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Development Of Nutritional Status By Nutrition Education For School Going Boys (13 To 15 Years) In Vijayawada And Chennai.

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ABSTRACT

The study aims at ascertaining the most appropriate communication media to be used to bringing about improvement in nutritional knowledge, attitudinal change in children for sustainable development. 300 school going children (13-15 years), 300 boys were selected randomly from Vijayawada (Andhra Pradesh) and Chennai (Tamilnadu) further grouped as normal weight, over weight and underweight based on BMI for age percentile. Questionnaire as the tool framed to collect data from respondents. Communication media comprising of power point presentation was used. Pre and post tests were conducted to assess the gain in knowledge. The result reveals that the awareness toward nutrition was positive before presentation and showed more than 10% of improvement in gaining knowledge in nutritional awareness, physical activity and lifestyle, whereas only 2% to 3% progress was observed in the parameters of Food group, Nutrients, Deficiency disorders and healthy habits. Over all boys and girls interest to introduce high-nutrient foods and variety their diet increased significantly. 100% of improvement was shown by boys and girls towards adopting healthy habits. Thus imparting nutrition education improved the knowledge score of all the respondent in all the parameters. Which if continued in future, can have long lasting effect on improvement of nutritional status and healthy lifestyle.

Keywords: Sustainable development, normal weight, over weight and underweight, healthy habits

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INTRODUCTION

Adolescence marks the developmental transition from childhood to adulthood, a time when many important social, economic, biological and demographic events set the stage for adult life. Adolescents aged 10-19 years constitute about one –fourth of India's population in order to realize this potential to the fullest. Young people must be healthy, educated and equipped with information skills and confidence that would enable them to contribute to their communities and the country's socio-economic growth. The state of nutrition among young people continues to be of concern despite a number on the nutritional status of adolescents is limited to adolescent girls and their childbearing roles small-scale studies show obesity as an emerging problem in India and an increase in irregular dietary habits among the young at the system level there are gaps in implementation of the programs directed towards improving the nutritional status of the young people including the irregular flow of funds and a delay in allocation of food grains. Adolescents in India (UNICEF) 2013.

The present study was conducted on 300 boys and Girls from selected school (13-15 years age) of Vijayawada (Andhra Pradesh) and Chennai (Tamil Nadu) so as to compare the impact of nutrition education and gain in knowledge

MATERIAL AND METHODS

A baseline survey was conducted on 300 school going boys from Vijayawada & Chennai using pre scheduled questionnaire subjects of specific age group (13-15) years) were selected from private schools of two places. From each place 150 subjects were selected. The questionnaire was constructed based on general and specific information. Pre & Post Nutritional education test was performed, for which nutrition knowledge was imparted through power point presentation. It was framed as per the questionnaire, the topics were related to 1 – Nutrition awareness. 2-Food group, Nutrients and deficiency disorder, 3-healthy habits, 4-Physical activity and lifestyle. For each origin question one score was given no negative marking was done thus the increased percentage was calculated and the gain in knowledge was assessed.

RESULT AND DISCUSSION

The aim behind intriguing the general information from subjects was to collect the detail about their family background as it influences his or her life style. The educational standard and socio-economic status of parents have a great influence on one's personality and way of living. It was important to know the general information before going further as it was going to help while analyzing and relating their answers and also helped to get familiar with the subjects. In this fashion, an informal atmosphere we created, rapport was established that developed interests among subjects and helped easy filling of the questionnaire and preparing the interviewee for the interview.

Table 1: Gender and weight -wise distribution of school going children in Vijayawada and Chennai

S.No	Place	Weight wise distribution			Total
		N	O	U	
1	Vijayawada I	69(46.00)	25(16.66)	56(37.33)	150
2	Chennai II	81(54.00)	27(18.00)	42(28.00)	150
	Total	150 (50%)	52(17.33%)	98(32.66%)	300

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Figure 1: Gender and weight wise distribution of school going children

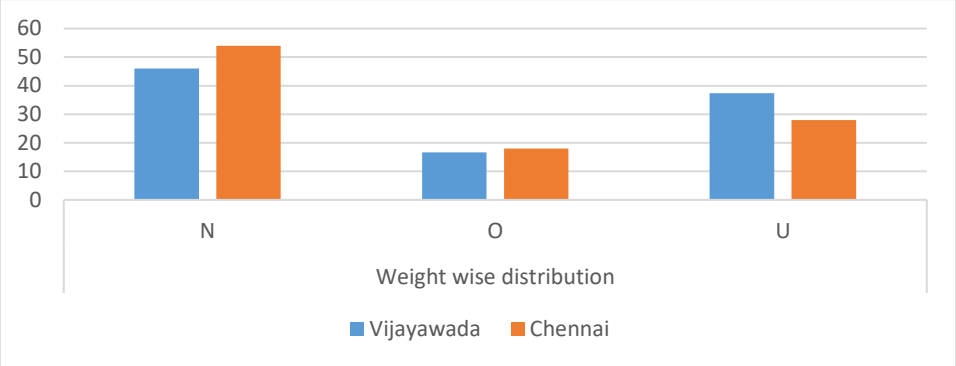

Table 1 and Fig 1 depict the gender and weight wise distribution of school going children in both the cities. In Vijayawada 54.67% children belong to normal category among which girls outnumbered the boys. Only 20 % Vijayawada children were overweight were in again more girls were overweight than boys. However it was observed that 25.33% Vijayawada children were underweight and opposite trend of more underweight boys than girls was noted (37.33% v/s 21.33%).Similar pattern was observed in case of Chennai children where 53.83% belonged to normal weight, 21.33% over weight & 23.66% were under weight. More percentage of girls in this city too was normal weight and overweight while more % of boys were underweight than girls.

Thus it can be noted that 54.83% of children from these two cities were normal weight followed by underweight which (24.16%) and only 19.83% were obese. Percentage of underweight boys in both the cities was higher than girls. Nutritional education and results of pre and posttest:

Table 2: Percentage of marks obtained in pre and posttest of nutritional education among school going boys in Vijayawada and Chennai

Section	Nutrition Education topics	Place	Pretest Mean ± SD	Pretest %	Posttest mean ± SD	Post Test	Increased%
Section 1	Nutrition awareness	Boys Vijayawada	4.43±1.75	55.37	6.08 ±1.55	76	20.62
		Boys Chennai	4.66±1.64	58.25	5.19±1.50	64.87	6.62
Section II	Food group Nutrients and deficiency	Boys Vijayawada	11.46±3.55	45.84	13.41±3.51	53.64	7.8
		Boys Chennai	10.95±3.49	43.8	11.87±3.26	45.88	2.08
Section III	Healthy Habits	Boys Vijayawada	4.40±1.65	73.33	4.40±1.30	73.33	0
		Boys Chennai	4.28±1.40	71.33	4.47±1.20	74.5	3.16
Section IV	Physical Activity and lifestyle	Boys Vijayawada	3.94±1.53	65.66	5.36±0.92	89.33	23.66
		Boys Chennai	4.44±1.06	74	5.18±1.03	86.33	12.33

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Figure 2: Percentage of marks obtained in pre and posttest of nutritional education among school going boys

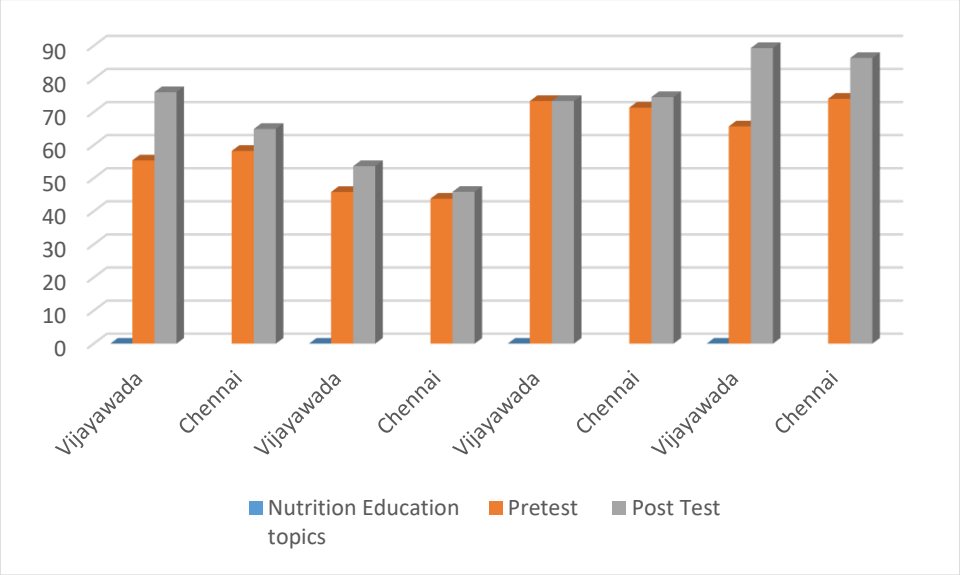

Table 2 details that after imparting the education it was found that in the first part of pretest nutrition awareness questions Chennai boys scored (58.25%) better than Vijayawada in posttest Vijayawada boys scored better than Chennai (76%). The increased % was also high 20.62%

In section II of nutritional knowledge in food group, nutrients and deficiency disorder it was observed that boys scored 40% marks from both the places. Vijayawada boys showed more positive results in both pre and posttest as compared to Chennai boys.

Under the section of healthy habits of Pre and Posttest Vijayawada boys scored highest 73.33% in pretest than Chennai 71.33% but no improvement was observed in Posttest as they didn't want to make any immediate changes in current life.

Style or eating pattern. Thus in this parameter the increased% was 3.16% gained by Chennai boys. While discussion also they showed their willingness for adopting healthy habits like no skipping breakfast, fixed meal timings, avoid junk food, washing hands and taking both every day. It was observed that all the boys were well aware of importance of exercise and sports for healthy and disease free life they were also aware of harmful effects of drugs, alcohol, tobacco and cigarette. This was the reason that ever body did very well in last section boys from Vijayawada scored 65.66% in pretest and 89.33% i posttest. From Chennai boys scored 74% and 86.33% in pre and posttest respectively. The highest increased percentage of boys was 23.66% from Vijayawada.

Overall Vijayawada boys performed better as compared to Chennai. Even though they scored low percentage in pretest but increased % was higher as compared to Chennai in all the sections except in adopting healthy habits. The reason was students from Vijayawada were more attentive and alert when presentation was given, they were disciplined and sincere [1-5].

Marks obtained by boys when categorized weight wise (Normal weight, over weight and underweight)

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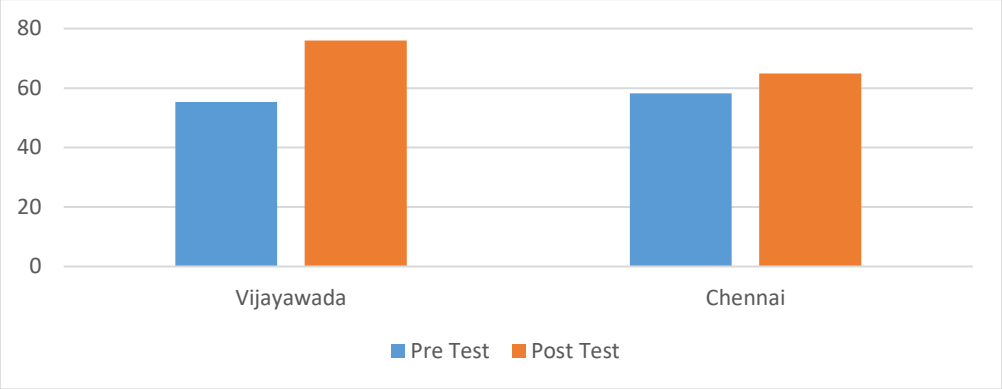
Table 3: Percentage of marks obtained under Nutritional awareness of Pre and Posttest of Nutritional Education among school going boys in Vijayawada (I), Chennai (II)

S.NO	Place	Pretest Mean ± SD	Pre Test %	Posttest Mean ± SD	Post Test%	Increased%
Vijayawada						
1	IBN	4.47±1.94	55.87	6.08±1.63	76	20.12
2	IBO	4.76±1.61	59.50	6.12±1.26	76.50	17
3	IBU	4.23±1.57	52.87	6.07±1.60	75.87	23
	Total	4.43±1.75	55.37	6.08±1.55	76	20.62
Chennai						
1	IIBN	4.54±1.76	56.75	5.32±1.61	66.5	9.75
2	IIBO	4.62±1.64	57.75	5.22±1.33	65.25	7.5
3	IIBU	4.90±1.39	61.25	4.92±1.35	61.50	0.25
	Total	4.66±1.64	58.25	5.19±1.50	64.87	6.62

Figure 3: Percentage of marks obtained in Nutritional Awareness of pre-test and post-test in Vijayawada



From Table 3 it can be observed that underweight boys of Chennai scored least increased % followed by overweight boys of Chennai. The basics of nutritional awareness was better understood by normal weight boys from both the cities.

Table 4: Percentage of marks obtained in food group nutrients and deficiency disorder knowledge among school going boys in Vijayawada and Chennai in pre and Post of Nutritional Education.

S.NO	Place	Pretest Mean ± SD	Pre Test %	Posttest Mean ± SD	Post Test%	Increased%
Vijayawada						
1	BN	11.31±3.73	45.24	13.24±3.65	52.96	7.72
2	BO	11.8±2.91	47.2	13.12±3.46	52.48	5.28
3	BU	11.48±3.81	45.92	13.75±3.39	55	9.08
	Total	11.46±3.55	45.84	13.41±3.51	53.64	7.8
Chennai						
1	BN	10.85±3.51	43.4	11.77±3.32	47.08	3.68
2	BO	11.62±2.91	46.48	11.4±3.81	45.6	0.88
3	IIBU	10.71±3.81	42.84	12.352.74	49.4	6.56
	Total	10.95±3.49	43.8	11.87±3.26	45.88	2.08

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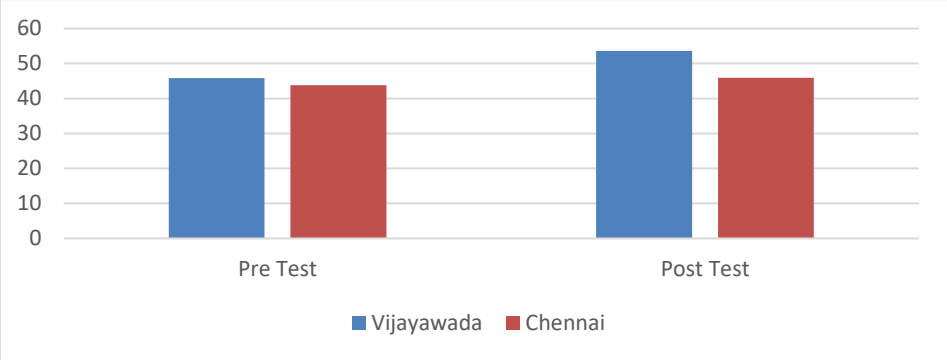
Figure 4: Percentage of marks obtained in food group nutrients and deficiency disorder knowledge among school going boys in Vijayawada and Chennai in pre and Post of Nutritional Education



The pretest percentage in table 4 clearly indicates that all boys lack in the knowledge of food groups, deficiency disease s and nutrient requirements. In Chennai over weight boys and scored fewer marks as compared to pretest. Thus in increased % it was showing negative marks. The least percentage was also observed in Chennai 45.6% by overweight boys. From both the cities highest improvement was observed only in underweight boys.

Table 5: Percentage of marks obtained under healthy habits in Pre and Posttest of Nutritional Education of school going boys in Vijayawada (I) and Chennai (II)

S.NO	Place	Pretest Mean ± SD	Pre Test %	Posttest Mean ± SD	Post Test%	Increased%
Vijayawada						
1	IBN	4.47±1.64	74.5	4.23±1.33	70.5	-4
2	IBO	4.76±1.50	79.33	4.68±1.28	78	-1.33
3	IBU	4.14±1.73	69	4.68±1.26	74	5.66
	Total	4.40±1.65	73.33	4.40±1.39	74.16	8
Chennai						
1	IIBN	4.46±1.30	74.33	4.6±0.90	76.66	2.33
2	IIBO	3.70±1.23	61.66	4.25±1.05	70.83	9.16
3	IIBU	4.3±1.60	71.66	4.35±1.20	72.5	0.83
	Total	4.28±1.40	71.33	4.47±1.02	74.5	3.16

Figure 5: Percentage of marks obtained under healthy habits in Pre and Posttest of Nutritional Education of school going boys in Vijayawada (I) and Chennai (II)

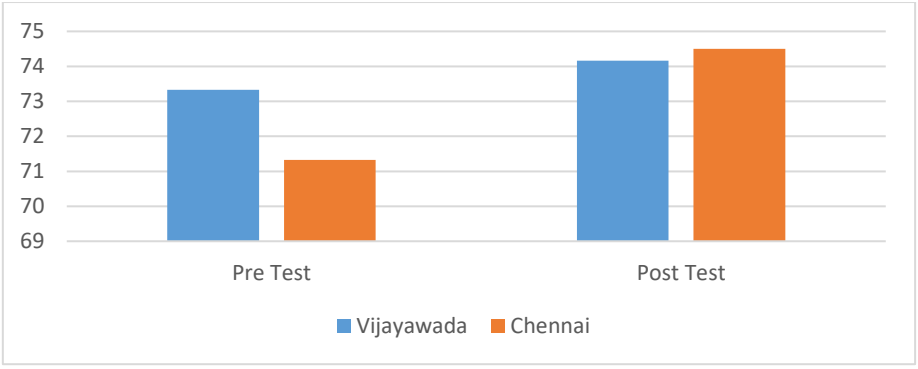


Table 5 reveals that Vijayawada over weight and normal weight boys scored highest in present but in posttest no improvement was observed may be because they don't want to make any immediate changes in current life style or eating pattern. Thus increased % was zero, Maximum gain i knowledge was seen among over weight boys of Chennai and underweight boys of Vijayawada. Underweight boys of Chennai as they ha poor

scores in posttest reason may be they are comfortable with current eating pattern and monotonous diet as observed in 24hr recall. Thus accordingly they might have answered with a no change rigid thought process

Table 6: percentage of marks in category of Physical Activity and Lifestyle in Pre and posttest of Nutritional education of school going boys in Vijayawada (I) and Chennai (II)

S.NO		Place	Pretest Mean ± SD	Pre Test %	Posttest Mean ± SD	Post Test%	Increased%
	Vijayawada						
1		IBN	3.97±1.43	66.16	5.28±1.04	88	21.83
2		IBO	4.36±1.43	72.66	5.48±0.82	91.33	18.66
3		IBU	3.73±1.67	62.16	5.39±0.824	89.83	27.66
		Total	3.94±1.53	65.66	5.36±0.92	89.83	23.66
	Chennai						
1		IIBN	4.48±1.03	74.66	5.11±1.08	85.16	10.5
2		IIBO	4.4±1.11	73.33	5.18±0.92	86.33	13
3		IIBU	4.40±1.10	73.33	5.3±0.99	83.33	15
		Total	4.44±1.06	74.00	5.18±1.03	86.33	12.33

Figure 6: Percentage of marks obtained in Physical Activity and Life style among school going children in Vijayawada

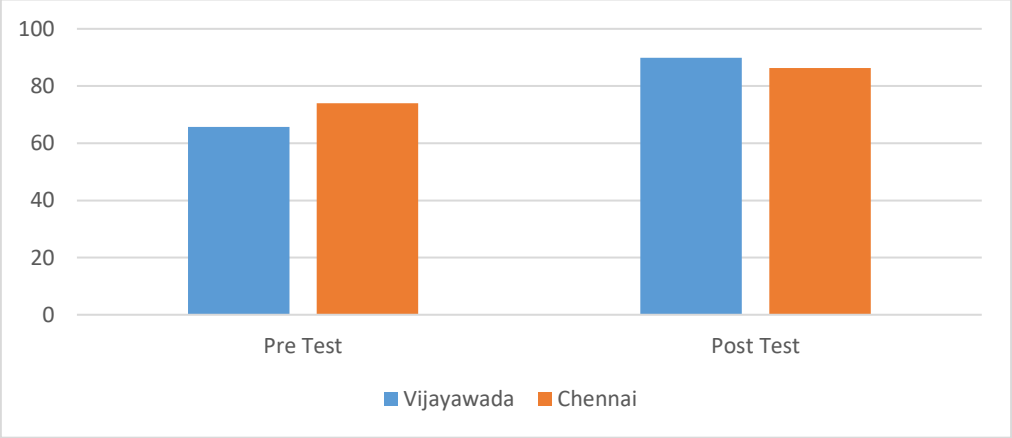


Table 6 details that all respondents performed well in physical activity and life style test but highest knowledge gained and marks obtained by underweight boys from both the cities.

CONCLUSION

It is concluded that although the majority of boys (13-15 years) scored more percentage in posttest as compared to ore test still the percent increase is not up to the expected level of nutrition education imparted. Overweight boys from Chennai scored less in posttest of knowledge in Food group, Nutrients and Deficiency disorder, they learned the nutritional facts but no ready to add variety in diet and want to continue with i\monotonous daily meals. Highest improvement was observed in underweight boys from both the cities under same section II showing acceptance for adding variety nutrient rich food items in daily diet to fight immunity and deficiency disorder in future. Vijayawada boys showed no improvement in the post test of adopting healthy habits, respondents showed a carefree attitude towards healthy lifestyle practices. The presentation improved the knowledge score of most of the respondent in all the parameters covered but it should be a continuous approach in future by teachers or health workers.

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