

Assessment of nutritional status and physical fitness among college going girls

■ NAVITA PAREEK AND GAURANGI SHUKLA

Received: 28.06.2012; Revised: 14.09.2012; Accepted: 28.10.2012

See end of the paper for authors' affiliations

Correspondence to :

NAVITA PAREEK

Department of Home Science
(Food Science and Nutrition),
Banasthali University, JAIPUR
(RAJASTHAN) INDIA
Email: navitap@yahoo.com

■ **ABSTRACT** : In college going girls due to lack of exercise or physical activity a major problem of obesity is found. Physical fitness is only achieved by correct nutrition, regular exercise and proper nutrition knowledge. Hence, the aim of present study was to assess the nutritional status and physical fitness among the college going girls. The sample comprised of 100 college going girls selected on the basis of stratified convenient sampling and divide into three groups; Home Science, Non-Home Science and Sports Group. Anthropometric measurements like height, weight and body mass index (BMI) was used as a general tool to assess the nutritional status. National Physical Efficiency Battery B test was used to assess the physical fitness among the groups. The result revealed that the BMI of the three groups was normal that ranged into 19.66 - 20.13. Majority of the students of sports belonged to fit and good fitness category whereas 50 per cent students of Home Science and Non-Home Science belonged to average fitness category. The study concluded that proper nutrition and regular exercises have a greater impact on the physical fitness level.

■ **KEY WORDS** : Physical fitness, Body Mass Index, Nutritional assessment

■ **HOW TO CITE THIS PAPER** : Pareek, Navita and Shukla, Gaurangi (2012). Assessment of nutritional status and physical fitness among college going girls. *Asian J. Home Sci.*, 7 (2): 390-392.

College students are exposed to a variety of new experiences and potential lifestyle changes that may influence their health and risk of obesity, including changes in eating habits, living environment and daily lack of physical activity (Huang *et al.*, 2003). For maintaining weight and to be physically fit, proper exercise, proper nutrition and proper nutrition knowledge play an important role in one's life. Fitness is being able to handle the daily stress of life and is a symbol of good physical or mental health. Physical fitness is only achieved by correct nutrition, regular exercise and proper nutrition knowledge (Chuhan, 1999). Proper intake of nutrients and well balanced diet give nourishment to the body and help to maintain long term physical fitness and proper health. Hence, the present study was conducted to assess the nutritional status and physical fitness among college going girls. The present study was conducted with the following objectives in mind :

- To assess the nutritional status of college going girls.

- To assess the physical fitness of college going girls.

■ RESEARCH METHODS

Sample selection:

The study was carried out at Department of Home Science, University of Banasthali. 100 college going girls were selected on the basis of stratified convenient sampling. Three groups were made: Home science group, Non-Home science group and Sports group.

Tools and techniques:

Anthropometric measurements for assessing nutritional assessment:

The height was measured with stadiometer. For the measurement of body weight, beam or lever actuated scales with an accuracy of 50- 100 g was used. Weights of the sample were taken under basal conditions with minimum clothing and without shoes. The body mass index (BMI) of the subjects was calculated by using the Quetelets Body Mass Index

formula weight/height squared (kg/m^2). Based on this, the respondents were classified as per the classification (Garrow, 1987) in different grades of nutritional status.

Physical fitness test :

National physical efficiency test battery (B) (age group 16 years to 30 years) was used for the present study for assessing physical fitness among college going girls students using by manual for conducting the test (Kamlesh *et al.*, 1992).

Sr. No.	Items	Passed
1.	50 Meters run	8 sec
2.	Hopping 25 meters	6.5 sec
3.	Throwing the Throw Ball	65 ft
4.	Modified Pull Ups	12
5.	200 Meters Run	32 sec

Grading criteria for physical fitness was as given below

If the subject-passed in all the activities then falls in the category of fit,

if passed in four activities that is good.

if passed in 3 activities that is average.

if passed in 2 activities that is below average.

if passed in only 1 activity that falls in the category of poor.

RESEARCH FINDINGS AND DISCUSSION

Obtained results are presented in the following Table 1 and 2.

Results of anthropometric measurement of the three groups:

All the three groups were subjected to the anthropometric measurements mainly measurement of height, weight and BMI were done.

Table 1 depicts that the average height of sports students (161 cms) was more as compare to the other students because as they regularly do exercises. Students of Home Science and Non-Home Science groups also have normal BMI that ranged into 19.66. Therefore the results indicated that there was not so much difference in the mean height, weight and BMI among the three groups.

Results of physical fitness test of the three groups:

All the three groups were subjected to the physical activities and different results were obtained among the three groups.

Table 2 indicates that highest percentage of fitness was found in sports group. Almost 50 per cent students of sports group were fit and other 50 per cent were average and above average in fitness test. None of the students belonged to below average and poor physical fitness category in sports group.

Almost 35 per cent of the students of Home Science group were found good and fit and the other 50 per cent was found to be average in fitness test. Almost 30 per cent of the students of Non-Home Science group were fit and good and 50 per cent were found to be average and the other 20 per cent were found below average and poor as they were not involved in any kind of regular physical exercises. In spite of the growing number of overweight and obese college students, only 40 per cent participate in any kind of regular physical activity, with 30 per cent or more of all students not participating in any exercise at all on a weekly basis (Keating *et al.*, 2005).

Conclusion:

The study concluded that proper nutrition and regular exercises have a greater impact on the physical fitness level. If there is a high consumption of nutritious diet then this will increase the fitness level of the students.

Groups	Height (cm)	Weight(kg)	BMI (kg/m^2)
Home Science group	159.3 \pm 4.91	51.1 \pm 4.91	20.13 \pm 1.80
Non-Home Science group	160.37 \pm 3.79	49.96 \pm 4.30	19.44 \pm 1.53
Sports Group	161.16 \pm 5.40	51.13 \pm 3.13	19.66 \pm 1.16

Groups	Fit	Good	Average	Below average	Poor
Home Science group	13%	23%	44%	15%	3%
Non-Home Science Group	9%	18%	51%	9%	12.1%
Sports Group	46.6%	40%	13.33%	-	-

Authors' affiliations:

GAURANGI SHUKLA, Department of Home Science (Food Science and Nutrition), Banasthali University, JAIPUR (RAJASTHAN) INDIA

■ REFERENCES

Chauhan, M.K. (1999). Workload and health problems in some occupational activities. Paper presented in advanced training course in ergonomics, at SNDT Women's University, Mumbai, 22-27 February, 1999.

Garrow, G.H. (1987). Quetlets index as a measure of fitness. *Internat. J. Obesity*, **9** : 147-153.

Huang, T.T.K., Harris, K.J., Lee, R.E., Nazir, N., Born, W. and Kaur, H. (2003). Assessing overweight, obesity, diet and physical activity in college students. *J. Am. Coll. Health*, **52**(2): 83-86.

Kamlesh, M.L. (1992). Methodology of research in physical education and sports, 1 pp. 228-250

Keating, X.D., Guan, J., Castro Pinero, J. and Bridges, D.M. (2005). A meta- analysis of college students' physical activity behaviours. *J. Am. Coll. Health.*, **54**(2): 116-125.

Sharma, R. and Hardikar, M. (2010). Effect of Socioeconomic Factors on Physical Fitness of college going girls of Sagar. *Internat. Reffered Res. J.*, **2** : October; 2010.
