ORIGINAL ARTICLE   **Open Access**

CASTE, GENDER AND MALNUTRITION: AN ENQUIRY IN TO NUTRITIONAL STATUS OF SCHEDULED CASTE WOMEN IN KARNATAKA

Nisargapriya T S [1]*, Gundappa [2,] Lokesh M U[3]

[1]Department of social work Bangalore North University, Kolar, [2] Department of Social work, Bengaluru City University, Bengaluru, [3]Department of social work Davanagere University, Davanagere

Abstract

The present study was aimed to analyze the effect of household food insecurity on nutritional status of schedule caste women in Karnataka. The study carried out in 8 districts of Karnataka state. Descriptive research design was adopted with 384 sample size. Interview schedule was administered to obtain the primary data collection. The data analysis was done with the help of SPSS 17. Version. The results were clear that, there is a significant effect on household food insecurity on nutritional status of schedule caste women in Karnataka. Efforts are needed to improve the socio-economic conditions of the Schedule caste families. Better socio-economic conditions will impact on the accessibility, affordable capacity of the household which will impact on improved quality of diet that result in improved nutritional health.

Keywords: Household Food Insecurity, Nutritional, Schedule Caste.

1. Introduction

The concept of food security is multidimensional in nature and is determined by whole range of issues such as domestic production of food, import and export of food, purchasing power of people to access food as well as factors that influence absorption of food in the body. "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. (FAO, 1983). Food security is a complex issue, linked to health through malnutrition. The nutritional status of women is important both for the quality of their own lives and the survival and healthy development of their children.

*Corresponding author
Full Address :
Department of Social work, Bengaluru City University,Bengaluru,,Karnataka, India.
E-mail: nisarga.ts@gmail.com

Better nutrition means stronger immune system, fewer incidences of illness and better health. However, recent evidence from developed countries indicates that malnourished women with a body Mass Index (BMI) below 18.5 show a progressive increase in mortality rates as well as an increased risk of illness. In India, increased prenatal and neonatal mortality, a higher risk of low-birth-weight babies, stillbirths and miscarriage are some of the consequences of malnutrition among women.

2. Food Insecurity among Dalit Households

Historically, Dalit populations were assigned to inferior social strata. They were further marginalised, and the bulk of them were assigned low-level positions in both traditional village organisations and formal government agencies, such as housemaids, agricultural labourers, daily wage labourers, and so on. Their food accessibility and affordability capacity are harmed as a result of their uncertain job and shifting economic situation. This economic disparity between socioeconomic groups, particularly among the Scheduled Caste and

Scheduled Tribes, women and female-headed families, the elderly, and children, demonstrates serious deprivation. Out of the estimated 1.27 billion population, a total of 77% are considered poor and vulnerable, and 70% are Dalit out of this are poor, and they fail to get two square meals a day (Das, 2016)

3. Review of Literature

A study conducted by Kumar (2006) found that health problems are prevalent among women, with more than 40% of women suffering from anaemia. When compared to other age groups, women of reproductive age faced a number of health issues. Malnutrition, a lack of calcium, gynaecological issues, and other issues plague these ladies. The study concludes that women's health is poor. It was discovered that inadequate food, a terrible environment, and a lack of access to healthcare services are to blame for their low health status.

In his study Nutrition Vision 2020, Radhakrishna and K Venkatareddy (2004) indicate that there is chronic under-nourishment in almost half of the population, particularly among vulnerable groups such as children, women, and the elderly from the lower class. Even among chronically malnourished households, the proportion of consumption expenditure spent on food is gradually declining. While current growth rates are expected to significantly reduce income poverty by 2010, chronic food insecurity is expected to endure. The health of Dalit women is precarious, with high rates of maternity and newborn death. Dalit women are malnourished and anaemic as a result of a lack of health care and poverty (Radhakrishna, 2003).

According to Ramu Rawat and Sayeed Unisa's (2021) study on "Association between nutritional status of scheduled caste children and their educational performance in rural Barabanki district, Uttar Pradesh, India," children's nutritional status (underweight) and educational performance by selected background characteristics are shown in the study. It was discovered that underweight children from low SC dwelling areas do poorly in school (47.2%), whereas non-stunted youngsters perform much better (77.1 percent). Children from medium and high SC residential regions had similar outcomes. When compared to non-underweight children, underweight children from food-insecure households performed worse. However, the mother's age and educational standing have a substantial impact on the children's educational aptitude. As the mother's educational level rises from zero to more than eight years, the children's educational achievement rises in both groups (underweight & non-underweight). Furthermore, the estimate suggests that non-underweight children outperformed underweight children in terms of educational performance (Rawat & Unisa, 2021).

Poverty, food security, dietary diversity, preventive health, water and sanitation, financial stress, curative care, household decision-making, breastfeeding, and infant/child feeding were all assessed in the study. Religious affiliation and tribal or caste affiliation, family size, marital status, and the age and gender of children residing in the household were also assessed. In India, caste and tribal affiliations are determined by birth, represent population social stratification, and are frequently utilised to develop anti-discrimination regulations and governmental quotas for disadvantaged castes or tribes (Krishna, 2003).

Food scarcity, according to proponents of this hypothesis, arises when the availability of food is less than the population's food requirement. Adam Smith and Thomas Malthus were the leading proponents of this method, arguing that famines are mostly caused by a rapid decrease in food availability. They identify natural forces as the primary sources of food insecurity and examine their impact on harvest failures and price increases. They are supply-oriented, which distinguishes the Food Availability Decline theory from the climate theory. Food availability decrease theory is open to criticism because it focuses solely on food availability at the local level rather than assessing food availability at the aggregate or macro level. They argued that the crop failures due to natural disasters often result in high food prices, increased demand to deal with uncertainties. The decline in purchasing power affects the poor and those who are in trouble by bad weather to become food insecure (Lin and Yang 2000).

The "food entitlement decrease theory" has been chastised for focusing solely on the economic side of hunger and failing to acknowledge the social and political aspects. For starters, he fails to acknowledge people as socially rooted members of households, communities, and states. Second, he fails to grasp that famine is caused as much by political crisis as it is by economic shocks or natural disasters (Devereux, 2001). Those who have criticized Sen believe that importing food in a scenario of existing insecurity could be the solution to reducing food insecurity and saving lives (Steven Engler, et al,).

4. The rationale of the study

While there has been significant research on the frequency of and factors associated with food insecurity around the world, more research is needed in countries such as India, where the prevalence of food insecurity remains high. According to Upadhyay and Palanivel (2011), the causes of food insecurity in India are complex; they include traditional factors

(food scarcity and low purchasing power), socio-demographic factors (illiteracy, unemployment, overcrowding, poor environmental conditions, and gender bias), and political-developmental factors (lack of inter sectoral coordination and political will, poorly monitored nutritional programs, and inadequate public food distribution systems). Understanding the various factors that contribute to food insecurity aids practitioners in developing targeted and effective solutions (Upadhyay & Palanivel, 2011).

Food insecurity-related behaviours, including coping techniques, appear to differ among cultures. In one research of Aboriginal and Canadian children, both social support and limiting food consumption were often used in food insecure groups, although seeking institutional assistance was not (Tam, Findlay, & Kohen, 2014). Comparatively, coping strategies in rural Nepal include selling agricultural and livestock products, collecting wild foods, and using savings (Khatri-Chhetri & Maharjan, 2006). In India, documented solutions include relying on lower-cost foods, restricting food consumption, borrowing from friends, purchasing food on credit, relying on food help, withdrawing children from school to save money, and sending children to work (Gupta, Singh, Seth, Agarwal, & Mathur, 2015) (Mohapatra, 2012) (Sabar, 2014).

5. Objective of the Study

1. To know the socio-economic conditions of the respondents
2. To assess the household food insecurity effect on the nutritional status of the respondents
3. To ascertain the nutritional status of the respondents and its impact on respondents' health status

6. Methods and Material

Descriptive research design was adopted, stratified sampling procedure was employed for selecting the revenue regions of Karnataka state such as, Mysore, Kalburgi, Belagavi, and Davanagere, from each division two district were selected, from two districts two taluks were selected, from each taluk 24 malnourished Dalit women were selected. Overall, 384 respondents were selected as respondents by using purposive sampling technique. Data was collected by using interview schedule it was consisted three scales, to assess the socio-economic status Kavith Gaurs socio-economic scale was used. To assess the nutrition and malnutrition status of the respondent's body mass Index formula was (= weight in kilograms ÷ Height in meters squares) (kg/m2)

adopted. To analyse the status of household food insecurity of the respondent's household food insecurity scale was adopted. Statistical analysis was done with the help of Microsoft excel and SPSS 17.0 version.

7. Results and Discussion

Table.No.1 Socio-economic status of respondent's

Socioeconomic Status					
Upper Class (I)	Upper Middle Class (II)	Lower Middle Class (III)	Upper Lower Class (IV)	Lower Class (V)	Total
00	00	21	337	26	384
(0.0)	(0.0)	(5.5)	(87.8)	(6.8)	(100)

Parentheses in figures are percentage

The above table reveals the socio-economic conditions of the respondents. Socio-Economic condition is an individual's social class, it has significant impact on their ability to receive adequate nutrition and medical care overall health. The Socio-economic status (SES) is an important determinant of health and nutritional status as well as of mortality and morbidity. The above table explicit, that majority 87.8 % of the respondents fall in upper lower class, 5.5 % of them were below lower class. 6.8 % of them were lower-middle class. It was observed from the study that, most of the respondents were works as agricultural labourers in the farms of non-dalit people. Guaranteed employment is also major problem for them which will lead to income fluctuation due to the lesser amount of livelihood avenues. It might be one of the major reasons for their low socio-economic status.

In addition to that, their social status in societal stratification also plays a vital role in perpetuating them to be in lower social status, which holds them back by denying all sorts of privileges particularly education and employment. It was found majority of families were lived in below poverty line. Hence, their socio-economic condition is very low as the study result depicted above. Supporting to that, socio-economic and caste census report 2011 survey report released by Karnataka Government also reveals i.e.73 % of the Dalit families were the most deprived among rural households in India and 45 % of the scheduled caste households were landless and earn by manual casual labour (Government of India, 2011). The low socio-economic conditions persons experience a wide array of health problems as a result of their low socio- economic status (Simandan, 2018). It can be inferred that, majority of the respondent's socio-economic condition is low because of their low educational status, employment and income status. It also influences the accessibility, affordability, acceptability and actual utilization of various available health facilities.

Table.No.2 Household Food insecurity status of the respondents

Sl. No	Indicators	Mean	Interpretation
1	Worried of food would short-come	M=1.1198	Low
2	Enable to eat the kinds of preferred foods due to lack of resources	M=.8151	Low
3	Have to eat Limited variety of food	M= .6823	Low
4	Could not afford to eat balanced meals	M=.8047	Low
5	Relied on fewer kinds of food	M=.8281	Low
6	Not having enough food	M=.8828	Low
7	Eat less than they felt to it.	M=.7334	Low
8	Cut size of meals or skipping meals	M=1.2422	Low

From the above table analysis, it was found that the majority of the respondents were facing high level of household food insecurity, which directly impacts on the nutritional status of the respondents. Household food security is defined as state in which "all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life" (USAID, 1992). The problem of chronic hunger and malnutrition prevails at a large scale due to subsequent of lack of food security; India has the largest number of undernourished people (WHO, 2018). In this context, knowing the status of household food security among the Dalit women is essential to determine the role of household food security on their nutritional health. In respect to worried of shortage of ration the Mean value is (M=1.1198) it indicates very low mean which means they worried of food will run short. Felt unable to eat kinds of preferred food because of limited variety of foods (M=.8151) due to lack of resources (M= .6823) which also has very low mean value. Respondents have to eat food that they really did not want to eat because of lack of resources to obtain other types of food; it's strongly due to their low purchasing ability. It can also be observed from the above table, respondents could not afford to eat balanced meals (M=.8047) and they rely on fewer kinds of food (M=.8281). Respondents not have enough food to eat which indicates very low mean value (M=.8828). It was significant from the above table majority of the respondents had to eat fewer meals in a day because there was not enough food or insufficient of foods, which indicates very low mean value (M=.7334). Majority of the respondents cut their size of meals or skip meals because of food shortage (M=1.2422).

This result portrays the food insecurity condition of the respondents in respect of their income and inability to meet their basic needs, concern of the food budget and supply, in terms of quality and quantity of the food consume by them, adjusting to the normal and routine food, substituting fewer and low-cost foods, it was evident from the table reduced food intake by the respondents and their households as a consequence may reduce loss of weight and physical sensation of hunger.

Table.No.3 Nutritional status of the respondents

Nutritional status in respect of BMI Value				
Severe (18.49 below)	Over Weight (25.00 to 29.99)	Grade-1 (Obesity-30.00 to 34.99)	Grade-2 (Obesity-35.00 to 39.99)	Grade-3 (obesity-over 40.00)
199	28	46	69	42
(51.8)	(7.3)	(12.0)	(18.0)	(10.9)

Parentheses in figures are percentage, *p=sig.@0.05 level

Nutritional status was assessed by anthropometric measurement (Body Mass Index) to classify the respondents according to nutritional status. The study clarifies the nutritional status of 384 respondents, among 384 of the respondents. Majority of the respondents 51.8 % of them are severely malnourished, whereas 18.0 % of the respondents were suffering from over obesity (grade-2) (Obesity-35.00 to 39.99), 12.0 % of the respondents were suffering from Grade-1(25.00 to 29.99). And 7.3 % of the respondents were suffering from overweight. It was found half of the respondents were malnourished due to affordability of adequate food. The nutritional status of women is most important both for the quality of their own lives and the survival and healthy development of their children. Better nutrition means stronger immune system, fewer incidences of illness and better health. Though, the recent studies from developed countries indicate that malnourished women with a Body Mass Index (BMI) below 18.5 show a progressive increase in mortality rates as well as an increased risk of illness. Increased prenatal and neonatal mortality, a higher risk of low-birth-weight babies, still births and miscarriage are some of the consequences of malnutrition among women (Mallikharjuan & Balakrishna, 2010). It was reported by the National Family Health Survey reports and present study also highlights the same that, severe malnutrition among the Dalit women is rampant and half of the Dalit women were suffering from malnutrition (NFHS , 2017).

If children do not get sufficient food, their physical growth won't be that normal in the same way, adults without adequate food to eat lose weight and those who over eat gain weight. Because of low social status some segment of population, the diet which lacks both the quality and quantity lead to suffer from malnutrition, the women who bear malnutrition are likely to have malnourished babies. Nutrition deficiencies wreak long lasting damage equally on individuals and society. Under nutrition and over nutrition is common incidence of nutritional diseases and determined by examining a satisfactory sample of population by economic class, occupation, age and sex (Begum, 2006).

The present study highlights that, majority of the Dalit households were below poverty line, their

socio-economic conditions are continued to be very poor from historically. In this study, it's strongly indicated that there is a significant relationship between their social-economic condition and food insecurity among the households, which has direct impact on their nutritional status. It hampers the ability to work and be productive and thus limits the ability to earn the income required to lead a decent life. Health consequences of malnutrition may further lead to various health problems such as blindness from Vitamin A deficiency, physical stunting from protein shortages, low body mass index from energy deficiency. The study recommends to design wide-ranging programmes instead of uniform programmes, because socially excluded groups are highly heterogeneous and requires special policies and programmes separately. Otherwise combating the malnutrition problem among these vulnerable groups would be harder. (NisargaPriya & Lokesha, 2017). Another study "Anna Bhagya Programme in Ensuring the Food security among the Rural Dalit Households: An Empirical study of Chikkabalapura District" also revealed that 71.30% of the respondents reported, from past four weeks they were worried that they did not have enough food due to of lack of resources. 65.74% of the respondents they were not able to eat the kinds of foods they preferred. 71.30% of the respondents stated that, they had to eat limited variety of foods due to lack of assets, 31.48% of the respondents shared that they slept hungry at night. It clearly denotes that, insufficient access to affordability to varied nutrient rich food. This state of food poverty leads them to have insufficient nutritional intake and which might be the cause for their malnutrition status (Nisargapriya, Shivlingappa, & Lokesha, 2017)

It indicates that the Scheduled Caste (Dalit) groups remain the poorest among the social groups, belonging to agricultural laborer, day laborer and casual labor, they are the worst sufferer. The study demonstrates that, food insecurity among the respondents was considerably prevalent, due to lack agricultural landholdings and better income. It clears from the study insufficient access to affordability to varied nutrient rich food. This state of food poverty leads them to have inadequate nutritional consumption and be the cause for their malnutrition status.

8. Conclusion

The study found that, majority of the Dalit household were below poverty line, their socio-economic conditions is very poor. As per the observation and study findings its strongly indicates that there is a significant relationship between their social economic condition and food insecurity among the households, which has direct impact on their nutritional status. It hampers the ability to work and be productive and thus limits the ability to earn

the income required to lead a decent life. Health consequences of malnutrition may further lead to various health problems such as blindness from Vitamin A deficiency, physical stunting from protein shortages, low body mass index from energy deficiency. Therefore, the present study strongly recommends to design wide-ranging programmes instead of uniform programmes, because socially excluded groups are highly heterogeneous and requires special policies and programmes separately to address the unique issues of excluded groups. Otherwise combating the malnutrition problem among these vulnerable groups would be harder.

8. References

Begum, R. (2006). A text book of Foods, Nutrition and Dietetics. New Delhi: Sterling Publishers Private Limited.

Das. (2016). Food Insecurity among Dalit Communities in India: Searching the root causes and Dimensions. Journal of Political sciences and Public affairs, IV (1).

FAO. (1983). World Food Security: a Reappraisal of the Concepts and Approaches. Rome: Director General's Report.

Government of India. (2011). Socio-economic and Caste Census (SECC) 2011. India: Ministry of Rural Development.

Gupta, P., Singh, K., Seth, V., Agarwal, S., & Mathur, P. (2015). Coping Strategies Adopted by Households to Prevent Food Insecurity in Urban Slums of Delhi, India. Journal of Food Security, 3(1), , 6-10.

Khatri-Chhetri, A., & Maharjan, K. L. (2006). Food insecurity and coping strategies in rural areas of Nepal",. Journal of International Development and Cooperation, 12(2) , 25-45.

Krishna, A. (2003). What is happening to Caste? A view from some North Indian Villages". The Journal of Asian Studies, 62 (4) , 1171-1193.

Mallikharjuan, & Balakrishna. (2010). Diet and Nutritional Status of Women in India. Journal of Human Ecology, 29 (3), 165-7-.

Mohapatra, G. (2012). Hunger and Coping Strategies among Kondh Tribe in Kalahandi District, Odisha (Eastern India)". Transience: a journal of global studies, 3(2) , 51-60.

NFHS . (2017). (NFHS-4) 2015-16. India. Mumbai: International Institute for Population Sciences (IIPS) and ICF.

NisargaPriya, & Lokesha. (2017). Household Food Insecurity and Its Association with Nutritional status of Dalit Women: A Study of Kolar District Karnataka. Jai Maa Sarawathi Gyandayini, An International Multidisciplinary e-Journal , III (2), 309-315.

Nisargapriya, Shivlingappa, & Lokesha. (2017). Anna Bhagya Programme in Ensuring the Food security among the Rural Dalit Households: An Empirical study of Chikkabalapura District. IJRAR- International Journal of Research and Analytical Reviews , Vol.4 (4), 408-410.

Radhakrishna, R. &. (2003). Food Security and Nutrition: Vision 2020.

Rawat, R., & Unisa, S. (2021). Association between nutritional status of scheduled caste children and their educational performance in rural Barabanki district, Uttar Pradesh, India. Clinical Epidemiology and Global Health , 1-7.

Sabar, B. (2014). Food Insecurity and Coping Strategies: Tale of Two Particularly Vulnerable Tribal Groups in Karnataka", . Journal of Asian and African Studies.

Simandan, D. (2018). Rethinking the health consequences of social class and social mobility. Social Science and Medicine, 200, 258-26.

Tam, B. Y., Findlay, L., & Kohen, D. (2014). Social networks as a coping strategy for food insecurity and hunger for young Aboriginal and Canadian children. Societies, 4(3) , 463-476.

Upadhyay, R. P., & Palanivel, C. (2011). Challenges in achieving food security in India. Iranian journal of public health, 40(4), 31.

USAID. (1992). "Policy Determination 19, Definition of Food Security. Washington, DC: United States Agency for International Development.

WHO. (2018). Global Nutrition Report. World Health Organisation.