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A comparative study to assess the nutritional status by selected anthropometric measurements among urban and rural primary school children in selected primary schools

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Abstract
A comparative study to assess the nutritional status by selected anthropometric measurements among urban and rural primary school children in selected primary schools at Aurangabad district, with view to develop health education booklet.
Objectives: 1. To assess the nutritional status of urban primary school children.
2. To assess the nutritional status of rural primary school children.
3. To compare the nutritional status among urban primary school children with rural primary school children.
Methodology: The conceptual framework used for this study was based on modified Nola J. Pender health promotion model. The study was conducted on a sample of 100 urban and rural primary school children of Rajnagar and Karmad at Aurangabad District. Non-probability convenient sampling technique was used for selecting samples. In the present study Comparative Descriptive research design was adopted. The tool used for data collection was selected anthropometric measurement. The data was collected, tabulated and analyzed by using descriptive and inferential statistics. The level of significance was at 0.05 levels.
Results: The study revealed that the nutritional status among children was assessed by using anthropometric measurement and questionnaire. Out of the 100 children in that 50 urban17 (34%) were normal children, underweight 28(56%), overweight 5(10%) Where 50 children from rural area, normal 17(34%), underweight 32(62%), overweight 2(2%), obesity 0(0%).
In urban mean was 15.886 where as in rural 15.116, the mean difference was 0.77 the standard deviation was 3.59269581 in urban where as in rural 2.422755 the standard error was. The degree of freedom was 1.98; impaired t value was 1.98and p value was > 0.05.

Keywords: BMI-body mass index

Introduction

"Prevention is better than cure."
" Good life style with respective of occupation help to maintain good health"
" Occupational health deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards [1].

-WHO.

The health of workers has several determinants, including risk factors at the work place leading to cancers, accidents, musculoskeletal diseases, respiratory diseases, hearing loss, circulatory diseases, varicose veins, stress related disorders and communicable diseases. In occupations occupation nature, environment in occupational place, occupational areas, time period of working, workload etc. makes impact onhealth in various aspectswith respective of occupation. Varicose veins are known to be more common among profession such as policeman, teachers, nurses, army, shop keepersbus conductors etc. who has to stand and sit for longer time during their duties. Even though the exact cause of varicose veins is unknown however there are some contributory factors responsible for varicose veins. Some of the major risk factors are age, gender, pregnancy, family history, obese, lack of exercises and prolonged standing and sitting etc [2]. Among primary school teachers there are two important risk factors i.e. gender and prolonged standing and sitting during their duty hours, this increase their risk of getting varicose veins later in their life. It is preventable if they have knowledge regarding varicose veins in detail. Varicose veins are veins that have become enlarged and twisted due to leaflet valves no larger meet properly and the valves do not work properly which are present in veins [3]. Varicose veins are most commonly in superficial veins of the legs which are subjected to high pressure and gravity when standing. Varicose veins

can lead to leg swelling, eczema, skin thickening and ulceration and painful especially when standing [4]. The complications of varicose veins are thrombophlebitis, deep vein thrombosis, bleeding, venous leg ulcer [5].
The only way to avoid the varicose vein among the workers with prolonged standing and sitting is to follow the preventive measures such as maintain healthy weight, exercise, use compression socks, eating high fibre and low salt diet etc. Millions of workers spend majority of the working day standing and many hours in static positions. Standing uses 20% more energy than sitting. Prolonged standing may lead to tiredness, loss of concentration and increased health risks. These health risks include swelling of feet and legs, feet and joint damage, varicose veins, heart and circulatory disorders, lower back problems and pregnancy complications. In the present scenario, one of the most important conditions that results from prolonged standing and sitting is varicose veins. Special efforts are being made by the health care professionals to reach and motivate members of various cultural and socioeconomic groups concerning lifestyle and health practices. Health education is considered to be an independent function of nursing practice and a primary responsibility of nursing profession. The nurses are not only supposed to give care but also health education to theirclient, family, community and occupational workers. There is a need of the health care professionals to recognize the need to educate the public regarding preventive measures of various emerging diseases.

Statement of the Problem
" A comparative study to assess the nutritional status by selected anthropometric measurements among urban and rural primary school children in selected primary schools at Aurangabad district, with view to develop health education booklet" .

Research Objectives
1. To assess the nutritional status of urban primary school children.
2. To assess the nutritional status of rural primary school children.
3. To compare the nutritional status among urban primary school children with rural primary school children.

Material and Methods
Conceptual Frame work: Modified Nola J Pender' s Health Promotion Model
Research Design: Comparative descriptive research design
Research Setting: Rajnagar primary schools of urban and karmad of rural area at Aurangabad District
Sample: Urban and Rural Primary school children in selected primary schools at Aurangabad.
Sample size & sampling technique: Sample size considered for the study was 50 urban and 50 rural primary school children at Aurangabad district. Sampling technique was Non-Probability Convenient Sampling which is a type of non-probability sampling.
Development & description of tool: The tool used for gathering relevant data, selected anthropometric measurements, to assess the nutritional status among urban and rural primary school children in selected primary schools at Aurangabad district.

Description of tool
Section 1: It refers to age, gender, education status of the father, education status of the mother, occupation of mother, occupation of father, birth order, type of food habit, type of the family, and size of family income per month, religion and meals per day.
Section 2: Selected anthropometric measurement like height, weight and body mass index.

Inclusion criteria
- The primary school children 6-12 year of age.
- The Children who are not sick at the time of data collection.

Exclusion Criteria
- The Children who are not willing to participate.
- The Children who were not available during the time of data collection

Procedure for data collection
The research investigators obtained the formal permission from the Principal of Z.P Primary School, Balapur, Aurangabad and Kai Vilas Bhamre Vidya Mandir Primary School, Bharat Nagar, Garkheda Parisar Aurangabad to collect data for the main study.

Result and Discussion

Table 1: Distribution of frequency and percentage analysis of selected variables. N=50.

Sr. No	Demographic variables	Frequency (f)	Percentage (%)
1.	Age (in years)		
	a) 20-30	17	34
	b) 31-40	28	56
	c) 41-50	05	10

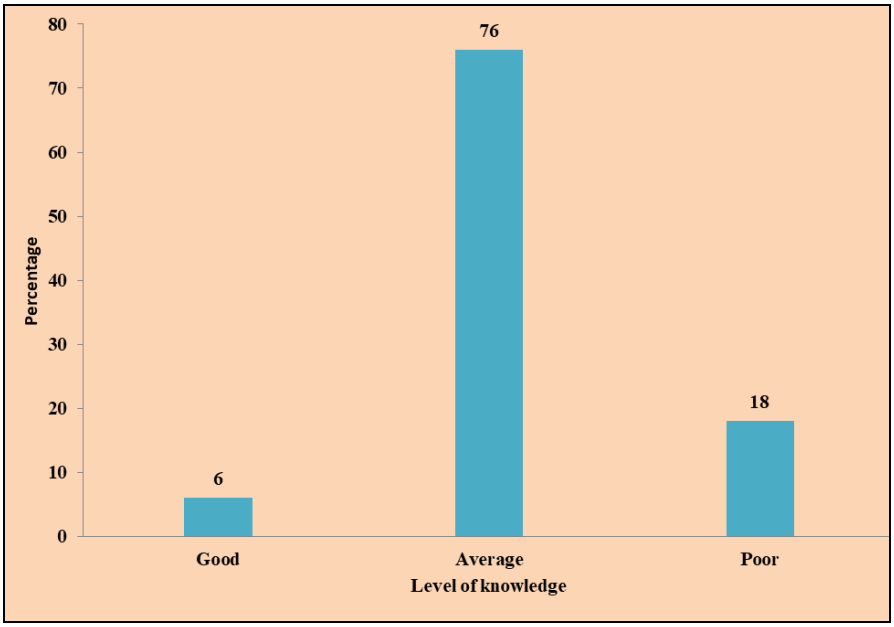
	d) 51 and above	00	00
2.	Gender		
	a) Male	24	48
	b) Female	26	52
3.	Religion		
	a) Hindu	48	96
	b) Muslim	00	00
	c) Christian	00	00
	d) Others	02	04
4.	Educational qualification		
	a) Primary education	00	00
	b) Secondary education	00	00
	c) Higher secondary	05	10
	d) Graduation and above	45	90
5.	Period of experience(in years)		
	a) 1 to 5	23	46
	b) 6 to 10	22	44
	c) 11 to 15	04	08
	d) 16 and above	01	02
6.	Income per Month (in rupees)		
	a) Rs.10,000- 20,000	15	30
	b) Rs.21,000- 30,000	25	50
	c) Rs.31,000-40,000	08	16
	d) Rs.41,000 and above	02	04

Table No 1 revealed that 28 samples were in the age group 31-40 years, 17 were in the age group 20-30 years and only 5 were in the age group 41-50 years. Majority i.e., 26 samples were females and 24 were males. Majority of samples i.e. 48 belonged to Hindu and only 2 were others. Educational status of majority of samples was graduation and above and only 5 completed higher secondary. 23 samples had 1-5 years of experience, 22 had 6-10 years of experience, 4 had 11-15 years of experience and only 1 sample had more than 16 years of experience in teaching.

Table 2: Mean, Median Mode, Standard deviation of knowledge scores of primary school teachers regarding varicose veins.N=50

Sr No	Mean	Median	Mode	Standard Deviation
1.	16.58	16.5	20	4.52

Table no: 2 revealed that the mean knowledge score of sample was 16.58, median was 16.5 mode was 20 and standard deviation was 4.52



Graph 1: Knowledge of participants regarding varicose veins.

Graph No 1 revealed that 76% of samples had average knowledge, 18% had poor knowledge and only 6% had good knowledge regarding varicose veins.

Table 3: Association between knowledge score regarding varicose veins among teachers in selected primary schools at Aurangabad with selected socio demographic variables. N=50.

Sr. No	Socio demographic variables	Good	Average	Poor	Chi -square cal	Table value	df
1.	Age (in years)				8.13	12.59	06
	a) 20 to 30	02	09	06			
	b) 31 to 40	01	24	03			
	c) 41 to 50	00	05	00			
	d) 51 and above	00	00	00			
2.	Gender				4.7	5.99	02
	a) Male	02	15	07			
	b) Female	01	23	02			
3.	Religion				0.65	12.59	06
	a) Hindu	03	36	09			
	b) Muslim	00	00	00			
	c) Christian	00	00	00			
	d) Others	00	02	00			
4.	Educational status				1.74	12.59	06
	a) Primary	00	00	00			
	b) Secondary	00	00	00			
	c) Higher secondary	00	05	00			
	d) Graduation and above	03	33	09			
5.	Period of experience				9.76	12.59	06
	a) 1 to 5 years	03	13	07			
	b) 6 to 10 years	00	20	02			
	c) 11 to 15 years	00	04	00			
	d) 16 and above	00	01	00			
6.	Income per month in rupees				5.56	12.59	06
	a) 10,000 to 20,000	02	12	01			
	b) 21,000 to 30,000	01	17	07			
	c) 31,000 to 40,000	00	07	01			
	d) 41,000 and above	00	02	00			

Table No 3 revealed that chi square calculated value of socio demographic variables was lesser than table value so they were not associated.

Conclusion

The findings of study showed that majority of primary school teachers had average knowledge regarding varicose veins. Thus it was found to be important to create awareness regarding varicose veins so that they can take precaution to prevent further complications.

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