

A STUDY OF KNOWLEDGE, ATTITUDE, AND PRACTICE IN RURAL AND URBAN HOUSEHOLDS REGARDING THE FUNDAMENTALS OF NUTRITION

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ABSTRACT

Lifestyle changes significantly impact health and nutritional status, especially in developing countries and transitioning nations. While living standards have improved, food availability and access to services have expanded, leading to negative consequences like inappropriate dietary patterns, decreased physical activity, increased tobacco use, and diet-related metabolic disorders, especially among poor people.^[1] Starches, refined grains, and processed foods have positive associations with change, while vegetables, nuts, fruits, and whole grains have inverse associations with weight gain. A study was conducted among 100 samples aged 25-60 years in rural and urban households. 100 samples between the ages of 25 and 60 were used in the current study. 50 of the samples were taken from a rural location and 50 from an urban area using the simple random sampling approach. This study used a quantitative research method as its research design. Ambalapattu Kudikadu Village in Thanjavur District and Swathantra Nagar, Chennai, were the locations of the research. Each person received a questionnaire with a list of questions including demographic information (age, gender, education level, and family members), a source for nutritional knowledge, and three categories (knowledge, attitude, and practice) with ten questions each about fundamentals of nutrition. The study concluded that the knowledge, attitude and practices of urban households were higher than rural household.

KEYWORDS: Fundamentals of Nutrition, urban households, nutrition status, rural households.

INTRODUCTION

Chronic disorders including diabetes, obesity, cancer, and cardiovascular diseases can all be prevented in large part by proper nutrition. The shift in lifestyle brought on by urbanization is creating a number of issues, including a change in eating habits, a decline in physical activity, and an increase in salt and fat consumption, all of which contribute to an increase in the prevalence of non-communicable diseases that are nutrition-related.^[3] One's food preferences have been found to be influenced by economic, social, biological, and cultural factors in addition to one's knowledge of nutrition. A healthy, balanced diet can prevent many ailments brought on by inadequate nutrition or by consuming too much sugar and fat, which can cause cardiovascular diseases.^[4] The scientific evidence is increasingly supporting the idea that changes in diet and physical activity have significant effects, both positive and negative, on health issues throughout life. Nutrition and physical activity are emerging as a major modifiable determinant of chronic disease.^[5,6] Most crucially, dietary changes may not only affect current health, but physical activity may also affect whether or not a person would have conditions like

diabetes and cardiovascular disease much later in life.^[7,8] A person's mental health is negatively impacted by poor diet, which weakens their immune system and causes depression and other mental health problems. In its most basic form, a Knowledge, Attitude and Practices (KAP) survey was a method that made it possible to obtain both qualitative and quantitative data.^[9,10] The survey serves to identify any misunderstandings about nutrition principles that respondents may have regarding the change we want to achieve by soliciting their opinions. It exhibits their knowledge of nutrition, what they are currently doing, and also demonstrates their openness to learning new things.^[11]

METHODOLOGY

The current study employs statistical, mathematical, or computational techniques to empirically investigate observable phenomena in accordance with the quantitative research method. To gather the data, a simple random sampling procedure was employed. A total of 100 samples were gathered: 50 from the urban area (Lloyds Road, Chennai 600 005) and 50 from the rural region (Ambalapattu Kudikadu, Orathanadu

Thaluk, Thanjavur district). The study will last for one month. The inclusion criteria were both male and female, with an age group of 25–60 years, and people who were willing to participate. The exclusion criteria were individuals below 25 years and above 60 years and individuals who were not willing to participate.

The interview schedule was created; asking questions in-person to subjects is one way to gather data from them. An interview schedule consists of a list of prepared questions that should be asked precisely as written. Because of its uniform format, every interviewee receives the same set of questions in the same sequence. A set of questions called a questionnaire is given to participants in order to gather data that is statistically significant. Each individual was provided questionnaire contains set of questions like Demographic data (age, gender, education.), Source of nutritional Knowledge, and further the questionnaire was divided into 3 categories Knowledge, Attitude and Practice, each category contains 10 questions regarding the Nutrition Principles.

Demographic data contains a set of questions related to name, age, gender, and occupation. Education level was found to be a significant predictor of adult nutritional knowledge, explaining why those with greater levels of education tend to have better nutritional awareness and improved comprehension of information from the media. This group of questions was designed to find information about the subjects' nutritional knowledge. A set of 10 questions was prepared to understand nutritional knowledge. Alcohol consumption, smoking, and bad behavioral patterns all have an impact on a person's nutritional status. A healthy eating regimen ought to be part of the daily schedule. The queries concerning attitude were written up and examined with the participants. A healthy lifestyle requires a balanced diet as well as a good behavioral pattern. People ought to eat in a healthy manner. A set of ten questions was created to extract the subjects' dietary habits. The SPSS software coded and evaluated the questionnaire data that was gathered from the questionnaire. For the purposes of demographic data, a frequency table and percentage analysis was created. The data was also analyzed using SPSS using the T-test. Program.

Table 1: Distribution of Age.

Age in Years	Rural (N = 50)		Urban (N = 50)		Total (N = 100)	
	Count	Percentage	Count	Percentage	Count	Percentage
< 35 Years	13	26%	12	24%	25	25%
35-45 Years	22	44%	17	34%	39	39%
>45 Years	15	30%	21	42%	36	36%
Total	50	100%	50	100%	100	100%

Abbreviation: N=Total number of participants in the respective study groups

The age distribution within the rural group is shown in the above table (1). Thirty percent (15) were over 45, forty percent (24) were between 35 and 45, and twenty-six percent (13) were under 35. Of the participants in the

urban group, 24% (12) were under 35 years old, 34% (17) were between 35 and 45 years old, and 42% (21) were over 45.

Table 2: Distribution of Gender.

Gender	Rural		Urban		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Male	11	22%	22	44%	33	33%
Female	39	78%	28	56%	67	67%
Total	50	100%	50	100%	100	100%

The above table (2) represent the gender distribution among the selected samples, in rural group 11 (22%) were males and 39 (78%) were females where as in

urban group 22 (44%) were males and 28 (56%) were females.

Table 3: Education Qualification of the Participants.

Educational Qualification	Rural		Urban		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Illiterate	7	14.0%	1	2.0%	8	8.0%
SSLC	14	28.0%	19	38.0%	33	33.0%
HSC	10	20.0%	3	6.0%	13	13.0%
Graduate	19	38.0%	27	54.0%	46	46.0%
Total	50	100.0%	50	100.0%	100	100.0%

The educational status of the chosen samples is shown in the above table (3); in the rural areas, 7 (14%) were illiterate, 14 (28%) had completed their SSLC, 10 (20%) had passed their HSC, and 19 (38%) had graduated. In

the urban groupings, there were 1 (2%) illiterate people, 19 (38%) SSLC graduates, 3 (6%) HSC graduates and 27 (54%) graduates.

Table 4: Source of Nutritional Knowledge.

Source of Nutritional Knowledge	Rural		Urban		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Health Care Professionals	8	16.0%	19	38.0%	27	27.0%
Friends and Family Members	21	42.0%	8	16.0%	29	29.0%
Newspaper & Magazines	12	24.0%	4	8.0%	16	16.0%
Social Media	9	18.0%	19	38.0%	28	28.0%
Total	50	100.0%	50	100.0%	100	100.0%

The sources of nutritional knowledge are shown in Table 4 above. In large rural households, friends and family members accounted for 42% of the sources of nutritional knowledge, followed by newspapers and magazines (24%), social media (18%), and health care professionals

(16%). The primary knowledge sources in urban households were 38% from social media, 38% from healthcare professionals, 16% from family members, and 8% from newspapers and publications.

Table 5: Nutritional Knowledge Between Rural And Urban Groups.

Nutritional Knowledge	Rural		Urban		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Honey can be given as the first feed to new born baby						
Yes	23	46.0%	20	40.0%	43	43.0%
No	27	54.0%	30	60.0%	57	57.0%
Infant should receive exclusive breast feed up to six months						
Yes	49	98.0%	50	100.0%	99	99.0%
No	1	2.0%	0	0.0%	1	1.0%
Ragi contains calcium						
Yes	37	74.0%	45	90.0%	82	82.0%
No	13	26.0%	5	10.0%	18	18.0%
Tea / coffee inhibits iron absorption						
Yes	23	46.0%	29	58.0%	52	52.0%
No	27	54.0%	21	42.0%	48	48.0%
Perishable foods can be stored for 7 days						
Yes	18	36.0%	24	48.0%	42	42.0%
No	32	64.0%	26	52.0%	58	58.0%
Water helps to maintain body temperature						
Yes	44	88.00%	46	92.00%	90	90.00%
No	6	12.00%	4	8.00%	10	10.00%
It is good to wash vegetables after cutting						
Yes	13	26.0%	9	18.0%	22	21.0%
No	38	74.0%	41	82.0%	79	79.0%
Are you aware of free food supplements provided by government in Anganwadi centers.						
Yes	47	94.0%	42	84.0%	89	89.0%
No	3	6.0%	8	16.0%	11	11.0%

The above table 50 reveals the nutritional knowledge of the selected samples. 54% of rural and 57% of urban group participants were aware that honey can't be given as the first feed to new born. 98% of rural and 100% of urban people knew that infants should receive exclusive care for the first six months. 74% of rural and 90% of urban people was aware that ragi contains calcium. 46% of rural and 58% of urban people was aware that the consumption of tea or coffee inhibits iron absorption.

36% of rural and 48% of urban people was aware of the storage of perishable foods. 88% of rural and 92% of urban groups were aware that water maintains the body temperature. 74% of rural and 82% of urban samples know the procedure to wash vegetables. 94% of rural and 84% of urban groups was aware of the free food supplements provided by the government.

Table 6: Nutritional Attitude between Rural and Urban Groups.

Nutritional Attitude		Rural		Urban		Total	
		Count	%	Count	%	Count	%
Same food intake is necessary in both the genders when small amount of food is available.	Not Important	15	30.0%	6	12.0%	21	21.0%
	Not Sure	11	22.0%	9	18.0%	20	20.0%
	Important	24	48.0%	35	70.0%	59	59.0%
It is important to take breakfast daily	Not Important	1	2.0%	1	2.0%	2	2.0%
	Not Sure	2	4.0%	2	4.0%	4	4.0%
	Important	47	94.0%	47	94.0%	94	94.0%
It is important to consume traditional food than fast food.	Not Important	2	4.0%	1	2.0%	3	3.0%
	Not Sure	6	12.0%	4	8.0%	10	10.0%
	Important	42	84.0%	45	90.0%	87	87.0%
It is necessary to use iodized salt in cooking	Not Important	9	18.0%	5	10.0%	14	14.0%
	Not Sure	15	30.0%	17	34.0%	32	32.0%
	Important	26	52.0%	28	56.0%	54	54.0%
It is necessary to wash hands before preparation & serving of food.	Not Important	0	0.0%	1	2.0%	1	1.0%
	Not Sure	2	4.0%	1	2.0%	3	3.0%
	Important	48	96.0%	48	96.0%	96	96.0%
Egg should be included in diet daily	Not Important	5	10.0%	10	20.0%	15	15.0%
	Not Sure	9	18.0%	11	22.0%	20	20.0%
	Important	36	72.0%	29	58.0%	65	65.0%
White bread is a healthy food	Not Important	13	26.0%	9	18.0%	22	22.0%
	Not Sure	20	40.0%	18	36.0%	38	38.0%
	Important	17	34.0%	23	46.0%	40	40.0%
Non-vegetarian foods are rich in protein	Not Important	6	12.0%	3	6.0%	9	9.0%
	Not Sure	13	26.0%	13	26.0%	26	26.0%
	Important	31	62.0%	34	68.0%	65	65.0%
What do you think about consumption of expired food products	Not Important	3	6.0%	3	6.0%	6	6.0%
	Not Sure	1	2.0%	2	4.0%	3	3.0%
	Important	46	92.0%	45	90.0%	91	91.0%

Table 6 above shows the selected samples' attitudes regarding the nutrition principles. Of the group samples, 48% of the rural and 70% of the urban group believe that gender equality in food distribution is significant. In both rural and urban groups, 94% of respondents believe that eating breakfast every day is crucial. Traditional food is more significant than fast food, according to 84% of rural and 90% of urban people. Of the group participants, 52% from the rural and 56% from the urban areas knew that iodized salt was used in cooking. Daily egg

consumption is crucial, according to 72% of rural and 58% of urban respondents.

White bread is not a healthful food, as understood by 26% of rural and 18% of urban residents. Participants, 62% from rural and 68% from urban areas, made sure that the non-vegetarian cuisine was high in protein. 92% rural and 90% urban people were not ready to consume the expired food.

Table 7: Nutritional Practice between Rural and Urban Groups.

Nutritional Practice		Rural		Urban		Total	
		Count	%	Count	%	Count	%
How often do you eat outside	Daily	0	0.0%	6	12.0%	3	3.0%
	Weekly	14	28.0%	15	30.0%	29	29.0%
	Monthly	21	42.0%	14	28.0%	35	35.0%
	Rare	15	30.0%	15	30.0%	30	30.0%
No of meals you consume in a day	2 Meals	-	-	-	-	-	-
	3 Meals	17	34.0%	8	16.0%	25	25.0%
	3 Meals & 2 Snacks	33	66.0%	42	84.0%	75	75.0%
Do you treat your water in any ways to make it safe to consume	Yes	40	80.0%	47	94.0%	87	87.0%
	No	10	20.0%	3	6.0%	13	13.0%
How many times do you wash your hands in a day	<5 times	12	24.0%	9	18.0%	21	21.0%
	5 Times	14	28.0%	15	30.0%	29	29.0%
	>5 times	24	48.0%	26	52.0%	50	50.0%
Do you reuse the leftover food	Yes	38	76.0%	42	84.0%	80	80.0%

	No	12	24.0%	8	16.0%	20	20.0%
What type of snacks do you consume regularly	Home Made	6	12.0%	30	60.0%	36	36.0%
	Fruits	13	26.0%	10	20.0%	23	23.0%
	Packed Foods	25	50.0%	7	14.0%	32	32.0%
	Junk Foods	6	12.0%	3	6.0%	9	9.0%
Do you take self-medication	Yes	29	58.0%	39	78.0%	68	68.0%
	No	21	42.0%	11	22.0%	32	32.0%
How do you reduce foodwaste	Complete WholeFood	14	28.0%	10	20.0%	24	24.0%
	Proper Storage	29	58.0%	17	34.0%	46	46.0%
	Cook Limited Quantity	7	14.0%	23	46.0%	30	30.0%

The dietary practices of rural and urban groups are shown in Table 7 above. In the urban group, 12% eat outside daily, 30% weekly, 28% monthly, and 30% seldom. In the rural group, 28% eat outside weekly, 42% monthly, and 30% seldom. 3 meals and 2 snacks are consumed daily by 66% of persons in rural groups and 84% of those in urban groups. In order to make drinking water safe to drink, 82% of people in rural areas and 94% of people in urban areas treat it. People wash their hands more than five times a day in rural areas (24%), while in urban areas (18%). 24% of rural residents do not repurpose their leftover food, compared to 76%. Reusing leftover food is done by 84% of urban dwellers and not

by 16%. About the eating of snacks In rural areas, 12% of people eat handmade cuisine, 50% eat food in packs, and 12% eat junk food. In metropolitan areas, 84% of people eat prepared meals, 14% pack food, and 6% have junk food as a snack. In rural areas, 58% and in cities, 78% of people use medication without a prescription.

Reducing food waste involves 28% of rural and 20% of urban people finishing the entire meal, 58% of rural and 34% of urban people properly storing the leftover food, and 46% of rural and 48% of urban people cooking a little amount of food.

Table 8: Comparison Nutritional Knowledge, Awareness And Practice Among Rural And Urban Participants.

	Study Groups	N	Mean	SD	Std. Error	t Value	DF	P – Value
Level of Knowledge	Rural	50	9.1	1.80	0.25	-3.27	98	0.00
	Urban	50	10.6	2.40	0.34			
Level of Attitude	Rural	50	16.1	2.40	0.34	-1.671	98	0.048
	Urban	50	16.9	2.51	0.35			
Level of Practice	Rural	50	16.0	1.58	0.22	-5.438	98	0.00
	Urban	50	18.4	2.60	0.37			

Note: Statistical hypothesis were tested by using independent t test. P-value less than "0.05" is considered statistically significant.

The nutritional knowledge, attitude, and practice of individuals from rural and urban areas are compared in the above table 8. Whereas the mean knowledge level in urban areas was 10.6 with SD 2.04, the mean in rural areas was 9.1 with SD 1.80. The attitude level mean for the rural group was 16.1 with SD 2.40, and for the urban group it was 16.9 with SD 2.51. Urban practice levels were 18.4 and SD 2.60, while rural practice levels averaged 16.0 and SD 1.58.

The test was deemed statistically significant because the P values for Knowledge, Attitude, and Practice were less than 0.05. Urban families had greater levels of knowledge, attitude, and practice than rural households did.

The study by Zeinab Ahadi et al. (2014), Knowledge, Attitude, and Practice of Urban and Rural Households towards Principles of Nutrition in Iran: results of NUTRIKAP Survey found that both Iranian rural and urban households possessed a moderate level of knowledge, a positive attitude, and good practices.^[17]

CONCLUSION

The concept of nutrition is extremely important for the development and wellbeing of an individual. A high intake of nutritious foods and knowledge, attitude, and practice about their nutritional status lead to a healthy lifestyle. Lack of dietary knowledge results in chronic diseases like cancer, diabetes mellitus, obesity, cardiovascular diseases, etc. Dietary intake of whole grains, pulses, nuts, dairy products, green leafy vegetables, fruits, and vegetables may improve the nutritional status. The study concluded that the knowledge, attitude, and practices of urban households were higher than those of rural households.

Vulnerable sections of the community should be more frequently included under various schemes and should also be supported by their families. It would be beneficial if awareness sections related to making and maintaining kitchen gardens, the importance of nutritious food, sanitation, and hygiene were taught to every member of the family, especially in rural areas.

The development of a nutritional education program for rural people would provide them with all the relevant information regarding essential nutrients like protein, vitamins, minerals, carbohydrates, fat, calcium, potassium, zinc, iron, and so on. The differences are acknowledged between healthy and unhealthy food items, and the learners become aware of the significance of diet and nutrition in their lives.

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Conflict of interest

No conflict of interest was declared by the authors.

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Ethical Approval

Informed consent was taken from the participants.

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