“Household structure and nutritional status of children & women: India & comparison between Kerala and Orissa"

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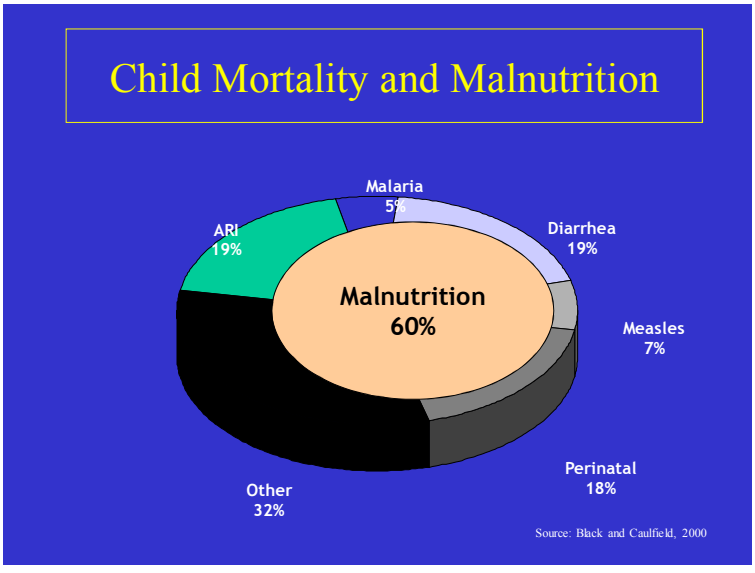
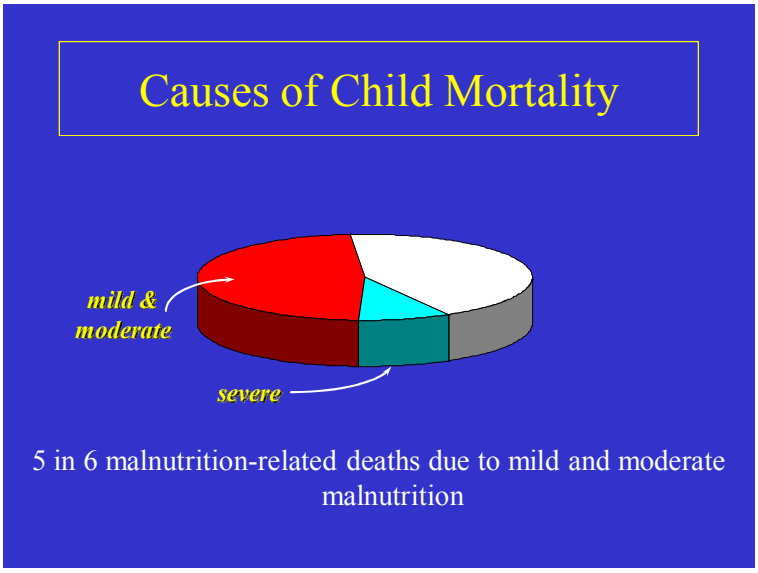
Background: Health of the people is the most important indicator of development of a nation, and nutrition is an important determinant of health. India has the highest incidence of childhood malnutrition in the world. Almost 30% babies in India are born with low birth weight and are doomed to adverse consequences, including degenerative diseases in later life. Comparison of putative factors between regions within India (Developed and undeveloped state), Child malnutrition has long been recognized as a serious problem in India, but national-level data on levels and causes of malnutrition have been scarce. Hence, during 2005-06, a National Family Health Survey was carried out to examine the levels and determinants of child malnutrition in the country. More specifically, this survey estimated the levels of child malnutrition and examined the effects of mother's nutrition, mother’s education and other demographic and socioeconomic factors on the nutritional status of children in India. Based on standards developed by the WHO, 48 % of children under age 5 years are stunted, and 43% are underweight. The proportion of children who are severely undernourished is also notable 24% according to height-for-age and 16% according to weight-for-age. Under nutrition is substantially higher in rural areas than in urban areas, however, 40 % of children are student and 33% are underweight. Maternal education has the strongest independent influence on child malnutrition. Children whose mothers have little or no education tend to have a lower nutritional status than do children of more-educated mothers, even after controlling potentially confounding demographic and socioeconomic variables. The nutrition status of children is strongly related to maternal status. The age of the child and household economic status all have independent effects on nutritional status. Considering the very strong impact of maternal education and household structure on child nutrition.

Objective of this study: To examine the differentials of nutritional level of children and women in reproductive age-group15-49 years by their household structure in both the state of India.

Why Focus on Nutrition





Early marriage and child birth continue to be the social norm in India, These culture compulsions are more pronounced in families of lower social–economic status through sometimes middle class families reflect the same phenomena. Within the context of specific variables such as social-economic & health status, caste, tribal group, religion, education and such differentials, after marriage, a women is under the authority of her mother –in-law and

generally has little autonomy in decision making, even regarding her own fertility. Their isolation and limited freedom of movement contribute to their dependence and restrict their access to family planning information and services.

The Problem--Long term detrimental effects on growth, health, cognitive and educational outcomes and Malnutrition leads to decrease in productivity. And moderately and severely malnourished children are 5 to 8 times more likely to die than adequately nourished children. Even children with mild malnutrition who form the majority of children in the community, have a greater risk of death than children who are normally nourished. About 36% of women 15-49 years are undernourished.

Data-Methodology:

The data used in this analysis are drawn from the nationally representative 2005-06 National Family Health Survey (NFHS-III) of 124385 ever-married women aged 15-49 years ,4540 and 3566 women aged 15-49 in Orissa and Kerala and 1781 and 1017 child aged 0-60 months in Orissa and Kerala for whom complete information is available with regards to health and households characteristics. We restrict our analysis to only those households that had children born in the 5 years prior to survey.

We measured child nutrition using two anthropometric measures: a child's height-for-age, and weight-for-height, both are expressed in standard deviations (Z-scores) from the median of the reference population, this being the commonly used US National Center for Health Statistics (NCHS) standard as recommended for use by the World Health Organization (WHO). The height-for-age Z-score measures the child's height according to age, this being an indicator that reflects the cumulative effects of growth deficiency and so is designed to measure long-term nutrition. The weight-for-height Z-score measures the child's weight according to height, where this indicator has been used to monitor the growth of children and is typically regarded as a measure of short term rather than long term health status. Both anthropometric measures are influenced by a number of factors including chronic insufficient women's Health, women's education, household facilities, and low socio-economic family status. However, these anthropometric measures are widely regarded by nutritionists as a reliable indicator of malnutrition. For women nutrition using body mass index (BMI), information on the height and weight of women age. The same scales and measuring boards used to measure children were used for women. Women's height can be used to identify women at risk of having a difficult delivery, since small stature is often related to small pelvic size. The cutoff point height, below which women can be identified as nutritionally at risk, varies among populations, but it is usually considered to be in the range of 140-150 cm. BMI is defined as weight in kilograms divided by height in metres squared (kg/m2).This index excludes women who were pregnant at the time of the survey and women who gave birth during the two months preceding the survey. A cutoff point of 18.5 is used to define thinness or acute under nutrition and a BMI of 25 or above indicators overweight or obesity. Utilizing NFHS-III, information on background, socio-economic and health characteristics, such as women's education, wealth index, residence, caste, the dependent variables are Nutritional status of women and children. Of the several variables used in this study, besides cross tabulations, a regression analysis is also done to understand the factors influencing nutritional status of women and children in Kerala and Orissa.

Summary:

In height-for-age Z-scores, 28 percent children in nuclear family in urban in Kerala while 13 percent children in nuclear family in urban areas in Orissa. In Kerala, age of children 9-11 months, nobody's are not malnourished but more than 11 percent children are malnourished in Non-nuclear family in Kerala which are belonging to height-for-age Z-scores whereas 5 percent female are belong to severe condition in Non-nuclear family while 8 percent female are belong to severe condition in nuclear family in height-for-Z-scores. 33 percent children are belonging to severe condition in Non-nuclear family and only 4 percent child are belong to same nutritional status in poorer index in Kerala. Those family are used tube well for drinking water to have less percentage of children they are belonging to low nutrition status rather than other sources in height-for-age Z-scores.

Age of children 6-8 months, in non-nuclear family 13 percent children are severe but in nuclear family only .1 percent children are severe but opposite of this .1 percent children are severe in non-nuclear family while 7 percent children are severe in nuclear family in weight-for-height Z-score in Kerala. Those children are belonging to ST caste; they are more severe in nuclear family comparatively non-nuclear family in weight-for-height Z-score in Kerala.

In NFHS-III, The percentage values of nutritional status of women, 35 percent women are thin which highest percentage of all in age groups is 15-24, and important thing is that as the age increases percentage of thin women decreases, which are belong to Nuclear family in Kerala. 33 percent women overweight in urban areas in nuclear family whereas 32 percent women are overweight in rural in non-nuclear family in Kerala. Percentage of thin women is high which are belonging to ST, nuclear family rather than non-nuclear family in Kerala.

When comparing the two states in India it is found that overall percentage of normal women is higher in non-nuclear family in Kerala. Data indicate that residence and economic parameters have positive relation with nutritional status of women in household structure wise in both states, like accordingly wealth index percentage of normal women is increases and rural to urban areas percentage of normal women increases also. In the case of overweight women, more variation in nutritional status is indicated, particularly with they are used source of drinking water differently, similarly, a large gap in nutritional status is indicated by education. Percentage of illiterate women they are thin 54 percent whereas 25 percentage women are thin in higher education in Orissa.

The positive dependence between wealth index and nutritional outcomes of the children in both of the state in India. Here we found that, relative to male children, female children were more likely to have poor weight-for-height and height-for-age Z-scores and same thing found in household structure wise that, relative to non-nuclear family, nuclear family children were poor height-for-age Z-score and better weight-for-height Z-score in Orissa.

However, when we examined the anthropometric measures of children who were aged at least five year at the time of the survey, we saw that male children had better height-for-age Z-scores relative to female children in both state. Mother's, education, was shown to be an important predictor of children and women nutrition, particularly for female children. Economic variables such as wealth index were shown to have an important positive effect on height-for-weight.

The between region, and within country comparisons suggest that malnutrition has complex a etiology and only balanced strategy of development ensuring food, nutrition, health and household facilities can help eliminate the burden of malnutrition in the community, particularly in women and children. Women's education and literacy programs could also play an important role in improving the nutritional status of children and women.