

Sedentary lifestyle and health factors as leading cause of diseases: A multi centered study

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Objectives: To correlate sedentary behaviors with the deteriorating health status to provide awareness to the people as well to introduce advantages through active lifestyles.

Methodology: This descriptive cross-sectional study included 130 teaching faculty members from February to July 2017. The study was conducted at three universities of Sindh Jamshoro. The participants were aged from 40 to 80 years that had risk factors as obesity and cardiovascular disease. We used self-administrated Daily Activities GHQ David Goldberg and Mc-gill pain questionnaires.

Results: There was a significant association between a sedentary lifestyle and deteriorating health factors. The variables including daily activities and health status were observed about

56% and active lifestyle represents 55% of good health status while the sedentary lifestyle was about 17% representing bad health status with 16%.

Conclusion: Good health status had the most prevalent rate in health-related behavior as compared to other lifestyle factors. An association between daily activities and health status determines that individuals who are not physically active are more likely at risk for deteriorating health status. Further research will help healthcare professionals to give patients awareness about the effects of a sedentary lifestyle and to motivate them to become physically active. (Rawal Med J 202;45:707-710).

Keywords: Sedentary lifestyle, physical inactivity, rehabilitation.

INTRODUCTION

A sedentary lifestyle refers to irregular physical activity, including sitting, reading, watching television, playing a video game, and computer use for much of the day.¹ Physical inactivity has been related not only to obesity but also to associated morbidity and non-transmittable chronic diseases.² A sedentary lifestyle includes less than 150 minutes of moderate physical activity or less than 60 minutes of vigorous activity per week.³ Physical activity is accepted worldwide as a public health priority.⁴

Regular physical activity can play an essential role in the prevention and treatment of cardiovascular disease, overweight, and obesity as well as improving a person's lipid profile.⁵ Major health problems facing modern society are malnutrition, overweight and obesity.⁶ Regular physical activity can be regarded as an essential component of a healthy lifestyle.⁷ Regular exercise increases the muscle mass, thereby strengthening the bones and in affecting muscles that are responsible for maintaining body balance and coordinating

movement with the activities for reducing the risk of mortality.⁸

Avoiding a sedentary lifestyle during adulthood not only prevents cardiovascular disease independent of other risk factors but also substantially extends the total life expectancy and cardiovascular disease-free life expectancy for men and women.⁹ Many cross-sectional studies have provided an analysis of self-reported health outcomes, but recently identified a survey that indicated a sedentary lifestyle may lead towards the mortality through many factors such as cardiovascular disease, obesity, and overweight.¹⁰ This study aimed to correlate sedentary behaviors with the deteriorating health status to provide awareness to the people as well to introduce advantages of active lifestyles.

METHODOLOGY

This descriptive cross-sectional survey used self-administrated questionnaires with the sample size of 130. It included permanent teaching faculty members aged 40-80 years of three multi-centered

public sector institutions of Sindh Jamshoro LUMHS, Mehran University and Sindh University, Hyderabad, Pakistan. We have excluded all young age, non-professional participants. The sampling technique was simple random. The study was conducted from February 2017 to July 2017. The study was approved by the Institute of Physiotherapy and Rehabilitation Sciences, IPRS LUMHS Committee and written informed consent was obtained from all participants.

We used pretested Daily Activities GHQ David Goldberg and Mc-gill pain questionnaire. This consisted of close-ended questions. In the first part, Section A recorded the demographic profile of the participants whereas, In the second part (Daily Activities) or section B recorded the daily activities of the participants and the referenced question or ideas were taken from the standard questionnaire of a systematic approach to maintaining the health.¹⁰⁻¹¹

The third part (Health status) or section C recorded the health status of the participants with the reference from the standard questionnaire of GHQ David Goldberg¹ and Mc-gill pain questionnaire.¹² All the participants were interviewed and were asked to fill the questionnaire at the time of induction in the study. The considered health risk factors included obesity and cardiovascular heart diseases.

Statistical Analysis: Data were entered and analyzed on SPSS version 16. Frequencies, percentages, and Chi-square tests were applied to the variables to know the association among the daily activities and health status of the participants. $p < 0.05$ was considered significant.

RESULTS

There was relationship between daily activities and health status which was high about 56% of an active lifestyle that represented 55% of good health status (Table 1). The sedentary lifestyle with 17% represents the bad health status with 16%. Furthermore, a cross-tabulation active lifestyle with the relation of good health status showed 63.9% that represents the association (Table 2). The Chi-square test was applied to the variables to know the significant value, so the chi-square represents the .004 value considerably. The result showed that the

participants who adopted a sedentary lifestyle are more prone to having risk factors for morbidity as compared to those participants who took an active lifestyle.

Table 1. Participants daily activities and health status.

Daily Activities	Frequency	Percentage
Sedentary	17	13.1%
Active	73	56.2
Physical Demanding	40	30.8%
Total	130	100%
Health	Frequency	Percentage
Bad	16	12.3%
Fair	42	32.3%
Good	72	55.4%
Total	130	100%

Pearson Chi Square Test: Value: 15.179 df: 4 Asym: Sig (2 sided) .004

Table 2. Daily activities and health status.

Daily Activities *Health Crosstabulation					
		Health			Total
		Bad	Fair	Good	
Daily Activity sedentary	Count	6	6	5	17
	% within Health	37.5%	14.3%	6.9%	13.1%
active	Count	3	24	46	73
	% within Health	18.8%	57.1%	63.9%	56.2%
physical dema	Count	7	12	21	40
	% within Health	43.8%	28.6%	29.2%	30.8%
Total	Count	16	42	72	130
	% within Health	100.0%	100.0%	100.0%	100.0%

Figure: 1. Daily activities and Health status

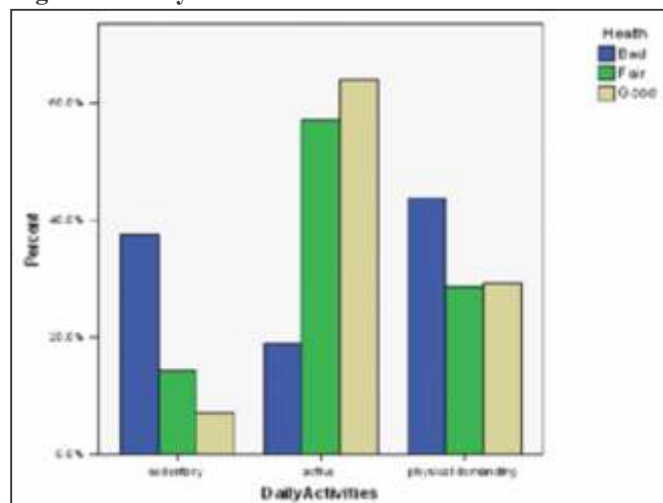


Figure 1 illustrates the percentages of participants with daily health status consisting of three

categories of risk factors of everyday activities (sedentary, active and physical demanding). In terms of the sedentary group, 38% of the survey participants agreed that their health was bad. While 18% counted fair, and 8% had good health. Similarly, in the active category, the majority of respondents fell in good health about 70%, and 50% for fair whereas lowest record based on bad health about 19%. In the physically demanding category, majority of participants stated their health was bad, about 43% while both variables fair and good showed a similar count of 30% approximately.

DISCUSSION

Physical inactivity or sedentary lifestyle is a term used to identify people who do not get the recommended level of regular physical activity.¹³ The American Heart Association recommends 30-60 minutes of aerobic exercise three to four times per week to promote cardiovascular fitness.¹⁴ Physical inactivity is identified as the fourth leading risk factor for global mortality causing an estimated 3.2 million deaths globally, and that increase mortality ratio is due to leading etiological factors towards diseases like obesity or high lipid profile that mostly responsible for cardiovascular heart diseases.¹⁵

Physical activity is associated with more favorable biological changes in risk factors that associate with cardiovascular heart diseases among adolescents, like serum lipid and lipoprotein levels.¹⁶ Physical activity in adolescents is also important to attain and maintain good health status.¹⁷ In this study, we have correlated the sedentary lifestyle as the leading cause of diseases among adolescents in terms of designing a pattern to determine the relation among daily activities with the health status because the adaptation of the sedentary lifestyle has adverse effects on health outcomes. In the selected population of teachers that tend to have a sedentary lifestyle or physical inactivity and the consequences of a sedentary lifestyle are evident because of the increased risk factors of obesity or high lipid profile that may lead to cardiovascular heart diseases.⁹

Our results showed correlation between daily activities and health status. One of the significant reasons for cardiovascular heart disease is adopting

a sedentary lifestyle. Although our study had a higher response rate for active lifestyle, the results indicate those people who are adopting an active lifestyle had a good health status as compared to those people who adopt sedentary lifestyle. The results showed percentages that (active lifestyle about 56.2% associating with good health status 55.4% whereas, sedentary lifestyle 13.1% associating with bad health status 12.3%).

Moreover, association among the daily activities and health status were proved as the previous researches or evidence indicates that not being physically active was associated with deteriorating health status.¹¹ The participants who were engaged in physically demanding activities are not having a good health status as active participants. Because physically demanding or over events makes the person's fatigued, depressed or causing delayed onset of muscle soreness that cause the metabolic or physiological changes and leads towards the diseases.⁷

Study limitations include lack of statistical expertise and shortage of time were the main obstacles and having small sample size was not enough to accommodate the majority of the respondent's demographics.

CONCLUSION

Good health status had the most related to health-related behavior as compared to other lifestyle factors. An association between the daily activities and health status determines that individuals who are not physically active are more likely at risk for deteriorating health status. Thus, further research will help healthcare professionals to give patients awareness about the effects of a sedentary lifestyle and to motivate them to become physically active by considering an adaptation of an active lifestyle to reduce morbidity.

ACKNOWLEDGMENT

The authors would like to thank the administration of the Institute of Physiotherapy and Rehabilitation Sciences LUMHS Jamshoro for allowing us and to the respondents who were involved throughout the data collection process for showing their promising co-operation and contribution in this study.

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Conflict of Interest: None declared.
 Rec. Date: Nov 28, 2019 Revision Rec. Date: Jun 24, 2020 Accept Date: Jul 3, 2020

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