

Short Communication

Physical Activity level among Medical Education Students

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Abstract

Obesity is a major Non Communicable Disease (NCD), with physical activity as an important factor influencing it. Objectives include finding out body mass index and finding out the level of Physical activity using Saltin Grim by Physical Activity Level Scale (SGPALS) among 182 students. The findings indicated that level of Physical activity was low among the subjects and there was a weak correlation between BMI and Physical activity level.

Keywords: Physical Activity, SGPALS, BMI, NCD.

Introduction

Physical activity (PA) is anything that gets your body moving¹. Exercise is a form of physical activity and is important in maintaining health and preventing Non Communicable Diseases (NCDs)².

In this one time observational study 182 students of physiotherapy and nursing courses who volunteered to participate were screened for physical activity level in an attempt to assess the level of physical activity among students of medical education who are the future health promoters in controlling NCD. Overweight and Obesity account for 5% of mortality among NCDs Worldwide. 2.8 million people die each year as a result of being overweight (including obesity) and an estimated 35.8 million (2.3%) of global Disability Adjusted Life years (DALYs) are caused by overweight or obesity.

This major problem can be tackled only if suitable measures are taken to prevent it right from the young age. Physical activity being an important factor related to overweight and obesity, it is very important to know the level of Physical activity among young adults.

Aim: i. To find the level of Physical Activity among Physiotherapy and nursing students, ii. To correlate the level of Physical activity with Body Mass Index (BMI).

Materials and Methods

Study participants were physiotherapy and nursing students from the Vels University, Chennai. The participants were screened at Physiotherapy Department using a Saltin Grimby Physical Activity Level Scale (SGPALS)³⁻⁵. The SGPAL scale has four levels of Physical activity level ranging from i. physically inactive, ii. Some light Physical activity, iii. Regular

Physical activity and training and iv. Regular hard physical training for competitive sports.

The parameters of height and weight were also noted to estimate Body mass index (BMI) and Body fat percentage manually. The data was collected and documented for analysis.

The baseline parameter of height and weight was also noted to estimate Body mass index (BMI)^{6,7} and Body fat percentage manually. The study was conducted over a period of one week and the data thus collected was statistically analysed.

Results and Discussion

It was observed that out of 182 students screened for physical activity level that 68.13% of the participants were physically inactive and only 24.17% of them were engaged in mild physical activity and it was further inferred that in terms of BMI and Body fat percentage that 14.83% of the participants were undernourished and 27.97% were overweight predisposing them to the risk of obesity.

Data Analysis and Interpretation: The first objective of the study was to find the physical activity level among physiotherapy and nursing students. Out of the 182 students assessed using the Saltin Grimby Physical Activity level Scale; most of them fall under the inactive range.

The second objective of the study was to find the correlation of Physical activity level with that of Body Mass Index (BMI). The value of R was found to be 0.0329.

Therefore there is Weak Positive Correlation between the level of physical activity and body mass index. The P-Value is 0.657508. The result is not significant at $p < 0.05$.

Table -1
Students distribution based on the Saltin Grimby Physical Activity Level Scale (SGPALS)³

Level of PA	PA Description	Frequency	Percentage
1	Inactive ³	124	68.13
2	Some light physical activity ³	44	24.17
3	Regular physical activity and training ³	13	7.14
4	Regular hard physical training for competitive sports ³	1	0.54

N=182

Table-2
Distribution of students based on the WHO's Body Mass Index (BMI) classification

BMI Score	Range of BMI	Frequency	Percentage
Severe Thinness	<16	7	4.06
Moderate thinness	16-16.9	5	2.74
Mild thinness	17-18.5	14	7.69
Normal	18.5-24.9	99	54.39
Pre-Obese	25-29.9	40	21.97
Obesity Class 1	30-34.9	15	8.24
Obesity Class 2	35-39.9	2	1.09

N=182

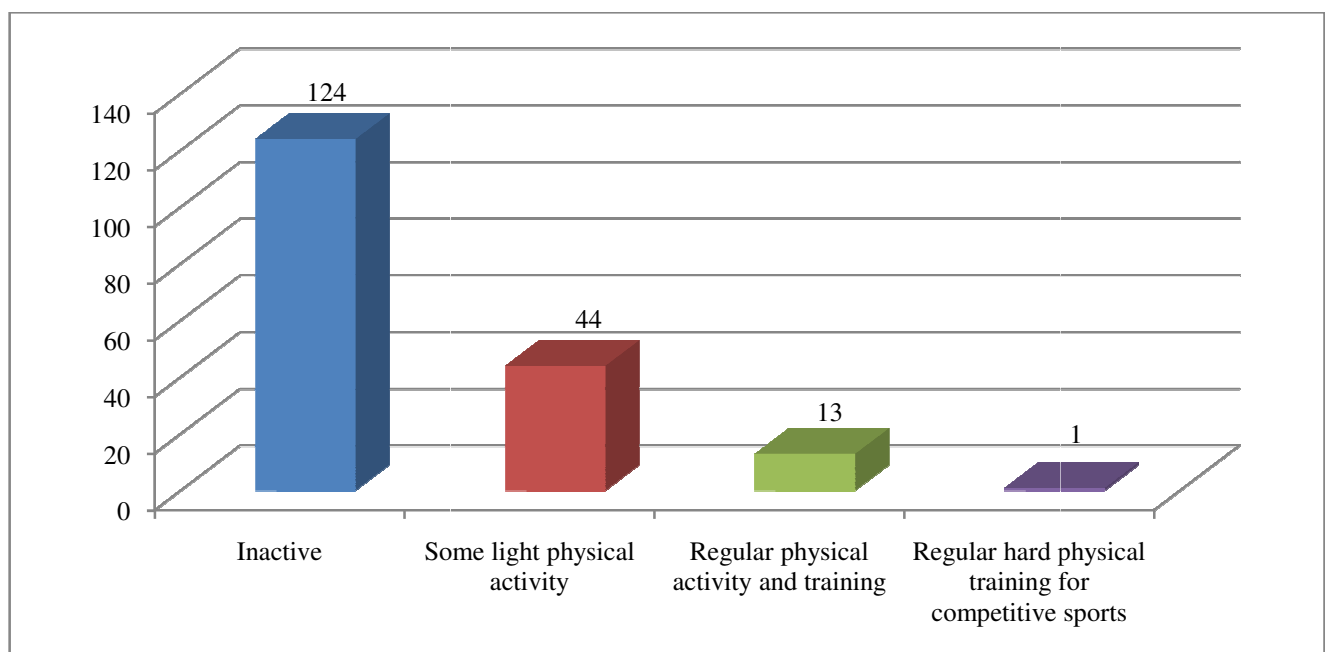
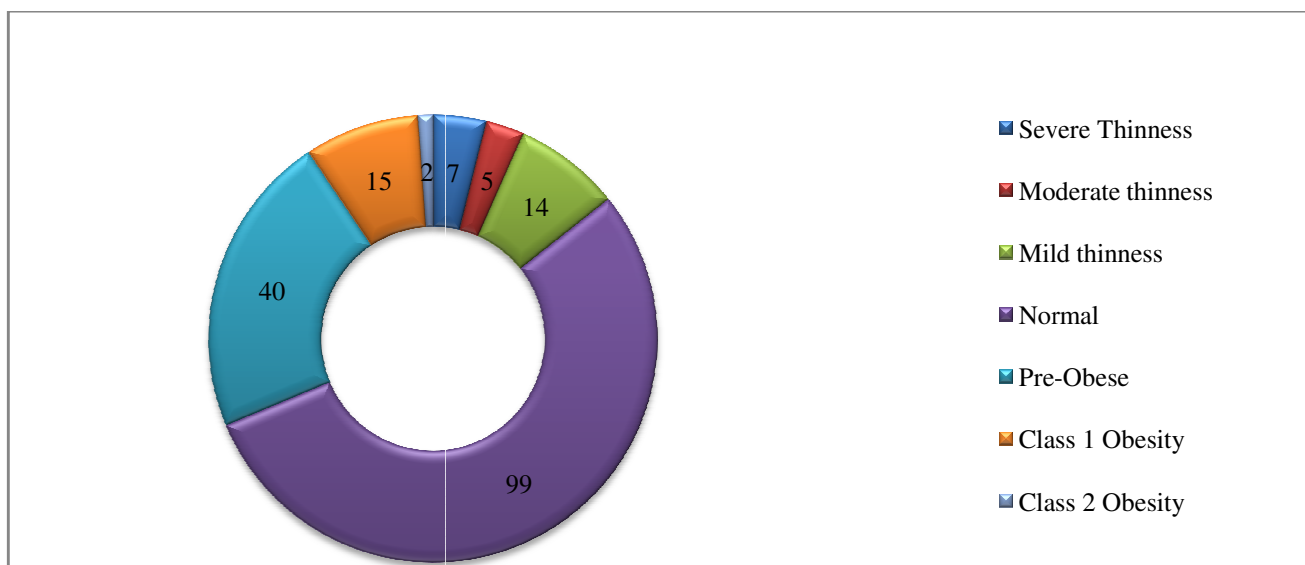


Figure-1
Distribution of sample based on the Saltin-Grimby Physical Activity Level Scale (SGPALS)³



Figure–2
Distribution of sample based on the WHO's Body Mass Index (BMI) classification

Conclusion

The above results infer that in reference to the physical activity level of physiotherapy and nursing students there was a significant level of inactivity reported and there is a weak positive relationship between the Body mass index and the physical activity level. Hence it is concluded that physical activity level among students of medical education who are the future health providers is considerably low and the BMI among the adolescent and young adult population undergoing physiotherapy and nursing courses is considerably high predisposing them to the risk of obesity which is attributed to various modifiable and preventable factors.

References

1. Michael O. Leavitt. (2008). Physical Activity Guidelines for Americans. Available from [http:// Health.gov /paguidelines/pdf/paguide.pdf](http://Health.gov/paguidelines/pdf/paguide.pdf), Accessed on 03/01/2016.
2. World Health Organization (WHO) (2014). Diet and Physical Activity Guideline. Available from net library <http://www.who.int/dietphysicalactivity/pa/en>. Accessed on 03/01/2016.
3. Grimby G. et.al. (2015). The "Saltin-Grimby Physical Activity Level Scale" and its application to health research. *Sc. and J Med Sci Sports.*, 25 Suppl 4, 119-125.
4. Rodger L. et. al. (2012). Self-reported leisure time physical activity: a useful assessment tool in everyday health care. *BMC Public Health.*, 12, 693. doi: 10.1186/1471-2458-12-693.
5. Saltin B. and Grimby G. (1968). Physiological analysis of middle-aged and old former athletes. Comparison with still active athletes of the same ages. *Circulation.*, 38, 1104-1115.
6. U. S. Centre for Disease Control and Prevention (CDC) (2016). Healthy weight, Body Mass Index (BMI). Available from net library http://www.cdc.gov/health/yweight/assessing/bmi/adult_bmi/ Accessed on 03/01/2016.
7. Must. A. et. al. (2006). Body mass index in children and adolescents: considerations for population-based applications. *International Journal of Obesity*, 30, 590-594, doi:10.1038.
8. Supriya K. Vinod (2015). A study to assess the level of Physical activity in young adults at puducherry. *PJN*, 8(1), 30.
9. D'Elia L. (2016). The Olivetti Heart Study: Predictive value of a new adiposity index on risk of hypertension, blood pressure, and subclinical organ damage. *Nutr Metab Cardiovasc Dis.*, Apr 4., S0939-4753(16)30006-0.
10. Sloan J.A. (2016). Impact of self-reported physical activity and health promotion behaviors on lung cancer survivorship. *Health Qual Life Outcomes.*, 14(1), 66, doi: 10.1186/s12955-016-0461-3.
11. World Health Organization (WHO) (2016). Non Communicable Diseases Report. Chapter 1 – Burden: mortality, morbidity and risk factors, pages 9, 22-24. Available from http://www.who.int/nmh/publications/ncd_report_chapter1.pdf. Accessed on 05/01/2016.