

A Comparative Study on the Nutritional Status of the Pre-School Children of the Employed Women and the Unemployed Women in the Urban Slums of Guntur

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ABSTRACT

Background: The early childhood development is most crucial and the mother's care and attention is essential. The inevitable changes like women entering the work field have an effect on the child care and development.

Aim: To study the selected anthropometric indices of the children of employed and unemployed women.

Settings and Design: This study was done in the urban slums of Guntur city by using a cross sectional, descriptive design.

Methods and Material: This study was conducted during January – April 2011 with a sample of 312 children of non working women and 311 children of working women, who were selected through the systemic random quota sampling method in 6 randomly selected slums. The data was collected through questionnaires who were named as the Mother's schedule and the Child schedule, which consisted of close-ended questions which were coded for an easy data entry. The Mother's schedule looked at the information regarding the mother, like the caretaker during the mother's absence, the time which was spent with her child

each day, etc. The Child schedule looked for information like whether the child was exclusively breast fed, its age in months when the weaning started, whether the government sponsored crèche services (Anganwadi center) were utilized, etc. It also included the anthropometrical measurements of the child like its current weight, current height and mid arm circumference, which were obtained by using standardized tools.

Statistical Analysis: For each schedule, a separate table was created in a relational basis in MS Access, with suitable key fields to connect the information for the analysis.

Results: The children of the unemployed mothers weighed significantly higher than the children of the employed mothers. The children of the unemployed mothers also stood significantly taller than the children of the employed mothers.

Conclusion: In the absence of the mothers who are at work, a childcare service is essential and this should be facilitated through legislation, NGO efforts, etc. Breast feeding and the bonding time with children are to be encouraged for the employed mothers.

Key Words: Employed mothers, Employment status, Nutritional status, Pre-school children, Unemployed mothers

INTRODUCTION

Traditionally, a woman's place has been her home and a generation ago, her employment outside her home was looked down by the society. This situation has now changed and women have started seeking employment outside their homes because of their gross economic necessity, followed by their desire to raise their economic standards, to have an independent income, to make use of their education, to pursue a career, etc [1].

Women's participation in the economic activity is a mixed blessing. It increases the family income and it may give the women some economic independence and status in the society. It however also increases her work load and cuts into the time that she has to spend with her children. In the workplace, the biological qualities like motherhood, reproduction, lactation, child rearing, etc are often turned into biological handicaps [2].

As more and more women are being forced to take up work in the unorganized sector, the real challenge is to ensure that the laws and schemes (including child care) that exist (at least on paper) for the women workers in the organized sector are extended to this vast majority [3]. In the past, the older siblings (or grandpar-

ents were usually available to take care of the young infants while the mother was employed; but because of the social change and the modernization, the extended family has become less common. All these factors may contribute to a poor child care.

The prevalence of underweight among the children in India is amongst the highest in the world. The child malnutrition in India is mostly the result of the high levels of exposure to infections and the inappropriate infant and young child feeding and caring practices. It has its origins almost entirely during the first two to three years of life [4].

As per the Third National Family Health Survey (NFHS-3, 2005-06), almost half of the children who are under five years of age (48%) are stunted and 43% are underweight. The proportion of the children who are severely undernourished (more than 3 standard deviations below the median of the reference population) is also notable - 24% according to the height-for-age and 16% according to the weight-for-age. Wasting is also quite a serious problem in India, affecting 20% of the children who are under five years of age [5]. Many of the world's big cities are in the developing countries and 60% of their population live in the urban

slums. The link between urbanization, a degraded environment, the inaccessibility to healthcare and a deteriorating quality of life is significant and it is particularly evident in sharp inequities in the Infant Mortality Rate [6]. Under these circumstances, questions have been raised about the cost benefit balance of the women's entry into the labour force. "Does this dual burden result in the neglect of the personal and childcare with an adverse impact on the maternal and the child health?" Hence, an attempt was made to study the difference in the nutritional status of the children of working and non working women in low socio-economic conditions.

AIMS AND OBJECTIVES

To study the nutritional status of the children of employed and un-employed women in urban slums by using selected anthropometric indices.

MATERIALS AND METHODS

This was a cross sectional descriptive study which was carried out during January – April 2011 in 6 randomly selected slums under the purview of the field practice area of the NRI Medical College, Guntur District in Guntur city, Andhra Pradesh, India. after obtaining the appropriate ethical clearance.

The Criteria and the Method for the Selection of the Children:

The study included pre-school children and their mothers in the areas which were covered by the anganwadi centres of 6 randomly selected slums. In each of the 6 slums, 50 children of working mothers and 50 children of non-working women were selected by using a systemic random quota sampling method. Three hundred twelve children of 300 non-working women and 311 children of 300 working women were the subjects for the study [Table/Fig -1]. The malnourished status which was observed in the children of the unemployed and the employed mothers was in the range of 25 to 30% in the pilot study. The formula, $N = 4pq/l^2$ was applied to determine the sample size, by taking the prevalence, p as 25% and q as $(100-p) = 75\%$, which was divided by an allowable error 'l' which was 20% of P .

The Method of the Data Collection: The data collection was preceded by a meeting of the formal and the non-formal leaders and the anganwadi teachers in the selected slums. An informed consent was taken from each respondent.

The Description of the Questionnaire: The data for the study was collected by using two instruments, namely the Mother's schedule and the Child schedule. These consisted mostly of closed-ended questions with codes which were developed for the entry of the data into the computer. For each schedule, a separate table was created in a relational basis in MS Access, with suitable key fields to connect the information for the analysis.

In the Mother's schedule, the information regarding the mother; a caretaker during the mother's absence, the time that she spent with her children in hours per day, the money which was spent by her family on child care per month and their perception of her employment on the child care (helps/harms/no effect), etc was obtained.

In the Child schedule, the information regarding the children names, ages and sex were first recorded. Then, the information on whether the child was exclusively breast fed, its age in months when the weaning started, whether the services of the anganwadi centre were utilized, the reasons for not utilizing them and finally, the anthropometrical measurements were recorded. The birth weight (from the hospital record/records of the anganwadi center), the current weight with a portable balance, the current height with an anthropometrical rod and the mid arm circumference with Shakir's tape were recorded. The information was collected by the authors themselves to have uniformity. The data checking and the data entry were done in MS Access and MS Excel. The Epi Info 2000 and other suitable software were used for the data analysis.

RESULTS

[Table/Fig -2] shows that the child was carried to the work place by only 5% of the employed women. Among the employed women, 41.7% left the children at the anganwadi. 20% of the children are dropped at the anganwadi by other family members. Their grand parents took care of 28% of the children and the rest were cared for by other family members.

Among the unemployed mothers, 10.3% spent one hour a day with their child, 61.7% spent two hours a day and 26.3% spent three hours a day with their children. Among the employed mothers, 83.3% spent only one hour a day with their children [Table/Fig -3]. The proportion of the working mothers who spent more than one hour a day with their children was seen to be significantly less as compared to that among the unemployed mothers (Chi square - 307.6, $p < 0.001$). 42.9% of the unemployed mothers and 37.6% of the employed mothers exclusively breastfed their children for five months [Table/Fig -3].

In our study, 65.1% children of the unemployed mothers received the anganwadi care, while 92.9% children of the employed mothers received the same and this difference was statistically significant [Table/Fig -3].

In our study also [Table/Fig -4], the children of the unemployed mothers weighed significantly higher than the children of the employed mothers. (For the 2+ years children, $z = 6.18$, $p < 0.05$, for the 3+ years children, $z = 6.9$, $p < 0.05$ and for the 4+ years children, $z = 8.8$, $p < 0.05$).

The children of the unemployed mothers stood significantly taller

Children's age in years	Employment status of mother					
	Unemployed		Employed		Total	
	N	%	N	%	N	%
1+	24	7.7	6	1.9	30	4.8
2+	124	39.7	104	33.4	228	36.6
3+	126	40.4	120	38.6	246	39.5
4+	38	12.2	81	26	119	19.1
Total	312	100	311	100	623	100

[Table/Fig-1]: Children's age and employment status of mother

	N	%
Child carried to workplace	15	5
AWC and mother	125	40
AWC and family members	66	21
Others (Grand parents, siblings, father, neighbors)	105	34
Total	311	100

[Table/Fig-2]: Caretaker during mother's absence

	Unemployed	Employed	Chi	
	Mother	Mother	Square	p value
Stopping exclusive Breast feeding before 6 months	199	261	32.7	<0.001
Services of Anganwadi center utilised	203	289	76	<0.001
> 1 hour time spent with child/ day	269	50	318.1	<0.001

[Table/Fig-3]: Issues regarding breast feeding and childcare

Mothers'								
Age	employment		No. of		Weight of child		Height of child	
	status	children	Mean	SD	Z value	Mean	SD	Z value
2+	Employed	104	8.97	0.67	6.2, p<0.05	75.4	2.9	3.4,
	Unemployed	124	9.65	1.09		77	4.3	p<0.05
3+	Employed	120	10.2	1.05	6.9, p<0.05	81.4	4.5	3.6,
	Unemployed	126	11.1	1.34		83.7	5.6	p<0.05
4+	Employed	81	11.7	1.46	8.8, p<0.05	89.3	6.1	0.16,
	Unemployed	38	12.4	1.49		89.1	6	p<0.05

[Table/Fig-4]: Weights and heights of study children

than the children of the employed mothers. For the 2+ years children, $z = 3.42$, $p < 0.05$ and for the 3+ years children, $z = 3.6$, $p < 0.05$ [Table/Fig -4].

DISCUSSION

Nakahara S et al., suggested that in many developing countries, the poor women had multiple roles, and that often their time constraints were so severe, that their participation in the income-generating activities resulted in a reduced childcare time, which in turn affected the children's health [7]. Powell and McGregor found that the nutritional status of the children of the working mothers was poorer than that of the children whose mothers stayed at home [8]. The effect of the mother's occupation on the child's nutritional status was complicated, though it could be expected that the working mothers would be better able to provide for their families.

The maternal employment and the educational characteristics constrain the good child-care practices, and the alternative caregivers take over a more important role in the child care as the mothers join the work force [9]. Mittal A et al., in their study, found that the mother's occupation did seem to affect the nutritional status of the child, though a statistical analysis showed that the difference was insignificant [10]. The present study showed that many mothers (62%) did leave their children at child care centres, while the rest were taken care of by a family member at home. According to Bhangsi SM et al., 75% of the working mothers had some help which was available for childcare [11]. However, Jain SCM et al., suggested that the childcare which was given by the mother was superior to that which was given by any other family member [12].

Kimmel J and Powell LM suggested that for many mothers, for reasons which were based on either the market demand or on their skill sets, the jobs that required the nonstandard hours of some form could be their only option. Being a nonstandard worker significantly reduced the likelihood of using formal modes of the child care, such as a child care centre [13]. This study also showed that a majority of the working mothers could only spend

one hour with their dependant children. In contrast, Desai et al., found that the mother's time which was spent in specific activities did not differ much by her work status [14]. However, according to Bhangsi SM et al., the time which was spent by housewives in childcare (3-4 hours vs. working women 2-3 hours) was more [11]. There was no significant difference in the breast feeding practices between the working and the non working mothers here and the same was seen in a study which was done by Leslie J [15]. However, in contrast, Ware H stated that there was a possibility of child neglect and malnutrition due to an early abandonment of the breast feeding [16].

In this study, a significant number of working mothers were found to be utilizing the anganwadi centers and availing their care for their children as compared to the unemployed women. Silva EMK et al found that the supplementary feeding at the day care centres improved the children's nutrition [17], while Gershoff SN et al., observed that the supplementary feeding at the day care centres had no effect on the children's growth [18]. The anganwadi centers have to be strengthened, to provide nutrition and also care for the minor illnesses, so that the children can develop well. Fonseca W et al., concluded that in view of the growing numbers of the children who attended the day care centres in both the developing and the developed countries, it was essential that ways be identified to improve the design and the management of such centres, in order to minimize the risks like that of pneumonia [19].

Kumar et al observed that the improvements in the wage income translated into improvements in the child nutrition status more readily in the households where the women were employed [20]. Educated, nutritionally strong and employed mothers who had control over their household resources could take care of their children more effectively, which was reflected in the better nutritional status of their children [21].

Finally in this study, the children of the unemployed mothers weighed significantly more and stood significantly taller than the children of the employed mothers. Tucker et al., in their study, found a similar positive impact [22]. Toyoma N et al., also found

that the children of the non working mothers had significantly a greater height and weight [23].

CONCLUSION

In today's world, there is a need for women to enter the workplace due to various reasons; financial needs, self actualization, etc. However, in this study, it was seen that the children of the working women from a low socio- economic background were both under weight and also shorter than those of the non working women. Though governmental and NGO efforts are already in place to subsidize the working mother's attention to her children in most of the places, a better utilization of these facilities has to be encouraged, so that a promotive and a preventive child health care is available for the working mothers. The anganwadi workers are an important asset which has to be fully utilized by the mothers for their children's welfare. The employed mothers have to be helped by a legislation that ensures day care facilities for their children at their work places. Lobbying by the non-governmental agencies for such a legislation is to be sought. Breast feeding and the bonding time with the children are to be encouraged for the employed mothers as much as possible, for the all round development of their children. Finally, the local community participation in the improvement of the child rearing and the child caring attitudes and the practices for the employed women, will decide positively the future of our young children and the future of the country.

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