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Impact of intervention on knowledge, attitude and practices in food consumption pattern of rural adolescent girls

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Abstract

Dietary knowledge and access to resources are critical to improve health and nutrition in a sustainable way. Adolescence is the time to learn and adopt healthy habits to avoid many health and nutritional problems later in life. The aim of present study is to investigate the impact of intervention on knowledge, attitude, practices and food intake of rural adolescent girls. Questionnaire was prepared by the investigator to assess the knowledge, awareness, and practices of the sample. For assessing food intake, 24hr recall method was used. Basing on the pre-test intervention was planned and implemented and the sample was post tested for their knowledge, awareness practices and food intake. The study reveals that attitude about the food nutrients, balanced diet nutrient rich food was found be average in half of the sample and low in more than one fourth (36.6%) of the sample. Only ten per cent of them were aware of the nutrient rich foods and its impact on health. The knowledge about the nutritive food, advantages of sprouts, millets and green leafy vegetables etc was found to be average in three fourth of the sample. The, Knowledge, Attitude and practice of experimental group after intervention reveals that the nearly more than three fourth of the sample attitude levels was high on nutritive food, knowledge about the food group and nutrient requirements increases to higher levels. The study further reveals that food consuming and cooking practices to retain the nutritive value in tack were found to be improved in 75 per cent of the experimental group. The results conclude that a significant difference in intake of food like green leafy vegetables, roots and tubers, nut and milk & milk products was found between the two groups. The experimental group after intervention was found to increase the consumption of green. The intervention has helped the experimental group to be aware of nutritional needs and consume the right foods. Hence it could be concluded that intervention had impact on the food intake of the adolescent girls.

Key words: leafy vegetables, roots & tubers, nuts, milk, milk products

Introduction

Adolescence is a unique stage in developmental life cycle and second most critical period after the early years of life, as it is period of rapid physical growth and changes in body composition, physiology and endocrine. Rapid growth and changes heighten their nutritional requirements and risks of under nutrition. Factors associated with under nutrition of adolescents are poor house hold economic condition, periodic food shortage, poor knowledge about long term consequences of under nutrition of adolescents, quantity and quality of food, and access to health and nutrition services.

Dietary knowledge and access to resources are critical to improve health and nutrition in a sustainable way. Adolescence is the time to learn and adopt healthy habits to avoid many health and nutritional problems later in life . Adolescents have more easy access to health and nutrition information through schools, recreational activities, and mass media than they have later in their lives. Particularly, health and nutrition knowledge and healthy habits of female adolescents will have critical roles to play in maintaining future family health and nutrition.

Earlier studies

Seema Choudhury, C.P.Mishra , K.P.Shukla (2010) in their study on nutritional related knowledge of rural adolescent girls found that their nutrition related knowledge was not up to the mark and majority of them were not aware about their nutritional needs. Ignorance about micronutrients and protective foods prevailed in adolescent girls.

Naeeni M., Jafari M (2012) investigated nutritional knowledge, practices and dietary habits among adolescents and found that the nutritional knowledge of female adolescents and practices was very low and because of this it had impact on the nutritional intake of the sample. et, to date, relatively little research has examined nutritional knowledge, practice and attitudes of young adolescent girls. The present aimed at studying the impact of nutritional education on knowledge, awareness and practices in food consumption patterns.

Objective: The aim of present study was to investigate the impact of intervention on knowledge, attitude, practices and food intake of rural adolescent girls.

Methodology: For the present study questionnaire was prepared by the investigator to assess the knowledge, awareness, practices of the sample. For assessing food intake, 24hr recall method was used. Basing on the pre-test intervention was planned and implemented and the sample were post tested for their knowledge, awareness practices and food intake. The data was collected, coded, analysed and presented in following sections.

Results and Discussion

Table 1: Socio Economic Profile of Adolescent Girls

S.no	Dimension	N	%
1.	**Age**		
	11-14	208	69.33%
	15-17	92	30.66%
2.	**Type of family**		
	Nuclear	206	68.66%
	Joint	94	31.33%
3.	**Income**		
	<5000	64	21.33%
	5000-10,000	147	49%
	10,000-15,000	69	23%
	>15,000	20	6.66%

The profile of the adolescent girls was represented in the above table. Majority of the girls (69.3%) belonged to 11-14yrs age group and mostly (68.6%) were from nuclear families. Half of them belonged to families whose income levels were between 5000-10,000.

Table 2: Food Habits

S.no	**Food habits**	N	%
	Vegetarians	15	5%
	Non vegetarians	285	95%
	Meal pattern		
	Twice	40	13.33%
	Thrice	249	83%
	Four times	11	3.66%

The study reveals that 95 percent of them were non vegetarians and had meals thrice a day.

Table 3: Attitude, Knowledge and Practices of Food Consumption before Intervention

High=7-10 Average =4-6 Low = 1-3

S.no	Levels	High	Average	Low
	Awareness	31 (10.3%)	159 (53%)	110(36.6%)
	Knowledge	28(9.3%)	216(72%)	56(18.66%)
	Practice	23(7.6%)	223(74%)	54(18%)

The study reveals that attitude about the food nutrients, balanced diet nutrient rich food was found be average in half of the sample and low in more than one fourth (36.6%) of the sample. Only ten percent of them were aware of the nutrient rich foods and its impact on health. The knowledge about the nutritive food, advantages of sprouts, millets and green leafy vegetables etc was found to be average in three fourth of the sample. The good practices followed for better nutrition was also found to be average in 74 percent of the sample. Hence the results of pre-test conclude that awareness, knowledge and practices of food consumption was found to low in the sample selected. The intervention was planned and executed to improve the knowledge, awareness and practices of consuming nutritive food

Table 4: Attitude, Knowledge and Practices of Food Consumption after Intervention

High=7-10 Average =4-6 Low = 1-3

S.no	Levels	High	Average	Low
1.	Knowledge	254(84%)	46(15.3%)	
2.	Attitude	272(90.6%)	28(9.3%)	-
3.	Practice	227(75%)	65(21.6%)	8(2.6%)

The, Knowledge, Attitude and practice of experimental group after intervention reveals that the nearly more than three fourth of the sample attitude levels was high on nutritive food, knowledge about the food group and nutrient requirements increases to higher levels. The study further reveals that food consuming and cooking practices to retain the nutritive value in tack was found to be improved in 75 percent of the experimental group.

Table 5: Mean Differences in Attitude, Knowledge and Practices before after intervention

S.No	Levels	PRE		POST		t value	p value
		Mean	SD	Mean	SD		
1.	Attitude	4.1	1.8	7.7	0.79	31.72	0.0001**
2.	Knowledge	4.8	1.44	7.4	0.85	26.93	0.0001**
3.	Practice	4.8	1.3	7.72	1.27	27.63	0.0001**

The data analysis shows that there were significant differences in knowledge, attitude and practice of consuming nutritive food before and after intervention. The attitude and knowledge of the sample increased and practices of nutritive food intake was also found to be increased.

Table 6: Impact of Intervention on Food Intake of Adolescent Girls

Food Groups	Experimental		Control		t value	pvalue
	Mean	SD	Mean	SD		
Cereals	343.2353	32.28737	336.75	36.03	0.79	0.43
Pulses	39.65714	32.89806	32.5	11.6	1.21	0.22
Leafy veg	32.22857	21.14587	10	28.4	3.71	0.004**
Roots &tubers	58	40.25277	32	25.26	3.236	0.0019**
Other vegetables	65.28571	55.65125	73.75	45.68	0.696	0.488
Nuts and oil seeds	30.71429	14.88733	22	4.84	3.2933	0.0016**
Condiments & spices	16.65714	7.463982	16.4	7.76	0.891	0.137
Fruits	57.57143	59.64624	46.25	46.28	0.8872	0.3781
Fishes & other sea foods	2.083333	9.991316	0	0	1.243	0.2181
Meat and poultry	15.85714	35.54646	20	40	0.4588	0.6478
Milk and milk product	61.25	16.35075	50.714	20.11	2.405	0.0189**
Sugar	14	5.43	12.25	6.01	1.27	0.205

The impact of intervention on food intake of experimental group studied by taking into accounts the differences between experimental and control in food consumption pattern. The results conclude that a significant difference in intake of food like green leafy vegetables, roots and tubers, nut and milk & milk products was found between the two groups. The experimental group after

intervention was found to increase the consumption of green leafy vegetables, roots & tubers, nuts and milk & milk products. The intervention has helped the experimental group to be aware of nutritional needs and consume the right foods. Hence it could be concluded that intervention had impact on the food intake of the adolescent girls.

Conclusion

Widespread under nutrition, micronutrient deficiency, low dietary knowledge, and low coverage of iron supplement among adolescents are concerns for public-health nutrition among adolescents. Therefore, they need to be sensitized about diet and nutritional needs in adolescence and adverse effects of undernutrition of adolescents to change their mindset. The community nutrition workers, with appropriate communication materials, can do the job effectively. Dietary education in schools, communities, and health facilities in a coherent manner can bring larger effects than stand-alone interventions. Schools can incorporate dietary education and nutritional needs at this age into family-life education or health education.

Periodic assessment of knowledge and practice of girls may guide the discussion issues in accordance with the need. Some operations research may be needed to develop communication materials and about how to sensitize policy-makers, service providers, and teachers to work together and to increase participation in community-based adolescent girl's forums.

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