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Nutritional knowledge and practices followed by rural women: An exploratory study

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Abstract

Nutrition is an important element that influences the quality of human life. Knowledge of nutrition is one of the factors that shape the nutritional behavior of individuals as well as communities. Women are generally responsible for food selection and preparation and the care and feeding of the family. They are the key to food security for their household food practices. The study was undertaken to assess the nutritional knowledge and practices followed of rural women with the sample size of 500 respondents. The respondents were selected randomly. Data was collected using survey method in five villages namely Kalkeri, Kumbarkoppa, Belur, Dubbanamaradi and Kogilgire of Dharwad district of Karnataka, India. Findings of the study revealed that 62.00 per cent of the rural women belonged to the age group of 20-40 years. Nearly one third of the rural women were involved in agriculture, almost half of the rural women belonged to lower middle socio economic status (51.80%) to upper middle socio economic status (47.80%). The 30.60 per cent had moderate nutritional knowledge and 17.80 had medium level of nutritional practices among rural women. Highly significant relationship was observed between age, education, occupation, socio economic status and knowledge among rural women. Highly significant relationship between income, education, occupation and nutritional practices among rural women. The rural women had shown highly significant correlation between nutritional knowledge and nutritional practices. Independent variables age, income, education, occupation, socio economic status of the rural women significantly influenced the knowledge and practices. It is recommended that diverse technical support and comprehensive nutritional extension programs such as demonstrations, training programs and group discussions may be implemented by different organizations in order to increase women's knowledge and practices.

Keywords: Nutritional knowledge, nutritional practices, rural women

Introduction

Women are nutritionally the most vulnerable section especially in rural area usually associated with agriculture. Although women are food producers at farm and household level their own nutrition situation is not encouraging all over the developing countries including India. About two third of the manual labour in farming is constituted by rural women. Irrespective of their degree of affluence, they provide 14-18hr of productive physical labour every day in a wide variety of activities directly connected with agriculture, allied and domestic chores. Women invariably performs the duties of both employees and housewife. This dual role entitles heavy mental and physical effort which often leads to complete exhaustion of women due to over work. Good health is a requirement throughout life and vital to women in terms of their daily activities, but nutritional deficiencies is a major problem for women in India.

Health is fundamental to human progress. Women's health status effect their productivity and their by their roles in society and their own development. Nutrition is closely interlinked with health. Low nutritional status of women makes her more prone to several diseases.

Hence, the present study was conducted with the following

objectives

1. To study the profile characteristics of the rural women
2. To assess the Nutritional knowledge of the rural women
3. To know the nutritional practices followed by the rural women
4. To analyze the relationship between profile characteristics and nutritional knowledge

Methodology

The study was conducted in Dharwad district of Karnataka to know the nutritional knowledge and practices followed by the rural women by All India Co-ordinated Research Project- Women in Agriculture in the five adopted villages viz., Belur, Dubbanmaradi, Kalakeri, Kumbarkoppa and Kogilageri. Personal interview method was used to collect the information from 500 rural women through random sampling method during 2021-2022. Profile characteristics viz age, education, occupation, family income was analysed using frequency and percentages. The Socio-Economic Status (SES) of the rural people was analysed and categorized as upper high SES, lower middle SES, poor SES, very poor SES.

The nutritional knowledge was analysed by teacher made

knowledge statements. Totally 22 statements were measured by giving 1 score to ‘Yes’ statements and 0 score to ‘No’ statements. The maximum and minimum score ranged from 23 to 0. Based on mean and Standard Deviation (SD) they were classified into ‘Adequate Knowledge’, ‘Moderate Knowledge’ and ‘Inadequate Knowledge’. Similarly nutritional practices also consists of 21 statements. They were classified as ‘Good practices’ ‘Average practices’ and ‘Poor practices’.

Correlation Co-efficient was used to find the relationship between the profile characteristics (Independent variables) and knowledge & practices (Dependent variables)

Regression was used to know the influence of independent variables on dependent variable.

Results and Discussion

The data depicted in Table 1 reveals that almost 62.00 per cent of the rural women belonged to the age group of 20-40 years followed by 36.60 per cent of the rural women in the age group of 41-60 years and remaining 1.60 per cent were above sixty years of age. It is known fact in rural area that the girls are married at the young age and these young rural women were more prone to adopt innovation, are

comparatively energetic, and interested. So, they might be keen to gather knowledge on different nutritional issues. The results are similar with the study conducted by Sultana *et. al.* (2023) [10]. Majority of the rural women were illiterates (28.40%) whereas 26.00 per cent had education upto primary, almost equal per cent of rural women studied upto middle school and high school (15.20% & 15.00%). Less than ten per cent of the rural women were educated upto intermediate (9.00%), graduation and above (6.40%). Education helps individuals to broaden their thinking and expand their horizons of knowledge on nutritional aspects and practices. With respect to occupation of the farm families, 34.00 per cent were doing agriculture, 16.60 per cent were agricultural labourers, 11.40 per cent doing service either in private or government jobs. Three per cent of the respondents were involved in small jobs. Rest were house wives. More than half (56.80%) of respondent’s income was between Rs. 10,000 - 19,999 followed by 14.40 per cent respondents had income between Rs. 5000-9999. 11.20 per cent respondent’s income was between Rs. 20,000 to 49,000. The remaining 10.20 per cent of them had income between Rs. 1000-2499 and only 7.40 per cent of the farm families had income between Rs. 2500-4999.

Table 1: Profile characteristics of rural women N=500

Variables	Categories	Number	Percentage
Age	20-40 yrs	309	61.80
	41-60 Yrs	183	36.60
	61-80 yrs	08	01.60
Education	Illiterate	142	28.40
	Primary	130	26.00
	Middle school	76	15.20
	High school	75	15.00
	Intermediate	45	09.00
	Graduation & above	32	06.40
Occupation	Agriculture	170	34.00
	Labour	83	16.60
	Service (Govt/Private)	57	11.40
	Small business	15	3.00
	House wife	175	35.00
	Any other	-	-
Family income/month	>50,000	-	-
	20,000-49,999	56	11.20
	10,000-19,999	284	56.80
	5000-9999	72	14.40
	2500-4999	37	7.40
	1000-2499	51	10.2
	<1000	-	-

Table 2: Socio-Economic Status (SES) of the rural families N=500

SES	Upper high	-	-
	High	02	00.40
	Upper middle	239	47.80
	Lower middle	259	51.80
	Poor	-	-
	Very Poor / Below poverty line	-	-

It was observed from table 2 that almost half of the rural women belonged to lower middle socio economic status (51.8%) to upper middle socio economic status (47.8%) and only 0.40 per cent of the rural women were under high socio economic category.

Table 3a: Overall nutritional knowledge among rural women N=500

Levels of nutritional knowledge	N	%
Adequate knowledge	37	7.40
Moderate knowledge	153	30.60
Inadequate knowledge	310	62.00

The data in the table 3 (a) revealed that 62.00 per cent of the rural women exhibited inadequate knowledge followed by 30.60 per cent had moderate knowledge and only 7.40 per cent of the respondents had adequate knowledge about nutrition. It is essential for women to have adequate nutrition and nutritional knowledge not only because it enables them to become valuable members of their

households and communities but also because of the direct influence that maternal nutrition and nutritional knowledge have on the health and growth of the generation that comes

after them. The results are in line with the findings of Morales *et al.* (2021)^[9].

Table 3b: Statement wise Nutritional knowledge among rural women N=500

Sl. No.	Statements	Yes	%	No	%
1	Are you aware of super foods	40	8.00	460	92.00
2	Millets are better for health than rice and wheat	184	36.80	316	63.20
3	Nutri Thali is nothing but a balanced diet	364	72.80	136	27.20
4	Balanced diet is essential for good health	373	74.60	127	25.40
5 (-)	Skipping meals is good for health	320	64.00	180	36.00
6	Cutting nails timely is hygienic practice	495	99.00	5	1.00
7 (-)	Anemia is due to deficiency of Vitamin A	150	30.00	350	70.00
8	Ideal body weight is necessary to maintain good health	353	70.60	147	29.40
9 (-)	Intake of green leafy vegetables (GLV) enhance Vitamin C	51	10.20	449	89.80
10	Drinking tap water is not good for health	264	52.80	236	47.20
11 (-)	Washing hands before eating food is not a good practice	168	33.60	332	66.40
12	Morning walking and jogging are good for health	383	76.60	117	23.40
13	Cereals are rich source of carbohydrates	485	97.00	15	3.00
14 (-)	Sprouting will not improve nutrient availability	51	10.20	449	89.80
15	Obesity may be due to excess intake of fat	184	36.80	316	63.20
16	Egg is complete protein	476	95.20	24	4.80
17 (-)	Regular consumption of junk food is good for health	360	72.00	140	28.00
18	Milk and milk products enhance calcium and is important for bone health	300	60.00	200	40.00
19 (-)	Females need more iron in diet than male	186	37.20	314	62.80
20	GLV's are good source of folic acid	192	38.40	308	61.60
21	Supplement diet is necessary to overcome deficiency of nutrients	49	9.80	451	90.20
22 (-)	Protein is necessary for good Hemoglobin (Hb) status	55	11.00	445	89.00

The results in the table 3b reveals the data on the statement wise nutritional knowledge of rural women. It is clear from the table that rural women have inadequate knowledge about super foods (92.00%), supplementary diet (90.20%), sprouts improve nutrient availability & intake of green leafy vegetables enhance Vitamin C (89.80%), 89.00 per cent has no knowledge about proteins are necessary for growth. Seventy per cent does not have knowledge about anaemia, 66.40 per cent does not have about washing hands before eating. An equal per cent (63.20%) of the respondents does not know that millets are better for health than rice & wheat and obesity may be due to excess intake of fat. Around sixty percent of the people doesn't knows that the content of folic acid in the GLV's and females need more iron in diet than male. Nearly half of the respondents don't have knowledge about drinking tap water is not good for health (47.20). Less than forty per cent of the people don't have the knowledge about milk and milk products enhance calcium and is important for bone health (40.00%), skipping meals is good for health (36.00%), ideal body weight is necessary to maintain good health (29.40%), regular consumption of junk food is good for health (28.00%), nutri thali is nothing but a balanced diet (27.20%), balanced diet is essential for good health (25.40%), morning walk and jogging are good for health (23.40%). Very few respondents don't have knowledge about the egg is complete protein, cereals are rich source of carbohydrate and cutting nails timely is hygienic practice. To ensure their family's health in a sound manner, it is necessary to have concrete knowledge on nutritional issues to build up their nutritional knowledge by attending more number of trainings, awareness programmes,

exhibitions, campaigns etc. The findings are in line with Dupuis *et al.*, (2022)^[4].

Table 4(a): Overall nutritional practices of rural women N=500

Levels of Nutritional Practice	N	(%)
Poor	389	77.80
Average	89	17.80
Good	22	4.40

The data in the table 4 (a) revealed that 77.80 per cent of the rural women showed poor nutritional practices followed by average practices (17.80%) and less than five per cent (4.40%) had good nutritional practices. The results were in line with study conducted by Shapu *et al.*, (2020)^[11].

The findings of the study depicted in the table 4 (b) showed that statement wise nutritional practices of the rural women. Most of the rural women have poor practices on use chia seeds, quinoa seeds and flax seeds in their regular diet (85.80%). Consumption of millets (79.80), supplementary diet (86.80%), egg (85.80%), fish and meat (82.60%), green leafy vegetables (76.40%), fruits and vegetables (71.00%), roots and tubers (61.80%), milk and milk products (56.40%). It was surprising to know that 62.00 per cent of the respondents skip the meals. Nearly one fourth of the respondents do not practice hygienic practices (23.20%), use direct tap water for drinking (21.40%), fried foods (26.20%) and washing of hands before having food (20.80%). The probable reason could be lack of time, dual work load, lack of exposure, lack of education, awareness and willingness.

Table 4 (b): Nutritional practices among rural women N=500

Sl. No	Statements	Yes	%	No	%
1	Do you use Chia seeds, Quinova seeds and flax seeds in your diet	71	14.20	429	85.80
2	Do you use millets in your daily diet	101	20.20	399	79.80
3	Is your daily diet consists of all five food groups	53	10.60	447	89.40
4	Do you consume balanced diet daily	210	42.00	290	58.00
5	Do you skip meals	190	38.00	310	62.00
6	Do you cut your nails frequency	484	96.80	16	3.20
7	Do you keep yourself hygiene	384	76.80	116	23.20
8	Do you practice yoga/exercise to maintain ideal body weight	102	20.40	398	79.60
9	Do you consume GLV's daily	118	23.60	382	76.40
10 (-)	Do you drink direct tap water	393	78.60	107	21.40
11	Do you wash your hands before having food	386	77.20	104	20.80
12	Do you maintain kitchen garden at home	141	28.20	359	71.80
13	Do you consume cereals in daily diet	365	73.00	135	27.00
14	Do you consume sprouted grains	328	65.60	172	34.40
15 (-)	Do you consume fried, baked foods daily	369	73.80	131	26.20
16	Do you eat enough fruits and vegetables	145	29.00	355	71.00
17	Do you consume milk and milk products daily	218	43.60	282	56.40
18	Do you consume roots and tubers daily	191	38.20	309	61.80
19	Do you take supplement diet	66	13.20	434	86.80
20	Do you eat egg daily/frequently	71	14.20	429	85.80
21	Do you eat fish & meat	87	17.40	413	82.60

Table 5: Correlation between the independent variables, nutritional knowledge and nutritional practices of the rural women N=500

Variables	Knowledge	Practices
Age	0.131**	0.115*
Income	0.098*	0.147**
Education	0.186**	0.229**
Occupation	0.234**	0.270**
Socio economic status	0.201**	0.077
Knowledge	1	0.637**

It was clear from the Table 5 that there was a highly significant relationship between age, education, occupation, socio economic status and knowledge among rural women. The significant relationship was observed between income and knowledge of the rural women. Rural women with high income might help them have access to different information sources and this might help them to gain knowledge on different nutritional issues. Similar results were also noted by Chong *et al.* (2019) [3] and Johnson *et al.* (2018) [8].

There was a highly significant relationship between income, education, occupation and nutritional practices among rural women. As the education, occupation and income increases the nutritional practices also increases. The significant relationship was observed between age and nutritional practices of the rural women which indicates that, as the age increases the experience and knowledge also increases with regard to nutritional practices. The socio economic status had shown non significant relationship with the nutritional practices of the rural women this indicates that everyone needs good nutrition irrespective of their socio economic status. Educational qualification of an individual might expand the horizon of outlook and insight of a respondent (Sarmin and Hasan, 2019) [10]. This might help them to gain more nutritional knowledge and motivate to improve the nutritional practices.

The rural women had shown highly significant correlation between nutritional knowledge and nutritional practices.

Table 6: Influence of independent variables on the nutritional knowledge of the rural women N=500

Variables	R	R2	% contribution	F value
Age	0.131	0.017	0.17	8.682**
Income	0.098	0.010	0.10	4.863**
Education	0.186	0.035	0.35	17.830**
Occupation	0.234	0.055	0.55	28.753**
Socio Economic Status	0.201	0.040	0.40	20.921**

The perusal into Table 6 examines that all the independent variables age, income, education, occupation, socio economic status of the rural women significantly influenced the knowledge at 0.01 level of significance. In total, the independent variables contributed 1.6 per cent to the nutritional knowledge of the rural women.

Table 7: Influence of independent variables on the nutritional practices of the rural women N=500

	R	R2	% contribution	F value
Age	0.115	0.013	0.13	6.645*
Income	0.147	0.022	0.22	10.953**
Education	0.229	0.052	0.52	27.535**
Occupation	0.270	0.073	0.73	39.124**
Socio Economic Status	0.077	0.006	0.06	3.002 ^{NS}

Results from the Table 7 reveal that income, education, occupation of the rural women showed highly significant influence on the nutritional practices at 0.01 level, Age of the rural women have significant influence on the nutritional practices at 0.05 level. The socio-economic status did not influenced significantly to the nutritional practices of the rural women. In total, the independent variables contributed 1.86 per cent to the nutritional practices of the rural women.

Conclusion

The results of the study revealed that the majority of rural women possessed inadequate to moderate knowledge of various nutritional issues. Therefore, it is recommended that diverse technical support and comprehensive nutritional

extension programs such as demonstrations, training programs and group discussions may be implemented by different organizations in order to increase women's knowledge of nutritional issues which will improve their nutritional status and enable them to take care of the nutritional status of their respective households. Different arrangements should also be made by the relevant authorities to increase the educational level of women to increase the efficacy of various printed materials regarding nutritional issues, such as books, booklets, leaflets, posters, newspapers, etc.

Apart from imparting nutritional knowledge programs, there is a need for new techniques, government schemes, and policies to improve nutritional knowledge and practice, ultimately improving nutritional status in India. The results showed that socio economic status of the families vary from lower middle to upper middle hence; the focus should be given to improve socioeconomic conditions rural families to improve their dietary pattern. There is a need to encourage the rural women to adopt healthy nutritional practices.

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