

# THE IMPACT OF MATERNAL WORK STATUS ON THE NUTRITION AND HEALTH STATUS OF CHILDREN IN SIALKOT

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## Introduction:

Mothers' employment status has potential implications for virtually all aspects of children's growth and development, and nutrition outcomes are no exception. The quality of children's diets and their subsequent physical health may depend significantly on whether and how much their mothers work outside the home. Employed mothers may have less time available to supervise their children's activities and to prepare their meals. On the other hand, the additional income they bring into the household may help to ensure a stable supply of high quality food. The net effects on children's well being are likely to vary depending on the presence of other adults in the household, the household's income net of the mother's earnings, and the age of the child. [1]

When the mother participates in the labor market, the amount of time spent in household activities--particularly more time-intensive activities such as child care and breastfeeding--have a tendency to decline. [2]

The problem of malnutrition in poor societies is best viewed as a "syndrome of developmental impairment," which includes growth failure; delayed motor, cognitive, and behavioral

development; diminished immune competence; and increased morbidity and mortality. Growth retardation is often found in association with other problems, such as vitamin A deficiency and anemia. These clusters of nutritional problems flourish during periods of vulnerability, namely *in utero* and during the first three years of life, and affect at least a third of all young children in developing countries. Survivors of malnutrition in early childhood suffer functional disadvantages as adults, including diminished intellectual performance, low work capacity, and increased risk of delivery complications. The prevention of low birthweight and the promotion of adequate growth and development during early childhood will result in healthier, more productive adults. [3]

Children who are severely malnourished typically experience slow behavioral development, even mental retardation may occur. Even when treated, undernutrition may have long-term effects in children, with impairments in mental function and digestive problems persisting - in some cases for the rest of their lives.

Malnutrition, the result of a lack of essential nutrients, resulting in poorer health, may be caused by a number of conditions or circumstances. It could be because of poor diet, food shortages, digestive disorders, mental problems but experts say that lack of breastfeeding, especially in the developing world, leads to malnutrition in infants and children. In some parts of the world mothers still believe that bottle feeding is better for the child. [4]

Poor feeding practices, such as inadequate breastfeeding, offering the wrong foods, and not ensuring that the child gets enough nutritious food, contribute to malnutrition.[5]

There are two principal ways in which mothers' involvement in work outside the house has a negative effect on their children's nutrition and health status. First, the work load can affect the woman's own nutrition and health and consequently decrease her capacity to attend to other activities such as child care or to produce an optimum quantity of breast milk. Second, time constraints imposed by her involvement in work outside may prevent her from attending to the needs of her children. It is possible that working mothers spend less time than assumed in child care. [6]

The income/time trade-off made by working mothers would be expected to lead to increased reliance on prepared foods (e.g., frozen entrées) and carry-out items, which are typically higher in fat and sodium, and possibly lower in fiber, than meals cooked at home.

The overall effect of maternal employment on children's dietary patterns and diet quality is hard to predict. Although some aspects of diet quality related to income might be improved (e.g., more fresh fruits and vegetables), other aspects related to the caregiver's time

availability might be worsened (greater use of prepared foods and carry-out). [1]

On the assumption that no caretaker would be more motivated than the child's mother to supervise the child's activities, we anticipate that children in non-parental care or self-care might snack more, perhaps on less healthful foods, watch more television, and be less physically active than their counterparts, other things equal.

Direct measures of children's nutritional status (e.g., food and nutrient intake), as well as other nutrition-related outcomes (e.g., food assistance program participation, risk of overweight, food sufficiency) are included in this analysis of the relationship of mothers' work with child nutrition outcomes.

## **LITERATURE REVIEW:**

A recent study by Anderson, Butcher, and Levine (2002) examined the relationship between maternal employment and childhood overweight. Mother-child data from three sources were used: the National Longitudinal Survey of Youth, the Third National Health and Nutrition Examination Survey (NHANES III), and the 1994 to 1996 and 1998 CSFII. Descriptive findings indicate that fast food consumption is higher among children whose mothers work, but no differences were seen in energy intake, TV viewing, or levels of overweight.

Horton and Campbell (1991) used data from the 1984 Family Food Expenditure Survey (urban households in Canada) to find that maternal employment is associated with higher rates of restaurant-food consumption and higher costs per calorie of home-prepared food. The authors also find that full-time maternal employment is negatively associated with household nutrient availability (which combines expenditure and nutrient variables), with no evidence showing

that increased income from maternal employment was being related to increased expenditures on basic needs. [1]

A cross-sectional anthropometrics survey was carried out in a low-income community of Surabaya, Indonesia, to examine the association between mother's employment and the child's nutritional status for identifying a group at risk of having malnourished children. Subjects were 274 children under the age of 5. The children of non-working mothers had significantly higher height-for-age z-score (HAZ) ( $p < 0.05$ ) than those of working mothers. The study identified a group at risk of malnutrition, i.e., children of mothers working in informal sectors. The programs to provide childcare for working mothers should target this particular group of poor households. [7]

## **OBJECTIVES:**

- To assess the nutritional status of children under age of five.
- To assess Weight for Age and Height for Age of the children.
- To assess the Vitamin A deficiencies, infectious diseases, anemia and growth retardation in children.
- To compare the results between children of working and non-working mothers.

## **MATERIAL & METHODS:**

### **STUDY DESIGN:**

Cross-sectional study

### **STUDY SETTING:**

A random village in Sialkot

### **DURATION OF STUDY:**

August-September 2014

### **SAMPLE POPULATIONS & SIZE:**

The target population consists of 100 mothers.

### **SAMPLING TECHNIQUE:**

The mothers are randomly selected in the village households. 50 of them will be working mothers and 50 as non-working.

### **INCLUSION AND EXCLUSION**

#### **CRITERIA:**

All the selected mothers are briefed about the study and consent for inclusion in the study was taken.

### **DATA COLLECTION PROCEDURE:**

Approval and permission for the study is taken from the Nazim of that village. The mothers are informed about the study and taken consent. Questionnaires were handed out to assess the behavior of mothers regarding their work and nutrition and health status of children and their knowledge about the hazards of malnutrition in children.

## DATA ANALYSIS PLAN:

The data are cleaned and processed on an IBM-compatible PC/XT using DBase III plus. The weights and heights of children are converted to sex-specific Z scores of weight for age and height for age based on growth reference curves of the US National Center for Health Statistics (NCHS)/Centers for Disease Control (CDC) and using the CDC Anthropometric Software Package. The weight and height of the children are categorized into various grades of malnutrition as defined by the Pakistan Academy of Pediatrics. Children's ages in months are squared to transform the curvilinear relationship between nutrition status and age into a linear one.

The relative risk of children becoming morbid or malnourished based on mothers' working status is calculated using a prevalence odds ratio with a 95% confidence interval. Analysis of covariance is done to study the effect of maternal employment on child nutrition and health status, controlling for the effect of income and child's age. Data analysis was done using the Statistical Package for the Social Sciences (SPSS/PC+). [8]

## OPERATIONAL DEFINITIONS:

**Malnutrition:** Malnutrition can be defined as the insufficient, excessive or imbalanced consumption of nutrients.

**Working woman-** working 5-6 hours outside home, even if just helping her husband in the fields.

**Non-working woman-** who doesn't leave home for more than an hour.

## REFERENCES:

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- [7] (Oxford Journals *J Trop Pediatr* (2001) 47 (3): 179-181. doi: 10.1093/tropej/47.3.179)
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## DATA COLLECTION PLAN:

A self-administered questionnaire is used to know about their working habits; which is comprehensive to assess the effects of working mothers on the nutritional status

of children. Also, the weights and heights of the children under 5 years of age are measured and correlated with the normal. The children were examined for signs of pallor for anemia. Clinical examination for ocular signs of vitamin-A deficiency, conjunctival sclerosis with Bitot's spots, corneal sclerosis (with and without ulcers), and keratomalacia will be carried out by medical interns.

### PERFORMA

**Note for confidentiality:** The information collected in this study will be used only for research purposes and would not be exposed to any other person or purpose

1. Name of Mother (Optional)  
\_\_\_\_\_
2. Age: \_\_\_\_\_(years)
3. Do you work?
  - a. Yes
  - b. NoIf yes, please mention what job  
\_\_\_\_\_
4. How many hours do you work?
  - a. 5-6 hours
  - b. 8-10 hours
  - c. >10 hours
5. Since how long have you been working?  
Please mention \_\_\_\_\_ (years)
6. How much time do you spend with your children?

- a. Half day
  - b. Just at night
  - c. Evenings and nights
7. Who takes care of your children when you are away at work?
    - a. Grandparents
    - b. Maid
    - c. Older siblings of you little child
    - d. Father
    - e. No one
  8. With whom do your children stay most comfortable with?
    - a. Grandparents
    - b. Maid
    - c. Siblings
    - d. Father
    - e. No one
  9. Have your children suffered from pneumonia, diarrhea, measles or worm infestation or any other infection in past year?
    - a. Yes
    - b. NoIf Yes, please mention \_\_\_\_\_
  10. Have any of your children suffered from Night blindness?
    - a. Yes
    - b. NoIf Yes, please mention how many children  
\_\_\_\_\_
  11. Have you breastfed your children?
    - a. All of them
    - b. None of them
    - c. If other, please mention  
\_\_\_\_\_
  12. Do you think breastfeeding is necessary for the health of children?
    - a. Yes
    - b. No
    - c. I don't know
  13. Do you think your work has adverse effects of your child's health?
    - a. Yes
    - b. No
    - c. Sometimes

14. Does your job easily allow you to take care of your children?

- a. Yes, easily                      b. Sometimes  
c. Not at all

15. Are you satisfied with the care provided by the guardians while you are away?

- a. Yes                      b. No                      c. Sometimes

16. Does your job provide an opportunity to bring better food and services to your children?

- a. Yes                      b. No                      c. I don't know

17. Do your children frequently eat frozen and packed food or fast food because you aren't able to give time to cooking?

- a. Fast food                      b. Frozen food                      c. I cook for them  
d. Maid cooks for them

18. Have you received complaints of bad behavior of your child from their guardians or school teachers of 1<sup>st</sup> grade?

- a. Yes                      b. No, never  
c. Sometimes

19. What do your children do in the time when you aren't home?

- a. Study                      b. Watch TV                      c. Sleep  
d. Play outside    Other \_\_\_\_\_

20. Do you prefer staying home with children or going to work if you had a choice?

a. Stay at home

b. Continue job

21. How do you think nutritional status of children can be improved or the balance between job and home be maintained?

- a. Keep educated maids                      b. By not working  
c. Educating mothers about breastfeeding  
d. Grandparents of children can replace the need of mother's care                      e. Part-time jobs  
f. Sending children to boarding schools