

**EXERCISE HABITS OF HEALTH CARE PROFESSIONAL STUDENTS AND NON HEALTH CARE PROFESSIONAL STUDENTS- A CROSS SECTIONAL SURVEY****JAGATHEESAN ALAGESAN<sup>1</sup> AND VIVEK PANDEY<sup>2\*</sup>**<sup>1</sup>Saveetha College of Physiotherapy, Saveetha University, Chennai, India<sup>2\*</sup>Saveetha College of Physiotherapy, Saveetha University, Chennai, India.**ABSTRACT**

Exercise is an important component of healthy lifestyle to reduce a person's risk of developing the disease and subsequent disability. Health care professional students' physical activity behaviours may provide an indicator for the future of physical activity among those in the profession. This study compared the exercise habits of health care professional students and non-health care professional students. A cross sectional survey was done among the health care professional and non-health care professional students of Saveetha University, Chennai to find out exercise habits through questionnaire. A total of 1274 subjects participated in the study with the Mean  $\pm$  SD age of  $19.81 \pm 1.84$  years. Exercise habits were analysed under three categories namely vigorous exercises, moderate exercises and strength training. There were no significant difference between health care professional students and non-health care professional students in exercise habits with p value more than 0.05. This study concludes that the health care professional students exercised at the same levels that are of non-health care professional students.

**KEYWORDS:** Exercise Habits, Students, Health Care Profession, Non-Health Care Profession**VIVEK PANDEY**Saveetha College of Physiotherapy, Saveetha University,  
Chennai-602105, India jagaphd@yahoo.in

\*Corresponding author

## INTRODUCTION

Exercise is an important component of healthy lifestyle to reduce a person's risk of developing the disease and subsequent disability.<sup>1,2</sup> Physical activities are growing public health concern. This concern is being addressed by many professional organizations, including the American Medical Association (AMA), The American College of Sports Medicine (ACSM)<sup>3</sup> and The American Physical Therapy Association (APTA).<sup>4,5</sup> The endorsement of an active lifestyle is more credible coming from a professional who is physically active.<sup>6</sup> Physical therapist is trained to have authorities on exercise. When physicians recommended an exercise program to a patient, a physical therapist was the most likely health care professional to whom referral would be made.<sup>7</sup> The Health promoting behavior that received the greatest attention from physical therapist was the promotion of physical activities to their patients.<sup>8</sup> Health care providers who are physically active themselves are more likely to counsel patients on the benefits of physical activity. Physical activity participation rates among hospital employees, nursing students, medical students and physiotherapy students have been studied.<sup>9-15</sup> We were unable to find published research to compare the physical activity of health care professional students and non-health care professional students. Because physicians and medical students who were physically active were more likely to counsel their patients on the benefits of activity than their sedentary counterparts,<sup>16-18</sup> knowledge of the physical activity habits of health care professionals may be an important indicator of their willingness to engage in counselling activities. Health care professional students' physical activity behaviours may provide an indicator for the future of physical activity among those in the profession or a gauge of the level of self-selection of active people into the profession. Hence aim of this study is to compare the Exercise Habits of Health Care Professional students and non-health care professional Students.

## METHODOLOGY

A Cross-Sectional Survey was conducted among the students of Saveetha University,

Chennai to find out their exercise habits. Current students of medicine, physiotherapy and engineering were included in the study. The health care professional students included were medical and physiotherapy students of all the years. The non-health care professional students included were engineering students of all the years. Survey of Leisure-Time Activities for Physical Therapist (SLTAPT) was administrated using Paper-form based survey tool. The survey form was adopted from previous researches.<sup>14,15</sup> The survey form about personal exercise habits was administrated to the health care professional students and non-health care professional students. The survey consisted of 6 sections; first two sections were about information to the participant and consent form. Section three consisted of four background demographic questions followed by three sections about vigorous activities, moderate activities and strengthening activities done during leisure time. All the vigorous, moderate and strengthening activities questions were asked using definitions and phrasing identical to the National Health Interview Survey form. Survey was done by using the questionnaire method of data collection by principal investigator. The participants were met at their place with prior appointment and survey form was given in their hand after explaining about the research to fill, sign and return back.

## DATA ANALYSIS

The data were analysed using IBM SPSS-20 software package. Total of 1581 subjects participated and 1273 subjects replied remaining 308 not consented to participate in this survey on Exercise Habits of Health Care Professional Students and Non Health Care Professional Students. The students of physiotherapy and medicine were representing health care profession with the total of 609, out of which males were 231 and females were 378 with the Mean  $\pm$  SD age of 20.14  $\pm$  2.18 years. Non-health care students were represented by 664 engineering students including 400 males and 264 females with the Mean  $\pm$  SD age of 19.46  $\pm$  1.51 years. Table-1 shows the demographic distribution of all

participants. Females were more in health care profession and males were more in non-health care profession. The mean age of the subjects was almost same.

**Table 1**  
**Demographic distribution of participants**

Students	N	Gender		Age(years) (Mean ± SD)
		Male	Female	
Health Care	609	231	378	20.14 ± 2.18
Non-Health Care	664	400	264	19.46 ± 1.51
Total	1273	631	642	19.81 ± 1.84

Exercise habits were analysed under three headings, vigorous exercise, moderate exercise and strength training exercises. All participants were asked about number of days they do these kinds of activities in a week. A total of 497 health care students were doing vigorous exercises, 558 were doing moderate exercises and 472 were doing strength training out of 609 participants for at least one day per week. A total of 564 non health care students were doing vigorous exercises, 650 were doing moderate exercises and 580 were doing strength training out of 664 participants for at least one day per week.

**Table 2**  
**Percentage of students doing exercises in health care and non-health care professions**

Days	Vigorous Exercise %		Moderate Exercise %		Strength Training %	
	Health Care	Non-Health Care	Health Care	Non-Health Care	Health Care	Non-Health Care
0	18.4	15.1	8.4	2.1	22.5	12.7
1	11.8	13.4	7.9	12.3	6.2	5.1
2	18.9	25.3	14.3	19.3	11.0	9.8
3	19.5	19.4	13.1	15.8	7.9	3.8
4	11.3	6.3	11.7	12.8	3.0	2.9
5	12.0	14.0	14.9	15.7	7.7	3.6
6	3.9	2.3	10.0	10.1	34.3	47.1
7	4.1	4.2	19.7	11.9	7.4	15.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 2 shows the details of percentage of students doing exercises in both health care profession and non-health care profession. The overall percentage of students doing exercises at least once per week was more in non-health care professional students than health care professional students. Non-health care professional students were doing exercises of all three categories for more number of days per week than health care professional students.

**Table 3**  
**Comparison of exercise duration of health care and non-health care professional students by independent t-test**

Exercise level (duration in minutes)	Students	N	Mean ± SD	t	p
Vigorous Exercise	Health Care	497	56.59 ± 23.26	1.865	.064
	Non-Health Care	564	50.86 ± 15.94		
Moderate Exercise	Health Care	558	21.44 ± 16.87	1.503	.133
	Non-Health Care	650	23.37 ± 25.86		
Strength Training	Health Care	472	76.73 ± 54.33	0.733	.466
	Non-Health Care	580	65.51 ± 42.14		

Table 3 shows the details of comparison of exercise duration of health care professional students and non-health care professional students by independent t-test. The Mean  $\pm$  SD of Vigorous Exercise duration in Health care students is  $56.59 \pm 23.26$  minutes and non-health care students is  $50.86 \pm 15.94$  minutes with p value equal to 0.064 proves no different between health care and non-health care students.

The Mean  $\pm$  SD of Moderate Exercise duration in Health care students is  $21.44 \pm 16.87$  minutes and non-health care students is  $23.37 \pm 25.86$  minutes with p value equal to 0.133 proves no different between health care and non-health care students.

The Mean  $\pm$  SD of Strength Training duration in Health care students is  $76.73 \pm 54.33$  minutes and non-health care students is  $65.51 \pm 42.14$  minutes with p value equal to 0.466 proves no different between health care and non-health care students.

## DISCUSSION

This study analysed the exercise habits of health care and non-health care professional students in terms of their daily habits and total duration of exercises per day. A total of 1273 subjects participated in the study including 609 from health care profession and 664 from non-health care profession. This study shows that non-health care professional students exercise for more days in a week than health care professional students, but there is no difference between the duration of various forms of exercises done by both professional students. In this study health care professional student had the highest percentage of doing moderated exercises daily i.e. all 7 days in a week may be an indicator that exercise habits are influenced by occupational preference. Frank et al in various studies, have found that medical student also preferred strenuous exercise as modality of choice for physical activity.<sup>17,18</sup> Barnes and Schoenborn proved that those who are active at work are more likely to be active in leisure-time activity.<sup>19</sup> James et al have given statement that regular physical activity remains an important behaviour for promoting health and preventing musculoskeletal as well as heart disorders and physical activity rates decline consistently during the adolescent years.<sup>20</sup> Level of education also appears to be a factor in engagement in leisure-time Physical activity. Education has been hypothesized to be an

important social influence on health and likely improves the ability to obtain and interpret health related information.<sup>21</sup> Our results are consistent with findings in study by Marshall et al.<sup>22</sup> The strongest determinant of participation in strength training is participation in other aerobic activities.<sup>23</sup> Physical activity has been recognized as an important means to help curb chronic disease and provide substantial health benefits. Health care professionals play an important role in helping to promote the benefits of physical activity by counseling their patients to increase their participation.

## CONCLUSION

This study concludes that the health care professional students exercised at the same levels that of non-health care professional students in Saveetha University, Chennai. This study recommends further research to compare exercise habits of health care professional students and non-health care professional students from other institutes or geographical area. Further research is needed to analyse the exercise habits of health care professionals and determine the relationship between personal exercise habits and counselling practices of health care professionals.

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