



Physical Activity Practices among Primary Health Care Physicians in Al-Jouf: A Cross-Sectional Study

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ABSTRACT

Objective: The aim of the study was to evaluate the physical activity and its association with the blood pressure among primary health care physicians in the Aljouf Region of Saudi Arabia. **Method:** This cross-sectional study was conducted between May and July 2019 at primary health care clinics situated in the Aljouf region. A self-administrated questionnaire was used to collect data. Association of participants' gender and blood pressure readings with their physical activity was computed by using statistical tests. **Results:** Out of 81 participants, 71 (87.7%) were physically active. Among physically active participants 43.7% used to do mild physical activities while 43.7% and 12.6% used to do moderate and vigorous physical activities. There was no statistical significance was found between gender, blood pressure and physical activities among physicians. **Conclusion:** The prevalence of physical activity among the physicians was quite high and it was the fruitful outcome of this study. However, a study with large sample size is required to test any statistically significant association between blood pressure and physical activity. Furthermore, it is also vital to counsel the patients in order to promote daily physical activities among the general population living in Saudi Arabia.

Keywords: Primary health care physicians, Physical activity, Saudi Arabia

INTRODUCTION

Around the globe, physical inactivity is one of the leading risk factors for mortality [1]. Approximately 3.2 million deaths reported annually due to insufficient physical activity [2]. Lifestyle is a major component which contributes a lot in order to increase or decrease physical activities in our daily life. The increase and advancement in technology is facilitating and improve easiness in our lives but on the other hand, it has a major role in decreasing our daily activities.

A drastic change in lifestyle and eating habits has been observed over the past few decades in Saudi Arabia that changes in lifestyle reduced physical activity among the Saudi population. Hence, lifestyle-related diseases such as diabetes, coronary artery disease, and hypertension have increased [3]. An increase in the burden of these diseases became the principal cause of morbidity and mortality in Saudi Arabia [4]. The prevalence of physical inactivity among Saudi children, youth and adults were reported to be 57%, 71%, and 80% respectively by WHO [5]. 60% of the entire Saudi population is physically inactive, reported in a national health survey in 2013 [6]. Physical inactivity has an estimated leading cause of most non-communicable diseases not only in Saudi Arabia but worldwide also. It was reported that worldwide 6% of coronary heart disease, 7% of type 2 diabetes cases, 10% of breast and colon cancer caused due to physical inactivity [7].

Primary health care clinics (PHCC) can have a vital contribution to counter this issue. Physicians at PHCC can provide counseling to their patients in order to encourage them for being more physically active. Studies proved that patients followed physicians' advice to increase daily physical activities [8]. There are various advantages of physical activities and at the top of it, it reduces the risk of diabetes, stroke, heart diseases, and breast and colon cancer. Furthermore, it can help in decreasing the prevalence of obesity [9]. The physically active body has fewer mental health issues like anxiety, depression, and stress [10].

High prevalence of physical inactivity among the Saudi population and health issues caused due to this was one of the basic reasons for the conducted present research. Another reason for this study was to evaluate the physical health of

physicians from whom patients got motivation and inspiration. Hence, the aim of the study was to evaluate the amount and type of physical activities doing by primary health care physicians working in Al-Jouf region. Furthermore, their blood pressure was also examined and associated with their physical activeness.

METHODS

This cross-sectional study conducted between May and July 2019 at primary health care clinics situated in the Al-Jouf region of Saudi Arabia. Ethical approval for the study was granted by the Ministry of Health, Saudi Arabia. Under the administration of the Ministry of Health, there are 16 primary health care clinics in Sakaka, 10 in Dumah Aljandal and 7 in Tabarjal which were included in the study. Each PHC center has a male and female section, at least one physician works in each section. Six centers had additional physicians due to working load and timing. This makes at least 78 physicians working in these centers. Both male and female physicians were invited to participate in the study and participation was voluntary.

A self-administrated validated questionnaire of the International physical activity questionnaire (IPAQ-SF) was used in the study. There were 7 questions that were related to evaluating the type and amount of daily physical activity. Demographic variables included city and place of practice and gender of the physician. Furthermore, systolic and diastolic blood pressure of every participant was taken. It was mandatory to answer all the questions in the questionnaire and given blood pressure reading. The authors of the study contacted the physicians at their primary health care setting to get the questionnaire filled and taken their blood pressure.

In the questionnaire, the first question was about vigorous activity and the second question was about amount of vigorous activity (hours per day), the third question was about moderate activity and fourth was about amount of moderate activity (hours per day), question five was about walking habit and sixth was about how many hours per day. The last question was about how much time a participant spent sitting during a day. During the data entry, by using the responses of questions two, four and six one new column in data file were generated that was presenting the total time (in minutes) was spending during a week for doing physical activity.

Statistical package for social sciences (SPSS Version 23) was used for data entry and analysis. Cross tabulation and bar chart was used to present descriptive statistics. For inferential statistics, ANOVA was employed to make a comparison between activity levels and systolic and diastolic blood pressure. Two independent samples T-test was used for comparing the mean difference in blood pressure and gender of the participants. The level of significance was kept as 0.05.

RESULTS

The total number of primary health care (PHC) physicians who participated in the study was 81. Classification of the participants according to gender was described as 54 (66.7%) were males and 27 (33.3%) were females. Most of the participants were belonged to Sakaka city (n=45, 55.5%), followed by Tabarjal (n=22, 27.2%) and Dumah Aljandal (n=14, 17.3%). A blood pressure reading of the study participants revealed that the average systolic blood pressure of a participant was 119.4 (\pm 17.3) with maximum noted value was 160. While average diastolic blood pressure was 75.5 (11.8%) having the highest value 98.0.

Physicians were asked various questions to evaluate their daily activities and activity levels were classified as vigorous, moderate and walking. Among 81 PHC physicians at Al-Jouf region, only 32 replied that they did vigorous physical activity, on average they used to do vigorous activity 2.5 (\pm 1.5) days in a week and 46.6 (\pm 35.6) minutes daily. Furthermore, 39 replied they used to do the moderate level of physical activity their average daily time for the activity was 51.5 (\pm 45.2) minutes and 2.94 (\pm 1.7) days in a week. Another question was about time spent on walking on average a physician was walking about 37.35 (\pm 2.3) minutes daily and 4 (\pm 2.1) days in a week. Physical activity score was calculated by combining all kinds of physical activities doing by an individual during a week. Hence, physical activity score was further divided into levels (mild, moderate and vigorous). The analysis revealed that through the score it was found that only 9 out of 81 physicians were doing vigorous physical activities while 31 and 41 were having moderate and mild activities respectively.

A comparison of activity level with gender and blood pressure revealed that there was no significant bounding between these variables. Figure 1 presenting the comparison with a systolic and diastolic blood pressure of the participants and their activity levels. Table 1 shows the average systolic and diastolic blood pressure of the physicians after arranging

them according to the physical activity score. There was no statistical significance found among various activity levels (mild, moderate, vigorous) and blood pressure.

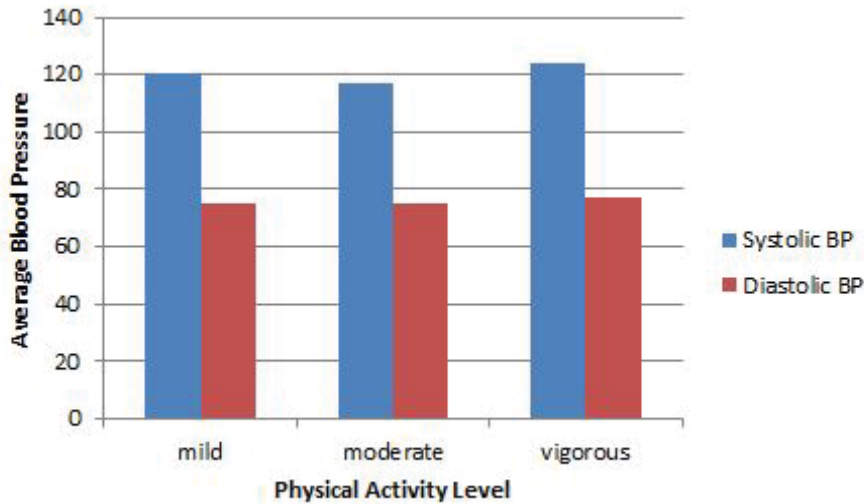


Figure 1 Comparison between blood pressure and physical activity levels

Table 1 Comparison of activity levels with blood pressure

| Activity Levels | Systolic BP Mean (SD) | p-value | Diastolic BP Mean (SD) | p-value |
|-----------------|-----------------------|---------|------------------------|---------|
| Mild | 120.37 (11.1) | 0.516 | 75.32 (9.3) | 0.897 |
| Moderate | 116.87 (24.3) | | 75.42 (15.4) | |
| Vigorous | 123.67 (10.3) | | 77.33 (8.6) | |

DISCUSSION

The benefits of exercise on physiological and psychological health are well known and it was the purpose of the current study to find the physical activity habits among primary health care physicians. It was found that 87.7% of the physicians who participated in the study had a habit of doing some sort of physical activity. Researchers reported the benefits associated with regular physical activities in the form of preventing diseases and improve health [11,12]. Physical activities help to reduce the chances of stroke, hypertension, diabetes mellitus etc.

In the present study, it was found that out of 81 participants 12.3% were inactive and did not use to do any physical activity at all. Among the rest of the participants who were physically active 43.7% used to do mild physical activities while 43.7% and 12.6% used to do moderate and vigorous physical activities. A study conducted in 2015 in the AlJouf region reported 34.8% of the physicians were inactive [13]. It was also reported in the study that 65.2% of the physicians were used to do moderate physical activities which were quite high compared to present study findings. Suija, et al., reported 92% of female family doctors were physically active [14]. A survey conducted in 2012 showed that American physicians were found more active compared to the general population and the level of their physical activity was increasing as an increase in age [15].

The prevalence of physical inactivity among primary health care physicians in the present study was lower than its prevalence in the general population. WHO reported 80% of the inactivity rate among the Saudi adult population [5]. The current study did not find any statistically significant difference in physical activity levels and between genders. Furthermore, variation in blood pressure was also tested with different levels of physical activity but no statistical significance obtained. In the literature, there were some studies on the same topic that also reported no statistical significance in their findings [13,16].

Physically active healthcare providers are more likely to motivate their patients to be more physically active and fit [17,18]. Similarly, it is less likely to get motivation from less or no active physicians [19]. Hence, it is vital for a physician to be more active so their patients get inspired by them and follow the counseling provided to them.

Our study had some limitations as well and the small sample size was one of its major limitations. A large sample size increases the chances of getting statistical significance and that can help to generalize the results. Secondly, the age of the physician was not included in the study which could also be an important variable because variation in age could also help in studying the variation in physical activity levels.

CONCLUSION

In a nutshell, the majority of the primary health care physicians either male or female working in the Aljouf region were physically active. Furthermore, their systolic and diastolic blood pressure was also found normal and no significant variation was observed while compared with gender and activity levels. Besides this physicians should also impart advice to their patients for being more physically active.

DECLARATIONS

Acknowledgment

Thanks to the Director of the General Directorate of Health Affairs in Aljouf for giving me permission to carry out the study and also thanks to all the physicians for their participation. Special thanks to Dr. Arif Al Hasan, Dr. Waseem Suleman and Dr. Altaf H. Bandy for reviewing the study.

Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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