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Original Research Article

Effect of maternal employment on health status of pre-school children in an urban-slum of Bhubaneswar

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ABSTRACT

Background: Women employment enhances household income and translates into better standard of living especially for children. That means maternal employment may benefit children's health by increasing parent's ability to buy high-quality food, good housing, and appropriate medical care. But, time spent at work may also decrease mother's ability to care for and supervise children, leading perhaps to less healthy activities, such as eating poorly, unhygienically or engaging in too many unhealthy activities. This study tries to examine maternal employment as one potentially critical influence on the health status of young children in low-income families. The objectives were to assess the health status of preschool children and to find out the association between employment status of mothers and health status of their children of preschool age group.
Methods: A community based cross sectional study was done involving mothers having at least one child and living in the urban health training center (UHTC) catchment area. A pretested semi structured questionnaire was used to assess the health status of the preschool children and the related variables.
Results: 110 women were included in the study out of which 78 were not working/homemakers and 32 were employed. Immunization of children was better among employed mothers (81%) than children of unemployed mothers (67.9%). Hospitalization was also more among the children of non-working mothers.
Conclusions: Employment somehow helps in better care for children which is reflected in the health status of the children and also by the immunization status.

Keywords: Working mothers, Child care, Maternal employment

INTRODUCTION

Rapid urbanization and migration of people for job opportunities and better living conditions to urban areas, has led to the growth of slums; around 3.72% (163,983) of the population of Odisha live in slums. Almost half of them are females (77,657) and 21,930 are children less than six years old. Majority of them (38,362) are from tribal areas and belong to low socio-economic income group.[1] The capital city, Bhubaneswar, has 30% of the population living in slums with a tremendous growth (78%) in the last decade.[2]

The compromised living condition and prevailing poverty compel the females to work outside for sustaining and catering to the needs of the family. According to the Washington post, two-thirds of the people surveyed had said that "although it may be necessary for a mother to work, it would be better for her family if she could stay home and care for the house and children".[3] The condition in India is no different, although there occurs the need of employment, still people and especially men believe that the ladies should stay at home. In a study done by Poduval et al around 69.5% of the working women's husbands, 60% of their in-laws, and 63.9% of the children thought

that the employment was favorable for the family members.[4] It is well established at the low end of the wealth spectrum that poverty is an important determinant of mortality and poor health in all countries.[5]

Women employment enhances household income and translates into better standard of living especially for children. The literature also suggests that women employment affect demographic outcomes such as fertility and childhood mortality. Also, it has been said that there is a direct link between mothers working and poor health and social outcomes for children mothers who undertake paid work have less time available to encourage physically active play or prepare home-cooked meals from fresh ingredients. That means maternal employment may benefit children's health by increasing parent's ability to buy high-quality food, good housing, and appropriate medical care. But, time spent at work may also decrease mother's ability to care for and supervise children, leading perhaps to less healthy activities, such as eating poorly, unhygienically or engaging in too many unhealthy activities. Children of mothers from slums are more likely to get benefit from increase in family income, but, depending on non-availability of mothers and the quality of non-parental care, may also be more vulnerable to the negative health effects.[6,7] This study tries to examine maternal employment as one potentially critical influence on the health status of young children in low-income families. The objectives of the research was to assess the health status of preschool children and to find out the association between employment status of mothers and health status of their children of preschool age group.

METHODS

Type of study

It was a community based cross-sectional study.

Place of study

The study was undertaken in an urban slum of Bhubaneswar, which is under the field practice area of a medical college.

Time period of the study

The study was carried out over a period of six months (May 2016 to November 2016).

Study population

The study population consisted of females more than 18 years of age residing in the slum.

Inclusion criteria

Employed and unemployed mothers with at least one child, with children in the age group of 1-5 years, residents of the selected area for more than one year, and those who were willing to participate in the study and gave an informed written consent.

Exclusion criteria

Employed and unemployed mothers who were not available during the period of visit, who were not staying with their children, with chronic debilitating diseases, who were mentally incapacitated, migration in between study period, and uncooperative women or family in which the female was residing.

Sample size determination

The sample size was estimated to be 110, by taking the prevalence of malnutrition as 34.4% in the age group of 1 to 5 years, according to National Family Health Survey (NFHS) 3 in the state of Odisha.[8] The sample size was calculated by the formula:

$$N = Z^2 pq/d^2$$

where $Z = 2$ at confidence level of 95%

p = proportion of the population having the event of interest=34.4%

$q = 1 - p$ = proportion of the population having the event of interest = 65.6%

d = allowable margin of error 10%

Taking 20% non-response rate, the sample size was 110 and hence a total of 110 respondents.

Sampling technique

A total of 110 employed and unemployed mothers having children in the age group of 1-5 years were included in the study using convenience sampling technique.

Study tool

A semi-structured, pre-tested, pre-designed and interviewer administered questionnaire was used to collect relevant data. The questionnaire had the following details: socio-demographic profile, nature of employment, mother's perception on the effect of employment on their children's health, followed by children's health assessment. Mothers were also asked about their children's major health conditions like pneumonia, severe diarrhoea, measles, or worm infestation and any health condition needing admission of the child in a hospital, in the past one year.

Data collection

Data was collected by house visit, using an interviewer-administered questionnaire. If the participant was unable

to understand the questions, she was explained in detail in local language. The participants were encouraged to provide answers to the questions without assistance from the family, to avoid bias. Outmost care was taken of the confidentiality of the participants. If in a house there were more than one eligible child, the mother of the younger child was interviewed.

Data analysis

Data collected was checked, coded and entered into Microsoft excel spreadsheet and analyzed using Statistical Package for the Social Sciences (SPSS) software version 20. Results were expressed as frequencies, means and standard deviations, proportions. F-test and chi square tests were used as appropriate, as tests of association; with a p-value of <0.05 as statistically significant.

RESULTS

A total of 110 mothers were included in the study, average age being 28.34 years with a standard deviation of 3.97 years, minimum age being 21 and maximum 35. They were having an average family income of Rs. 14,480 (the income varied between Rs. 7000- Rs. 26000). Majority (77.3%) of them were Hindus while 22.7% were Muslims.

Around 61.8% were having their own houses, majority (67.28%) being pucca with adequate ventilation (86.4%). Overcrowding (49.1%) was present in almost half of the houses, while sanitary toilet was present in most (83.6%). Tap water was the most common (59.1%) source of water; all the families living in the urban slums with similar environmental sanitary conditions and used a common drinking-water supply.

Most of the ladies (86.3%) had got themselves registered during their last pregnancy and almost 94.5% of them had their last delivery in hospital/clinics (institutional). 70.9% of the mothers were housewives while 29.1% were involved in some sort of work (employment). Out of the working ladies 43.75% were doing part time while 21.87% were wage workers while only 15.62% were doing full time jobs.

The socio-economic backgrounds of the working and non-working mothers were nearly comparable; except the type of family (81.25% of the working mothers and 53.85% of non-working belonged to nuclear families; this difference was also found to be statistically significant with a p-value of 0.0097), average family size (the average family size was 4.06±1.63, with a minimum of 3 and maximum of 10 members (Table 1). 81.25% of the working mothers and 53.85% of non-working belonged to a 3 member family; this difference in family size was also found to be statistically significant, with p=0.04) and per capita income (the average per capita income of working mothers was 7,297.33±4236.92 rupees, with range of 3333.33 to 16.666.00; while, the average per capita income of non-working mothers was 5,939.81±295.00 rupees, with range of 1,666.00 to 13,666.00; although this difference was not statistically significant, with p=0.08). Out of 110 children enrolled in the study, 43.64% were males and 56.36% were females.

Table 1: Socio-demographic characteristics of children (n=110).

Socio-demographic variable	Working mothers (n=32)		Non-working mothers (n=78)	
	N	%	N	%
Age group (in months)				
<24 months (n=83)	22	68.75	61	78.21
24-36 months (n=7)	3	9.37	4	5.12
≥36 months (n=20)	7	21.88	13	16.67
Sex				
Male (n=48)	15	46.87	33	42.31
Female (n=62)	17	53.13	45	57.69
Family type*				
Nuclear (n=68)	26	81.25	42	53.85
Joint (n=42)	6	18.75	36	46.15
Family size				
3 members (n=68)	26	81.25	42	53.85
4 to 6 members (n=33)	6	18.75	27	34.62
≥7 members	0	0.00	9	11.53
Literacy status of mother				
Illiterate (n=39)	12	37.50	27	34.62
Literate (n=71)	20	62.50	51	65.38
Literacy status of father				
Illiterate (n=33)	10	31.25	23	29.49
Literate (n=77)	22	68.75	55	70.51

*none belonged to three-generation type

Table 2: Self-reported morbidity among children in past one year (n=110).

Morbidity[$]	Working mothers (n=32)		Non-working mothers (n=78)		Relative risk	95% confidence interval	p-value
	N	%	N	%			
Respiratory illness	9	28.12	8	10.25	2.74	1.1616-6.4732	0.021
Diarrhoea	11	34.37	23	29.48	1.16	0.6468-2.1010	0.609
Fever	17	53.12	25	32.05	1.65	1.0478-2.6220	0.030
Worm infestation	3	9.37	2	2.56	3.65	0.6409-20.8574	0.1445
Hospitalization	3	9.37	24	30.76	0.30	0.0987-0.9409	0.038

[$]none of the mothers reported the child suffering from measles and skin infection, *p<0.05, **p<0.001

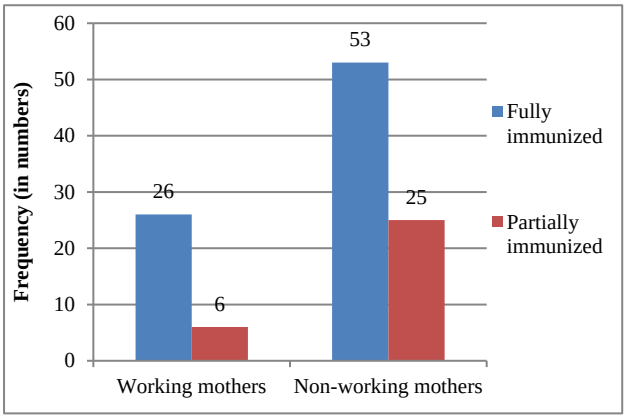

Figure 1: Immunization status of the children (n=110).

70% of the mothers started breastfeeding their babies within an hour of birth (in their last pregnancy) while around 10.9% delayed it even for more than 24 hours. 56.36% of the women continued breastfeeding their children for more than 6 months while 43.63% practiced for <6 months. While 87.5% of the working women breastfed their babies for more than 6 months only 61.5% of the housewives did so. This difference in the practices of exclusive breastfeeding was also found to have a statistically significant difference with a p-value of 0.007. 81.25% of the children of working mothers, while 67.95% of non-working mothers were fully immunized (p=0.24). None of the children were unimmunized (Figure 1).

Fever was the most common morbidity (38.2%) found among children followed by diarrhoea (30.9%) and respiratory infections (15.5%). Out of the total children around 24.5% had history of hospitalization. On examining the children pale conjunctiva (21.8%), followed by dry skin (19.10%), teeth discoloration (18.2%) and pale face (15.5%) were some of the general health findings. Around 14.5% of the children had rashes over body and 10.9% had thin and sparse hair. 61.8% of the women spent >3-4 hours of their time with their children. While 71.82% of the working mothers thought that their employment somehow helps their children in getting better healthcare, only 20.51% of non-working mothers thought so; this difference was also found to be statistically significant with a p value of 0.0001.

Episodes of fever (53.12%) and respiratory infections (28.12%) were higher among the children of the working mothers and these differences were also significant statistically (p=0.030) and (p=0.021) respectively; while hospitalization was higher (30.76%) among children of mothers who were housewives (p=0.038) (Table 2).

DISCUSSION

In present study 70.9% of the mothers were housewives while 29.1% were involved in some sort of work (employment). Similar findings were there in a study carried in Japan where 78.1% women were either not working or quit their job after childbirth.[9] While Zilanawala et al in their study found that around 51.3% women were unemployed.[10] Our study shows that the poor health conditions were higher among the children of the working mothers when compared to those of nonworking mothers. Similarly Study done by Gennetian et al suggests that having a mother who worked more reduces a child's probability of having very good or excellent health by 45 percentage points, relative to children with non-working mothers.[7]

In our study it was observed that the hospitalization of children was more among the children of non-working ladies (30.7%) where as it was only 9.3% in children of women who were working. Similarly study done by Morrill suggest that maternal employment is associated with a slight decrease in the incidence of hospitalization and asthma episodes and a slight increase in injuries or poisonings.[11]

In the present study, 71.8% of the working mothers thought that their employment somehow helps in their children's care where as 79.4% of the housewives thought that the employment of the working women harms the children's care and needs. In a study done by Anderson et al, the authors argue that children of mothers in higher social classes are generally placed in day care facilities in which the caregivers have lower skills than those of the mothers

which results in lower care of children.[12] We found that 87.5% of the working women were breast feeding the babies for more than 6 months which is more than (61.5%) of the housewives, which shows a positive impact of employment on breast feeding, however a study by Pasquel et al says that formally employed mothers were 20% less likely to breastfeed compared to non-formally employed mothers and 27% less likely to breastfeed compared to unemployed mothers.[13]

Generally maternal employment is thought to be well contributing to maternal psychosocial well-being through the provision of social support and resources from the workplace, and hence it is deducted that employed mothers would be more positive parents.[14]

CONCLUSION

Overall, on the basis of our results, we can say that mothers who are employed have less morbidity in their children and are giving better care as compared to those who are home makers. But at the same time, the unemployed women's perception is that their employment might adversely affect the children's care and the reverse is the perception of the women who are employed. Hence, it can be concluded that mothers who are employed are utilizing their earnings for the better healthcare and despite the business and less family time, they are able to provide a better care to their kids.

Limitations

This study has some limitations. First, the study being cross-sectional in design, and hence we are unable to tease apart the mechanisms of effect associated with our key variables. An understanding of causal processes is essential for generating useful policies to improve population health.

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