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Comparison of nutritional status among the students of different socioeconomic status

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Abstract
The purpose of the study was to compare the Nutritional status among the students of different socio economic status. By using simple random sampling researcher had selected 9 colleges with two colleges from each district from the Gorakhpur region. Again 900 male students aged between 18-22 years were randomly selected from these 9 colleges and they were divided into three income groups, that is High Income Group, Middle Income Group and Low Income Group by using Socio-Economic Status Scale Questionnaire developed by G. P. Srivastava (1991) and from three groups a total of 900 students, 300 students each From High Income Group, Middle Income Group and Low Income group were selected for the purpose of this study using stratified random sampling technique. Nutritional status was calculated by measuring body weight and height of subjects and using weighing machine and Anthropometry. the following procedure. The following formula was used for calculation of nutritional status: It will be found by the following formula Pelidisi formula/ Pelidisi index or parquet index: - [Nutritional status = [3√10*Weight in gram.)/ (Sitting height in cm.) ×100] Weight of the subject was measured in gram and height was measured in cm.for the statistical treatment in this study 'One Way Analysis of Variance' was applied to find out the significance difference among different socio-economic groups in relation to their nutritional status. L. S. D. post hoc test was applied to find out the paired difference. The level of significance was set at 0.05 levels. it was found that significant difference exists between high and middle, high and lower, whereas no significant difference exist between middle and lower income group. The comparison through L.S.D. among all three income groups showed that differences were found between students of high and middle, and high and low income groups in Nutritional Status.

Keywords: nutritional status, socio economic status

Introduction
American Psychological Association (2015) socioeconomic status (SES) is often measured as a combination of education, income, and occupation. It is commonly conceptualized as the social standing or class of an individual or group. When viewed through a social class lens, privilege, power, and control are emphasized. Furthermore, an examination of socioeconomic status as a gradient or continuous variable reveals inequities in access to and distribution of resources. Socio-economic status is relevant to all realms of behavioral and social science, including research, practice, education, and advocacy. Kulshrestha (1972) investigated that the economic factors play an important part in determining social status, which includes the total income of family, saving, capacity to collect money in emergency etc. Therefore it is better to call this factor as socio-economic factor, rather than social or economic factor status. Though economic status often determines social status, it may not always do so. Take the case of a wealthy trader; he may be financially well off but his place in the society may not be so high. The respectability or position associated with an occupation has certainly something to do with social status. According to Akshaya Poshan nutrition resource platform (1971) the diet of an organism is what it eats, which is largely determined by the perceived palatability of foods. Dietitians are health professionals who specialize in human nutrition, meal planning, economics, and preparation. They are trained to provide safe, evidence-based dietary advice and management to individuals (in health and disease), as well as to institutions. Clinical nutritionists are health professionals who focus more specifically on the role of nutrition in chronic disease, including possible prevention or remediation by addressing nutritional deficiencies before resorting to drugs.

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While government regulation of the use of this professional title is less universal than for "dietician", the field is supported by many high-level academic programs, up to and including the Doctoral level, and has its own voluntary certification board, Professional associations, and peer-reviewed journals, e.g. the American Society for Nutrition, Nutrition Society of India, Food Scientists and Nutritionists Association India, Indian Dietetic Association and the American Journal of linical Nutrition.

A poor diet may have an injurious impact on health, causing deficiency diseases such as Scurvy and Kwashiorkor; health-threatening conditions like obesity and metabolic syndrome and such common chronic systemic diseases as cardiovascular disease, diabetes and osteoporosis.

Methods and Materials

By using simple random sampling researcher had selected 9 colleges from the Gorakhpur region. Again 900 male students aged between 18-22 years were randomly selected from these 9 colleges and they were divided into three income groups, that is High Income Group, Middle Income Group and Low Income Group by using Socio Economic Status Scale Questionnaire developed by G. P. Srivastava (1991) and from three groups a total of 300 students, From High Income Group, Middle Income Group and Low Income group were selected for the purpose of this study using stratified random sampling technique. Nutritional status will be found by the following formula Pelidisi formula/ Pelidisi index or parquet index: - [Nutritional status = [3√10*Weight in gram.)/ (Sitting height in cm.) ×100] Weight of the subject was measured in gram and height was measured in cm.

Analysis of the Data

For the statistical treatment in this study 'One Way Analysis of Variance' was applied to find out the significance difference among different socio-economic groups in relation to their nutritional status. L. S. D. post hoc test was applied to find out the paired difference. The level of significance was set at 0.05 levels.

Table 1: Descriptive statistics of the selected variable

Variables	Group	N	Mean	Std. deviation	Std. error
	High	300	91.87	1.92	.19
Nutritional Status	Middle	300	86.54	2.97	.29
	Lower	300	85.67	8.15	0.81

Table 2: Analysis of Variance (ANOVA) for the variable of "Nutritional Status"

	Sum of square	Df	Mean Square	F
Between group	1996.67	2	998.32	
Within group	7880	297	26.53	37.61
Total	9877.42	299		

From the above cited Table 2 it is found the calculated F value (37.61) found more than tabulated F (2.99), hence there is significant difference exist among high, middle and lower income group in the variable of "Nutritional Status".

Further Least significant difference (LSD) was carried out to know the mean significance difference among the selected income groups and it is presented in the following Table 3.

Table 3: Mean wise comparison among High, Middle and Lower income groups for the variable of "Nutritional Status"

High	Middle	Lower	MD	Sig.
91.59	86.44	85.89	5.15*	.000
91.59	86.44	85.89	5.70*	.000
			0.55	.454

*Significant

Mean wise comparison for the variable of "Nutritional Status" is presented in the above cited Table 3, and from the table it is found that significant difference exists between high and middle, high and lower, whereas no significant differences exist between middle and lower income group.
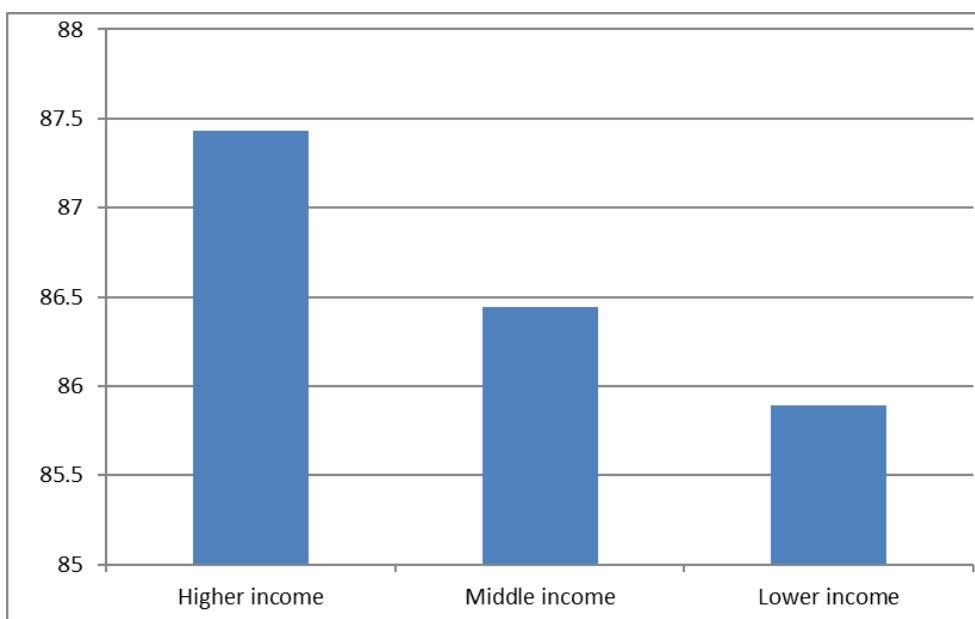
Fig 1: Showing mean's difference among different Income groups of the variable "Nutritional Status"

Differences between means of the variable "Nutritional Status" of higher income group, middle income group and low income group students.

Result and Discussion

Significant difference existed between higher income students, middle income students and lower income students.

The same result was find out by Mukherjee Debarati, Majumdar Swarnali (2013) [4] compared the nutritional status of adult Indian male between high and low socioeconomic adult males between 25-35 years to their food pattern, nutritive value of those food items. Data was collected from different socio economic zone especially high and low by assessing nutritional status and dietary analysis. The data was entered in MS excel and analysed by using Statistical package of Social Science (SPSS) 17.0. From the cross sectional study by determining anthropometric profile and nutritional status, it can be easily concluded that the High Economic group has a better nutritional status than the Low economic group. Though the trend of the results were as expected, the nutritional status of High socio economic group is still not satisfactory. Same result found by Sangeeta C. Sindhu (2008) assessed the nutritional status of the youth (18-21 years based on BMI in the young adults of Haryana in different income group students.

They found significance difference exist in these students based on BMI. Same result found by Nabeela Fazal Babar *et al*. (2005) studied that impact of socioeconomic factors on nutritional status in primary school children. They found that the nutritional status of children from lower socio economic class was poor as compared to their counter parts in upper socio economic class.

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