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Physical Activity Level of White Collar Office Workers in Penang, Malaysia

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Abstract

Background
Though the health benefits of Physical Activity (PA) have been proven, the level of physical inactivity has been increasing gradually in the adult population, especially office workers who spend most of their working time in sitting in a chair. But there is insufficient data regarding the physical activity level of office workers in Penang, Malaysia.
Objectives
The objective of this study is to determine the physical activity level of the white-collar office workers in Penang, Malaysia.
Methodology
A cross-sectional study was conducted with 121 office workers from various companies in Penang aged 18 to 65 who were recruited by the convenience sampling method. The physical activity level data were measured using the International Physical Activity Questionnaire (IPAQ)-short form in English.
Results
The majority of the office workers (66.1%) was in the category of Moderate Physical Activity Level based on the Guidelines for Data Processing and Analysis of the International Physical Activity Questionnaire (IPAQ) –Short Form. In this study, a higher percentage of female office workers were in the moderate physical activity category, whereas male office workers reported a higher percentage of high physical activity level.
Conclusion
The majority of the office workers reported moderate amount of physical activity in Penang, Malaysia.

Keywords

Physical Activity, IPAQ, Office Workers

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Introduction

The health benefits of physical activity (PA) have been well proven(Warburton & Bredin, 2017). The regular PA has shown to prevent the development of many chronic diseases and prevent premature death(Warburton & Bredin, 2017; Warburton, Nicol, & Bredin, 2006). Conversely, physical inactivity and sedentary behavior have shown to contribute to the problem of chronic diseases(González, Fuentes, & Márquez, 2017). Therefore, regular physical activity has been recommended for a healthy life by international guidelines(World Health Organization, 2010).

Even though the health benefits of physical activity has been known, the physical inactivity has been a major problem worldwide and it is one of the major risk factors for the development of non-communicable diseases("WHO | Physical activity," n.d.). Globally, one-quarter of the adults are insufficiently physically active("WHO | Physical activity," n.d.). In Malaysia, more than one-third of the males and nearly half of the females were insufficiently active as per 2016 data("WHO | Malaysia," n.d.). Hence it is important to promote physical activity in Malaysia.

There are various factors associated with physical activity participation and it varies with country and occupational setting(Atkinson, Lowe, & Moore, 2016; "WHO | Physical Inactivity," n.d.). In Malaysia, the occupation has been identified as one of the significant factors associated with physical activity participation(Cheah & Poh, 2014; Lian, Bonn, Han, Choo, & Piau, 2016). Hence it is important to check the physical activity level of people specifically based on their occupation so that specific strategies can be planned based on their occupation to promote physical activity. Among the working population, white-collar office workers spend most of their time sitting and they are sedentary during the job(Hopkin & Sarkar, 2016). Research studies from developed countries like Poland have documented the low levels of physical activity among office workers and it has become a major issue of office workers(Biernat, Tomaszewski, & Milde, 2010).

There is limited research about the physical activity level of office workers in Malaysia. As office workers are one of the major workforces in Malaysia, checking their physical activity level is essential for the promotion of good health. Hence, the objective of this study was to identify the Physical activity level of the white-collar office workers from Penang, Malaysia.

Methodology

A cross-sectional survey was conducted among full-time white-collar office workers with the age range of 18 to 65 years old who were recruited by convenience sampling method from various companies in Penang, Malaysia from 7th March to 1st April 2016.

The physical activity level was assessed by the International Physical Activity Questionnaire(IPAQ) – Short form in English(Booth, 2000; "Downloadable questionnaires - International Physical Activity Questionnaire," n.d.). The ethical clearance was obtained from INTI International University Research Ethics Committee. Prior to data collection, a detailed explanation about the study was given to participants and informed consents were obtained from all participants.

Based on the IPAQ standard scoring criteria, the study sample was characterized into three levels of physical activity: "high" "moderate" and "low" levels of physical activity(“IPAQ scoring protocol - International Physical Activity Questionnaire,” n.d.). The descriptive analysis of the data was calculated using SPSS version 21.

Results

A total of 150 white-collar office workers was approached and 121 participants between the age of 18 and 64 (72 males and 49 females) responded with an overall response rate of 80.7%. This study found out that the overall 12.4%, 66.1% and 21.5% of participants reported high, moderate and low levels physical activity respectively. 62.5% of respondents were Chinese, 21.5% respondents were Malay, 15.7% respondents were Indians and Other (0.8%) race as well. Most of the respondents were in the age group of 35-44 years old (42.1%) and married (77.7%). 90.9% of the respondents used the car as their transportation to work as compared to those who walk or cycle to their workplace. The category wise data are attached in the charts below.

Chart 1: Physical Activity Level as measured by IPAQ in percentage

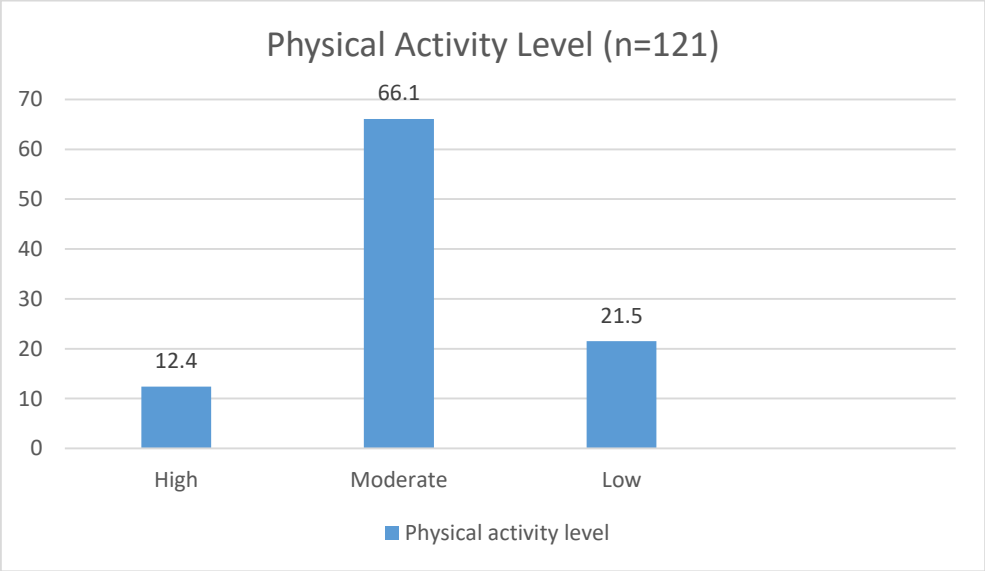
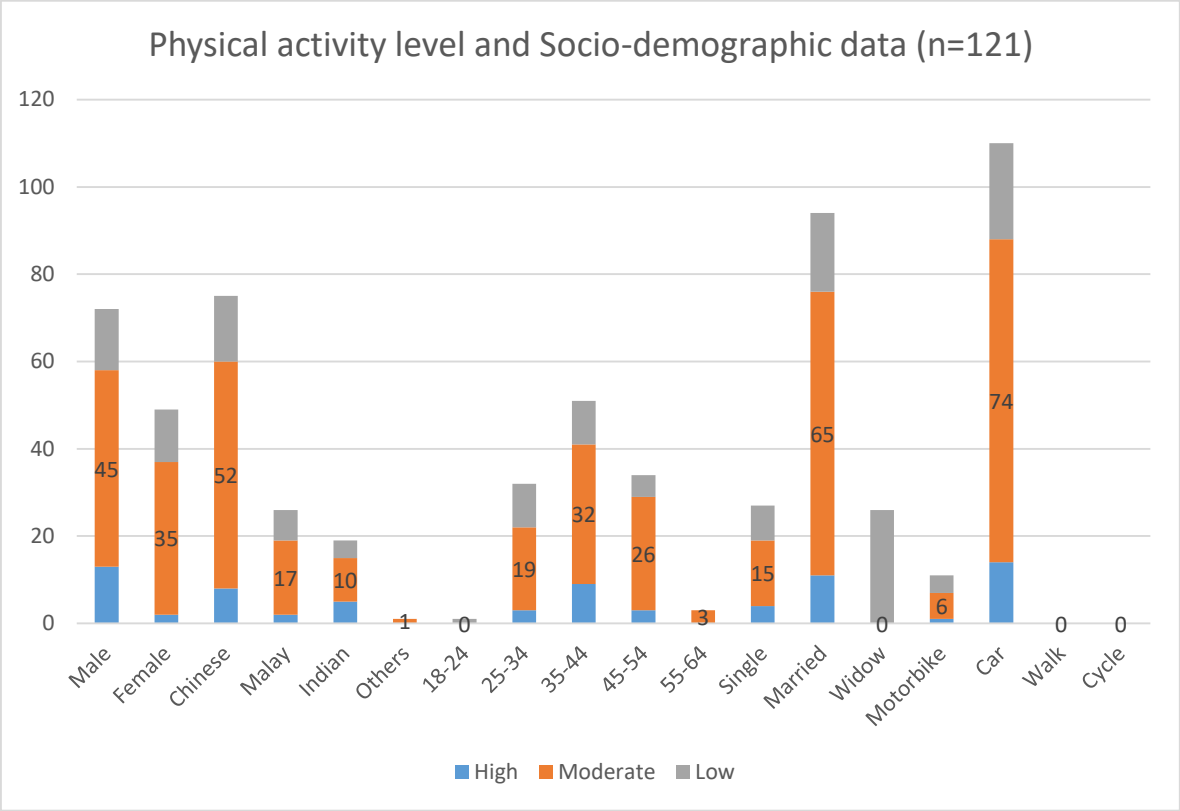


Chart 2: Physical Activity Level and Sociodemographic Data



Discussions

The objective of this study was to determine the physical activity level of the white-collar office workers in Penang, Malaysia. Based on the result, most of the office workers (66.1%) falls under the category of Moderate Physical Activity Level which means 66.1% of the respondents with total physical activity of at least 600 MET-minutes/week. This shows that the white-collar office workers are active physically, which is similar to reported results among Malaysian student populations (Balaraman, Ramalingam, Kantharuban, & Surendran, 2017). A study of white-collar office workers from Poland has reported the moderate-intensity leisure-time physical activity of 42% in women and 53% in men, which is lower than the 62.5% in men and 71.4% in women reported in this study(Nawrocka, Mynarski, Cholewa, & Garbaciak, 2017). The physical activity level reported in this study was higher than the percentage of physically active general Malaysian adults (56.52%)(Cheah & Poh, 2014). However, it is matching with the percentage of physically active Malaysian health care workers (67.2%)(Jamil et al., 2016).

The majority of the respondents in this study drove a car to work, which is one of the factors limiting their physical activity. Males were reported to be more active than women(Nawrocka et al., 2017). Whereas a high percentage (71.4%) of female office workers was in the category of moderate physical activity level compared to male workers (62.5%) in this study. However, male office workers' reported a high physical activity level (18%) compared to female office workers (4.1%).

The limitations like the subjective report of physical activity and small sample size with a convenience sampling method might have affected the results of this study.

Conclusion

This study results indicated that the majority of the white-collar office workers from Penang are engaged in a moderate amount of physical activity. The importance of physical activity should be emphasized to constantly ensure that the communities are leading a healthy lifestyle.

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