

Research Paper

Nutritional Awareness and Dietary Practices by Farm Women: An Empirical Study

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ABSTRACT

Awareness on proper nutrition, nutritional value of food and healthy practices in food intake can build a difference in farm women productivity. Poor dietary practice is one of the biggest global contributing factors on recurrent disease in farm women. Negative effects of malnutrition among women were compounded by heavy farm work demands and poverty, although technological breakthrough brought tremendous scope in agriculture sector. Under this backdrop, this study was conducted with the objectives to gauge the nutritional awareness and dietary practices by farm women. The study was conducted among 150 farm women of Bhagalpur district of Bihar. From this research, it can be concluded that mass media, social media, and grassroots extension functionaries play pivotal role in creation of nutritional awareness among farm women. The mostly dietary practices included cereals (Rice, Wheat & Maize) and farm women nutritional awareness is significantly correlated with age, education level and mass media exposure of farm women.

Highlights

- ① Assure nutritional support safeguard farm women from number of diseases and ensure farm women productivity.
- ② Nutritional awareness and its practice by farm women are correlated. It was noted that that mass media, social media, and grassroots extension functionaries play pivotal role in creation of nutritional awareness among farm women.

Keywords: Farm women, nutrition, diet, cereal, education level

Awareness on proper nutrition, nutritional value of food and healthy practices in food intake can build a difference in healthy society and nation as a whole. Deficiencies in nutritional practices may lead to unproductive life in farm women. Poor dietary practice is one of the biggest global contributing factors on recurrent disease. Human body derives strength and protection against disease through the intake of balance diet. In Indian farming, farm women immensely contribute in food production, however, nutritional status as well as nutritional knowledge of women were unsatisfactory and needs interventions (Upadhyay *et al.* 2011). Actually, negative effects of malnutrition among women were

compounded by heavy work demands and poverty (Jethi and Chandra, 2016), although technological breakthrough brought tremendous scope in agriculture sector (Panda and Bhatnagar, 2020). Hence, the nutrition education about the importance of balanced diet, food groups and their functions and eat right according to body requirements and working status (Jyoshna *et al.* 2017) need to be catered among to the farm women through different media

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as associated with farm technology dissemination (Panda, 2014). Farm women extent of knowledge in relation to nutrition was low, however, it could be improves through nutrition training programme (Kumar *et al.* 2016). Farm women performed agricultural activities and household activities however, their dietary, nutritional and energy intake was lower (Singh *et al.* 2012).

MATERIALS AND METHODS

The study was conducted in Bhagalpur district of Bihar. Farm women were selected randomly from three blocks of the district namely, Sabour, Naugachhia and Pirpanti. From each block 50 farm women were selected randomly. Hence the sample size were 150. The Questionnaire was pretested over 15 number of farm women. Although questionnaire were prepared in English language, but during interview it was translated to local language i.e. Hindi. Data was collected during September, 2019 to December, 2019. The schedule was developed for the study, however, Nutritional Awareness of the farm women was tested through the scale developed by van Dillen *et al.* (2008). The statistical methods administered were mean, per cent, Standard Deviation, Rank and correlation coefficient. For analysis of data IBM SPSS 21 was employed.

RESULTS AND DISCUSSION

It is imperative to know the situational context of farm women; hence socio-economic profile of farm women was studied. From the table 1, it is noted that 32 per cent farm women belong to 50-60 years age group, however 8 per cent respondent belonged to upto 30 years age group. The perusal of table also revealed that education level of 60 per cent farm women was up to 5th standard and only 2 per cent up to higher secondary. It is also noted that 80 per cent respondent had up to 1hectare land and most of them belonged to nuclear family (56.67%). Amongst the respondent 60 per cent were non vegetarian and 40 per cent were vegetarian and 34 per cent respondent’s farming experience range between 20-30 years.

Farm women consumed different type of food items, so it is essential to know their categories of nutritional sources and their diet pattern. It is noted that 56.67 per cent respondent’s nutritional source was cereals (rice, wheat and maize) with home production, however 21.33 percent purchased the same from the market and 50 per cent of the respondent got the same through home production and purchasing from the market. It is also noted that 60 per cent respondent purchased animals protein

Table 1: Socio-economic Profile of Farm Women (n = 150)

Variables	Class interval	Fr	%	Mean	SD	CV(%)	Mode	Min.	Max
Age (in Year)	Up to 30	12	8.00	43.20	12.94	27.95	52	28	65
	30 to 40	39	26.00						
	40 to 50	27	18.00						
	50 to 60	48	32.00						
	>60	24	16.00						
Education	Up to 5 th Std.	90	60.00	.63	.46	71.05	.32	.16	2.32
	Up to 10 th Std.	57	38.00						
	Up to 10+2 Std.	3	2.00						
Land Holding (in Ha)	Upto 1 ha	120	80.00	22.34	10.17	47.52	25	5	50
	> 1 ha	30	20.00						
Family Size	Up to 4	60	40.00	25	10.17	47.52	25	5	50
	4 to 6	63	42.00						
	>6	27	18.00						
Types of Family	Nuclear	85	56.67	25	10.17	47.52	25	5	50
	Joint	65	43.33						
Types of Diet	Vegetarian	60	40.00	25	10.17	47.52	25	5	50
	Non-Vegetarian	90	60.00						
Farming Experience (in Years) ^f	Up to 10	18	12.00	22.34	10.17	47.52	25	5	50
	10 to 20	45	30.00						
	20 to 30	51	34.00						
	30 to 40	27	18.00						
	> 40	9	6.00						

Table 2: Nutritional Sources of Farm Women (n = 150)

Sl. No.	Nutritional Items	Sources		
		Home Production (A)	Purchase from market (B)	Both A & B
1	Cereals(Rice, Wheat & Maize)	85 (56.67%)	32 (21.33%)	75 (50%)
2	Animals Protein (Egg, Fish, Meat)	12 (8.00%)	90 (60.00%)	8 (5.33%)
3	Plants Protein (Pulses-Moong, Arhar, Lentil, Gram)	64 (42.67%)	70 (46.67%)	52 (34.67%)
4	Fat (Different Oils)	32 (21.33%)	89 (59.33%)	15 (10.00%)

Figure in the () indicate %. Multiple Response.

Table 3: Mass Media and Extension Personal Exposure of Farm Women (n = 150)

Sl. No.	Mass Media	Most Often	Sometimes	Rarely	Weighted Mean	Rank
1	Television	38 (25.33%)	82 (54.67%)	30 (20.00%)	2.05	IV
2	Social Media	23 (15.33%)	78 (52.00%)	49 (32.67%)	1.82	V
3	Newspaper	10 (6.67%)	20 (13.33%)	120 (80.00%)	1.27	VII
	Awareness campaign	25 (16.67%)	60 (40.00%)	65 (43.33%)	1.73	VI
4	ICDS Workers	73 (48.67%)	40 (26.77%)	37 (24.66%)	2.24	II
5	Rural Health Workers	65 (43.33%)	68 (45.33%)	17 (11.34%)	2.32	I
6	Primary Health Centre workers	58 (38.67%)	69 (46.00%)	23 (15.33%)	2.23	III

(egg, fish and meat) from the market. Only 8 per cent of them had their home production. In case of plants protein (pulses- Moong, Arhar, Lentils and Gram), it was observed that 46.6 per cent respondent purchased the same from the market while 34.67 per cent farm women obtained it through home production and purchased from market (table 2).

In present context mass media, social media, grassroots extension functionaries play pivotal role in dissemination of nutritional related information among the common people. However, it becomes imperative to know the roles of these Media in nutrition awareness creation among the farm women. It is noted that rural health workers contributed mostly on creation of nutritional awareness among the farm women and it was ranked I followed by ICDS workers (rank-II), Primary health centre workers (rank III) and television (rank-IV) (table 3).

The nutritional awareness of farm women was assessed based on a scale (Dillen *et al.* 2008). The perusal of table 4 revealed that major nutritional awareness factors were Take care that eat regularly (rank I), do not want to ask things eat are good one (rank II), do not worry about healthiness of food (rank III), healthiness snacks makes no difference (rank IV) and take care on balance diet (rank V).

It is noted that 100 per cent farm women took cereals, pulses and legume, vegetables and fat.

However, it is noted that 25.33 per cent farm women took fruits (table 5). The perusal of table 6 revealed that 71.33 per cent farm women took leafy vegetables daily, 88.67 per cent received tuber and root daily however 50.67 per cent farm women consumed beans weekly and 40.67 percent took nuts (Groundnut, Cashew nut) monthly. However, consumption of animal Protein i.e. Meat, Fish and Egg were mostly monthly basis.

Knowledge Gap of farm women on foods nutritional value and importance were assessed and it is noted that 40.00 per cent farm women knowledge gap varies between 40- 60 per cent. However, 11.33 per cent respondent knowledge gap arranged between 80- 100 per cent (table 7). Physical Parameters of respondents were also assessed and it was found that average Body Mass Index ((kg/m²) of farm women was 21.78 (table 7).

Correlation coefficient between farm women's degree of nutritional awareness and situational variables were studied, it was observed that nutritional awareness was positively and significantly correlated with age, education level, mass media exposure. From this relationship it may be inferred that as the age, educational level and social media exposure increases so the respondent nutritional awareness will increase. However, it is observed that nutritional awareness is negatively and significantly correlated with body mass index.

Table 4: Nutritional Awareness of Farm Women (n = 150)

Sl. No.	Items	Weighted Mean	Rank
1	Take care that eat regularly	4.31	I
2	Do not want to ask oneself all the time whether the things eat are good for one	4.12	II
3	Eat what like and do not worry much about the healthiness of food	4.04	III
4	The healthiness of snacks makes no difference	3.89	IV
5	Take care on balanced diet	3.89	V
6	It is important that diet should be low in fat	3.87	VI
7	It is important to eat two pieces of fruit and 200 g of vegetables a day	3.87	VII
8	Very particular about the healthiness of food eat	3.45	VIII
9	It is important that daily diet contains a lot of vitamins and minerals	3.41	IX
10	Prepared to leave a lot, to eat as healthy as possible	3.34	X
11	Have the impression that other people pay more attention to healthy eating	3.32	XI
12	Healthiness of food has little impact on food choices	3.31	XII
13	Do not avoid foods, even if they may raise cholesterol	2.98	XIII
14	It is important to know how to eat healthy	2.98	XIV
15	Pay attention that do not eat too much	2.87	XV
16	Pay attention to food that do not use too much sugar	2.87	XVI
17	Always follow a healthy and balanced diet	2.78	XVII

Table 5: Food items intake by Farm Women (n = 150)

Sl. No.	Food items	Frequency	Per cent (%)
1	Cereals	150	100
2	Pulses and legumes	150	100
3	Vegetables -		
	Leafy vegetables	150	100
	Tubers & Roots	143	95.33
	Beans	128	85.33
	Others Vegetables	143	95.33
4	Nuts (Groundnut, Cashew nut)	80	53.33
5	Fats & oils	150	100
6	Milk and its products	85	56.67
7	Animal Protein (Fish, Egg, Meat)	76	50.67
8	Fruits	38	25.33

Table 6: Frequency of Intakes as influenced by diet types (n = 150)

Sl. No.	Food items	Daily	Weekly	Monthly	Chi-square (observed value)	Chi-square (critical value)	P-Value
1	Cereals	150 (100%)	0	0	1.623	5.871	0.490 ^{NS}
2	Pulses & Legumes	135 (90%)	15 (10%)	0	4.499	5.859	0.105 ^{NS}
3	Leafy vegetables	107 (71.33%)	43 (28.67%)	0	1.631	5.789	0.432 ^{NS}
4	Tubers & Roots (Vegetable)	133 (88.67%)	10 (6.67%)	0	0.457	3.631	0.389 ^{NS}
5	Beans(Vegetable)	34 (22.67%)	76 (50.67%)	40 (26.66%)	1.323	3.573	0.390 ^{NS}
6	Nuts (Groundnut, Cashew nut)	7 (4.67%)	12 (8.00%)	61 (40.67%)	2.479	4.754	0.095 ^{NS}
7	Milk	89 (59.33%)	43 (28.67%)	18 (12.00%)	1.781	5.595	0.322 ^{NS}
8	Meat	0 (%)	15 (10.00%)	25 (16.67%)	0.357	3.231	0.239 ^{NS}
9	Fish	12 (8.00%)	25 (16.67%)	32 (21.33%)	1.421	5.871	0.490 ^{NS}
10	Egg	5 (3.33%)	32 (21.33%)	34 (22.67%)	3.299	4.879	0.125 ^{NS}
11	Fruits	0	57 (38.00%)	43 (28.67%)	1.379	4.654	0.115 ^{NS}

Table 7: Knowledge gap of farm women on foods nutritional value and importance (n = 150)

Sl. No.	Knowledge Gap Level	Frequency	Per cent
1	Upto 20 %	21	14.00
2	>20% to ≤ 40%	29	19.33
3	>40% to ≤ 60%	60	40.00
4	>60% to ≤ 80%	23	15.33
5	>80% to ≤ 100%	17	11.33

Table 8: Physical Parameters of Farm Women (n = 150)

Sl. No.	Particulars	Average
1	Height (cm)	153.45
2	Weight (kg)	53.20
3	Body Mass Index(kg/m ²)	21.78

Table 9: Correlation Coefficient between degree of nutritional awareness and situational variables (n = 150)

Sl. No.	Parameter	Correlation Coefficient (r)
1	Age (X ₁)	0.267*
2	Education level (X ₂)	0.321**
3	Mass Media Exposure (X ₃)	0.284*
4	Social Media Exposure (X ₄)	0.189
5	Family Size (X ₅)	0.129
6	Body Mass Index (kg/m ²) (X ₆)	-0.246*

*Significant at 5% level.**Significant at 1% level.

From this negative relationship, it may be concluded that higher the body mass index i.e. body weight lowers the level of nutritional awareness among the farm women (table 9).

CONCLUSION

Farm women immensely contribute in farming, however, poor dietary practice by them is one of the biggest global contributing factors on their recurrent disease. Negative effects of malnutrition among women were compounded by heavy farm work demands and poverty, although technological breakthrough brought tremendous scope in agriculture sector. From the study it is concluded that mass Media, social Media, and grassroots extension functionaries are creating the nutritional awareness among farm women. Although, farm women independent on availability of cereals (rice, wheat and maize) and to moderate extend on vegetables and pulses, however, for getting animal proteins (fish, meats, eggs), mostly, they have to depend on external sources i.e. have to purchase from the market. Major nutritional awareness factors among farm women were (a) take care that eat regularly and (b) take care on balance

diet. There is Knowledge Gap of farm women on foods nutritional value and importance, so training and awareness programme may be conducted on regular basis. Farm women nutritional awareness is significantly correlated with age, education level and mass media exposure of farm women.

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