

PHYSICAL ACTIVITY PROFILE OF THE PROFESSORS OF PADJADJARAN UNIVERSITY BASED ON GLOBAL PHYSICAL ACTIVITY QUESTIONNAIRE

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ABSTRAK

Aktivitas fisik merupakan salah satu faktor yang menentukan kesehatan dan kebugaran seseorang, termasuk pada Guru Besar Universitas Padjadjaran, agar dapat mendukung kinerja akademiknya. Global Physical Activity Questionnaire (GPAQ) dapat menggambarkan aktivitas fisik. Penelitian ini bertujuan untuk mengetahui profil aktivitas fisik pada Guru Besar Universitas Padjadjaran berdasarkan GPAQ. Profil aktivitas fisik yang dilihat dari variabel jenis kelamin, kelompok usia, pemenuhan rekomendasi, serta intensitas dengan menampilkan jumlah (*n*) dan persentase (%) didapatkan dari 141 Guru Besar Universitas Padjadjaran yang memenuhi kriteria inklusi. Hasil penelitian deskriptif-kuantitatif menunjukkan bahwa 109 responden adalah pria dan 32 responden adalah wanita. Berdasarkan kategori kelompok usia WHO, 35 responden berada di usia pertengahan, 78 responden lanjut usia, dan 28 responden lanjut usia tua. Lima puluh delapan orang (41,1%) tidak memenuhi rekomendasi minimal aktivitas fisik, 114 orang (80,8%) melakukan aktivitas sedang, dan 29 orang (20,6%) melakukan aktivitas berat. Dengan demikian, dapat disimpulkan bahwa Guru Besar Universitas Padjadjaran yang didominasi oleh pria lanjut usia tidak memenuhi rekomendasi minimal aktivitas fisik meskipun banyak yang melakukan aktivitas sedang dalam kesehariannya. (FMI 2017;53:283-286)

Kata kunci: Aktivitas fisik; GPAQ; guru besar

ABSTRACT

Physical activity is one of the factors which determines one's health and fitness, including the professors of Padjadjaran University, as it might support their academic performances. Global Physical Activity Questionnaire (GPAQ) may describe physical activity. The purpose of this study was to describe physical activity profile of the professors of Padjadjaran University based on GPAQ. Physical activity profile which was classified as gender, age group, recommendation fulfillment, and intensity variables by presenting quantity (*n*) and percentage (%) was obtained from 141 professors who fulfilled the inclusion criteria. The result of this descriptive-quantitative study showed that 109 of the respondents were male, and 32 were female. According to WHO age group categories, 35 respondents were middle aged, 78 were elderly, and 28 were late elderly. Fifty-eight respondents (41.1%) did not fulfill minimal recommendation for physical activity, 114 respondents (80.8%) underwent moderate activity and 29 respondents (20.6%) underwent vigorous activity. Therefore, it can be concluded that professors of Padjadjaran University, which were mostly middle-aged men, did not fulfill minimal recommendation for physical activities, although many of them underwent moderate activities in their daily routines. (FMI 2017;53:283-286)

Keywords: GPAQ; physical activities; professors

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INTRODUCTION

Professor is the highest functional position for a lecturer who still teaches in a university. A professor has workload of 40 hours per week with the obligation to implement the Tri Dharma Perguruan Tinggi, write books, produce scientific works, and disseminate ideas to enlighten the community (Law No. 14 of 2005). To be able to fulfill his obligations, a professor must be healthy and fit.

One's health and fitness will be reflected in the ability to do physical activities (Miles 2007). Physical activity is a

gesture produced by skeletal muscle. Physical activities, based on the type, can be categorized into working, walking, and leisure time. Physical activities can also be categorized by its intensity, i.e.: low, moderate, and high (Miles 2007). A professor has a tendency of low physical activities and it may increase the risk of degenerative diseases, metabolic syndrome, and mortality (Kokkinos 2012, Setiawan et al 2016).

WHO has developed GPAQ (Kappa 0.67-0.73; Spearman rho 0.67-0.81) which is used to assess physical activities in population (WHO 2012, Armstrong & Bull 2006, Bull et al 2009). This study aimed to determine

physical activity profile of the professors of Padjadjaran University based on GPAQ.

MATERIALS AND METHODS

This study was conducted in November 2016. Upon the approval of Medical Research Ethics Committee of Faculty of Medicine, Padjadjaran University, Bandung No. 1023/UN6.C1.3.2/KEPK/PN/2016, the study was conducted using descriptive-quantitative method and cross sectional design. In the design of this study, the data obtained were not from the primary source. The data were observed to identify the physical activity profile of the professors of Padjadjaran University based on GPAQ.

The population of this study was all professors of Padjadjaran University. This study used secondary data obtained from examination data of Padjadjaran University professors. The determination of sample size was calculated using categorical descriptive formula. The sample size was set with the value of type I error of 5%. The value of variable category proportion was 50% because there was no previous study, and the precision value was 10%. The sample size of each variable was the same because of the same of category proportion value.

Sample selection was done by using consecutive sampling technique which was taking all subjects encountered in the population according to inclusion and exclusion criteria that at least met the minimum number of study subjects (Dahlan 2013). The inclusion criteria in this study were subjects enrolled as professors at Padjadjaran University, not retired professors, and fulfilled GPAQ questionnaire.

Physical activity assessment was conducted using GPAQ consisting of 16 questions about physical activities (P1-P16) which were divided into 3 domains: working activities (high intensity: P1-P3, moderate intensity: P4-P6), walking activities (P7-P9), and leisure activities (high intensity: P10-P12, moderate intensity: P13-P15), plus sitting (P16) (WHO 2012). In addition to the questionnaire, GPAQ includes show cards to help respondents to know which activity is meant in each questionnaire. The show cards contain pictures and examples of some types of moderate and high physical activities for working and leisure activities (WHO 2012).

This questionnaire was used to assess the physical activities performed based on the total combination of metabolic equivalent (MET) minutes within 1 week. Working and leisure activities were rated as 4 MET for

moderate intensity and 8 MET for high intensity, while walking activities were valued at 4 MET (WHO 2012). Physical activities were then categorized as not meeting the minimum recommendations made by WHO if MET-minutes within 1 week was <600 MET (WHO 2012). Data obtained were then processed using Microsoft Excel 2013. After being analyzed, the descriptive information, such as the number and percentage of the table, was obtained.

RESULTS

A total of 141 male and female professors of Padjadjaran University with age range of 45-85 years old which were then grouped according to WHO to middle age (45-59 years old), elderly (60-74 years old), and late elderly (75-90 year) has been selected as samples (Table 1).

In this study, male respondents were 109 and female were 32. Based on age groups, 35 respondents were in middle age, 78 elderly, and 28 late elderly. The majority of respondents were male elderly of 56 persons (39.7%).

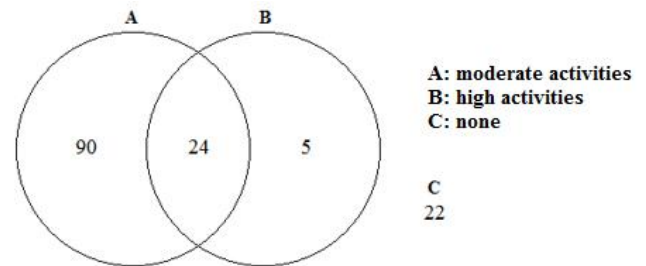


Fig. 1. Number of respondents (n) in physical activity intensity

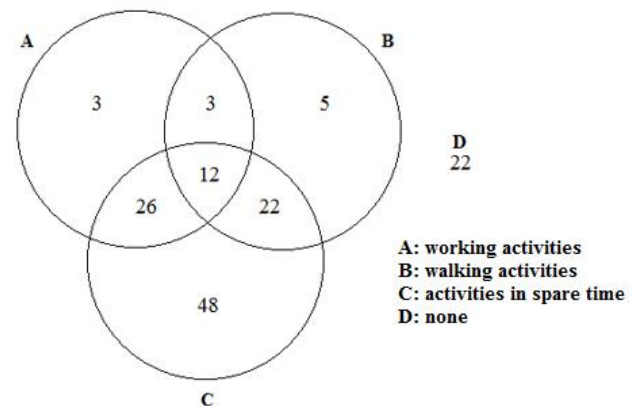


Fig. 2. Number of respondents (n) in physical activity domain

Table 1. General characteristics of the respondents

Variables	Age Groups			Total
	Middle age (45–59 years old)	Elderly (60–74 years old)	Late Elderly (75–90 years old)	
Sex				
Male	29	56	24	109
Female	6	22	4	32
Total	35	78	28	141

Table 2. Percentage (%) and number (n) of respondents in WHO recommendation fulfillment, physical activity intensity, and domain based on age groups

Variables	Age Groups			Total
	Middle Age	Elderly	Late Elderly	
WHO recommendation fulfillment				
Fulfill (≥ 600 MET)	21(14.9%)	47(33.3%)	15(10.7%)	83(58.9%)
Not fulfill (<600 MET)	14(9.9%)	31(22.0%)	13(9.2%)	58(41.1%)
Physical activity intensity				
Moderate activities	30(21.3%)	64(45.4%)	20(14.2%)	114(80.9%)
High activities	8(5.7%)	17(12.1%)	4(2.8%)	29(20.6%)
Domain of physical activity				
Working activities	10(7.1%)	27(19.1%)	7(5.0%)	44(31.2%)
Walking activities	7(5.0%)	23(16.3%)	12(8.5%)	42(29.8%)
Activities in spare time	31(21.9%)	61(43.3%)	16(11.4%)	108(76.6%)

Data obtained showed that the physical activities of 58 persons (41.1%) did not meet WHO minimum recommendation. Based on the intensity of physical activities, 114 out of 141 persons (80.9%) performed moderate activities and 29 out of 141 respondents (20.6%) performed high activities. Whereas, based on the domain of physical activities, 44 out of 141 respondents (31.2%) performed working activities, 42 out of 141 persons (29.8%) made walking activities, and 108 out of 141 respondents (76.6%) performed activities in spare time.

DISCUSSION

Data showed that 58 (41.1%) professors of Padjadjaran University did not meet the minimum physical activities recommended by WHO. Such phenomenon of the lack of physical activities of Padjadjaran University professors needs to be taken into account because of the risk of degenerative diseases and the increase of mortality rate (Kokkinos 2012). Physical activity becomes one of the prevention of non-communicable diseases, such as the risk of obesity, type 2 diabetes mellitus, and other metabolic syndromes. In addition, physical activity is also useful to prevent cardiovascular disease, cancer, dementia, Alzheimer's, strengthen muscles and bones, improve mental health, and reduce mortality (Kohl et al

2012, Miles 2007, Vogel et al 2009, Warburton et al 2006).

The factors that caused Padjadjaran University professors did not meet the recommendations of physical activities were age, BMI, and health condition. The higher the person's age, the higher the risk of physical inactivity (Miles 2007, Kokkinos 2012, Pelclová 2015). Body Mass Index (BMI) can also affect physical activity. A person with a high BMI or above the normal limit (BMI=23) tends to have certain obstacles in physical activity (Miles 2007). Based on physical activity intensity, 114 out of 141 persons (80.9%) performed moderate activities. Whereas, 29 out of 141 persons (20.6%) performed heavy activities. This happened because some people did not only do moderate activities but also high intensity activities, or vice versa, or even did not do both, as shown in Fig. 1.

It was obvious that more moderate activities were done than heavy activities. This was due to factors affecting physical activities as described above, so that Padjadjaran University professor tended to prefer or do more moderate activities. In addition, the job as a professor is generally classified as moderate activity. Therefore, professors of Padjadjaran University who did heavy acti-

vities generally did not do working activities but leisure time activities.

Similar with the intensity of physical activities, some people did not only do one or more domains, some even did not do all the three, as shown in Fig. 2. If each domain of physical activities was compared, it was identified that leisure time activities are the most widely performed by 108 out of 141 persons (76.6%). It was possible to occur because when Padjadjaran University professors had free time, generally, they did physical activities although not all of them met the minimum recommendations of WHO.

In contrast to leisure time activities, working activities were only performed by 44 out of 141 persons (31.2%) and walking activities were only done by 42 out of 141 persons (29.8%). Working as a professor allows the lack of physical activities performed during the work. Whereas, the minimum walking activities was likely caused by the majority of Padjadjaran University professors to use vehicles, such as cars or motorcycles, to go home and go to various places, whereas the walking activities defined by GPAQ is by walking or cycling at least 10 minutes (WHO 2012).

CONCLUSION

In general, most Padjadjaran University professors, dominated by elderly men (60-74 years), did not meet the minimum recommendations of physical activities, although many of them did moderate activities in their daily lives.

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