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Original Research Paper Nursing

ASSESS BODY MASS INDEX AND RECOMMENDED DIETARY ALLOWANCE IN PRE ADULTHOOD STUDENTS

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ABSTRACT

AIMS AND OBJECTIVE : A study to assess body mass index and recommended dietary allowance in pre adulthood studying in a selected nursing college vadodara.1.Determine the body mass index and recommended daily allowance in pre adulthood studying in a selected nursing college.2.Co-relate the body mass index with recommended daily allowance of pre adulthood.3Find out association between body mass index and selected demographic variables in pre adulthood studying in a selected nursing college.

BACKGROUND OF THE STUDY BMI =body mass index was originally framed by Adolphe Quetelet, a Belgium mathematician and scientist, between 1830 and 1850 .Adolphe was the first person to think of reliable, it is only one tool that physicians use in evaluating a person's health status. . then the categorize that person as under weight, normal weight, over weight, or obese on that value. We can find the BMI by using the formula : BMI=WEIGHT in kg/ HEIGHT in cm2. The food and nutrition board subsequently revised the RDAs every five to ten years. in the early 1950s. USDA nutritionists made a new set of guidance that also included the number of servings of each food group to make it easier for people to receive their RDAs of each nutrient. In 1997, at the suggestion of the institute of medicine of the national academy, RDA become one part of a broader set of dietary charts and guideline.

METHODOLOGY Co-relation research approach was used in the study to assess the BMI & RDA in pre adulthood students .the investigator adopted non probability convenience sampling technique. sample size was 130 pre adulthood nursing students.

RESULT: The analysis carried out in demographic variables majority findings the female 87.69 %, vegetarian diet 61.54%, income 20000 above 51..53% and no habit of exercises was 63.08%. it was found there was a correlation between BMI & RDA . The karl persons positive co-relation coefficient r = 0.7. then help of the fisher test found the diet and income was significant at 0.05 level with df=1. And gender and habit of exercises non significant at the level of 0.05 with df =1. Fisher exact test overall no significance.

CONCLUSION : The study was assess the BMI & RDA in preadulthood students ,followed by the standardized BMI chart and self modified RDA chart. Sample was done according to inclusion criteria. The result were analyzed by using both descriptive and inferential statistics.

KEYWORDS : Body mass index, recommended dietary allowance, Pre adulthood

INTRODUCTION

The BMI is statistical measurement derived from the height and weight. It is considered to be useful way to estimate healthy body weight, it does not measure the percentage of body fat. The BMI measurement can sometime misleading muscleman may have a high BMI but have much less fat an unfit person whose BMI is lower.

BMI =body mass index was originally framed by Adolphe Quetelet, a Belgium mathematician and scientist, between 1830 and 1850 .adolphe was the first person to think of reliable, it is only one tool that physicians use in evaluating a person's health status. A particularly persons whose weight is higher due to muscle may have a BMI that indicates the overweight, when their weight is higher due to muscle mass and bone . then the categorize that person as under weight, normal weight, over weight, or obese on that value.we can find the BMI by using the formula : BMI=WEIGHT in kg/ HEIGHT in cm2 .

The food and nutrition board subsequently revised the RDAs every five to ten years. in the early 1950s. USDA nutritionists made a new set of guidance that also included the number of servings of each food group to make it easier for people to receive their RDAs of each nutrient. In 1997, at the suggestion of the institute of medicine of the national academy, RDA become one part of a broader set of dietary guidelines called the dietary reference intake used by both the United States and Canada.

The standards would be used for nutrition recommendations for the armed forces, for civilians, and for overseas population who might need food relief. Roberts, stiebeling, and Mitchell surveyed all available data, created a tentative set of allowances for energy and eight nutrients and submitted them to experts for review. The final set of guidelines, called RDAs for recommended dietary allowance, were accepted in 1941. The allowance were meant to provide superior nutrition for civilians and military personnel, so they included a margin of safety . because of food rationing durning the war, the food guides created by government agencies to direct citizens nutritional intake also took food availability into account.

TITLE OF THE STUDY

"ASSESS BODY MASS INDEX AND RECOMMENDED DIETARY ALLOWANCE IN PRE ADULTHOOD STUDYING STUDENTS."

OBJECTIVES OF THE STUDY

1. Determine the body mass index and recommended daily allowance in pre adulthood studying in a selected nursing college.
2. Co-relate the body mass index with recommended daily allowance of pre adulthood.
3. Associate BMI with demographic variables.

ASSUMPTION

1. There will be Relation between body mass index and recommended dietary allowances
2. Students will have less knowledge regarding recommended dietary allowances according to their body mass index.

CONCEPTUAL FRAMEWORK

Health belief model provide a way of understanding and predicting how clients will behave in relation to their health and how them will comply with health care therapies. The model purposes that clients are more engaging in the related preventive action and low cost.

RESEARCH METHODOLOGY

RESEARCH APPROACH	Quantitative
RESEARCH DESIGN	Descriptive Research Design

VARIABLES	BMI & RDA
SETTING	A Selected Nursing College, Vadodara
POPULATION	Pre adulthood Students
SAMPLES	130 Pre Adulthood Nursing Students
SAMPLING TECHNIQUE	Convenient Sampling Technique
TOOL—DEVELOPMENT	Section 1: Socio-demographic variables Section 2:BMI & RDA chart
RELIABILITY	Using Karl's Person's correlation coefficient formula and the r value was 0.7 thus the tool is reliable.
PILOT STUDY	Pilot study was conducted on 7th September 2016 to find out the feasibility of the study. The pilot study was conducted in Pioneer Nursing College. The data for pilot study was collected from 13 pre adulthood students.
DATA COLLECTION PROCEDURE	The investigator selected 130 sample for the inclusion criteria for the data collection .the investigator explain the purpose of the study, then the given some information about the height and weight and diet pattern. And then check the height and weight with help of instruments and consent was taken from the sample.
ANALYSIS OF DATA	Consolidated and organized the collected data in a master sheet.Frequency and percentage for the analysis of demographic characteristics of the sample respondents.Mean for the overall scores.Association between BMI and demographic variables by using fisher's exact test.

ORGANIZATION OF STUDY FINDINGS

The data is analyzed and presented under the following sections:

SECTION A: Description of Sample Characteristics.Baseline data containing sample characteristics would be analyzed using frequency and percentage.

SECTION B: It consists of findings on Co- relate the body mass index with recommended daily allowance of pre adulthood students.

SECTION C: Associate BMI with demographic variables

SECTION –A

Description of the demographic variables

This section deals with the description of the demographic characteristics of nursing students and has been presented in the form of frequency and percentage.

1	**GENDER**	frequency	%	
	A	MALE	16	12.30
	B	FEMALE	114	87.69
2	**DIET**			
	A	VEGETARIAN	80	61.54
	B	NON – VEGETARIAN	50	38.46
3	**INCOME**			
	A	BELOW 20000	63	48.47
	B	20000 ABOVE	67	51.53
4	**HABITOF EXERCISES**			
	A	YES	48	36.92
	B	NO	82	63.08

In this section demographic profile of the respondents have been displayed to show the frequency distribution of the various attributes of demographic variables.

SECTION – B

Correlation Between Body Mass Index And Recommonded Daily Allowance Of Pre Adulthood

The karl pearson 's correlation coefficient = r = 0.7 there exists the positive correlation between BMI & RDA.

SECTION - C

Association Between Body Mass Index And Selected Demographic Variables In Pre Adulthood Students

Sr no	Variables	Scores which falls at median and above	Scores which falls below the median	Total	df	Fisher's exact value	Table value	Significance
			GENDER					
A	**MALE**	13	3	16	1	0.0028	0.132	NS
B	**FEMALE**	57	57	114				

Inference: The obtained fisher's exact test value 0.0028 in variable gender is less than the table value 0.132 at 0.05 level of significance with df = 1 ,hence the obtain value is no significant. There is no association between gender and BMI.

Association between BMI and Diet

Sr no	Variables	Scores which falls at median and above	Scores which falls below the median	Total	df	Fisher's exact value	Table value	Significance
			DIET					
A	**VEG**	42	38	80	1	0.1413	0.132	S
B	**NON VEG**	27	23	50				

Inference: The obtained fisher's exact test value 0.1413 in variable diet is more than the table value 0.132 at 0.05 level of significance with df = 1 ,hence the obtain value is significant. There is positive association between diet and BMI

Association between BMI and Income

Sr no	Variables	Scores which falls at median and above	Scores which falls below the median	Total	df	Fisher's exact value	Table value	Significance
			INCOME					
A	**≥20000**	34	29	63	1	0.1395	0.132	S
B	**<20000**	36	31	67				

Inference: The obtained fisher's exact test value 0.1395 in variable income is more than the table value 0.132 at 0.05 level of significance with df = 1 ,hence the obtain value is significant. There is positive association between income and BMI

Association between BMI and habit of exercises

Sr no	Variables	Scores which falls at median and above	Scores which falls below the median	Total	df	Fisher's exact value	Table value	Significance
			HABIT OF EXERCISES					
A	**yes**	34	14	48	1	0.0017	0.132	NS
B	**no**	36	46	82				

Inference: The obtained fisher's exact test value 0.0017 in variable habit of exercises is less than the table value 0.132 at 0.05 level of significance with df = 1 ,hence the obtain value is no significant. There is no association between habit of exercises and BMI.

DISCUSSION

This chapter deals with the discussion , based on the formulated objective of the study and hypothesis. The study was designed to assess the impact of comprehensive nursing intervention related

BMI & RDA guidance among students.

This study was conducted on assess the body mass index and recommended dietary allowance in preadulthood students.

SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS:
Majority of the subjects 87.69% belong to the gender of female group. Majority of the subjects 61.54% belong to the vegetarian diet. Majority of the subjects 51.53% belong to the 20000 below income. Majority of the subjects 63.08% belong to the no habit of exercises.

The findings of the study have been discussed based on the objectives and with supportive study.

SECTION – I
Determine the body mass index and recommended Dietary allowance in pre adulthood studying in sumandeep nursing college.

In this study, it highlights that the score mean BMI is 18.54 with RDA 25.02 allowance in pre adulthood students. And categories the body mass index levels:

Above the table depicts that majority of 70 students 53.84% are coming underweight. 54 students 41.54% are coming under normal weight, 6 students 4.61% are coming under over weight, and 0% student coming obesity and 0% student coming morbid obesity.

SECTION – 2
Co-relate the body mass index with recommended daily allowance of pre adulthood.

In this study, it was found that there is a significant correlation between BMI and RDA in students. The Karl Pearson correlation coefficient r= 0.7 and found that there was a value of diet and income is significant at 0.05 level of significant with df=1 and gender and habit of exercises non significant at level of 0.05 of non significant with df=1.

SECTION -3
Association between body mass index and selected demographic variables in pre adulthood .

GENDER : The obtain fisher's exact test value 0.028 in variable gender is less then the table value 0.132 at 0.05 level of significance with df = 1, hence the obtain value is non significant. There is no association between gender and BMI.

DIET : The obtain fisher's exact test value 0.028 in variable diet is more then the table value 0.132 at 0.05 level of significance with df = 1, hence the obtain value is significant. There is positive association between diet and BMI.

INCOME: The obtain fisher's exact test value 0.028 in variable income is more then the table value 0.132 at 0.05 level of significance with df = 1, hence the obtain value is significant. There is positive association between income and BMI.

HABIT OF EXERCISES: The obtain fisher's exact test value 0.028 in variable habit of exercises is less then the table value 0.132 at 0.05 level of significance with df = 1, hence the obtain value is no significant. There is no association between habit of exercises and BMI

CONCLUSION
This study present the conclusion drawn, implication and delimit ation and recommendation of the present study, the focus of this study was to impact of comprehensive nursing intervention related to BMI and RDA charts among pre adulthood students.

The study undertaken to find out the BMI and recommended dietary allowance among pre adulthood students. With conve nience sampling technique was used to draw the sample. The size of sample 130 and selection of the sample was done according to inclusion criteria. The result were analyzed by using both descriptive and inferential statistics.

RECOMMENDATIONS
- In the light of the above findings and personal experience of the investigator the following recommendations are offered.
- The study can be replicated on a larger sample thereby findings can be generalized for a larger population.
- A similar study can be conducted for cross sectional study the associated with excess weight and directly associated with better dietary and improved physical activity behaviors.

ETHICAL CONSIDERATION
Ethical consideration has been taken from informed written consent from the participants of the study. Anonymity and confidentiality of the participants have been maintained during study.

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