

ORIGINAL SCIENTIFIC PAPER

Patterns of Physical Activity of Libyan Undergraduate Students at the University of Tripoli Using International Physical Activity Questionnaire (IPAQ)

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Abstract

This study aims to evaluate Physical Activity (PA) among undergraduate students. Physical activity is associated with many physical and psychological health benefits, both in the prevention of ill, health and the management of existing health conditions and a strong relationship between being physically active and good health. The researchers used the descriptive approach to study 515 undergraduate students from the University of Tripoli in Libya. The International Physical Activity Questionnaire (IPAQ) short version was used to identify the physical activity levels among the participants. Higher prevalence of physical activity was found in moderate intensity which reached 18.49 minutes per day during the average of 3.69 days, while the High intensity PA category was only 9.38 minutes per day during the average of 1.54 days per week, participants were reached 28.02 minutes as an average time of walking with the average of 4.05 days of the week. The results of the study, indicated that all the students of the sample achieved moderate PA rates (18.49 minutes per day), which was higher than the rate of high intensity physical activity that was only (9.38minutes per day). Thus these results indicate that the sample did not reach the WHO recommendations toward physical activity and health even when combining the high moderate and high physical activity levels that achieved during the week.

Key words: *physically active, IPAQ, walking, moderate, high*

Introduction

Physical activity is defined as any physical movement performed by the skeletal muscles that requires the expenditure a quantity of energy that exceeds the energy spent in rest (Caspersen, Powell, & Christenson, 1985). Defined this definition and was subsequently widely adopted by research and at an international level as a Definition of physical activity (World Health Organization, 2004). Suggests that all activities of daily life such as walking and climbing, as well as domestic chores, gardening, or sports activities, are summarized as “physical activity”. The individual for the purpose of employment, recreation, treatment or prevention, “Physical activity is associated with many health benefits, both physical and psychological, in the prevention of ill health or in dealing with an unhealthy situation (Johnson, Tilgren, & Hagstromer, 2009).

This relationship between physical activity and health appears to be somewhat correlated with the amount of physical activity that a person is doing. The high intensity of physical activity is more important to reduce the risk of cardiovascular disease (Geffken, Cushman, Sakkinen, & Tracy, 2001). As well as to treat various other diseases, Such as osteoporosis (Warburton et al., 2006). Physical activity is therefore an essential element for the 18-65 age group (Haskell et al., 2013).

WHO reports that high levels of physical inactivity are observed worldwide, both in high-income countries, middle-income and low-income countries, and the increasing obesity rates in the Middle East Including Arab countries, are at high risk, and this is reflected in the incidence of related diseases, with the degree of overweight and obesity from 25% to 82% in the Middle East (Musaiger, 2004).



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To reduce the risk of non-communicable diseases and increase the physical activity level the World Health Organization recommended that adults aged between 18-64 should performing at least 150 minutes moderate physical activity per week or 75 minutes high intensity physical activity weekly (World Health Organization, 2013; Strong et al., 2005) conducted an evidence based study on effect of physical activities for school-age youth.

Students' behavior during work indicates an increase in physical inactivity. The students come to the university to ride a car and then moves from one study room to another, in the same building, or sitting in one of the halls. In addition, every college in the university has a car park that deprives the student one of the steps to walk they were going to do in the absence of this garage, therefore we have seen that it is important to stand on rates of physical activity at the university students because of these rates of importance to the public health of the students (Tremblay, Colley, Saunders, Healy, & Owen, 2010).

This study contributes to the identification of types of physical activity practiced by the undergraduate students in the university.

Methods

The researcher used the descriptive approach to achieve the study objectives. Five hundred and fifteen (515) undergraduate male students were selected from six faculties of University of Tripoli for measuring their physical activity patterns aged between 18 to 25 years. The sample selected was only male students due to several social and cultural factors, as well as there was a lack of female staff members to assist the researcher to collect female physical activity data. The participants were distributed on Faculty of Economics and Political Science, Faculty of Languages,

Faculty of Literature, Faculty of Science, Faculty of Engineering, faculty of Pharmacy. Thirty-five respondents did not return their questionnaires and their data were not included in the analysis.

The International Physical Activity Questionnaire (IPAQ, 2000) short version was used to identify the physical activity levels among the participants. The IPAQ was distributed during (2016-2017) semester. The IPAQ publically available at www.ipaq.ki.se and it does not need a permission to use it. This questionnaire focusing on the time spent doing High Intensity physical activity and the time spent performing Moderate Intensity physical activity during the day, and also IPAQ collecting the data about the spent for Walking more than 10 minutes during the day, and also the number of days for doing each category of previous physical activity patterns.

The researchers verified the validity and reliability of the questionnaire by applying it two times with thirty students from the research society where the lowest score was 0.703 and the highest score was 0.885. In general, there is statistical significance in all parts of the questionnaire.

The IPAQ measurement tool is based on 4 general items including 7 questions to identify the time spent in a high-intensity, moderate-intensity effort, the time spent walking during the past seven days, the time spent sitting during the past seven days.

Moderate activity in IPAQ is defined as those that result in a moderate increase in respiratory rate, heart rate and sweating for at least 10 minutes, and severe physical activity

According to IPAQ, the activity accompanied by a strong increase in heart rate and a significant increase in sweating during the exercise of this intensity of activity for ten minutes.

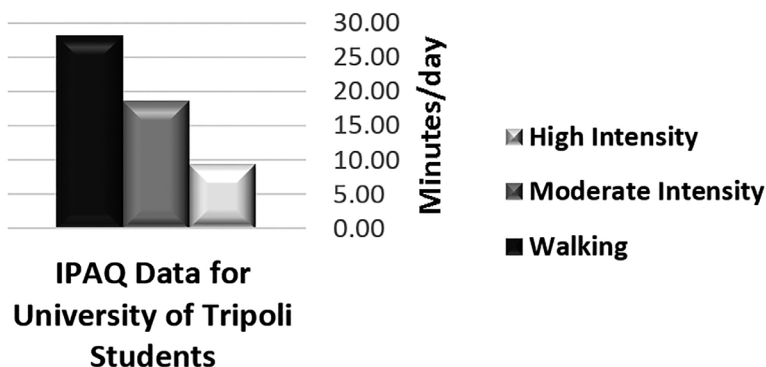


Figure 1. Physical Activity per Minute

Results

Higher prevalence of actives was found in moderate intensity PA which is reached 18.49 minutes per day (Figure 1) which is equivalent to 66.33% of physical activity (with the exception of walking) during the average of 3.69 days per week

(Figure 2), while the high intensity pa category was only 9.38 minutes per day which equivalent to 33.67% of physical activity during the average of 1.54 days per week, participants were reached 28.02 minutes as an average time of walking with the average of 4.05 days of the week.

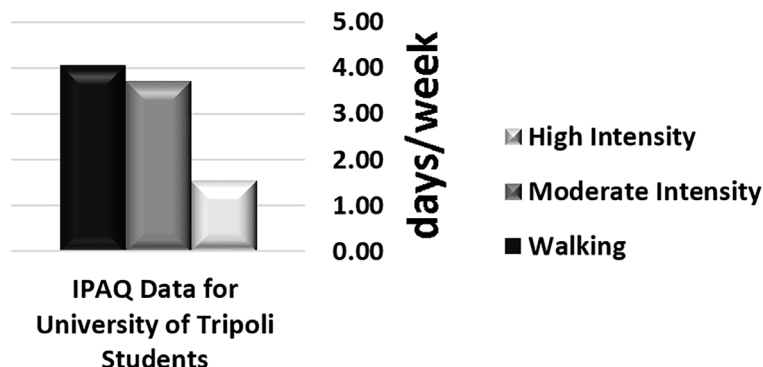


Figure 2. Physical Activity per Day

Discussion

This study aims to identify the patterns of physical activity with the students at University of Tripoli, through the use of the international survey of physical activity, as well as to identify the walking rate achieved during the week.

In Arabic world, the IPAQ instrument has been tested several researchers (Al-Hazzaa, 2006). The IPAQ subjected to a validity and reliability study conceded in 14 centers in 12 countries in the year 2000 (Craig et al., 2003).

The International Physical Activity Questionnaire (IPAQ) was built in 1998, many tests were conducted to achieve a high level of honesty and consistency. After conducting several studies, on this scale, the results showed that it has an acceptable degree of validity to be used in many places and in different languages. The results of these tests and studies also showed the possibility of using this tool in national projects and surveys that seek to identify the rates of physical activity in the population (IPAQ, 2014).

IPAQ Short version is a tool primarily designed to observe physical activity among adults in the age group (15-69 years) and provides detailed information for the purposes of evaluation. The short Arabic version of this questionnaire was used in a group of Arab countries (Awadalla et al., 2014). The researchers were informed of studies using the Arabic version in (Saudi Arabia, Egypt, and Sudan).

In May 2004, the World Health Assembly (WHA) issued Resolution 7517 on the Global Strategy on Dietary System, Physical Activity and Health. The Assembly recommended that Member States develop a national plan of action and policies to promote physical activity rates (World Health organization, 2010). In 2008, the European Union's Physical Activity Guidelines, which proposed a wide range of measures and measures for Member States to promote higher levels of physical activity, were published. These guidelines recommended that the EU and its member states achieve at least 60 minutes of moderate daily physical activity for children and young people, As well as a minimum of 30 minutes of physical activity.

Most early studies as well as current work focus on physical activity and its role in health and fitness (Kim et al., 2013) showed the benefits of regular physical activity for a healthy life.

The results of the study, as shown in Figure 1 and Figure 2, indicated that all the students of the sample of the selected faculties achieved moderate PA rates (18.49 minutes per day), which was higher than the rate of high intensity physical activity that was only (9.38minutes per day). These findings are compatible with the findings of (El-Gilany, Badawi, El-Khawaga, & Awadalla, 2011; Awadalla et al., 2014).As these studies found that moderate rates of physical activity was higher than the high intensity level, thus these results indicate that the sample did not reach the (WHO) recommendations toward physical activity and health even when combining the high moderate and high physical activity levels that achieved during the week. It was not clear the contributing factor for such below WHO guidelines but it could be attributed to increasing in sedentary life style, impact of urban design for land use and transport reduced physical activity. In addition, the subject's could not meet the WHO standard due to school stress and schedule that may have prevented them from physical activities.

Interestingly the results indicated that the sample spent 28.02 minutes for walking which was not compatible with their physical activity rates. The walking could be affected by readily available transport system in most study area. The result also

could serve as pro-active steps to reverse the decline in physical activity levels in recent decades brought about by numerous factors such as easily access to daily necessities of movement. Similarly, study conducted to determine rate of physical activity amongst university students in one of the European report is mention that participation in leisure sport and physical activity has remained relatively low in Romania, but still levels of obesity among Romanians aged 18 and older are among the lowest of all their EU counterparts (Eurostat, 2011). Despite increase awareness of the benefits of physical activities and its association with lower health risks and relationship between sedentary behaviors and higher health risks have been consistently identified but many students attributed lack of physical activities due to time constrain as revealed by study conducted among university student in the UK, this also agreed with this study which identified below WHO guideline on physical activity. Also revealed that cost is also institutional barriers for physical activity. Hence, suggested that universities must implement strategies to reduce cost, increase accessibility and improve students' time management capacity to include physical activity in their schedules. In another study among university student in Portugal, the level of student's physical activity was accessed if meets the public health recommendations for physical activity and went further to accessed effect of gender on daily physical activity (Clemente, Nikolaidis, Martins, & Mendes, 2016). Conversely, to this study, the results reveal that the amount of physical activity that Portuguese university students perform complies with the recommendation of moderate-to-vigorous PA for most of the week (5 days) (Clemente et al., 2016).Furthermore, Reported the gender based data of physical inactivity and the values revealed inactivity patterns in 41% of the men and 65% of the women students. In this study the general student's physical activity was focused but previous compared between genders, like the case of (Bauman et al., 2009; Baptista et al., 2012). In both studies, it is revealed that male students walked statistically more steps (23.92%) and spent more time in light (7.74%), moderate (26.61%) and vigorous (243.64%) activities than female students.

The study found that the sample could not reach the World Health Organization recommendation levels of physical activity.

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Conflict of Interest

The authors declare that there are no conflicts of interest.

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