Landscaping the Status of Nutritional Literacy in Rural India

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ABSTRACT

Nutrition has a significant impact on the growth and development of an individual. India is suffering from the double burden of malnutrition i.e., a significant part of its population is affected by both over-nutrition and under-nutrition. One effective measure of fighting malnutrition is to consume balanced, nutritious food loaded with essential nutrients and micro-nutrients. However, to consume healthy diet, the nutrition literacy comprising of nutritional knowledge, attitude and dietary practices to meet nutritional requirement is a pre-requisite. The present study provides a comprehensive understanding of the nutritional literacy landscape of rural India. It also highlights the role of nutritional literacy in driving nutri-sensitive agriculture. The study also throws light on the constraints faced by the rural people in attaining nutritional literacy and policy framework suggestions to overcome them.

Keywords: Nutritional literacy, Nutri-sensitive agriculture, Malnutrition.

Introduction

Nutritional literacy refers to the degree to which individuals have the capacity to obtain, process and understand nutrition information and skills needed in order to make appropriate nutrition related decisions. It comprises of components like nutritional knowledge, nutritional attitude and nutritional practices followed to meet the nutritional requirement. Nutritional knowledge refers to the understood information about the nutrition related aspects. Nutritional attitude is the degree of positive or negative feeling of the people towards nutrition. Nutritional practices are the set of activities and food consumption pattern performed regularly for intake of nutritious diet. Nutrition literacy plays a key role in transforming the food consumption pattern among the population and adopt healthy eating practices to combat the prevailing status of the malnutrition in India. India suffers from double burden of malnutrition. Child malnutrition is

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reported as 36.00 per cent of the children under 5 are stunted, 19.00 per cent are wasted, 32.00 per cent are underweight, 03.00 per cent are overweight and 67.00 per cent suffers from anaemia. Among adults, 16.00 per cent males and 19.00 per cent females suffer from under-nutrition, 23.00 per cent males and 24.00 per cent females suffer from over-nutrition and 25.00 per cent males and 67.00 per cent females suffer from anaemia (National Family Health Survey (NFHS) – 5, 2019). The statistics on the status of malnutrition in India highlights the dire need on improving nutritional literacy in the population to translate the learning into adoption of healthy dietary practices to combat malnutrition. With the active consideration of the above-mentioned concerns, the study was undertaken to explore the status of nutritional literacy in the rural India.

Objectives

- » To provide a comprehensive review of nutritional literacy in India
- » To document the constraints as perceived by the farmers to attain nutritional literacy
- » To provide suggestions to enhance nutritional literacy in rural India
- » To suggest policy framework to bridge the gaps in nutritional literacy in rural India

Research Methodology

The literatures based on research works conducted on nutritional literacy by the global scientific community were studied extensively and documented carefully. To document the constraints faced by the rural population in attaining nutritional literacy, the researchers adopted exploratory research design. The study was carried out in the Vadodara district of the Gujarat state in India. The sample size of the study was 150 and a total 150 farmers (75 males and 75 females) from 15 villages (5 male and 5 female farmers from each village), selected randomly for this study. The questionnaire was open ended and farmers were at the freedom of expressing the constraints faced in gaining nutritional literacy. The suggestions provided by the researchers are based on personal understanding of the issue and the comprehensive study of the suggestions provided by the respective scientific community across the globe. Based on the constraints perceived by the respondents, policy framework are suggested to address the issues and bridge the gap in nutritional literacy in rural areas.

Review of Literature

Nutritional knowledge

Suchitra and Ravindra (2018) revealed that slightly less than two-thirds (61.67%) of the respondents had medium knowledge, followed by 20.00 per cent and

18.33 per cent with low and high knowledge about nutrition, respectively. Soni and Verma (2019) stated that majority (45.00%) of the tribal women had medium level of knowledge about different types of anaemia, followed by 29.00 per cent and 26.00 per cent with low and high level of knowledge about different types of anaemia, respectively. Timothy et al. (2019) revealed that majority (76.80%) of the respondents had good knowledge of healthy nutrition, followed by 13.50 per cent and 9.70 per cent of the respondents had fair and poor knowledge of healthy nutrition, respectively. Bhimani et al. (2020) revealed that majority (73.00%) of the farm women had medium knowledge level about nutrition and food, followed by 18.00 per cent and 9.00 per cent with high and low knowledge level about nutrition and food, respectively. Geetha et al. (2022) stated that more than one-third (34.50%) of the rural farm women had high nutritional knowledge, followed by 33.50 per cent and 32.00 per cent with low and medium nutritional knowledge, respectively. Kumari et al. (2023) concluded that majority (71.00%) of the rural women had medium knowledge, followed by 15.00 per cent and 14.00 per cent with high and low level of knowledge about nutrition requirements of infants, respectively. Zala et al. (2025) reported that more than half (56.00%) of the male farmers had low level of nutritional knowledge, followed by 40.00 per cent and 04.00 per cent with medium and high level nutritional knowledge. Comparatively, more than half (56.00 per cent) of the female farmers had medium level nutritional knowledge, followed by 34.00 per cent and 10.00 per cent with low and high level of nutritional knowledge.

Nutritional attitude

Nivedita and Shanthini (2016) concluded in their study that the overall attitude towards antenatal check-up, healthy diet and the benefits of iron supplementation was favourable among the participants. Patimah et al. (2016) stated that more than half of the respondents (55.50%) of the respondents had negative attitude and 44.50 per cent had positive attitude towards the balanced diet. Geetha et al. (2022) stated that more than one-third (36.00%) of rural farm women had less favourable attitude towards nutrition, followed by 34.00 per cent had favourable and 30.00 per cent had more favourable attitude towards nutrition. Prasanthi and Sireesha (2022) concluded that less than two-thirds (65.00%) of the respondents had good attitude on millets and usage of millets, followed by 26.00 per cent and 9.00 per cent with average and poor attitude on millets. Priyadarshini and Biswal (2023) stated that the overall attitude of tribal adolescents towards the nutrition was found negative. Zala et al. (2025) reported that more than half (52.00 per cent) of the male farmers had more favourable attitude towards nutrition, followed by 48.00 per cent with favourable attitude and none had less favourable attitude. Comparatively, little less than two-

thirds (62.00 per cent) of the females had favourable attitude towards nutrition followed by 38.00 per cent with more favourable attitude and none had less favourable attitude.

Nutritional practices

Pareek (2015) concluded in their study that majority of the respondents adopted faulty nutritional practices. Patel et al. (2016) stated that more than two-thirds (68.00%) of the tribal women had medium level of knowledge, followed by 30.00 percent and 2.00 percent with high and low levels of knowledge about nutritional practices. Patimah et al. (2016) stated that more than two-fifths (46.50%) of the respondents followed poor nutritional practices followed by 53.50 per cent followed good nutritional practices to meet their nutritional requirements. Hoque et al. (2018) revealed that more than one-third (37.92%) of the respondents consume liquid milk several times per month, followed by more 29.64 per cent, 14.74 per cent, 14.18 per cent and 3.52 per cent consume liquid milk several times per week, daily, once in a month and several times in a day. Geetha et al. (2022) stated that two-fifths (40.00%) of rural farm women had poor nutritional practice, followed by 35.50 per cent and 24.50 per cent had fair practice and good practice of nutrition. Priyadarshini and Biswal (2023) stated that overall nutritional practice of the tribal adolescent girls was categorised as average, reflecting a lack of knowledge and negative attitude towards a balanced diet. Vahini et al. (2023) revealed that the average monthly consumption of millets is higher in urban households (2.29 kg) than in rural households (1.83 kg). Zala et al. (2025) reported that majority (84.00 per cent) of the male farmers followed fair practices, followed by 16.00 per cent with poor practices and none with good practices to meet their nutritional requirements. Comparatively, great majority (92.00 per cent) of the female farmers followed fair practices, followed by 06.00 per cent with good practice and 02.00 per cent with poor practices to meet their nutritional requirements.

Documented constraints as perceived by the rural people in attaining nutritional literacy

Rural population face significant challenges in gaining nutritional literacy. While understanding the constraints faced by the rural population, it became necessary to view it through gender lens. All the required care was taken to document the different problems faced by both the rural men and women. Table 1 shows the constraints faced by the respondents in gaining nutritional literacy.

In case of male farmers, 82.66 per cent of them felt that initiatives like POSHAN MAAH are not gender inclusive, followed by 73.33 per cent considered inadequate awareness about government schemes like PM-POSHAN Scheme

and passive participation in such programmes, 66.67 per cent considered lack of knowledge about nutrition related diseases, 64.00 per cent felt that inadequate knowledge about need-based diet, 53.33 per cent felt high cost of organic and nutritious foods, 46.66 per cent felt lack of health diagnosis camps in villages, 20.00 per cent considered lack of access to digital resources for information as major constraints in meeting their nutritional requirements. Interestingly, none of the male farmers considered gender-based stereotypes faced in the households as the constraint. This reflected the deep-rooted patriarchy and prevailing gender-blind situation in the rural areas. Whereas among the women farmers, majority (88.00%) of them considered lack of access to digital resources for information as major constraint, followed by 86.66 per cent considered gender based stereotypes faced in households, 80.00 per cent considered lack of health diagnosis camps in villages, 78.66 per cent felt initiatives like POSHAN MAAH are not gender inclusive, 77.33 per cent felt that inadequate knowledge about need-based diet, 70.66 per cent felt high cost of organic foods and highly nutritional foods, 66.67 per cent considered lack of knowledge about nutrition related diseases, 49.33 per cent felt that passive participation in programmes like PM-POSHAN Scheme, 40.00 per cent felt that inadequate awareness about government initiatives like PM-POSHAN Scheme and 33.33 per cent considered food prepared based on male members' preferences as major constraints in meeting their nutritional requirements. Overall, it can be stated that both male and female farmers faced different constraints and therefore need-based solutions should be devised for them to overcome the existing constraints and enhance their nutrition literacy.

Table 1: Perceived constraints by the respondents in attaining nutritional literacy **(n=150)**

Sr. No.	Perceived constraints	Male (n=75)			Female (n=75)		
		(f)	%	Rank	(f)	%	Rank
1	Inadequate awareness about government initiatives like PM-POSHAN Scheme	55	73.33	II	30	40.00	IX
2	Lack of knowledge about nutrition related diseases	50	66.67	IV	50	66.67	VII
3	Lack of health diagnosis camps in villages	35	46.66	VII	60	80.00	III
4	High cost of organic foods and highly nutritional foods	40	53.33	VI	53	70.66	VI

5	Initiatives like POSHAN MAAH are not gender inclusive	62	82.66	I	59	78.66	IV
6	Food prepared based on male members' preferences	10	13.33	IX	25	33.33	X
7	Lack of access to digital resources for information	15	20.00	VIII	66	88.00	I
8	Inadequate knowledge about need-based diet	48	64.00	V	58	77.33	V
9	Passive participation in programme like PM-POSHAN Scheme	55	73.33	III	37	49.33	VIII
10	Gender based stereotypes faced in households	00	00.00	X	65	86.66	II

Suggestions to enhance nutritional literacy in rural India

Based on the constraints documented, the effort was made to suggest ways and measures to enhance the nutritional literacy among the rural population. Training and capacity building programmes on nutrition education, health and disease diagnosis camps in the villages to identify the micro and macro-nutrient deficiencies in the rural population and prescribe them the necessary diet and foods to fulfill the deficiency. To combat malnutrition, household nutritional security is a key measure. This can be done by training them to grow and maintain a kitchen/nutrition garden with nutritional crops like spinach, bitter gourd, cucumber, bottle gourd, aonla tree, drumstick, etc. and consume them regularly. Inclusion of both male and females in nutri-sensitive programmes and schemes like ICAR's Nutri-Sensitive Agricultural Resources and Innovation (NARI) programmes, PM-POSHAN Scheme shall also consider anaemic males as target population. Bridging digital divide in rural areas, equipping them with the tools to gather information about the nutrition related aspects from social media platforms, TV programmes can play a catalytic role. Nutrition sensitive extension can also play a vital role for the same. Extension workers can encourage cultivation and marketing of nutritional crops like millets which will be gradually adopted by the consumers thus shifting the goal from increasing food production to the cultivation of nutrient rich foods, bio-fortified varieties to ensure nutritional security and combat malnutrition in India. Zala et al. (2025) suggested in their study the important policy framework to enhance nutrition literacy in India.

Policy framework to bridge the gaps in nutritional literacy in India

The constraints faced by the rural population in achieving nutrition literacy are to be addressed through targeted policy interventions. Therefore, the following points describe the applicable components to be included while formulating such a gender-inclusive policy to strengthen nutrition literacy in the rural population.

Components of the policy

Knowledge enhancement and capacity building

- Establish social institutions for training rural population about nutritional foods like millets and include both men and women in these programmes
- Organize regular health camps in villages for providing information about nutrition-related disorders and diseases like anaemia
- Collaboration of health department persons and extension officials to cover a larger target area
- Design programs like training on nutrition gardening for both men and women
- Set up Nutri-smart villages
- Build digitals tools like nutrition related information providing application, social media interventions like WhatsApp groups where healthcare staff and government officials upload information regarding nutrition.

Promote nutri-sensitive agriculture among the farmers

- Promote farmers to grow highly nutritional crops like millets, adopt organic farming practices
- Knowledge building about bio-fortified varieties and encourage their cultivation

Involve participation of civil society organizations

- Non-Governmental Organizations (NGOs) can help to reach the wider target area and influence the rural population to adopt nutritional practices.
- Self-Help Groups (SHGs) should be encouraged to take up millet-based entrepreneurship to supply more nutritional foods into the market
- Farmer Interest Groups (FIGs) should be trained by SHGs or private players like food processing companies to take up value-added enterprises to produce nutritional foods

Targeted programmes in village schools and community led programmes

- Create awareness among the children from school stage about nutritional food intake
- Prepare school kitchen gardens/nutrition garden with high nutritional

value vegetables like carrot, cabbage, spinach and coriander

- Organize millet fairs and exhibitions, organic food exhibitions to promote their marketing and encourage farmers to grow nutritional crops and vegetables.

The success of any policy and programme depends on its successful implementation. Therefore, effective implementation with regular monitoring is essential for the positive transformation on the grass root level.

Conclusions

Nutrition has significant impact on the development of the nation. Malnourished population is the army of the sick leading to the slowed down economic, social and technological growth of the nation. Therefore, it is of dire need to address the malnutrition by encouraging nutritional literacy among the population. Knowledge of healthy foods and diet will lead to their increased consumption among both the males and females, improving their nutritional practices gradually combating malnutrition. As India is progressively heading on the path of Viksit Bharat by 2047, let us strive to make India nutritionally secure and healthy.

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