands (61.3%) said that they wanted their children to have a good diet but were unable to do so due to poverty. About 48 percent of the male respondents expressed the need for weaning at the appropriate age.

Overall Extent of Male Participation

To find out the overall extent of male participation in family planning, fulfillment of reproductive health needs of their spouses and in child care, a 20-point scale in selected RCH components was developed. A zero score indicates 'no involvement'¹ by the male in any activity and a full 20 score indicates 'maximum' participation. If positive response was noted from the male respondent in any one of the following listed matters, a score of 1 otherwise 0 was given. The selected key RCH activities included to develop the composite index are:

- Any communication by husband and wife in various reproductive decision-making processes.
- Seeking treatment for reproductive health problems of wife.
- Willingness to use contraceptive by men.
- Current use of contraceptive by men.
- Treatment sought by the husband for side-effects in spouse due to contraception.
- Awareness about health problems that women suffer during pregnancy.
- Involvement of husband in ante-natal care.
- Involvement of husband during labour.

9. Ensuring treatment of wife after delivery.
10. Awareness about gynaecological disorders.
11. Knowledge among men on how AIDS can be prevented.
12. Treatment sought by husband for illness of the child.
13. Taking child for immunization.
14. Knowledge about ORS.
15. Giving ORS (oral rehydration solution) to child when the child had diarrhoea.
16. Ensuring weaning at an appropriate age.
17. Knowledge about correct age of weaning.
18. Ensuring that child gets a balanced diet.
19. Ensuring proper hygiene.
20. Knowledge about dangerous signs of pneumonia.

All the 400 males interviewed were classified on the basis of the male participation score. Scores obtained by husbands on 20-point scale as mentioned above were analyzed and a frequency table was generated (Table 9).

TABLE 9
 EXTENT OF MALE PARTICIPATION BASED
 ON A TWENTY-POINT SCALE

Score	(Range)	Percentage	Classification
0-5		29.8%	Very Poor
5-10		56.0%	Poor
10-15		13.4%	Moderate
15-20		0.8%	High

Overall male participation was found to be poor in the study area. About 86 percent of males came under the below moderate male participation scale while only less than 1 percent of the males came under in the 'high participation scale' category.

Table 10 below shows the association between the socioeconomic status and the overall male participation score. It is seen from the table that education (both husband's and wife's), family income and religion have a significant association ($p<0.05$) with the extent of male participation. It was more in educated (up to high school) families than the

illiterate or those having education up to middle school level. Family income also seems to have a positive impact on male participation. It was more in families with a higher income and more among Hindus than Muslims. The type of families, nuclear or joint, had no significant effect on male participation (Table 10).

TABLE 10
SOCIO-ECONOMIC STATUS
AND OVERALL MALE PARTICIPATION SCORE

Husband's education	Male Participation Score		Total
	Upto 10	Above 10	
Illiterate & just Literate	85	9	94
Up to middle	194	18	212
High school & above	64	30	94
Total	343	57	400
X ² = 31.442 DF=2 P<0.001			
Wife's education	Male Participation Score		Total
	Upto 10	Above 10	
Illiterate & just Literate	245	26	271
Up to middle	80	23	103
High school & above	13		21
Total	343	57	400
X ² = 19.863 DF=2 P<0.001			
Husband's occupation	Male Participation Score		Total
	Upto 10	Above 10	
Govt/Pvt. Service	102	25	127
Petty Business	25	7	32
Skilled Labour	103	20	123
Un-Skilled Labour	110	5	115
Total	343	57	400
X ² = 14.135 DF=3 P<0.001			
Family income (in Rs)	Male Participation Score		Total
	Upto 10	Above 10	
Upto 2000	86	4	90
2001-4000	179	32	211
Above 4000	78	21	99
Total	343	57	400

$X^2 = 11.154$ $DF=2$ $P<0.004$			
Religion	Male Participation Score		Total
	Upto 10	Above 10	
Hindu	261	53	314
Muslim	82	4	86
Total	343	57	400
$X^2 = 7.290$ $DF=1$ $P=0.007$			
Type of family	Male Participation Score		Total
	Upto 10	Above 10	
Nuclear	221	39	260
Joint & Extended	118	18	136
Total	343	57	400
$(\chi^2 = 0.105$ $df.=1$ $p=0.7457)$			

DISCUSSION

A strong preference for sons has been found to be pervasive in the Indian society, affecting both attitudes and behaviour with respect to children. The present study has also revealed a strong son preference among the slum dwellers in Delhi. This preference for son was more among males than females. Husbands (63%) desired sons even when their wives were not interested.

Couple or spousal communication can be a crucial step towards increasing men's participation in the reproductive health. It has been reported that men and women who discuss family planning are more likely to use contraception and consequently have fewer children. The present study has revealed that almost all men (about 100%) had heard of at least one modern method of contraception ie. tubectomy, vasectomy, condoms, Cu-T (IUD) and oral pills which are included in the family welfare programme. Female sterilization is the most widely known method of contraception in India followed by male sterilization. In the present study too, overall 100 percent of the married men knew about female sterilization while only 77 percent knew about male sterilization. Though knowledge among men about various contraceptives was high, the share of modern male methods i.e. the proportion of males adopting vasectomy and using condom was negligibly low (15.6%). The percentage of men who had undergone vasectomy in the study area was only 1.8 percent

which was no different than reported in NFHS-II (1977-1978). In other countries too, more men know about female sterilization than male sterilization¹². The present study revealed a poor level of knowledge among men on various aspects of ante-natal care viz., number of TT injections and IFA tablets that pregnant women should take to prevent tetanus and anaemia respectively. These may not be linked to direct causes of maternal deaths but are important factors affecting such deaths. Thus, the present findings suggest the need to increase awareness among men to take care of pregnant women during ante-natal period not only in assisting in household work but also helping her to avail appropriate services in the area of reproductive and child health.

Men can have a greater role for their wives once the baby is born. Since most maternal deaths occur within three days after delivery as a result of infection or haemorrhage, participation by men is vital to ensure rest and providing moral support to the wives. In later periods too, they have equally important role to play in keeping their children healthy and ensuring their proper growth and development through timely immunization. However, in context of urban slums where socio-economic conditions are poor, overall male participation was found abysmally low. The reasons for this might be men's (a) lack of knowledge/awareness about reproductive health matters; (b) fear of losing wages; and (c) the belief that ante-natal care and ensuring a safe delivery to women are solely 'women's affairs' in which men have a limited role to play.

In Ghana, it was found that more the fathers educated, greater the role in deciding immunization for their children¹³. This aspect may not be in any way different in Indian context too. Thus better male participation is expected by providing better education and counseling to men in all aspects of reproductive and child health like fertility, pregnancy, contraception, correct condom use, infant nutrition and child care.

RECOMMENDATIONS

Strategies need to be developed to involve men in the RCH programme and to make the men aware of their reproductive roles and responsibilities. This may be achieved by reaching male audiences with appropriate IEC messages to encourage couple communication and to improve acceptance of male methods. Family planning programmes may be made more male-friendly. Laying more emphasis on female education and women empowerment and providing income-earning opportunities would also substantially raise women's status in the family. This will also compensate the loss of daily wage to husbands belonging to below poverty line and provide them incentives to accompany their wives to hospitals. Some innovative insurance schemes in reproductive health with contribution from the Government may help to shield the daily wage loss by men and increase the overall male participation.

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प्रस्तुत अध्ययन में दिल्ली की एक शहरी मलिन बस्ती में रहने वाले 400 दम्पतियों में एक अर्ध-निर्मित साक्षात्कार प्रश्नावली की सहायता से प्रजनन शिशु स्वास्थ्य के प्रमुख क्षेत्रों के बारे में पुरुषों के ज्ञान, जागरूकता एवं भागीदारी की सीमा का आंकलन किया गया था। सर्वेक्षण के समय पाया गया था कि केवल 1.8 प्रतिशत पुरुषों द्वारा पुरुष नसबन्दी (वास्कटॉमी) विधि को अपनाया गया था और अन्य 13.8 प्रतिशत पुरुष कंडोम का प्रयोग कर रहे थे। जबकि, 57 प्रतिशत पतियों द्वारा गर्भावस्था के दौरान समुचित प्रसवोत्तर परिचर्या की आवश्यकता अनुभव की गई, केवल 5.7 प्रतिशत द्वारा इस दौरान विश्राम करना सुनिश्चित किया गया ताम 9.5 प्रतिशत पतियों ने अपनी पत्नियों के आहार में वृद्धि किया जाना सुनिश्चित किया था। साक्षात्कार किए गए आधे से अधिक पुरुषों द्वारा अपनी पत्नियों को यौन संवर्धित बीमारियों के लक्षणों के बारे में बताना उचित नहीं समझा

गया था। अधिकांश मामलों (88.5%) में पुरुष बच्चों के बीमार होने पर उनका उपचार कराने के लिए अपनी पत्नियों के साथ नहीं गए थे। जबकि, 25% पतियों द्वारा बच्चे की उचित आयु होने पर माता द्वारा अपना दूध छुड़ाना सुनिश्चित किया गया था। 18% द्वारा बच्चों को ओ आर एस घोल पिलाना ठीक समझा गया था। 21% पुरुषों द्वारा प्रजनन संबंधी विषयों पर अपनी पत्नियों से परामर्श लिया था तथा अधिकांश मामलों (54%) में केवल पुरुषों द्वारा ही इस विषय पर विचार-विमर्श लिया था। अध्ययन से प्राप्त निष्कर्षों से संकेत प्राप्त होता है कि अध्ययन में कवर किए गए जनसमुदाय में प्रजनन शिशु स्वास्थ्य संबंधी मामलों में पुरुष सहभागिता कम (56%) है, जो इस उद्देश्य के लिए विकसित 20-सूत्री स्केल पर 5 से 10 तक सीमा पर आधारित है।

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PREVALENCE OF LOWER REPRODUCTIVE TRACT INFECTION IN INFERTILE WOMEN

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ABSTRACT

Lower Reproductive Tract Infection (RTI) is a common health problem among Indian women in the reproductive age group. Whether asymptomatic or symptomatic, it is usually neglected by women making the diagnosis more difficult. A retrospective-outdoor patient department (OPD)-based study was conducted to determine the prevalence of lower RTI in women attending the infertility clinic at the National Institute of Health and Family Welfare, New Delhi. Lower RTI was detected in 30 percent of women and half of these (15%) were asymptomatic. Abnormal vaginal discharge was the commonest symptom found in the age group of 26 to 30 years. A comparatively higher prevalence was observed in women with lower educational and socio-economic status. Bacterial vaginosis was seen as the most common type of lower RTI. It was twice more prevalent in women with primary infertility as compared to those with secondary infertility. Following appropriate treatment, ten percent of these women were found successfully conceived.

Keywords: Infertility, Lower Reproductive Tract Infection, Bacterial Vaginosis, Prevalence.

The annual incidence of sexually transmitted diseases (STDs) in India is estimated at 5 percent or approximately 40 million new infections occur every year. Lower reproductive tract infection (RTI) is a common but neglected health problem in women in their reproductive age¹². Untreated lower RTI ascends and frequently leads to pelvic inflammatory disease (PID), chronic pelvic pain, tubo-ovarian abscess and ectopic pregnancy. All these contributed to infertility. It has been observed that up to 10-40 percent of women with untreated gonococcal or chlamydial infection develop symptomatic PID and up to one-quarter of those with PID become infertile³. It is therefore important to know the exact prevalence of Lower

RTI in infertile women. In the present study, a retrospective analysis of 200 infertile women was carried out to find out the prevalence of lower RTI and its correlation with the socio-economic status of women. Clinical features, various other complications and treatment outcome were also analysed in these women.

MATERIALS AND METHOD

This retrospective study was conducted at the National Institute of Health and Family Welfare over the period of one year from August 2001 to July 2002. The study included 200 women who attended the infertility clinic. The age of the patients ranged from 18 to 38 years. Detailed history was collected in a pre-structured questionnaire, which included socioeconomic profile, educational status, duration of infertility and obstetric history. Complaints of abnormal vaginal discharge were noted. General examination and gynaecological examination including per speculum and per vaginal examinations were performed in all patients. In women detected to have abnormal vaginal discharge, wet mount of the discharge, Gram's staining and culture and sensitivity tests were also carried out to identify the causative organism. Serum VDRL in husband and wife and routine urine examinations were carried out in all the patients. Specific treatment was given to control the infection. Fertility status was reassessed after completion of the treatment and during the follow-up visits.

FINDINGS

Two hundred infertile women between 18 and 38 years of age were included in the study. Out of 200 women 136 (68%) had primary infertility and 64 (32%) had secondary infertility.

Out of the total 200 women, 142 (71%) were asymptomatic whereas only 58 (29%) had symptoms of RTI. Common symptoms included abnormal vaginal discharge with bad odour and itching, urinary complaints, post-coital bleeding and dyspareunia. Clinical examinations and investigations revealed that lower RTI was present in 60 (30%) patients; 30 patients (15%) each from symptomatic and asymptomatic groups. It was more prevalent in women with primary infertility (20%) as compared to those with secondary infertility (10%). Prevalence of RTI in

symptomatic women is shown in Table 1. Presence of RTI was correlated with age and it was observed that the prevalence was high in the age group of 26-30 years (Table 2).

TABLE1
SYMPTOMS OF LOWER RTI IN THE STUDY POPULATION

Symptoms	Number of women	Prevalence
Abnormal vaginal discharge	36 (62.1%)	20 (55.6%)
Urinary complaints	12(20.7%)	6 (50%)
Post coital bleeding	5 (8.6%)	2 (40%)
Dyspareunia	5 (8.6%)	2 (40%)
Total	58	30

TABLE 2
EFFECT OF AGE VERSUS INCIDENCE OF LOWER RTI

Age in years	Number of women	Number of women with RTI n (%)
Less than 20 or 20	8	2 (25%)
21 to 25	82	25 (30.5%)
26-30	62	21 (33.9%)
More than 30	48	12(25%)
Total	200	60

This study also revealed that women coming from the lower strata of the society (Income less than Rs. 5000/- per month) showed higher prevalence of lower RTI (36%) compared to women coming from middle and higher income groups (25% and 16.7%) respectively (Table 3). Incidence of lower RTI and its correlation with education is shown in Table 4. Higher prevalence of lower RTI was seen in women who were illiterate (42.9%) as compared to women educated up to middle level (34.6%).

TABLE 3
INCOME VERSUS INCIDENCE OF LOWER RTI

Income p/m	Number of women	Number of women with RTI
Less than 5000	100	36 (36%)
5000-10000	88	22 (25%)
More than 10000	12	2(16.7%)
Total	200	60

TABLE 4
EDUCATIONAL STATUS VERSUS INCIDENCE OF LOWER RTI

Education	Number of women	Prevalence of lower RTI
Nil	28	12(42.9%)
Primary	20	8 (40%)
Middle	52	18(34.6%)
Secondary	28	9(32.1%)
Graduate	40	8 (20%)
Post-Graduate	32	5(15.6%)
Total	200	60

Gynaecological examination in 60 patients with lower RTI, revealed vaginitis in 14 percent, cervicitis in 10 percent, red lesion of cervix in 8 percent, thickened and tender fornices in 6 percent and fixed retroverted uterus in 6 percent of subjects.

Laboratory investigations (Table 5) revealed that bacterial vaginosis (19%) was the most common type of lower RTI followed by candidiasis (7.5%) and trichomonal vaginitis (3.5%). Urinary tract infection was found in 10 percent of patients. Serum VDRL was non-reactive in all the patients.

TABLE 5
TYPE SPECIFIC PREVALENCE IN LOWER RTI

Types of lower RTI	Number of women	Prevalence %
Bacterial vaginosis	38 (63.3%)	19
Candidiasis	15(25%)	7.5
Trichomonal vaginitis	7(11.7%)	3.5
Total	60	30

Lower RTI was treated in all patients with specific treatment and 10 percent of patients conceived during the follow-up.

DISCUSSION

Lower RTI affects fertility status through various mechanisms. Infected vaginal discharge affects motility and migration of sperms. Infection may also ascend and cause tubal blockage and infertility⁴.

Vagina has its own defense mechanisms to prevent infections. Vaginal pH is maintained at 4.5 by vaginal flora during the reproductive age. Any change in vaginal flora changes the surrounding pH and may lead to vaginitis⁵. Source of infection may be endogenous, sexually transmitted or iatrogenic. Endogenous infections are caused by overgrowth of normal vaginal flora. Iatrogenic infections are caused by inappropriate use of antibiotics, IUCD (Cu-T) insertion or procedures like cervical cauterization, cervical or endometrial biopsy. It may also be caused following unsafe abortion and delivery⁶.

In the present study, the prevalence of lower RTI was assessed in 200 infertile women. Lower RTI was more prevalent in women with primary infertility (20%) as compared to those with secondary infertility (10%). Prevalence of RTI in 17 percent of women with primary infertility and 6 percent in women with secondary infertility has been reported earlier in a similar study comprising 200 women¹.

The present findings showed that 58 (29%) of the total 200 infertile women were symptomatic for lower RTI. Abnormal vaginal discharge with bad odour and itching was the most common complaint in symptomatic patients and it was present in 62.1 percent of these patients. Other complaints included urinary problems (20.7%), inter-menstrual/post-coital bleeding (8.6%) and dyspareunia (8.6%). A recent review suggests that the proportion of women reporting with vaginal discharge ranges from 13 to 68 percent⁷. Abnormal vaginal discharges have been reported as the most common symptom of lower RTI (36%) in NFHS-2 (1998-99) data⁸.

Although lower RTI was present in 60 (30%) of the 200 patients, only half of them were symptomatic. In the rest of the women, lower RTI was detected on gynaecological examination and laboratory investigations. This highlights the fact that lower RTI is equally prevalent in asymptomatic infertile women. It has been estimated that over 50 percent of infections occur with no symptoms, preventing health seeking by women and consequently making diagnosis difficult⁹. In a large population-based study among the rural women, Bang et al had found that although 92 percent of women had gynaecological problems on examination, only 55 percent of them were symptomatic¹⁰.

Lower RTI was most prevalent in the age group of 26 to 30 years. The highest prevalence of sexually transmitted infection has been found in the age group of 21 to 30 years in our country, which is attributed to higher sexual activities in this age group¹¹. It was also correlated with educational status and income of the family. Highest prevalence was found in illiterates (42.9%) and lower income groups (36%) of women. NFHS-2 (1998-99) data reported similar prevalence of lower RTI; 41 percent in illiterate women and in those belonging to lower socioeconomic strata⁸. This is a general phenomenon among the populations of Asia, including India. Substandard hygiene, low socio-economic status, promiscuity and traditional taboo against openness about these diseases are the usual factors responsible for this high prevalence².

Bacterial vaginosis was found as the most common cause of infection. It was prevalent in 19 percent of women and accounted for 63.3 percent of lower RTI. It was diagnosed with Gram's staining and identification of clue cell. A recent review has reported that incidence of bacterial vaginosis ranged from 9 to 44 percent in sexually active women presenting with vaginal discharge¹². Thakur et al in their study in a Delhi hospital found bacterial vaginosis in 33 percent of lower RTI cases¹³.

Candidiasis was the second most common cause and it was found in 7.5 percent of women. It was diagnosed by wet mount of vaginal discharge with 10 percent KOH solution. Trichomonal vaginitis was found in 3.5 percent of women. It was diagnosed by wet mount taken with normal saline. Candidiasis and trichomonal vaginitis were etiological types in 25 percent and 11.7 percent of lower RTI respectively. Gupta V et al in their study of 139 women reported that bacterial vaginosis was the commonest cause of RTI found in 44.6 percent of women. It was followed by candidiasis (9.3%) and trichomoniasis (7.9%)¹⁴. Bang et al in their landmark study of rural women in Maharashtra reported the incidence of candidiasis in 34.5 percent and trichomonal vaginitis in 14 percent of women with RTI¹⁰.

Specific treatment to control infection was started in all the patients with lower RTI and the patients were followed up. As expected, 10 percent of the women were found conceived within three months of completion of the treatment.

CONCLUSION

Thirty percent of the infertile women were found to have lower RTI but timely treatment restored fertility among many of them. Prevalence of lower RTI is higher in the age group of 26-30 years among lower socioeconomic and illiterate women. Bacterial vaginosis was the most common cause of lower RTI. It was equally prevalent in symptomatic and asymptomatic groups. Lower RTI was twice more prevalent among subjects with primary infertility as compared to those with secondary infertility.

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भारतीय महिलाओं में उनकी प्रजनन आयु में निचला प्रजनन मार्गीय संक्रमण एक आम स्वास्थ्य समस्या है। इस रोग के होने अथवा केवल इसके लक्षण प्रकट होने पर महिलाओं द्वारा आमतौर पर इसकी उपेक्षा कर दी जाती है, जिससे इस रोग का निदान करना अत्यन्त जटिल हो जाता है। राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान, नई दिल्ली के बांझपन क्लिनिक में उपचार हेतु आने वाली महिलाओं में निचले प्रजनन मार्गीय संक्रमण की व्यापकता सुनिश्चित करने के लिए पूर्वापेक्षी-बहिरंग रोगी विभाग-आधारित एक अध्ययन किया गया था। 30% महिलाओं में निचला प्रजनन मार्गीय संक्रमण व्याप्त था और इनमें से आधी संख्या में महिलाओं (15%) में इस रोग के लक्षण नहीं पाए गए थे। असामान्य योनि स्राव 26-30 वर्ष आयु-वर्ग की महिलाओं में एक सामान्य के लक्षण पाया गया। निम्न शैक्षिक एवं सामाजिक-आर्थिक स्तर की महिलाओं में इस रोग की एक तुलनात्मक उच्च व्यापकता देखी गई थी। जीवाणु वैजाइनोसिस निचला प्रजनन मार्गीय संक्रमण एक अत्याधिक सामान्य लक्षण पाया गया था। गौण बांझ महिलाओं की अपेक्षा प्राथमिक बांझ महिलाओं में इस रोग की व्यापकता दुगुनी थी। इनमें से 10% महिलाएं पूर्ण उपचार कराने पर गर्भवती होने में सफल रहीं थी।

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HUMAN RESOURCE DEVELOPMENT IN A GOVERNMENT HEALTH ORGANIZATION: VIEWS OF DOCTORS

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ABSTRACT

As the demand for quality services rendered by the government health set-ups gets stronger day-by-day, continuous human resource development (HRD) becomes crucial both for service improvement and client satisfaction. The current study was undertaken to analyse the status of HRD mechanisms and issues in a government health organization, Employees State Insurance Corporation (ESIC). 139 doctors working in various capacities in two hospitals and 10 dispensaries of ESIC were interviewed. Secondary data were collected and studied from the available documents. Manpower planning was observed as per norms published under the aegis of the Director General, ESIC. However, shortfalls existed for doctors, in-position and sanctioned numbers, both at the hospitals and dispensaries. As per the respondents, the process of recruitment was slow. Though the performance appraisal was as per the prescribed norms, many were of the opinion that it was subjective, generalized and not reflective of the actual performances. The study also identified gaps in the system not followed by appropriate remedial measures. Rewards were as per the existing rules of the Central Health Services. Though time bound, rewards were seen invariably delayed. The policy' with regard to training had several lacunae. No separate 'Training Cell' existed for doctors. The policy document for transfers was under review. On the basis of the opinion expressed by the respondents, it is concluded that the existing status with respect to HRD mechanisms at ESIC is nor conducive to the spirit of HRD. It probably reflected a non-appreciation of the criticality of HRD issues and non-caring attitude of the health management functionaries at the highest level.

Keywords: Human Resource Development (HRD), Issues, Government health policy, Current mechanisms.

In the recent times, greater emphasis is being placed on capacity building in people than just in physical infrastructure alone. This capacity building in people is human resource development (HRD) and has wide interpretations, both in an organizational and holistic context. 'People' are the most valuable resource of any organization and this human asset would gain value in time, provided it was given the appropriate environment and support notwithstanding the size of physical infrastructure the organization has. In an organizational context, HRD may be defined as the process in which the employees of an organization are helped and supported in a continuous and planned manner to acquire and sharpen capabilities and skills required for performing various functions associated with their present and expected future roles. They are further helped to develop and enhance their undeveloped potential for their own and organizational developmental process. Developing an organizational climate contributes to professional well-being, motivation and pride of the employees which is considered as the third dimension of the process¹. The organizational goal of HRD normally is to have competent, motivated, dedicated and disciplined employees to ensure higher levels of productivity, profitability and growth of the organization.

Organizational HRD efforts are usually directed towards commitment and competency development among the employees since, without competent employees, it is difficult to harvest good productivity irrespective of the sophistication in technological or infrastructural resource base. Organisations use many mechanisms to achieve HRD goals². These HRD issues or mechanisms are manpower planning, recruitment selection and other forms of job assignments, induction programme, training, performance appraisal, rewards, punishments etc. Although it is widely recognized that improved management of Human Resources is the key to provide a more effective, efficient and quality health service, only few developing countries have made significant progress in this area. In recent years, staff plans often represent a little more than wishful thinking, bearing no relation to resource availability, key issues and problems such as reconciling to strategic management keeping in mind the local needs³. Little attention is also paid to the function of Human Resource Management, which is a part of HRD. Often this function is delegated to the Personnel or Establishment sections. The function of the Personnel section as has been evolved with time is mostly a maintenance function whereas HRD is supposed to have more proactive

functions⁴. The present study was conducted at ESIC in Delhi to analyse the HRD issues and mechanisms meant for doctors and the way they exist in their present form.

METHODOLOGY

The study was conducted in the health units of Employees State Insurance Corporation in Delhi. These were selected by random sampling method and the final tally included 2 out of 4 hospitals (50%) and 10 out of 33 (30.3%) dispensaries in the city. Doctors of major departments like Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Ophthalmology, Otorhinolaryngology (ENT), Orthopaedics, and Laboratory Medicine (Pathology, Microbiology, and Biochemistry) were selected from the hospitals to make the sample representative of the population under study. The following types of personnel were included in the sample population.

Hospitals:

- All Heads of Departments. This included all general wards in the specialty attached to the unit of the HOD.
- Fulltime Specialists and Insurance Medical Officers of the allopathic system of medicine working in these wards.

Dispensaries:

- All Insurance Medical Officers in-charge.
- All Insurance Medical Officers posted at the time of the study in the dispensaries.

The final sample included 139 doctors out of an expected total of 140.

Primary data were collected using a semi-structured interview schedule. Information on HRD mechanisms of manpower planning, recruitment and selection, performance appraisal, rewards/punishments, training and transfers was collected.

The following secondary data were collected and studied:

- Norms and standards for ESI hospitals and dispensaries for manpower planning and requirements,
- Relevant Gazette notifications for recruitment and selection,
- Annual confidential reports, formats and guidelines and forms for performance appraisal,
- Service and conduct rules for rewards and punishments,
- Training policy / Related documents for information on training,
- Other relevant records and circulars.

FINDINGS

The manpower planning for doctors (general duty medical officers and specialists) was done as per the "Norms and Standards of Staff and Equipment for ESI Hospitals and Dispensaries." The Director-General of Employees State Insurance Corporation published this document. The sanctioned and commissioned bed strength of ESI hospital at Basaidarapur is 600. The corresponding figures for ESI hospital, Rohini, were 270 and 100 beds respectively. There was a visible discrepancy visa-vis the sanctioned and in-position strength of the insurance medical officers (IMOs) and the specialists. It was more pronounced in case of medical officers as shown in Table 1.

TABLE 1
BED STRENGTH VERSUS NUMBER OF SPECIALISTS AND INSURANCE MEDICAL OFFICERS IN TWO ESI HOSPITALS

Hospital	Bed strength		Category of Personnel			
			IMOs		Specialists	
	(s)	(c)	(s)	(P)*	(s)	(P)*
Basaidarapur	600	600	117	48 (41)	46	30 (65)
Rohini-Sector 15	270	100	82	24 (29)	23	12(52)
Total	870	700	199	72 (70)	69	42 (117)

S)* - Sanctioned (C)* - Commissioned (P)* - In-position
Figures in parentheses indicate percentages
MOs - Insurance Medical Officers
Source - No. (5) of reference

Approximately a shortage of more than 61 percent of IMOs vis-avis the 'sanctioned' and the 'in-position' status in the two hospitals was observed. The reason mentioned was the unavailability of the required regular personnel to meet these norms. The time taken for completion of a single recruitment cycle was around one and a half to two years, and subsequently, some of the successful candidates deciding not to join the organization later were cited as the main reasons for such a situation. The shortfall for IMOs was however, partly met by recruiting Senior Residents in various specialties. This, however, did not find favour with the sitting IMOs (Table 2).

TABLE 2
RESERVATIONS AMONG IMOs AGAINST RECRUITING SENIOR RESIDENTS FOR REGULAR POSTS

Views expressed	N=98 (%)
1. Treated at par with senior residents despite seniority	63 (64)
2. Short-term measure	63 (64)
3. Possible ultimate reduction in number of sanctioned posts	33 (34)
4. Reduction in career advancement opportunities at senior level	33 (34)

(Figures in parentheses indicate percentages)

In the dispensaries, the discrepancy in the 'sanctioned posts' and the actual number of personnel 'in-position' was very much apparent. In some study units (Rohini Sector, 5 & 7 dispensaries), the 'in-position' strength was actually higher than the sanctioned strength. This was so because these units were started as single shift dispensaries and later converted into double shift dispensaries. However, the sanctioned strength had not been appropriately revised keeping in view of the norms for working in double shift dispensaries. To rationalize this paradox and streamline the functioning, requirement of IMOs was worked out based on the patient load of the dispensary (the norm being one medical officer for 60 patients). Even on this basis, there was a shortfall of IMOs in all the study units except Rohini Sector 5 and 7 and Seelampur dispensaries. This shortfall was more pronounced at Mangolpuri and Jwalapuri dispensaries. The IMOs wanted this discrepancy to be rectified in order to improve the quality of services. They were in favour of putting greater thrust on speedy recruitment. However, no solution was received by which the same can be operationalized.

The Process of Recruitment: The recruitment to medical posts in the ESIC was on the lines of recruitment to Central Health Services. The process was conducted by the Corporation and wasn't through the Union Public Service Commission. The criteria for it were published in The Gazette of India, June 16, 1990 (Jyaistha 26, 1912), Part-III, Section IV, page 1854-1855. The selection for IMO Gr. II and Specialist Gr. II was through direct recruitment. The posts were notified as per sector/unit requirement and position of personnel. The modalities for the recruitment were through an advertisement in all-India newspapers followed by a written examination or interview or both. Letters of appointment to the successful candidates were followed by medical examination. A panel of candidates numbering usually 50 percent of the advertised posts was maintained. This was in order to maintain a list of potential IMOs for replacing those selected candidates who do not join or get rejected on medical grounds. This panel of candidates could be called upon within a period of six months. This whole process from notification to recruitment usually takes a period of one and a half to two years. The subsequent notification for posts and advertisement, selection etc. are usually done after this duration. The selection to other posts has been through promotion after fulfilling certain conditions as per the established rules.

Performance Appraisal: Performance appraisal in the Corporation for medical personnel was by the medium of Annual Confidential Reports (ACRs). This format had four parts. These parts with the details are mentioned below:

- Part -1 This had details of the personal data of the individual.
- Part-II Self-appraisal
- Part-III Assessment by the Reporting Officer.
- Part-IV Remarks by the Reviewing Officer.

The scores assigned to various grades of appraisals ranged from '5' for outstanding' to '1' for 'below average'. Any 'outstanding' grading was to be accompanied by proofs for such a report.

The following are the opinion expressed by 57 percent of the IMOs (56/98) and 44 percent of the specialists (7/16).

- The process of writing ACRs was routine (subjective and generalized) rather than reflective of the individual's capability (objective and customized) in absence of any output indicators.
- While reporting, the officer tended to tread a middle path so as to avoid controversy and unnecessary explanations.
- The reviewing officer was not intimately associated with the working of the officer being reported upon to make any realistic opinion.
- Identified gaps should be followed by remedial action.

70 percent of the IMOs l/c (7/10) and 73 percent of HODs (11/15) felt that-

- The requirement of meticulous record keeping for adverse or outstanding entries into the ACR was the major stumbling block as the process was cumbersome, adding to their already extensive workload.
- Lack of appropriate local powers, anticipated union hooliganism and inadequate support from their superiors, the exercise of making an adverse entry for a staff member created personality and ego clashes resulting in unpleasant working atmosphere at the unit. This exercise therefore was usually avoided.
- These were bottlenecks in making such entries, especially adverse ones.

Reward System: In the Reward System, promotion of IMOs up to the level of CMO was time-bound in phases. In the first phase, it was to the level of IMO Gr. I, after being a regular IMO in Gr. II for 4 years and later to the level of CMO after working as IMO Gr. I for 10 years. The benchmark for these time-bound promotions was the absence of any adverse entries against the employee. The next promotion was to the level of Non-functional Selection Grade (NFCG). This too was time-bound now, as per the directive of the Ministry of Health, Government of India, the yardstick being 13 years of regular service after joining and two 'very good' performance appraisals in the last five years. The implementation of this directive was however, still under process. The promotions to the next level viz. Senior Administrative Grade (SAG) and further were on the basis of merit and availability of the posts. A minimum score of 19 in the last 5 years of appraisal was considered desirable for being considered

suitable for these promotions. It was also same for specialists till they become Specialist Gr. I (NFSG) except the time period required for reaching the pay scale and level of promotion from the time of appointment was less as compared to the IMOs. This created some undercurrents of resentment amongst the IMOs with similar experience and qualifications. Desire for some mechanism at policy level was expressed to minimize or eliminate this inequity. Other opinions regarding the issue were as listed in Table 3 (page 84). The IMOs l/c and HODs felt that these hampered their efficacy as frontline managers.

Policy on Training: Policy with respect to training and study leave was circulated to the various subordinate offices of the ESIC vide letter No. V-20/12/2/94-DM (HQ) dated the 15th May 1995. All the cases of training/conference/seminar/workshop as well as of study leave were examined and forwarded to the headquarters subject to the condition that the officers were found eligible to be sponsored under the prescribed policy and their absence for the period of training was not detrimental to the normal functioning of the Corporation. Prescribed government norms were adhered to for sending officials for out station trainings, and the trainees were provided TA/DA as admissible and travel allowances as per their entitlements. All trainings under the National AIDS Control Programme, the participants were provided per-diem as per the NACO norms. Separate budgeting to the tune of 0.5 percent was earmarked for training.

48 percent of IMOs (47/98) 13 percent of specialists (2/16); 20 percent of IMOs l/c (2/10) and 7 percent of HODs (1/15) were not sure of the existence of this document. Another 27 percent of IMOs (26/98); 19 percent of specialists (3/16); 40 percent of IMOs l/c (4/10) and 13 percent of HODs (2/15) were not sure of its complete contents (Table 4, page 85).

TABLE 3
OPINIONS ON EXISTING REWARD AND PUNISHMENT SYSTEM

Opinion	Category of Employee			
	<i>IMO</i> (<i>N=98</i>)	<i>Spl.</i> (<i>N=16</i>)	<i>IMO l/c</i> (<i>N=10</i>)	<i>HOD</i> (<i>N=15</i>)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
1. <u>Non-adherence to existing timelines</u> * for promotions. This resulted in o Employee continuing to work at a lower position than was due o Erosion of the authority of the official	69 (70)	16(100)	7(70)	9(60)
2. Power to take effective deterrent action at local level inadequate	83 (85)	13(81.3)	10(100)	15(100)
3. General lack of support from the superiors for punitive** actions taken	83 (85)	13(81.3)	10(100)	15(100)
4. Loss of impact of any action taken due to time taken at the higher level for final action	83 (85)	13(81.3)	10(100)	15(100)

(Figures in parentheses indicate percentage)
'Comprehension for this phenomenon was difficult as the initial three promotions were time bound.
"Punitive measures included written memorandums followed by warnings to amend the undesirable conduct, adverse entries in the service book with or without curtailment of increments for a specified period, suspension and termination of service. The basis of these measures was the existing service and conduct rules for the employees.
IMOs - Insurance Medical Officers. IMO l/c - Insurance Medical Officer In-charge, Spl. - Specialists

TABLE 4
TRAINING RECEIVED AND OPINION OF RESPONDENTS
ON VARIOUS TRAINING ISSUES

Training Received	Category of Employee			
	IMO (N=98)	Spl. (N=16)	IMO l/c (N=10)	HOD (N=15)
	n(%)	n (%)	n(%)	n (%)
Induction	35 (36)	4(25)	Nil	2(13)
Promotional	Nil	Nil	Nil	Nil
Orientation	74 (76)	10(63)	9(90)	14 (93)
Opinions on Training Issues				
1. Separate Training cell for doctors	85 (87)	14(88)	10(100)	15(100)
2. Inadequacy of present facilities at Directorate regarding o Physical Infrastructyre o Adequate teaching aids o Teaching material o Human Resource (Trainers) o Catering facilities	63 (64)	13(81)	10(100)	15(100)
3. Early conduct of Induction training (within 3 mo)	76 (78)	14(88)	10(100)	12(80)
4. Non conduct of formal promotional training considered detrimental for performing new roles	98(100)	16(100)	10 (100)	15 (100)
5. Present number of Orientation trainings few and infrequent	57 (58)	13(81)	7(70)	15(100)
6. Inappropriate placement post training	57 (58)	13(81)	7(70)	15(100)

Figures in parentheses indicate percentages)
IMOs - Insurance Medical Officers)
IMO l/c - Insurance Medical Officer In-
charge – Spl. – Specialists
HO D - Head of Department

Those respondents who were aware of the contents of this training 'policy' document felt that-

- The policy document did not cover aspects related to induction and promotional training vis-a-vis their timing, contents etc. and periodicity of orientation trainings different from the ones where application for sponsorship was to be made.
- Sponsorship of a conference/fellowship/training opportunity in the discipline, once in two years was inadequate. They desired such sponsorship by the Corporation on an annual basis for updating their skills.
- Efforts to make the existing document 'open*' were inadequate in terms of its content and conditions for training.
- Universal percolation of this document amongst the employees on a continuing basis was felt by many.
- The present 'policy' document was not employee-friendly with respect to finalization of number of people to be sent for training courses. The procedure of grant of leave, permission to attend training through proper channels was very cumbersome, time-consuming and often frustrating.

There was no separate training cell for doctors at the Medical Directorate, or headquarters level. There was, however, a nodal officer, appointed as a local arrangement for trainings of these personnel at both the levels.

A training calendar for trainings under the RCH programme, AIDS control programme and Population Council project for different categories of workers was drawn in the beginning of each year. No formal calendar was similarly drawn for other trainings. There were no formulated guidelines regarding content areas, frequency and duration of different types of trainings for different categories of employees. These were locally improvised.

The following was the existing strategy regarding different types of trainings for doctors:

- **Induction training-** The Regional Office of the ESI Corporation at Rajendra Place conducted this training. Content areas were informally communicated by the headquarter.
- **Promotional training-** No formal promotional training was conducted for doctors. The respondents felt that unlike the induction training programme where a reasonably accurate figure was not available regarding the training load, for promotional training, the same could be calculated on an yearly basis and an appropriate calendar for formal training could be drawn up.
- **Orientation training-** Requests for such trainings were processed as per the guidelines of the existing training 'policy' document. Regarding other trainings deemed appropriate by the authorities, information regarding the personnel to be sent, the timing of the training was communicated to the individual through his/her immediate superior for compliance.

The document giving the details and yardsticks for transfers in the form of a policy was under review for medical personnel. However, certain guidelines were evolved as per numerous discussions with the Medical Commissioner, the last being on 9 September 1985 and they formed the general guiding principles in transfers. 68 percent of the IMOs (67/98); 69 percent of specialists (11/16); 60 percent of IMOs l/c and 53 percent of HODs felt the process of transfers was not transparent and desired clear-cut guidelines in this regard in the form of a policy. The general feeling perceived by the respondents was that this mechanism was more of a harassment tool than a measure for staff welfare and catering to the demands of profession.

DISCUSSION

Manpower planning was done as per the "Norms and Standards for Staff and Equipment for ESI Hospitals and Dispensaries", published by the Director-General, ESIC, Kotla Road. As per the 2001-02 report of the Directorate (Medical), Delhi⁵, there was a major discrepancy for the doctors 'in position' as against 'staff sanctioned' in both the hospitals and nearly all the dispensaries. Overall, this was in contravention to the norms

recommended. Similar inequity in staffing patterns for rural health units, despite stringent regulations and apparently rigorous planning norms was also brought to the fore by Javier et al (1999) in their paper published by the Department for International Development (DFID) on human resource issues in the health sector³.

Recruitment and selection were as per the guidelines for Central Health Services. Being an autonomous body, the process of recruitment and selection was conducted by the organization, and not through the Union Public Service Commission. An average recruitment cycle for the recruitment of medical officers took one and a half to two years to complete with no certainty of the successful candidates joining the organization. The respondents (doctors) felt that this could be shortened by adhering strictly to the established protocols for speeding up the process.

The performance appraisal was done on the basis of annual confidential reports (ACRs). Nearly half of Insurance Medical Officers (IMOs) and specialists felt that the reporting and the reviewing officers usually did a "generalized/subjective" reporting than a "customized/objective" appraisal and reporting in the absence of output indicators. The role of the reviewing officer was unclear, since he/she was too far away and not really associated with the manner of working of the individual being reported upon. It was felt that this mechanism sometimes resulted identical appraisal between a non-optimal and an optimally performing worker. This was a major concern for the respondents. Also identified gaps were practically not followed up for remedial action. These perceptions have the risk of transforming as demoralizing and de-motivating factors for an efficient employee.

Majority of the IMOs l/c and HODs felt that the requirement of meticulous record keeping for 'adverse' or 'outstanding' entries into the Annual Confidential Reports (ACRs) added to their already extensive workload. Absence of powers at the local level, union hooliganism and lack of superior administrative support often compounded the vitiation of local working atmosphere when 'adverse' entry against an employee was made. This makes a case for rationalization of the workload of these personnel with a stronger support system for effective functioning of these personnel. Most of these concerns find an echo in the observations made

by Javier et al (1999), which stated that incentives for good performance were very weak and though systems like staff appraisal were in place, they were rarely enforced. Also, the appraisal systems rarely had specific output indicators for staff performance against which it could be measured. Line managers were sometimes reluctant to make judgments on others; performance due to anticipated reprisals and the absence of requisite powers to take appropriate action in event of a problem further aggravated the issue. Finally, they observed that appraisals were often made on personal and political grounds rather than objective and technical skills. They recommended that identified gaps on performance appraisal be followed by remedial action³.

Under the rewards, promotion of IMOs up to the level of CMO was time-bound and in phases. The next promotion to the level of Nonfunctional Selection Grade was made time-bound now. The implementation of this directive was, however, still under process. The promotions to the senior administrative level were on the basis of merit and availability of the posts. It was on similar lines for specialists till the level of Specialist Gr. I (NFSG), though the time-period required reaching this pay scale and the level of promotion from the time of appointment was shorter as compared to the period spent by IMOs. Non-confirmation to established time-lines was cited as the cause of operational problems by most of the respondents. This could be a de-motivating factor for the employees since the authority to reward appropriately at a local level was non-existent.

Punitive measures were perceived as given relatively swiftly by all the respondents. The respondents' feeling was that the rewards were not given on time despite eligibility but not the punishments. On the contrary, punitive measures were relatively quick as reported by Zalpuri (2000) in his study of the Organizational Structure of a District Hospital and assessment of selected services⁶. The observations of Javier et al (1999) that line managers rarely have requisite powers to take suitable action even when they do spot a problem, concurs with this observation of the respondents³.

A large percentage of respondents were not sure either of the existence of any document giving guidelines for 'policy' for training or its complete contents. Those who were aware of, felt that it gave no

directions *regarding* induction and promotional trainings vis-a-vis their *content*, *Ming* in *relation* to the event, etc. and the *periodicity* of *orientation* trainings *apart from the ones for which sponsorship* was applied for. It was felt that such issues should be addressed in the *policy* document. These findings are in synchrony with the recommendations of Talwar et al (1990) which addressed the Training Needs and Assessment of Health and Family Welfare Personnel in Uttar Pradesh⁷.

The respondents rued the non-existence of a separate training cell for doctors and nursing personnel. This, they felt, lead to a generalized 'ad-hocism' in the process of training. Opinion of the respondents regarding training policy, availability of better training infrastructure, resources- both material and manpower has parallels with the recommendations of the study done by Talwar et al (1990) who assessed the capability and capacity of the existing and potential infrastructure for continuing education with respect to training requirements⁷.

The existing training strategy was considered fragmented by the respondents. The absence of a separate training cell and training policy was felt responsible for this fragmentation and non-cohesion in training efforts. It was further considered as a stumbling block for preparation of a regular training calendar for each year and a designated training curriculum for different categories of training. A training calendar at the beginning of each year was being prepared only for trainings under the RCH programme, AIDS programme and the Population Council Project. Opinions on strategy for different categories of training were classified under the following heads:

- **Induction Training-** All the doctors felt the need for formal induction training within a reasonably short time after joining the organization. This is in concurrence with the recommendation of policy for induction training to all by P. P. Talwar et al (1990)⁷.
- **Promotional Training-** No formal promotional training programme was conducted for any category of personnel. Often individuals learnt by working with the supervisors and picking up instructions, and thus getting 'trained'. This is akin to Weston R and Mike's (1990) description of traditional method of training for laboratory staff, a 'Sitting next to Nellie' approach where the

individual was placed along with a more experienced staff member and often suffering from the usual disadvantages⁸. There was consensus on the role of a formal promotional training programme for the smooth transition into a new position.

- Orientation Training- The orientation training programme conducted for the respondents were unevenly distributed and infrequent in nature. Utility of these trainings conducted was suspect, since more often than not, the personnel were asked to work in a setting totally unconnected with the training received earlier. Inappropriate placement after training amounted to a waste of resources and it also led to de-motivation. Similar observations were reported by Javier et al³. The respondents wanted timely, systemically planned, quality trainings to be conducted. It was felt that these issues should be addressed in the policy on training. Identical opinion was expressed in one of the recommendations by Talwar et al (1990).

A formal document for doctors in the form of a transfer policy was under review for consideration. Numerous discussions were held with the Medical Commissioner, the last being in September 1985 addressing the present guiding principles for transfers. Over 50 percent of the respondents felt the need for a clear-cut, transparent transfer policy. The general feeling was that though requests were acceded to in the name of staff welfare, these were guided by other considerations. Transfers were often used as a harassment tool rather than a measure of staff welfare and actual field requirements.

CONCLUSION AND RECOMMENDATIONS

The critical importance of HRD and its various issues can no longer be ignored. Various HRD issues/mechanisms in the government sector exist without the basic 'HRD-orientation'; often devoid of the spirit of HRD. This is evident from the opinions of the respondents in the present study. Rational recruitment procedures to meet the organizational goals, timeliness of the reward systems, transparent transfers policy, effective support systems etc. are the felt needs of the times. The spectrum of probable reasons for the opinions expressed varies from the issues being dealt with by the respondents in a generic rather than a specific manner. The intensity of the appreciation and apprehensions

expressed on many issues in the present study is probably an indication that these need to be handled in a more empathic and technically correct manner to foster an effective and efficient organizational work culture in any organization.

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सरकारी स्वास्थ्य संगठनों द्वारा प्रदान की जाने वाली गुणकारी सेवाओं की मांग में दिन-प्रतिदिन वृद्धि होने के कारण सेवा में सुधार और ग्राहक की संतुष्टि दोनों के लिए सतत मानव संसाधन विकास कार्य कठिन हो गया है। प्रस्तुत अध्ययन मानव संसाधन विकास के यंत्र-विन्यास की वर्तमान स्थिति का आंकलन करने के लिए एक सरकारी स्वास्थ्य संगठन, कर्मचारी राज्य बीमा निगम संबंधी मुद्दों का विप्लव करने के लिए किया गया था। दो अस्पतालों तथा कर्मचारी राज्य बीमा निगम की 10 डिस्पेंसरियों में विभिन्न पदों पर कार्यरत 139 डाक्टरों से साक्षात्कार किया गया था। उपलब्ध दस्तावेजों से द्वितीयक आंकड़े एकत्र करके उनका विप्लव किया गया था। जनशक्ति योजना महानिदेशक, कर्मचारी राज्य बीमा निगम के तत्वाधान में प्रकाशित मानकों के अनुसार तैयार की गई थी। अस्पतालों और डिस्पेंसरियों में कार्यरत और यथास्थिति डाक्टरों की संख्या में स्वीकृति मानक के अनुसार कमियां थी। उत्तरदाताओं के अनुसार भर्ती-प्रक्रिया धीमी थी। यद्यपि, निष्पादन आंकलन नियम मानकों के अनुरूप था, अधिकांश के विचार में यह काल्पनिक एवं सामान्यीकृत था तथा इससे वास्तविक निष्पादन प्रत्यावर्तित नहीं होता था। अध्ययन से प्राप्त निष्कर्षों से ज्ञात हुआ कि पर्याप्त सुधारात्मक उपाय न अपनाए जाने के कारण प्रणाली में कमियां थीं। प्रतिफल केन्द्रीय स्वास्थ्य सेवा में विद्यमान

नियमों के अनुरूप थे। यद्यपि, समयबद्ध प्रतिफल स्थिर तथा विलम्बित थे। प्रशिक्षण संबंधी नीति में कई कमियां थीं। डाक्टरों के लिए कोई अलग प्रशिक्षण केन्द्र नहीं था। स्थानान्तरण संबंधी दस्तावेज की समीक्षा की जानी थी। प्रत्युत्तरदाताओं द्वारा प्रकट मत के आधार पर यह निष्कर्ष वर्तमान स्तर पर मानव संसाधन विकास की भावना का प्रेरक नहीं है। संभवतः यह मानव संसाधन विकास के विवेचनात्मक और उच्च स्तर पर स्वास्थ्य प्रबंध कार्मिकों की परवाह न करने वाले रवैये को झलकाते हैं।

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**KNOWLEDGE, ATTITUDES AND PRACTICES OF COMMUNITY
IN ANTI-MALARIA ACTIVITIES IN A DELHI SLUM**

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ABSTRACT

Community-based approaches for vector-control by making people aware of the disease, programme and services available to them have been recognized as highly successful. In order to study the effect of community participation in controlling malaria, the present study was undertaken in an urban slum of Delhi. Various aspects of malaria and its control as well as community's initiative for anti-malaria activities were analysed. The study population consisted of 53.3 percent illiterates and a majority of households was below the poverty line. It was observed that 70.3 and 93 percent of the respondents were aware of the cause and symptoms of malaria respectively. There was a significant association between educational status and knowledge of respondents regarding treatment of malaria ($P < 0.001$). Occurrence of fever with chills and rigors during the past six months and community's practices of sleeping in open places were found significantly ($P < 0.01$) associated. Community participation was evident only in the form of utilisation of services provided by the Government. 7 percent of the respondents felt that participation by local people for clearing stagnant water was necessary to reduce and prevent malaria. The above findings indicate that like many other programmes, community participation has been passive for anti-malaria activities and probably needs external help and motivation for improving the same.

Keywords: Urban slum, Community Participation, Anti-malaria activities, Vector control.

Besides tuberculosis, malaria is by far the most important tropical disease and kills more people than any other communicable diseases¹. It continues to be a major public health problem in India with over more than 8 percent of the country's population exposed to varying degree of malaria risk². India has achieved considerable success in malaria control since the

time of independence with malaria prevalence then as high as more than 75 million cases and 0.8 million deaths per year. Independent India has witnessed implementation of various malaria control strategies starting from National Malaria Control Programme (NMCP) in 1952 followed by National Malaria Eradication Programme (NMEP) in 1958, which achieved spectacular successes in the mid-sixties. However, the programme witnessed setbacks in the early seventies and with the return of malaria with vengeance in mid-seventies a Modified Plan of Operations (MPOs) in 1977 was adopted. MPOs stabilized the malaria incidence to around 2.18 million cases per annum by 1984 and since then there is no decline and annual incidence of malaria in India has been around 2 to 3 million cases per year³. The NMEP monitors the disease situation based on the reports received through the surveillance system operative through the state governments. It is a known fact that a significant portion of the population is seeking medical care from the private sector which is very large in our country. The private sector does not report information related to malaria incidence to Government agencies. Experts opine that the surveillance machinery has worsened over a period of time. Therefore, the official reported incidence is considered grossly underestimated. It is supported by increasing number of malaria outbreaks from different parts of the country with enhanced number of malaria deaths, particularly during the last several years⁴.

In 1995, the expert committee on malaria identified urban areas as high-risk areas. In urban areas, the breeding sites of vectors are mostly man-made. It was expected that anti-larval measures with chemical larvicides and biological methods along with personal protection measures would control the malaria transmission in urban areas. The situation was made more complicated by the rapid development and construction activities in urban areas. Unplanned rapid expansion of urban areas, industrialization without proper drainage facilities and development of supporting infrastructures like rail and roads without keeping in mind the natural flow of surface water etc. increased mosquitogenic conditions in all urban areas. The slums in towns and its periphery are the worst affected because of lack of water management and appropriate anti-larval operations. Around 10 percent of malaria cases are reported from the urban areas⁵. Survey conducted in Delhi slums⁶ shows that majorities of the slums lack proper sanitation and have poor drainage facilities resulting in water stagnations. This results in breeding grounds for mosquitoes and

mosquitogenic conditions. The other reasons for urban malaria problem include non-promulgation or improper implementation of civic laws for reduction/elimination of domestic and peri-domestic mosquito breeding places, poor case-finding mechanisms and insufficient staff for carrying out anti-larval operations⁷.

Malaria has acquired dangerous proportions on account of vector resistance to commonly used insecticides and drug resistance. Therefore, there is a need for garnering public support for malaria control strategies. The success of a disease control programme does not solely depend on adequate resources and effective management but also on the community's response in availing of these services which in turn depend on the knowledge of the people about the disease and their perception of the programme. Community participation in malaria control has considerable potential to contribute, particularly in source reduction, biological control, personal protection measures and extending cooperation for spraying, diagnostic and management activities, particularly in the slum areas. The global malaria control strategy endorsed by WHO in 1992 also emphasizes the need to develop sustainable control programme adapted to local needs. Malaria constitutes a major public health problem and community participation for its control will have a positive impact on the programme. Keeping in view the above, the present study was carried out in an urban slum of Delhi and the issues of community's perception and participation in anti-malaria activities were analysed.

The objectives of the study were:

1. To find out the knowledge and current practices of the slum dwellers regarding prevention and management of malaria as well as awareness regarding anti-malaria activities being undertaken by the Municipal Corporation of Delhi.
2. To assess the extent of community participation for the anti-malaria activities and study the various factors associated with it.

METHODOLOGY

In a metropolitan city like Delhi, the implementation of malaria control strategy is usually the responsibility of the civic bodies. In Delhi, Municipal Corporation of Delhi has a major responsibility in carrying out anti-malaria activities, which are implemented through anti-malaria units, located at 12 zones of the Municipal Corporation of Delhi. The present study was carried out in 'Sanjay Basti', an urban slum situated in Timarpur in the Civil Lines Zone of Delhi. The study population consisted of slum dwellers, *Pradhans* and other opinion leaders, representatives of the only NGO working in the area and officials of anti-malaria unit of the concerned Municipal Corporation of Delhi zone in the selected slum.

In this zone of the Municipal Corporation of Delhi, there were a number of circles for operational convenience. From the list of 20 circles in Civil Lines Zone, one circle was selected randomly and from this circle, one urban slum was selected on the basis of high prevalence of malaria. For ascertaining the knowledge and current practices of the slum dwellers, a sample size of 271 households was determined by taking the proportion as 50 percent and confidence limit 90 percent with 5 percent error. Heads of approximately 300 households were included in the study, which is 10 percent more than the required number taken in order to compensate the number of non-responses. Households for the study were taken up on the basis of systematic random sampling technique. Only two local leaders known as *Pradhans* were identified along with a representative of the only NGO working in the area. The officials of the concerned anti-malaria unit were also interviewed. Primary data were collected from respondents through interviews using a semi-structured interview schedule.

1. Heads of the selected households for collecting information on socioeconomic status, environmental conditions conducive to malaria, knowledge on causation, transmission, diagnosis and management of malaria; practices followed by them for seeking treatment for fever, prevention and control of malaria. Information was also collected on the availability of health facilities, perceptions of the community regarding anti-malaria activities carried out in the area and efforts by the community for its prevention etc.

2. The sole representative of the NGO and *Pradhans* of the selected slum for collecting information regarding details of I EC activities undertaken for malaria prevention, number and frequencies of meetings between local community and officials of anti-malaria units of the Municipal Corporation of Delhi, advocacy campaigns undertaken for source reduction and personal protection measures, any anti-malaria activity carried out with the contribution from the community in terms of money, labour etc.
3. The officials of the anti-malaria units of the concerned Municipal Corporation of Delhi zone for collecting information regarding IEC and/or educational programme for anti-malaria activities and with regard to community participation etc.

Focus Group Discussions (FGDs) were conducted to collect qualitative information regarding issues of community participation like knowledge and perceptions, prevailing practices related to prevention and protection measures, cooperation with the civic authorities related to malaria control etc.

FINDINGS

Socio-economic and Demographic Profile

Of the three hundred households interviewed, 62.3 percent were females and 66.3 percent of the respondents belonged to the age group of 21 to 41 years. 53.3 percent of the respondents were illiterates, which constituted more than half of the sample population. 37 percent of the respondents belonged to Scheduled Caste representing a large proportion of the sample population. One or more members from almost all the households were found employed; 34 percent in the private service, 18.3 percent skilled manual workers, 15 percent unskilled manual workers, 13 percent having their own business and 11 percent in the Government service. Majority (70.3%) of the households were having a monthly income in the range of Rs. 1000/- to Rs. 2500/-. All the respondents belonged to the age group of 17 to 33 years.

Environmental Conditions Conducive to Malaria

In the selected slum, all the households were having clean water supply through tap. However, in 82 percent of the households, the taps were located outside the house. Nearly all the households were storing water but the stored water was kept covered. 85.3 percent households had open drains and 2.3 percent households had no drainage system. 77.3 percent of households had coolers and 36 percent of all the respondents were not cleaning the coolers on weekly basis which is a major reason for promoting mosquito breeding (Table 1). 52 percent of the households had bushes/trees/plants outside their houses.

TABLE 1
AVAILABILITY OF DESERT / ROOM COOLERS AND THE PRACTICE
OF DRAINING WATER FROM COOLERS

Characteristics	No.	%
Availability		
Available	232	77.3
Not available	68	22.7
Total	300	100
Frequency of Draining the cooler		
Daily	14	4.7
2-3 times in a week	73	24.3
Weekly	37	12.3
Fortnightly	77	25.7
Once in a season	12	4.0
Never	19	6.3
Not applicable	68	22.7
Total	300	100

Knowledge and Awareness about Malaria for its Cause, Diagnosis and Treatment

Majority of the respondents (82.3%) mentioned malaria as the most common cause of fever followed by viral fever (13.3%). 70.3 percent of the respondents mentioned 'mosquito bite' as the cause of the malaria. Polluted air and unsanitary conditions around houses were consistently mentioned as the cause of malaria by 15.3 percent and 12.7 percent of the respondents respectively (Table 2). 93 percent of the respondents

knew 'chills and rigors' as the symptom of malaria and 86 percent of the respondents mentioned "blood slide examination" as the diagnostic test for malaria. 70 percent of the respondents did not have any knowledge about the treatment of malaria (Table 3).

TABLE 2
KNOWLEDGE OF THE RESPONDENTS ABOUT THE CAUSE OF MALARIA

Cause of Malaria	No.	%
Mosquito bite	211	70.3
Polluted Air	46	15.3
Unsanitary conditions around the house	38	12.7
Bad drinking water	1	0.3
Others	3	1.0
No response	1	0.3
Total	300	100

TABLE 3
KNOWLEDGE OF THE RESPONDENTS ABOUT MEDICINES FOR THE TREATMENT OF MALARIA

Name of the medicine for treatment of malaria	No.	%
unioroquirie	32	10.7
Quinine	58	19.3
Do not know	210	70
Total	300	100

Health Seeking Behaviour, Sleeping Practices and Perceptions about Prevention of Malaria

60.7 percent of the respondents mentioned that in case of fever among family members, the patient is taken to the Government doctor, while 37 percent of the respondents mentioned approaching a private doctor (Table 4). 22 percent of the respondents reported the occurrence of fever among family members with chills and rigors in the preceding 6 months. 13 percent of the respondents also mentioned sleeping outside the house in open places. Use of preventive measures for protection against malaria was reported by 96 percent of the respondents. Majority

(97.6%) from this group was using mosquito repellent coils and mats while only 1.7 percent mentioned using mosquito nets (Tables 5 & 6).

TABLE 4
HEALTH SEEKING BEHAVIOUR OF RESPONDENTS DURING FEVER

Health Seeking Behavior during Fever	No.	%
Takes him/ her to the Pvt. Doctor	111	37
Takes him to the Govt, doctor	182	60.7
Bring medicines from nearby chemist	1	0.3
No response	6	2
Total	300	100

TABLE 5
PERCEPTION OF RESPONDENTS
REGARDING PREVENTION OF MALARIA

Characteristics	No.	%
Is malaria preventable?		
Yes	289	96.3
No	7	2.3
No response	4	1.3
Total	300	100
Any preventive measures used		
Yes	288	96
No	12	4
Total	300	100

TABLE 6
TYPE OF PREVENTIVE MEASURES ADOPTED BY THE RESPONDENTS

Type of Method	No. of Respondents	%
Wire nettings	8	2.8
Mosquito nets	28	1.7
Mosquito repellent coils & mats	281	97.6
Mosquito repellent skil	7	2.4
Prophylactic anti-malarial drugs	0	0.0
Any other	3	1

Perception about Anti-malaria Activities

Majority of the respondents mentioned lack of anti-malaria activities in the surrounding areas. 89 percent of the respondents didn't ever see any surveillance worker paying visit to their area. 22 percent of the respondents acknowledged the presence of water bodies with weeds and plants around the neighbourhood. However, only 13.6 percent reported to have seen these being removed from the water collection. A large percentage (95 %) of the respondents were having knowledge regarding availability of free treatment facilities for Malaria in Government health facilities. However, only 51 percent were aware of the existence of blood slide testing facilities in Government health centres (Table 7).

TABLE 7
KNOWLEDGE OF RESPONDENTS ON THE AVAILABILITY OF
FREE TREATMENT AND TESTING FACILITIES FOR MALARIA
IN GOVERNMENT HEALTH CENTRES

Characteristics	No. of Respondents	%
Knowledge regarding free treatment facilities for malaria		
Yes	285	95
No	15	5
Total	300	100
Knowledge regarding prasence of blood slide taking ities for malaria		
Yes	153	51
No	147	49
Total	300	100

Extent of Community Participation and Associated Factors

The study showed that only 7 percent of the respondents were resorting to community efforts for cleaning stagnant water adjacent to their houses when need for the same arose. 43.3 percent of the respondents reported cleaning of stagnant water by the Government agencies and 32 percent reported self-effort for the same (Table 8). When views of the respondents were sought for involving community for taking collective action for the prevention and control of malaria, 53.3 percent of the

respondents preferred choosing representatives amongst themselves, and 32 percent suggested the formation of Mohalla committees for preventing water stagnation in low-lying areas. Others (24.7 %) suggested monetary contributions and 23.7 percent of the respondents didn't give any opinion (Table 9).

TABLE 8
RESPONSES REGARDING DRAINAGE/ PREVENTION AGAINST
STAGNANT WASTE WATER

Agency cleaning/clearing the stagnated water	No.	%
Self	96	32.0
Govt. Agency	130	43.3
NGO	1	0.3
Community Effort	21	7.0
Remains as such	43	14.3
No response	9	3.0
Total	300	100

Nine officials of the anti-malaria department were interviewed and all of them expressed that in general, community is cooperative and do not create any problem while carrying out anti-malaria activities. 66.6 percent of Malaria Beldars (n=4) mentioned that people in the slum were cooperative and supportive for getting their houses sprayed for focal spray and also helped in locating water collections for anti-larvicide spray. Only one of the Malaria Beldars denied getting any cooperation from the community. For increasing the community participation, some of the suggestions given were: (i) community to be empowered in terms of knowledge about causation, prevention, personal protection measures and right treatment for malaria; and (ii) training of locally available private practitioners regarding proper diagnosis and treatment of malaria as per the Government guidelines.

Table 9
SUGGESTIONS BY RESPONDENTS FOR COMMUNITY
INVOLVEMENT FOR PREVENTION AND CONTROL OF MALARIA
(Multiple Responses)

Suggestions	No.	%
Formation of Mohalla level committee for filling of low lying areas before rainy season	96	32
Monetary contribution for cleaning the stagnant water and for getting garbage removed	74	24.7
Choosing few representatives amongst themselves for coordinating with elected representatives of MCD and health officials of the Govt, for better and effective measures	160	53.3
Mohalla level committee should be empowered to take punitive measures against persons creating mosquitogenic conditions in the area	31	10.3
No response	71	23.7

Local opinion leaders, known as *Pradhans* in local parlance, however, were apprehensive and confused about the term 'community participation'. They mentioned that malaria control programme is solely a Government's programme and it is the sole responsibility of the Government officials only. They opined that community could help by adopting 'Personal Protection Measures'. They also suggested that elected representatives should spend their funds on improvement of sanitary conditions around the slums to prevent mosquitogenic conditions. ^ representative of the sole NGO working in the slum reported that there s no community participation by slum dwellers in any of the health activities and suggested the involvement of more NGOs by Government or publicizing the Government's programme on malaria control.

Focus Group Discussion (FGD)

Focus group discussions (FGDs) revealed that community was aware of the causation, symptoms etc. of malaria. They also knew how malaria gets transmitted and how stagnant water helps in the breeding of mosquitoes. The community was not happy about the quality of services being provided in Government health facilities; especially the behaviour of the staff and waiting time bothered them a lot. However, the reason for going to the Government health facility was mainly due to economic considerations. It was also revealed that private doctors seldom prescribed the blood slide test for malaria in case of fever. Regarding prevention of malaria and adoption of personal protection measures, the FGDs corroborated the findings based on interviews with the sample households. In general, people held that they were not participating in anti-malaria activities because they neither had guidance nor clarity about their role in the Government-run programmes. They were willing to be part of these activities especially the women who displayed more enthusiasm.

DISCUSSION

Socio-economic and Demographic Profile

Under the socio-economic and demographic profile, the findings revealed that half of the respondents belonged to the age group of 17 to 33 years. 84 percent of the samples were within the age bracket of 41 years. This is significant because Adarsh (1997) had found in his study of two slums of Shahadara zone of MCD, that fever as well as clinical malaria cases were maximum in the younger age group compared to the population in the age group of 45 years or more⁸. Similar findings were reported by Sethi et al in a survey conducted in 1987-88 in Delhi to compare the prevalence of chronic malaria in two pockets of migrant population with that of local population in a nearby village⁹. The younger population should be the target for health education and can be enrolled or guided for involvement in anti-malaria activities. In the selected slum, 37 percent of the respondents belonged to scheduled castes. As per the reports of the Planning Department, Government of Delhi, which has quoted the estimates of 1991 census, the scheduled caste population of Delhi is around 19.1 percent. Thus, it may be interpreted that a very high

number of people belonging to scheduled caste are the residents in the selected slum. 70.3 percent of the households were having a monthly family income of Rs 1,000/- to Rs. 2,500/- only and 10.7 percent of the households were not even earning Rs. 1,000/- per month. As per the survey conducted by the Ministry of Rural Development, Government of India in 1997, one of the criteria taken for the exclusion from BPL households was an annual household income of more than Rs. 20,000/-¹⁰. Thus, the 10.7 percent of the households in the selected slum belonged to the below poverty line group and the majority of the households had a monthly income of Rs. 1,000/- to Rs. 2,500/-. The health consequences of poverty are severe. The poor die younger and suffer more due to disability. They are exposed to greater risk from unhealthy conditions at home and at work. Malnutrition and past-illness make them more prone to fall ill and the process of recovery is slow because they have little access to health care facilities. It also came out in the FGD that community has priority for sustaining itself in terms of bread and butter first and can only think of participation when economic benefits accrue from it.

Environmental Conditions Conducive to Malaria

More than 85 percent of the sample respondents reported open drains in front of their houses. Similar findings were obtained in a recent survey conducted by National Council of Applied Economic Research (NCAER) during May-July 2000 in 32 slum clusters spread over Delhi. It reported that only 16.1 percent of the sample households had proper drainage system either underground or pucca¹¹. Yang TH (1985) stated that environmental negligence, stagnated water collections due to mismanagement of water, lack of drainage and sanitation promote the breeding of *Anopheles* mosquitoes in urban slums and further increase the chances of spread of malaria¹². Stagnant water in the coolers also provide breeding grounds for mosquitoes. The present findings revealed that 36 percent of the households were not draining the water from the coolers on a weekly basis. In urban areas, *Anopheles stephensi* was the principal vector, as has been reported. Adult female *Anopheles stephensi* bites humans both indoors and outdoors. Regarding resting habits of this mosquito, the opinion of the experts varied. While in Mumbai, it is found predominantly resting outside the house; in Kolkata, it is a house-haunting mosquito¹³. Data about resting habits of *Anopheles stephensi* in Delhi was not available. Mosquitoes prefer dark humid

places. Plants and bushes could be the ideal resting places for the mosquitoes. In the selected slum, 52 percent of the respondents reported bushes and plants outside their houses. A significant (Chi-square test $\chi^2=21.65$, D.F. = 1, $P < 0.001$) association was found between the presence of bushes and plants outside the houses of the respondents and the occurrence of fever with chills and rigors among the family members during the past six months preceding the study (Table 10).

TABLE 10
PRESENCE OF BUSHES/TREES/POTTED PLANTS OUTSIDE THE
HOUSE VERSUS OCCURRENCE OF FEVER WITH 'CHILLS & RIGORS'
AMONG FAMILY MEMBERS

Fever with chills and rigors	Bushes/Trees/Potted plants just outside house		Total
	Yes	No	
Yes	51	15	66
No	105	129	234
Total	156	144	300

Knowledge and Awareness about Malaria, its Cause, Diagnosis and Treatment

As far as community's awareness regarding various aspects of malaria is concerned, it was found that the community was well aware of the causes of malaria. Fever with chills and rigor is considered as signs of malaria. This compares favourably with the findings of a study conducted on malaria in the states of Haryana and Rajasthan in 1997-98 by the National Institute of Health and Family Welfare, New Delhi. Majority of the respondents were not aware about the medicine(s) used for the treatment of malaria. When this was entered in contingency table with educational status of the respondents, a significant ($\chi^2 = 81.59$, D.F. = 4, $P < 0.001$) association between the two was observed on Chi-square test (Table 11).

TABLE 11
EDUCATIONAL STATUS VERSUS KNOWLEDGE OF THE RESPONDENTS
ON TREATMENT OF MALARIA

Educational Status	Knowledge about the names of medicines of Malaria		Total
	Yes	No	
Illiterate	23	137	160
Primary Level	5	32	37
Middle School Level	25	32	57
High School Level	25	9	34
Graduate or more	11	1	12
Total	89	211	300

The association on Chi-square test (χ^2 =10.45, D.F. = 4, P < 0.05) between the respondents' educational status and their knowledge regarding treatment of malaria indicated that higher the educational level, the more the knowledge of the respondent on the subject of treatment of malaria (Table 12).

TABLE 12
EDUCATIONAL STATUS VERSUS KNOWLEDGE OF THE RESPONDENTS
REGARDING TESTS FOR DIAGNOSIS OF MALARIA

Educational Status	Test for diagnosis of Malaria		Total
	Blood Slide Examination	Do not know	
illiterate	128	32	160
Primary Level	35	2	37
Middle School Level	50	7	57
High School Level	33	1	34
Graduate or more	12	0	12
Total	258	42	300

Health Seeking Behaviour, Sleeping Practices and Perception about Prevention of Malaria

Despite the awareness regarding the presence of Government health facilities in and around the study area, 37 percent of the respondents reported taking their family members to the private doctors. The reason, as revealed during Focus Group Discussions, was that Government dispensaries are not open during evening hours which is convenient for working people to seek medical help. 3 percent of the respondents reported sleeping outside their houses in open places. When this was associated with the occurrence of fever with chills and rigors in any family member during past six months, the association was found to be statistically ($\chi^2 = 7.08$, D.F. = 1, $P < 0.01$) significant (Table 13).

TABLE 13
HABIT OF SLEEPING IN OPEN AND ITS ASSOCIATION
WITH FEVER WITH CHILLS AND RIGORS

Any family members suffered from fever with chills and rigors in past six months	Sleeping in open outside the house		Total
	Yes	No	
Yes	15	51	66
No	24	210	234
Total	39	261	300

As a preventive measure, nearly all of the respondents in the present study were using mosquito repellent coils and mats. Use of mosquito bed nets was not popular as revealed in the present study and was supported by findings from other studies as well. Voluntary Association of Community Health and Nature (VACHAN) reported after a study in Igatpuri, Maharashtra in 1996 that using mosquito net was not feasible because of its cost and method of sleeping together in a room¹⁴. Adarsh (1997) reported that only 1.7 percent of the respondents of the sample population in two slums of Delhi were using mosquito nets⁸. Agarwal et al reported that only 4 percent were using mosquito nets as a preventive measure against mosquitoes¹⁵. In another study, Debashish Biswas, Vector Control Officer of Kolkata Municipal Corporation (2000) while comparing the effectiveness of mosquito bed nets and mosquito

repellents in the slums of Kolkata, found that repellent users suffer from malaria to the extent of 80-85 percent, while those who sleep under bed nets hardly suffer. Though mats and coils are not effective against mosquitoes, most of the slum dwellers (80%) hardly use bed nets due to lack of space¹⁶.

Perception about Anti-malaria Activities

The study findings and the FGD have established that active surveillance, domestic breeding checking and anti-larval operations were hardly carried out in the selected slum. Kaul et al (1995) reported that in the urban areas of Delhi, where anti-larval measures and biological control measures are used for suppression of mosquito density, the anti-larval worker is seen as elusive entity or at best an occasional visitor¹⁷. Similar observations were reported by Adarsh (1997) in his study in two slums of East Delhi. The present findings are not different from those reported earlier. This reflects lack of monitoring and work culture for the malaria eradication programme officials⁸.

Extent of Community Participation

Community participation occurs when some or all members of the community contribute in some form to an activity which is aimed at the overall development of the community. Some or all members of the community may contribute in cash or kind. The community may provide volunteers to help the officials of the Government in carrying out the developmental activity. Thus, when the community helps and contributes in any action towards its own benefit in any form, community participation takes place¹⁸. In the study area, the removal of stagnated wastewater was considered as one of the community activities. 7 percent of the respondents reported community efforts for the same. It is significant in this sense that community in general, views such type of works as the duty of the Government officials. When Adarsh (1997) sought people's opinion on malaria control by Government in two urban slums of East Delhi, only 1.7 percent of the respondents felt that people should also participate in government efforts to control malaria, the rest opined that malaria should be controlled by Government efforts alone⁸.

Conceptually, cooperation, participation and involvement are very close to each other in achieving community development. Nevertheless, these terms differ in so far as 'cooperation' is considered which entails that if a programme is put up for the community by a Government agency, the community is expected to take benefit out of it¹⁸. It is like Government providing health facilities, diagnostic facilities and free treatment facilities for malaria and people are expected to utilize these services. In this context, the selected slum is very well covered with a malaria clinic nearby and more than 60.7 percent of the sample population utilize the services of this health facility. This is an example of passive community participation as the community is utilizing the services created by an external agency for their benefit. Community was aware about the problems and wanted to participate in solving these. This was revealed by the suggestions given by the respondents during FGDs, which highlights that community is affected by internal dissent and needs facilitation, guidance and leadership. Sometimes, community itself takes initiative to contribute towards community's cause. However, initiative for an activity comes from outside when an external agency like the Government or an NGO comes to the community with a programme and then the community responds and gets involved in it. The present findings show that the community desired external help from some voluntary agency or Government officials to guide them in making a suitable programme where community participation could be enhanced. Some considered self-initiated, self-mobilized participation as a higher quality or superior type of participation. However, in developing countries, most of the developmental actions and attempts towards community participation are externally initiated. If the activities proposed to be done by an outside agency is seen by the community as helping them and if the community accepts these activities and is willing to get involved then there is no reason why externally supported programmes should not be considered for stimulating community participation. In fact, in India, particularly in the field of preventive health, most attempts at community involvement are externally initiated like the Jamkhed Project in Maharashtra, and Vadu Rural Health Project in Pune¹⁹.

In 1995, the expert committee had recommended the involvement of NGOs and local opinion leaders as integral part of health educational strategy. However, in the selected slum, no such initiative was identified.

CONCLUSION

From the above findings, it emerged that though the community is knowledgeable about many aspects of malaria with regard to its cause, diagnosis and prevention, transforming this awareness into action needs further improvement. Activities undertaken by the Government in the areas of environmental sanitation, treatment of malaria and anti-malaria measures in the slum need improvement.

In the selected slum, some community participation is evident in the form of utilization of services, cooperation with anti-malaria officials for anti-malaria activities. A small percentage of people had participated in community action for clearing stagnating water from the drains. However, community is not making any decisions about what, where, when and how to solve malariogenic problems. The community is also not sharing the burden by providing resources such as money, land, building and manpower in this direction. In addition, the community has not developed any code of conduct for maintaining hygiene in the surrounding by taking steps to prevent garbage thrown on streets or to prevent water to stagnate in front of their houses. Therefore, it can be concluded that there is less community participation for anti-malaria activities in the selected slum. However, it is seen that the community was participating passively in anti-malaria activities to some extent and probably needs external help for stimulating active participation in this direction.

Lkkjk'k

रोग-नियंत्रण हेतु समुदाय पर आधारित एप्रोच, लोगों को रोग के प्रति जागरूक बनाकर उनके लिए कार्यक्रम एवं सेवाएं उपलब्ध कराने को अत्याधिक सफल प्रयास माना गया है। यह अध्ययन दिल्ली की एक मलिन बस्ती में मलेरिया पर काबू पाने के लिए सामुदायिक सहभागिता के प्रभाव का पता लगाने के लिए संचालित किया गया था। इस अध्ययन में मलेरिया-नियंत्रण के

विभिन्न पहलुओं के साथ-साथ सामुदायिक प्रयासों का विश्लेषण भी किया गया है। अध्ययन में कवर की गई जनसंख्या में 53.3% लोग अशिक्षित थे और उनमें से अधिकांश परिवार निर्धनता-रेखा से नीचे थे। यह देखा गया था कि क्रमशः 70.3% और 93% उत्तरदाता मलेरिया के लक्षणों और मलेरिया होने के कारणों के बारे में जागरूक थे। मलेरिया के उपसा के बारे में प्रत्युत्तरदाताओं के शैक्षिक स्तर और ज्ञान में ($p<0.001$) परस्पर उल्लेखनीय संबंध था। पिछले 6 महीनों में बहुत ठंड लगने और कंपकपी के साथ ज्वर आना तथा खुले में सोने के सामुदायिक व्यवहार में उल्लेखनीय संबंध ($P<0.01$) था। सरकार द्वारा उपलब्ध कराई गई सेवाओं के प्रयोग के रूप में सामुदायिक सहभागिता देखी गई थी। 7% प्रत्युत्तरदाताओं द्वारा यह अनुभव किया गया कि रूके हुए पानी को साफ करने में स्थानीय लोगों का सहयोग मलेरिया पर नियंत्रण पाने के लिए आवश्यक था। अध्ययन से प्राप्त उपरोक्त निष्कर्ष दर्शाते हैं कि मलेरिया-विरोधी कार्यों के लिए अन्य कार्यक्रमों की भांति सामुदायिक सहभागिता निष्क्रिय रही है, संभवतः इसमें सुधार लाने के लिए बाह्य सहायता की आवश्यकता है।

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INITIATION OF BREAST-FEEDING BY URBAN WOMEN

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ABSTRACT

Various factors influence the time of initiation of breastfeeding in women. In the present study, 200 mothers with new-born babies attending the out-patient department of Urban Health Centre, Government Medical College, Nagpur, were interviewed to find out the extent of influence of these factors on the initiation of breast feeding using a pre-tested questionnaire. Parity of mother less than or equal to two and practices of giving pre-lacteals to the child and discarding colostrum were found significantly associated with delayed initiation of breast-feeding. Premature babies were found more likely to be breast-fed earlier than the normal babies. Education of the mother beyond middle school had significant association with early initiation of breast-feeding. However, other factors like, age of the mother, ante-natal care received by the mother and sex of the child had no significant correlation with breast-feeding. The findings from the present study support the contention that community education and appropriate training of health functionaries in this regard are vital for promoting breast-feeding practices further.

Keywords: Pre-lacteal feed, Caesarian section, Pre-mature baby, Breast-feeding.

Cultural, traditional and scientific studies support breast-feed as the best food for babies soon after the delivery. The 'suckling reflex' is found to be very active during the first half hour after birth¹. In 1990, UNICEF and WHO launched the baby-friendly hospital initiative for the promotion of breast-feeding. It recommended that health personnel should help mothers to initiate breast-feeding within half an hour of birth of the child². The suckling reflex helps the release of hormone oxytocin resulting in uterine contraction that facilitates expulsion of placenta and reduces the

risk of postpartum haemorrhage³. Clemens et al found that early initiation of breast-feeding was associated with a marked reduction of the rate of diarrhoea throughout the first six months of life⁴. With early initiation of breast-feeding, it was reported that there are higher prolactin levels in the blood, greater milk output and better composition of milk⁵. Early initiation of breastfeeding is also proved to be associated with higher prevalence of subsequent practice of breast feeding⁶. Although, breast-feeding is almost universal in India, there is a need to lay emphasis on early initiation of breast-feeding and discourage the practices of delayed initiation. Recent data that correlate the timing of breast-feeding initiation in the newborn to various other factors is scanty. In the present study, we try to explore the factors that influence the early initiation of breast-feeding and the possible ways to improve such practices in an urban set-up.

MATERIALS AND METHOD

In this cross-sectional study 200 mothers with infants attending the outpatient department of Urban Health Centre, Government Medical College, Nagpur, were interviewed; using a pre-tested questionnaire (pilot-tested over a sample population exclusive of the study population for feasibility and appropriateness of questions). Data were collected over a period of one month during September to October 1999. The time of the first breast-feeding in each case was noted. Early initiation of breastfeeding was defined as breast-feeding within one hour of delivery. Besides socio-demographic information, other factors like ANC care, mode and place of delivery, sex of child, pre-lacteal feeds and colostrum were taken into consideration and correlated with the time of initiation of the first breast-feeding. Socio-economic status of subjects was assessed using modified Kuppaswamy Classification^{7,8}. Woman's educational status was classified into illiterate, literate and middle school complete and high school complete or more³. The data were analysed statistically using X² test as a test of significance.

FINDINGS

As per modified Kuppaswamy classification, majority of the study population belonged to the 'lower' or 'upper lower' socio-economic class. 22 percent of the study population was Muslim by religion and rest was Hindus. 96 percent of the mothers in the study population had their

deliveries in the hospital. While 77 percent of the women had normal deliveries, the rest (23%) delivered through caesarian section. In mothers with normal delivery, the average time of initiation of breast-feeding was 12.8 hours against 23 hours for those with a caesarian section; the median time of initiation of breast-feeding was 2 hours and 7 hours respectively. It was observed that 30 percent of the women in the study population initiated breast-feeding within an hour of delivery. Thus, a caesarian section delivery was identified as a variable having significant influence on the initiation of breastfeeding. Further analysis of the data was restricted to women with normal deliveries. In these women, 21, 39 and 85 percent breast-fed their children within half an hour, one hour and twenty-four hours of delivery respectively. 41 percent of the Muslim mothers compared to 38 percent of Hindus initiated breast-feeding within an hour of delivery. Median age of the mother in the study population was 24 years. No significant association was found between timing of initiation of breast-feeding and age of the mother. Those who were illiterate or had only primary education (23 %) initiated the breast-feeding within an hour of delivery compared to those (42 %) with education upto middle school and above. However, this difference was not found to be statistically significant.

Table 1 depicts the correlation between timing of initiation of breast-feeding and other variables. Pre-lacteal feeding of the child was found inversely related to early initiation of breast-feeding ($X^2 = 23.27$, $p < 0.001$); and was found highly significant.

Women with parity more than 2, initiation of breastfeeding was observed to be much earlier as compared to women with parity of either 1 or 2 ($X^2 = 13.05$, $p < 0.01$).

33 percent of the mothers discarded colostrum. Initiation of breast-feeding was more likely to be within an hour if the child was allowed to receive colostrum. There was a significant positive association between practice of giving colostrum to the child and timing of early initiation of breast-feeding ($X^2 = 13.21$, $p < 0.01$).

If the child was premature, the mother initiated breast-feeding within an hour of delivery as compared to the mothers having a normal child ($X^2 = 17.03$, $p < 0.001$).

No significant association was observed between timing of initiation of breast-feeding and other individual variables like antenatal care received by the mother or sex of the child.

TABLE 1
INFLUENCE OF DIFFERENT VARAIBLES ON THE
TIMING OF INITIATION OF BREAST-FEEDING

	Timing of Initiation of breast-feeding (hrs)			
Mode of Delivery	0-1	>1-24	>24	Total
Normal	60 (38.9)*	72 (46.75)	22(14.28)	154
Caesarian section	0(0)	33 (71.74)	13(28.26)	46
Total	60 (30)	105 (52.5)	35(17.5)	200 =N
X ² = 26.08, pO.001, HS				
Pre-lacteal feed Given	16(21.33)	41 (54.67)	18(24)	75
Not Given	44 (55.7)	30 (37.97)	5 (6.32)	79
Total	60 (38.96)	71 (46.1)	23(14.93)	154 = n1
X2= 23.27, p<0.001,HS				
Colostrums: Given	49 (47.57)	44 (42.72)	10(9.7)	103
Discarded	11(21.57)	27 (52.94)	13(25.5)	51
Total	60 (38.96)	71 (46.1)	23(14.93)	154
X?= 13.21,1X0.01, S				
Premature baby: Yes	22 (51.16)	9(20.93)	12(27.9)	43
No	38 (34.23)	62 (55.85)	11 (9.9)	111
Total	60 (38.96)	71 (46.1)	23(14.93)	154
X ² = 17.03, p<0.001,HS				
Parity: 1	12(36.36)	10(30.3)	11 (33.33)	33
2	37 (38.54)	52 (54.16)	7 (7.29)	96
>2	11 (44)	9(36)	5(20)	25
Total	60 (38.96)	71 (46.1)	23 (14.93)	154
X2= 13.05, p<0.01,S				
Antenatal Care: Received	47 (36.15)	63 (48.46)	20(15.38)	130
Not Received	13(54.16)	8 (33.33)	3(12.5)	24
Total	60 (38.96)	71 (46.1)	23 (14.93)	154
X2= 2.95, p>0.05, NS				
Sex of child: Male	33 (36.26)	43 (47.25)	15(16.48)	91
Female	27 (42.85)	28 (44.44)	8(12.69)	63
Total	60 (38.96)	71 (46.1)	23(14.93)	154
X2= 1.22, p>0.10, NS				

(Figures in parentheses represent percentages), NS -Not significant

DISCUSSION

Although breast-feeding is a universal phenomenon, in the Indian scenario, very few children are put to this practice immediately after birth. Only 16 percent of children in India and 23 percent in Maharashtra initiate breast-feeding within an hour of birth³. As the present study was conducted in an urban setup and there was a preponderance of hospital deliveries in the study population, a relatively higher value of 30 percent representing breast-feeding within an hour of delivery may seem to be justified. A significant difference on the aspect of early initiation of breastfeeding was noticed between mothers with normal delivery and those who underwent caesarian section. Similar findings have also been observed in studies reported earlier¹⁹. Thus, caesarian section delivery is a barrier for early initiation of breast-feeding and such mothers need encouragement and support during early post-partum period to initiate breast-feeding.

In the present study, early initiation of breast-feeding was found relatively high in middle school educated women population endorsing the findings of data of National Family Health Survey-II, India. Women's parity more than two was significantly associated with early initiation of breastfeeding in the study population, which may be explained by the fact that as the labour is less exhaustive in multi-parous women or in women with an experience of childbirth earlier. This observation contradicts the findings of Kishore et al¹⁰ which reported that multi-parous mothers delayed initiation of breast-feeding and the low educational status of these mothers was blamed as the influencing factor. However, no such linkage between multi-parity and education could be established in the present study.

Nearly 49 percent of the women who delivered normally gave pre-lacteal feed to the child. Kishore et al has also reported similar rate of pre-lacteal feeding¹¹. The practice of pre-lacteal feeding was found to be associated with delay in the initiation of breast-feeding. Ahmed et al reported that type and duration of pre-lacteal feeding had significant negative influence on milk secretion. Pre-lacteal feeding forms a vicious cycle with 'coming in' of milk; it first delays initiation, which later encourages pre-lacteal feeding¹².

Colostrum is the initial breast secretion and considered to be the nutritionally rich that provides natural immunological protection to the newborn. It is a complex food, rich in nutrients and non-nutritional bioactive components, which promote infant health, growth and development¹³. Practice of colostrum feeding was significantly associated with early initiation of breast-feeding. A majority of study subjects was found to discard colostrum. Similarly, if the child was born premature, chances of early breast-feeding was significantly higher. This is probably due to the care provided to mothers in the hospital during early postpartum period where the child was born premature; more attention was also given towards early initiation of breast-feeding. No linkage was found between ante-natal care and early initiation of breast-feeding. On the contrary, it is seen that proportionately, more of the mothers who did not receive any ante-natal care, breast-fed their children early compared to those who received it. This indicates that the quality of the ante-natal care services received by the mothers was not enough to educate them regarding appropriate breast-feeding practices. This is supported by the fact that only 13.4 percent of mothers received the right breast-feeding advices out of all those receiving the ante-natal care in New Delhi¹⁴. No linkage could be established between sex of the child and timing of initiation of breast-feeding in the present study. This explains that mothers do not necessarily discriminate between sexes for initiation of breastfeeding after delivery. The present finding is not different from those reported earlier¹⁵.

CONCLUSION

The above findings indicate that cultural practices like giving pre-lacteals and discarding colostrum delay the initiation of breast-feeding to the new born. Early initiation of breast-feeding was significantly correlated with independent factors like education of the mother, parity of the mother and premature childbirth. However, no significant association was established between ante-natal care received by the mother and in the early initiation of breastfeeding indicating probably the fact that IEC component for early initiation of breast-feeding during ante-natal care services needs to be further strengthened. There is also a need for encouragement and support to mothers delivering through caesarian section on the aspect of early initiation of breast-feeding during the postpartum period.

Extensive community education along with training of health functionaries on the promotion of more appropriate breast-feeding practices is very much essential to educate mothers on early initiation of breast-feeding; avoidance of pre-lacteals and not discarding the colostrum.

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महिलाओं में स्तनपान कराना प्रारम्भ करने के समय को अनेक घटक प्रभावित करते हैं। घटकों के प्रभाव की सीमा का पता लगाने के लिए शासकीय मेडिकल कालेज, नागपुर के शहरी स्वास्थ्य केन्द्र के बहिरंग रोगी विभाग में नवजात शिशुओं के साथ आने वाली 200 माताओं से साक्षात्कार किया गया था। माता की समानता एक से कम या दो के बराबर और माता के स्तनों में दूध आने से पहले बच्चे को कोलेस्ट्रम के रूप में आहार दिए जाने संबंधी व्यवहार में महत्वपूर्ण रूप में सह-संबंध पाया गया था। समय पर जन्में शिशुओं की अपेक्षा समय से पूर्व जन्में शिशुओं को शीघ्र प्रारंभ किया गया था। आठवीं कक्षा से अधिक शिक्षित माताओं द्वारा स्तनपान शीघ्र स्तनपान कराना प्रारम्भ कराना महत्वपूर्ण रूप से संबंधित था। अन्य घटक जैसे माता की आयु, माता द्वारा प्राप्त की गई प्रसवोत्तर परिचर्या तथा लड़का/लड़की होने का स्तनपान कराने से कोई उल्लेखनीय सह-संबंध नहीं था। प्रस्तुत अध्ययन से प्राप्त निष्कर्ष इस संतुष्टि का समर्थन करते हैं कि स्तनपान कराने संबंधी व्यवहार और अधिक प्रचलित बनाने में सामुदायिक शिक्षा और स्वास्थ्य कार्मिकों का पर्याप्त प्रशिक्षण महत्वपूर्ण घटक हैं।

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