SAMIR ELHADI AL-REFAI NEAR EAST UNIVERSITY HEALTH SCI. INS. PHD THESIS NICOSIA -2019

TURKISH REPUBLIC OF NORTH CYPRUS
NEAR EAST UNIVERSITY
HEALTH SCIENCES INSTITUTE

IDENTIFY PHYSICAL ACTIVITY LEVELS AND EXAMINE THE BARRIERS AND MOTIVATIONS AMONG MALES UNDERGRADUATE STUDENTS IN THE UNIVERSITY OF TRIPOLI TO CONTRIBUTE TO ENHANCE THE HEALTH

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DOCTORAL THESIS

PHYSICAL EDUCATION AND SPORT
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The directorate of the institute of health sciences

This study has been accepted by jury of Physical Education and Sports teaching program as PhD

Thesis committee:

(Signature)

Chair of committee: Prof. Dr. Caner Acikada

EUL

(Signature)

Supervisor: Prof. Dr. Cevdet Tinazci

NEU

(Signature)

Member: Prof. Dr. Sahin Ahmedov

CSU

(Signature)

Member: Yard. Doc. Dr. Osman Emiroglu

NEU

(Signature)

Member: Doc. Dr. Hasan Ulas Yavus

NEU

Approval:

According to the relevant articles of the Near East University post graduate study – education Examinations Regulations, this thesis has been approved and accepted by the above – mentioned members of the jury and the decision of Institute Board of Directors.

(Signature)

STATEMENT (DECLARATION)

Hereby I declare that this thesis study is my own study, I had no unethical behavior in all stages from planning of the thesis until writing thereof, I obtained all the information in this thesis in academic and ethical rules, I provided reference to all of the information and comments which could not be obtained by this thesis study and took these references into the reference list and had no behavior of breeching patent rights and copyright infringement during the study and writing of this thesis.

Samir Elhadi Alrefai

Signature

DEDICATION

To my father, to my mother, to my wife Alham, to all my brothers and sisters.

To all my children Sahab, Samaa and my little twins Sarab and Saraa.

To all my Friends.

To all my colleagues in the Faculty of Physical Education and Sports Science in Libya.

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First, I would like to thank **God** who gave me the confidence to be able to finish my thesis.

I am grateful to my supervisor, Professor **Cevdet Tinazci**, for his patience, thank you for teaching me everything to understand all the details of writing the thesis, you were more than an academic supervisor, but rather you were as brother and friend, thank you so much for your support, care and help.

A special thanks to my **Father** and my **Mother** who were pray to me to be a successful person, thank you so much.

I am grateful to my **wife** for her support I would like to say I am happy that you are my children's mother, thank you so much for your support**.**

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ÖZET

Samir Elhadi Alrefal. Tripoli Üniversitesindeki Erkek Öğrencilerin Fiziksel Aktivite Düzeylerinin Belirlenmesi ve Fiziksel Aktivitelerinin Önündeki Bariyer ve Motivasyon Özelliklerinin Sağlık Düzeylerine Etkisi. Yakın Doğu Üniversitesi, Sağlık Bilimleri Enstitüsü, Beden Eğitimi ve Spor Anabilim Dalı, Doktora Tezi, Lefkoşa 2018.

Bu çalışmanın amacı, Tripoli Üniversitesindeki öğrencilerin fiziksel aktivite motivasyonlarını bulmaktır. Bunu yaparken uluslararası fiziksel aktivite anketi kullanıldı. Diğer amaç ise öğrencilerin yürüme hızını öğrenmektir. Ayrıca deneklerin ne tür aktiviteleri, ne yoğunlukla yaptıklarını bulmak ve 18-22 yaş arasındaki erkek öğrencilerin fiziksel aktivite (FA) bariyer ve motivasyonlarını belirlemektir. Bu çalışmada 18-22 yaşlarındaki öğrencileri araştırmak için betimsel metod kullanılmıştır. FA'yi ölçmek için uluslararası fiziksel aktivite anketinin kısa sürümü kullanıldı. Ayrıca anketler kullanılarak bariyer ve motivasyonlar değerlendirildi. Bulgular SPSS istatistik paket (IBM sürüm 20) ve egzersiz kuralları anketi (BREQ 3) kullanılarak analiz edildi.

Bu çalışmada orta şiddetli fizksel aktivite düzeyi daha yüksek bulundu (18.49 dakika gün, 3.69 gün/hafta). Bunun yanında yüksek şiddetli fiziksel aktivite düzeyi ise sadece 9.38 dk gün 1.54 gün/hafta olarak bulunmuştur. Ortalama yürüyüş ise 28.02 dk 4.05 gün/hafta olarak bulunmuştur.

Libyalı öğrencilerin fiziksel aktivite seviyeleri Dünya sağlık örgütünün minimum standartlarına ulaşamamıştır. Ayrıca ana engelin zaman sıkıntısı olduğu bulunmuştur. Motive edici faktörler ise arkadaş ve aile etkisi ve fiziksel aktivitenin sağlık için öneminin bilinmesidir.

ABSTRACT

SAMIR ELHADI ALREFAI. Identify Physical Activity Levels and Examine the Barriers And Motivations Among Males Undergraduate Students In The University of Tripoli to Contribute to Enhance the Health. Near East University , Institute of Health Sciences, School of Physical Education and Sports, PhD Thesis, Nicosia, 2018.

This study aimed to Identify the patterns of physical activity among undergraduate students at the University of Tripoli using the international questionnaire of activity Physical and Learn about the walking rate performed by undergraduate students at the University of Tripoli. Identify the types and intensity of activities practiced by the sample. also this study aimed to examine barriers and motivations to physical activity among males the undergraduate students in the University of Tripoli aged 18-22.

The study design used the descriptive approach to study 515 undergraduate students, aged between 18-22 years from the University of Tripoli in Libya. The instrument used to measure the PA was the International Physical Activity Questionnaire (IPAQ) using its short version, furthermore, barriers and motivations were assessed using questioners and the data were analyzed with SPSS statistical package (IBM version 20) and Exercise regulations questionnaire (BREQ 3) respectively.

A 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. Thus, the level of physical activity among Libyan students didn't reach to the minimum standards guidelines of WHO within the aged group. Furthermore, the results found that the chief barrier is time constraint in relation to other behavioral factors. Among the motivational

factors; influence of friends and family stands out, this followed by the knowing the importance of physical activities to good health.

Conclusively, the physical activity level among students was found to be low and below WHO guidelines, lifestyle, and behavior play important role barriers and motivations.

Keywords: Physical activity level, barriers, motivations, exercise.

1. INTRODUCTION

World health organization classified physical inactivity as the fourth cause of global mortality (WHO, 2010) and there is a universal consensus that physical inactivity leads to poor health and the prevalence of several diseases for instance the coronary heart disease by 6%, colon cancer by 10%, breast cancer by 10%, and type 2 diabetes by 7% additionally 5.3 million of the 57 million deaths that occurred worldwide in 2008 (Lee et al, 2012).

However, being physically active regularly could reduce the risk of cardiovascular disease, diabetes and high blood pressure (Al-Nuaim et al., 2012).

Evidence shows that sedentary behaviour is inversely associated with physical and psychological wellbeing (Tremblay et al, 2010; Chinapaw et al., 2011).

Physical activity is defined as any physical movements performed by structural muscles that require spending more energy than the amount of energy consumed in the rest. (Caspersen et. al.,1985) have identified this definition and was adopted widely later through research and at international level as (Definition of physical activity World Health 2002, Moy 2005) suggests that all the activities of daily life such as walking and climbing as well as housework or gardening or sports activities, be summarized as "physical activity."

In addition, a positive relationship was found between being active and psychological wellbeing (Galloway, 2006).

The level of obesity has increased threefold during the last two decades in devolving countries includes Arabic countries those adopted a Western lifestyle which has seen decreased levels of physical activity (Musaiger et al., 2011a).

Changes in socio-economic status, availability of household electrical equipment, cars and also the technical sophistication resulted changes in the pattern of lifestyle in Arabic countries which meant that levels of physical activity have decreased sharply (Youssef et al, 2010; Musaiger et al., 2011). (Elmehdawi & Albarsha 2012) indicated that approximately 64% of Libyan adults are either

overweight or obese, also the obesity progressively increasing by the age and twofold more prevalent among women than men.

A survey carried out by World Health Organization East Mediterranean Regional Office in Tripoli in 2010 reported an alarmingly high prevalence of non-communicable diseases “Diabetes (16.4%), Hypertension (40.6%), and overweight/obesity (63.5%)”.

Any physical activity is bodily movement lead by structural muscles that require the use of energy that goes beyond the energy consumed on a regular rest. Physical inactivity is ranked fourth a risk factor contributing to global deaths and an alarming level in both developed and developing countries (Moy 2005).

As a lack of physical activity are a factor contributing to the prevalence of non-communicable diseases (Elmehdawi & Albarsha., 2012), as well as (STEP 2009) showed that less than half of the Libyan participants (43.9%) who said they were conducting "a low level" normal activity, which is equivalent to 10 minutes or less per day.

There are a handful of scientific research that examined patterns of physical activity between Arabic and covering the Libyan population (Al Hazzaa et al, 2011 a).

Consequently, conducting researches among this population is needed to fill this gap of lack information and database with regard to the obesity and physical activity and also it is considered very important to conduct more research to find out physical activity and related variables in order to contribute to adopting healthy lifestyles.

Thus, policies and decisions makers urgently have to develop comprehensive strategy to improve prevalence culture of performing physical activity to contribute to prevention of the non-communicable diseases.

Although, there is no database about the physical activity levels and obesity among Libyan population, the reports published by the world health organization

and several studies conducted on some Arabic countries mentioned to the prevalence of obesity and the low level of physical activity in most Arab countries.

The use of technology and E-learning in social work education has increased in recent years. These innovations affect traditional education as they merge into ranks face-to-face. The result has been an increasing convergence between the network and traditional education and the emergence of a new educational model aimed at integrating elements of both approaches. This built-in learning has great potential for social work in providing educational opportunities that benefit from the best of what or online, can provide traditional education.

Obesity is growing at an alarming rate in the Eastern Mediterranean region, including Arab countries, such as related diseases. The degree of overweight and obesity ranges from 25% to 82% in the Eastern Mediterranean region. The behaviour of physical inactivity plus eating mostly responsible for such high rates of obesity (Musaiger, 2004), and there is an urgent need to review the cultural issues, social, environmental and education on this (Mokhtar *et al.*, 2001).

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 et. al., 2009). Similarly, Aires (2009) described the physical activity (PA) as the movement of all types, from the smallest to the most complex, which could be voluntary or part of daily life. (Haskell et. al., 2007) showed that physical activity and good health have a strong relationship.

The authors aptly described it to typically be involuntary or spontaneously, from small body movements, like a blink of an eye, to all muscle contractions associated with different postures of the body. 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 (Geffkenet. al., 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., 2007).

There has been a direct correlation between the volumes of activity on the one hand, and the rate of public health on the other, as the increase in the rate of physical fitness led to further improvement in health indicators (Warburton et. al., 2006). In contrast, physical inactivity is a contributing factor to increased levels of obesity (Health and Social care information Centre, UK, 2008). WHO reports that prevalence of obesity has reached epidemic levels worldwide in children, In adults and this leads to an increase in non-communicable diseases (Who 2004).

There has been several studies that examine the role of physical activities to qualities of life (Rejeski and Mihalko, 2001; Acree et. al., 2006; Bize et.al. 2007). In these studies, physical activity is linked with increased with quality of life. (Rejeski and Mihalko 2001) define the quality of cognitive life is conscious judgment of the individual's satisfaction, on the psychological side. In other views, such as aging research. The quality of life has been used, as a term umbrella to describe the number of results that doctors believe is important in the lives of older people.

Many studies took into consideration the global decline in physical activity and increasing obesity and other risks of disease (World Health Organization, 2010). Physical activity might reduce these risks, at the same time has built, maintain the health of bone and muscle, reduce obesity, reduces stress and anxiety, and promote well-being and healthy lifestyles.

The study society is Libyan undergraduate students at University of Tripoli in Libya, Students at University of Tripoli chose the sample of the study deliberately, and aged between 18 and 22 years of this study such as (Simona and others, 2015).

Similarly, in an extensive system review identified the role of physical activity in enhancing quality of life. The authors found the correlation between quality life and physical activities among older adults. Many scholars have done the major research on physical activity and quality of life. (Teware *et. al.*,2015) observed the role of physical activities amongst cancer survivors, the benefits of

physical activity for cardio respiratory fitness, muscular strength, endurance and flexibility have been well established in the cancer survivors as well as general population. Some studies suggested an association between physical activity and depression and body image.

Although no conclusions can be drawn on the relationship between physical activity, "the important cognitive and physical function, the perceived public health, the role of the job and their spirituality," some studies suggested an association (Thompson *et. al.,* 2010). In view of studies, the benefits of physical activities could be sum up to include health, mind, and body, social and emotional wellbeing.

In accordance with WHO, Physical inactivity has been identified as the fourth leading risk factor for global mortality, and this poses a great threat to global health sector in relation to non-communicable diseases.

There has been increasing of the level of physical idleness worldwide and across age group and subsequently account for large number of morbidity and mortality.

Thus, idleness is considered as the main factor behind 21% to 25% of colon and breast cancer cases, 27% of diabetes cases, and physical inactivity is the fourth most common cause of death worldwide(WHO., 2004). Of global deaths due to physical inactivity, in parallel with changes in the Western world, obesity levels have tripled over the past 20 years in developing countries, including a number of Arab countries that have adopted a Western lifestyle based on low levels of physical activity and increased consumption of food (Musaigeret. al., 2011). 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).

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(WHO., 2015). (Strong *et. al.,* 2007) conducted an evidence based study on effect of physical activities for school-age youth.

The authors showed the beneficial effects of physical musculoskeletal activity on health, many cardiovascular components, obesity in young overweight, and blood pressure in a benign hypertensive adolescent. In the study, there is striking evidence to make adequate about the beneficial effect of physical activity on general wellbeing of the students.

Activity level can range from moderate to active all the time and is recommended by 60 minutes or more of physical activity can be achieved cumulatively in school in physical education, high school, sports, before and after school programs to achieve the desired results.

Several objective methods scientifically used to measure physical activity levels, such as monitoring devices that can be worn and measuring heart rate or energy expenditure (Strath et al., 2013), in addition to that numerous of subjects methods widely used to assess physical activity (Kim., 2013) include questionnaires and PA diaries(Strath et al., 2013).

Recent research has shown that increased behavior of inactivity coupled with reduced physical activity has been associated with a variety of health risks. As a result, there has been a recent increase in research focus on behavior as an independent basis (Tremblay et. al., 2010) 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.

In Arabic world, the IPAQ instrument has been tested several researchers(Helouetet. al., 2017; Agha and Al-Dabbagh., 2010; 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) and this was widely followed by validity and reliability testing worldwide (Agha and Al-Dabbagh., 2010) and also a study carried out to assess the physical activity among Lebanese adults by using the Arabic version IPAQ Found the IPAQ was at an acceptable level of validity and reliability.

Despite increased awareness of the benefits of physical activity 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 (Aceijas et. al., 2016), this is consistent with this study identified below World Health Organization (WHO) guidelines on physical activity. (Aceijas et. al., 2016) also revealed that the cost is also the institutional barriers to physical activity. Then, it was suggested that universities are strategies to reduce costs and increase access and improve students' ability to manage the time to include physical activity in their schedules. In another study among university students in Portugal, reached the level of physical activity to the student if it meets the public health recommendations for physical activity and went far beyond the influence of gender on physical activity daily (Clemente et al., 2016). In contrast to the study, the results reveal that the amount of physical activity done by university students Portuguese is compatible with the recommendation of the moderate Palestinian Authority to strong throughout most of the week (5 days). Moreover, (Clemente et. al., 2016) reported gender data based on the activity and the values that revealed the patterns of activity in 41 percent of men and 65 percent of female students. In this study, the physical activity for the student center, but compared with earlier between the sexes, such as cases (Baptista et. al., 2012) and (Bauman et. al., 2009). Study shows that male students are statistically more (23.92%) and spent more time in the light (7.74%), and the activities of conservative (26.61%), active (243.64%) of spending on students.

The IPAQ publically available at www.ipaq.ki.sandit 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.

Tripoli University is the largest university in Libya, located in the Libyan capital, Tripoli. The largest number of students studying between Libyan universities. The university was founded in 1957 a section of the University of Libya before being separated in 1973 to become what is now known as the University of Tripoli, and includes 16 colleges. May be in method section

This study suggests that it is time for social action to fully explore this new approach to education. Recommendations to research the evaluation of the effectiveness of learning built - in.

Study (1) quantitative study – this study examine patterns of physical activity among males undergraduate students in the University of Tripoli.

Study (2) qualitative study – This phase aimed to examine barriers and motivations to physical activity among males the undergraduate students in the University of Tripoli aged (18-22).

1.2 Statement of the Problems

Problem of Study (1)

The increased mortality due to lack of physical activity of concern to the stakeholders in the global health sector. World health organization has been ranked physical inactivity as the fourth cause of global mortality (WHO, 2010) and there is a global consensus that the lack of physical activity leads to poor health and the spread of various diseases, for example, coronary heart disease by 6%, and colon cancer by 10% and breast cancer by 10% and type 2 diabetes by 7% in addition to

5.3 million 57 million deaths have occurred throughout the world 2008 (Lee et al, 2012). All reasons why the researcher interested in the search for levels of physical activity and barriers - motivations to enhance the public health.

Problem of Study (2)

Despite this great challenge, many have not seen importance of physical activity due to factors such as sedentary life style and time constraint.

In addition, there is inadequate information in the minimum level of physical activity in many parts of the world, including the present study; Libya. Moreover, there is a lack of information about the barriers and motivations. Thus, this study will provide new information regarding the levels of physical activity and given the barriers and motivations.

1.3 Questions of Study

1- What is the reality of physical activity at undergraduate students at the University of Tripoli?
2- What types of physical activities do the undergraduate students at the University of Tripoli carry out during the week, and the amount of activity the physical exertion?
3- What is the percentage of walking exercise during the weekdays?
4- What are the most important factor of barriers and motivations?

1.4 Significance of Study

1- This study contributes to the identification of types of physical activity practiced by the undergraduate students in the university.
2- The results of this study contribute to the planning of some of the programs that will help lift the rates of physical activity at the students.
3- Contribute to create a database and part of the rates of other studies of physical activity in adults.

4- Opening the prospect of further qualitative studies seek to determine the underlying causes of these levels of physical activity.

In addition, this study aimed to look at the factors that serve as barriers to physical activities among the study group; furthermore, we examined factors that motivate the subject. Hence, this would give us clue on the hindrances to PA and those motivated would give information on what keeps them undertaking such activities.

Overall, the information would help to find recommendation and fill the gap of information among Libyan university students.

1.5 Objectives of Study

1- Identify the patterns of physical activity among undergraduate students at the University of Tripoli using the international questionnaire of activity Physical.
2- Learn about the walking rate performed by undergraduate students at the University of Tripoli.
3- Identify the types and intensity of activities practiced by the sample.
4- This study aimed to examine barriers and motivations to physical activity among males the undergraduate students in the University of Tripoli aged 18-22.

1.6 Study Limitation

In the light of the finding of this research, the following limitations were faced. The study looked at the physical activity level of University students , however, the study only looked on male students due to socio-cultural and religion reasons. Thus, the findings of this study would only be translated to gender specific information. In addition, the study looked at age bracket of 18 to 22 years; hence, the results couldn't cover those outside the range.

Another limitation to this study is the number of respondents that returned the questioners, where some did not return, thus affected the number of data intended to collect, perhaps enrollment as more difficult than expected.

2.GENERAL INFORMATION

2.1. Physical activity

According to World health organization (WHO), physical activity can simply be define as the any body movement that involve skeletal muscles which need energy expenditure (WHO, 2005). To clear the ambiguity of the terms related to this field, (Caspersen et al., 1985) clearly distinguished the widely confused terms; physical activity, exercise and physical fitness because they are interchangeably used. As it is defined earlier, the authors added that physical activity of body can be measured based on the energy expenditure and the unit is kilocalories, furthermore, they classified the physical activities into occupational, sports, conditioning, household, or other activities. On the other hand, exercise is considered as a division of physical activity that is well organized and planned, and in a repetitive manner over a period with a sole aim of either improving or maintaining physical fitness. By definition, physical fitness is a characteristic that is related to either health or skill. It is important these terminologies are distinguished because they can be used for interpretational framework in assessing research related to physical activity, exercise and physical fitness.

The importance and impact of regular physical activities has been established as the key factor for sound human health, of such advantages include psychological and physiological state of well-being (Lee et al., 2012). Studies revealed that physical activity is related to prevention of ill health and also improving management of preexisting health challenge (Haskell et al., 2007; Johnson et al., 2009). In a report of WHO (2005) ranked physical inactivity as 4th killer of human worldwide, furthermore it is also estimated to be main cause for the dead of people with some certain disease conditions such as breast and colon cancers (21-25%), diabetes (27%), and ishaemic health disease (30%). Physical activity is reported to be important part of humans especially within the adulthood age group of 18-65 years (Haskell *et al.*, 2007). It is worthy to that the physical activity is degree dependant, because high level is reported to have significant impact in reducing risk of heart related diseases and also in other diseases such as osteroporosis (Geffken et

al., 2001; Warburton et al., 2006). In a diverse population, there are some factors that influenced involvement in physical activity, for instance amongst adults, factors such as personal, social, cultural and environmental are consider to play role in their participation (*Bolívar et al., 2010;* Sjögren et al.,2010).

2.2. Importance of physical activity

The benefits of physical activity can never be overemphasized and it well documented. One of the chief benefits of physical activity is in enhancing health, hence the concept of health-enhance physical activity also known as HEPA (Oja and Borms, 2004). In the early 1990s, Illka Vouri and Pekka Oja introduced a concept that highlighted the role of movement in a daily schedules such as transportation at home, offices or at a leisure time on a moderate intensity can provide health benefits (Warburton *et al.*, 2006) submit the direct link between volume of physical activity and health, and it is evident that the higher the fineness achieves the better for the health status. Regular physical activity is associated with favorable health outcomes as reported by (Kallings et al., 2008), subsequently reduce all- caused deaths. Furthermore, the authors reported the association between dose-response physical activity and sound health is obvious in cases of coronary health diseases, diabetes type 2, and complete cardiovascular diseases; however there is little or no determining factor in other health conditions. In a particular study, the authors revealed that outdoor physical activity enhance health and general conditions of (well-being Bowler et al., 2010).

In a study by (Carnethon 2009) observed that physical activity prevent coronary heart disease (CHD) and cerebrovascular disease, as the activity targeting many system in body. However, the amount required remains ambiguous, because different methods of studies are employed to assess such benefits, for instance studies based on individual studies suggest a threshold effect for benefits, but in the case of meta-analytic studies report a graded inverse association. With physical inactivity being ranked 9th contributing risk factor to heart disease mortality worldwide according to research by (Interheart 2004) and the study revealed that physical inactivity as a risk knows no bound, regardless of geographic region race or gender across the globe (Yusuf et al., 2004).The authors investigated 52

countries across the globe to include developed and developing countries, and equates other risk factors (smoking, alcohol consumption, hypertension, waist/hip size, nature of diets, blood apolipoprotein) for heart disease and the results revealed that the relationship were observed in both men and women, young and old regardless of the world's region. However, the research was criticized for overlooking some well established risk factor for heart problems such as too much saturated fat and LDL cholesterol (MBJ, 2004).

In a similar trend, significant role of physical activity in preventing and treating coronary heart disease (CHD) has been reported and it is evident that physical inactivity can count to double risk factor in comparison with active people (Press et al., 2003). The authors highlighted the benefits of regular physical activity to include improving myocardial movement and electrical stability and other physiological benefits. In addition, in a prospective study revealed that vigorous physical activity among British civil servants between the ages of 45-65 years who don't have CHD were monitoring for eight and half years, the observation showed higher incidence of CHD in those that don't participant in vigorous activity among men (6.9%), on contrary those reported vigorous activity had only 3.1% incidence (Morris et a., 1980; Press et al., 2003). By definition, Vigorous activity refers to expanding more than 6 mets or utilizing 7.5 kilocal per minute, or work out at a minimum of 70% of maximum heart rate or in other way 70% of VO2max (American College of Sports Medicine, 2000).

Since the role of physical activity in health is well documented, the contrary would be detrimental to health as reported widely. On a global record, physical inactivity cost 3.2 million lives annually due to lifestyle associated disease conditions, subsequently resulted to increase the risk of all-cause mortality from 20 to 30% (WHO, 2011b). Based on regions, eastern Arabic countries such as Iraq, Kuwait, Lebanon, Libya, Saudi Arabia, Tunisia and United Arab Emirates presented with similar patterns of diseases related to physical inactivity and the result showed coronary heart disease, type 2 diabetes breast cancer and colon cancer for all-cause mortality, 8%, 9%, 13%, and 14% respectively (WHO, 2013). The importance of physical activity can't be overemphasized as it is noted to

improve mental health and quality life, reducing psychological trauma, stress and double self-esteem, not overlooking the better shape of human body (Calfas and Taylor., 2010; Whitelaw *et al*., 2008).

According to the World Health Organization, the lack of physical activity in the Arab countries is a key component of non-communicable diseases (World Health Organization, 2002).

Furthermore, decrease physical activity among Arabic population led to increase the overweight and obesity rates (Musaiger, 2007; Ng et al., 2011).

In Eastern Mediterranean includes seven Arab countries which as Iraq, Kuwait, Lebanon, Libya, Saudi Arabia, Tunisia, and United Arab Emirates prevalence of non-communicable diseases by 7·8% percent of coronary heart disease 9.6% percent of type 2 diabetes, breast cancer 14.1%, 13.8% colon cancer and death rates for all causes by 12.5% (WHO, 2013).

2.3 Barriers to physical activity

The benefit of physical activity is undermined by the rapid adopting of sedentary lifestyle across the world. There are ranges of barriers to physical activity usually due to the advancement of technology that made life more easily and in addition to other personal factors that hider physical activity such as physiological, behavioral, environmental and psychological factors (Chen, 2010). Therefore it is pertinent that the understanding of such barriers in the study area and the world at large will aid in formulating intervention policies.

2.3.1. Personal barriers

The most common personal barriers to physical activity are summarized by (Manaf 2013) and to include the following lack of time for exercise, inconvenience of exercise, low motivation, lack of interest and boredom during exercise, fear of injury or from past experience, lack of goal or expected outcome from the exercise,

lack of companionship and encouragement. Furthermore, the study sums up the major barriers as time, energy and motivation especially amongst middle-aged and elderly people. Other factors include cost of registration to gym, availability of facilities, transportation, exercise partner, proper skill, family consideration, socio-economic status, sex, age and variety of other components (Robbins *et al.*, 2003). The study by (Tandon et al., 2012) indicated that the socioeconomic level have impact on physical activity subsequently lead to adoption of sedentary lifestyle, hence reduce physical activity. In addition, cultures and beliefs play a significant role in influencing adults to engage in a type of physical activity with young children (Lindsay *et al.*, 2009; Emma, &Jarrett, 2010). There are a large number of cultural and social barriers that prevent ethnic minority groups accessing public health and activity services or even gender in some countries, women are not encourage to participate in physical activity (Szczepura., 2004). In another instance to validate that the culture has role in influencing physical activity, (Garrett 2006) reported that Arab parents are more interested in enrolling their children to more academic activities and extra moral classes after school which limit their time for other things like physical activity.

2.3.2. Environmental barriers

Environment and society have influence on the level of individual's physical activity, for example accessing of walking path many influence aerobic physical activity, high traffic to facilities, cycling traits, security of the community to help out door physical activity and availability of recreational centre (Manaf, 2013).

2.3.3 Overcoming the barriers

Experts have studied the barriers to physical activity and suggested ways to overcome such barriers as in centre for diseases control (CDC) recommendations. It is recommended that people need to monitor their weekly schedules and identify 30 minutes that it usually free and then use it for physical activity. Another way to

overcome such barriers is expressing the interest to involve in physical activity to family and friends, hence this will serve as motivational factor, also making new friends that are interested in physical activity will go a long way. To overcome lack of motivation and energy, make physical activity into your daily schedules by planning ahead and involve in activities that do not require more skills such as walking, climbing stairs and jogging.

2.4 Health Consequences of Sedentary Behaviour

Research has shown that increased sedentary behavior, rather than reduced physical activity is associated with a variety of health risks, and as such, there has recently been an increased focus on research on sedentary behaviour as an independent construct (Tremblay *et al.* 2010).

To study the health consequences of sedentary behaviour there needs to be clarification of the terminology and associated concepts (Owen *et al.*, 2010). Some debate surrounds the concept of sedentary behaviour and whether it is simply a lack of physical activity or whether it is a set of behaviors that are independent of physical activity (Tremblay, 2012). From the first viewpoint, researchers have defined sedentary behaviour as low energy expenditure (Pate *et al.*, 2008; Owen *et al.*, 2010; Tremblay *et al.*, 2010) or as physical activities that do not reach moderate to vigorous physical activity (MVPA), and defined as between 3-6 METs or greater than 6 METs respectively (Mullen *et al.*, 2011; Sims *et al.*, 2012; Biddle., *et al.*, 2012).

From the second viewpoint, however, sedentary behaviour has been defined as individual behaviors where sitting or lying is the dominant mode of posture and energy expenditure is very low (Biddle., *et al.*, 2012) such as sitting to read, screen-time (computer use, TV viewing, video game playing, mobile phone) or driving. One reason for the confusion surrounding the term may be that some people are sitting for long periods and classified as sedentary, yet they meet recommended physical activity guidelines in other parts of their lifestyle (Owen *et al.*, 2010). As such, researchers have become interested in the independent role that sedentary

behaviour plays in health and wellness (Owen *et al.*, 2010; Department of Health, 2011b).

Evidence shows sedentary behaviour is inversely associated with not only all-cause mortality (Chau *et al.*, 2013) but also psychological wellbeing and mental health (Hamer *et al.*, 2010; Tremblay *et al.*, 2010; Chinapaw *et al.*, 2011).

2.5. Recommended level of physical activity

The concern by level of physical inactivity across the world and the consequences made public health stakeholder and institutions to design policies and guidelines for various age groups. WHO developed the "Global Recommendations on Physical Activity for Health" with the overall aim of providing national and regional level policy makers with guidance on the dose-response relationship between the frequency, duration, intensity, type and total amount of physical activity needed for the prevention of non-communicable diseases. The age groups recommendations include 5–17 years old; 18–64 years old; and 65 years old and above (WHO, 2010). Below is the detailed description of these recommendations.

2.5.1. Recommendation for 5–17 years old

The subjects that fall in this age group may involve in physical activity such as play, games, sports, transportation, recreation, physical education or planned exercise, in the context of family, school, and community activities. These activities help them to improve cardio respiratory and muscular fitness, bone health, cardiovascular and metabolic health biomarkers and reduced symptoms of anxiety and depression, the following are recommended:

1. Children and young people aged 5–17 years old should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily.
2. Physical activity of amounts greater than 60 minutes daily will provide additional health benefits.

3. Most of daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

2.5.2. Recommendation for 18–64 years old

For adults of this age group, physical activity includes recreational or leisure-time physical activity, walking or cycling, occupational, household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities. These provide the following benefits cardio respiratory and muscular fitness, bone health and reduce the risk of NCDs and depressions, the following are recommended:

1. At least 150 minutes of moderate-intensity aerobic physical activity throughout the week, or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity.
2. Aerobic activity should be performed in bouts of at least 10 minutes duration.
3. For additional advantage, 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous-intensity activity should be used.
4. Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.

2.5.3. Recommendation for 65 years old and above

The physical activity in this group includes recreational or leisure-time physical activity, walking or cycling), occupational, household chores, play, games, sports or planned exercise. These help to improve cardio respiratory and muscular fitness, bone and functional health, and reduce the risk of NCDs, depression and cognitive decline, the following are recommended:

1. At least 150 minutes of moderate-intensity aerobic physical activity throughout the week, or do at least 75 minutes of vigorous-intensity aerobic

physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity.

2. Aerobic activity should be performed in bouts of at least 10 minutes duration.
3. For more benefits, adults aged 65 years and above should increase their moderate intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous intensity activity.
4. Adults of this age group with poor mobility should perform physical activity to enhance balance and prevent falls on 3 or more days per week.
5. Muscle-strengthening activities should be done involving major muscle groups, on 2 or more days a week.

2.6 Obesity Patterns in the Arabic World

There is a paucity of research on the levels of physical activity among the Arabs (Al-Hazzaa *et al*., 2011a) with the large majority of research conducted in females of this population (Musaiger *et al*., 2011b). During the last two decades, the level of obesity has increased threefold in those developing Arabic countries that have adopted a western lifestyle that has seen decreased levels of physical activity and eating patterns change (Musaiger *et al.*, 2011a). Additionally, the lack of physical activity in Arabic countries led to an increase in the prevalence of overweight and obesity (Musaiger, 2007; Ng *et al.*, 2011).(Al-Hazzaa *et al*. 2011b) found that the rates of sedentary behaviour is high, and that this is associated with low physical activity levels among adolescents aged 14-19 years in Saudi Arabia. It is also worth mentioning that physical activity levels among females are very low regardless of the country of the Arabic world under consideration (Henry *et al.*, 2004; Al-Sabbah *et al.*, 2007; Collison *et al.*, 2010; Al-Hazzaa *et al*., 2011b). According to the STEP wise survey performed by WHO 2003–2007, daily physical activity in different Arabic countries amounted to just 10 minutes or less of meaningful exercise (STEP wise, 2007).

The pattern of lifestyle has changed in Arabic countries as a result of alterations in socio-economic status, availability of electric home appliances, cars and also the technical sophistication which has meant that levels of physical activity have diminished sharply (Musaiger, 2007; Youssef *et al.*, 2010; Musaiger *et al.*, 2011a; Di-Capua *et al.*, 2005; Al-Sabbah *et al.*, 2007; Shuval *et al.*, 2008). In addition, it has been reported that the level of maternal education and monthly income of the house affects the degree of physical activity (Centers for Disease Control and Prevention, 2006; Obeisat 2012). WHO statistics (Regional Office in Cairo) indicated that there is a deficiency of physical activity amongst the adults in seven Arabic countries (Egypt, Iraq, Jordan, Kuwait, Saudi Arabia, Sudan and Syria).

These changing levels of physical activity among Arabic populations (Musaiger, 2004; Badran & Laher, 2011) are having very important consequences for increasing the prevalence of non-communicable diseases such as cardiovascular disease, type 2 diabetes and certain types of cancers (Khatib, 2004; Al-Nuaim *et al.*, 2012), as well as being associated with an increase in obesity levels of these populations. A high priority for Arabic nations has become the implementation of policies and national programs for promotion of physical activity in an attempt to reduce the levels of obesity (Musaiger, 2004).

A study carried out to examine the reasons behind such obesity indicated that the pattern of lifestyle among the Arabic gives the opportunity to be more physically inactive and suggests greater access to a westernized diet. Moreover, these populations have easy access to transport which results in less or no physical activity and there has been a shift in the workplace, where the majority of manual work is performed with the help and of availability of cheap labor, which reduces the quantity of workplace physical activity performed (Badran & Laher, 2011).

2.7 Interventions to Promote Physical Activity

Governments around the world face a huge problem in attempting to combat high rates of sedentary lifestyle and consequences of the lifestyle diseases associated with physical inactivity (Edwards *et al.*, 2006). These rates of physical activity (two thirds of population in European Union at ages of 15 years and older are physically inactive (Cavill *et al.*, 2006); only 37% of UK adults engage in physical activity regularly), lead to an important question; who should take action to implement strategies to improve (PANICE Public Health Guidance 2009) referred to various organizations and groups responsible for ensuring that recommendations are placed into practice, and these agencies include Government Departments, Local Authorities, local strategic partnerships, parents, families and carriers, private sector providers, schools and colleges (NICE, 2009). All organizations, whether small or large should take action to promote physical activity among their employees and manage a strategy that empowers the workplace as a vehicle to promote activity even without a gym (Public Health Agency, 2010).

Furthermore, increases in physical activity levels among children and adolescents were identified as a very important factor to promote health (Lobstein *et al.*, 2004; Van Sluijs*et al.*, 2007) particularly during the school day, as schools played a very important role to contribute in physical activity promotion (Pate *et al.*, 2006). However, a number of researchers adopt the view that family- and community-based interventions provide a better opportunity to improve physical activity levels than relying solely on school-based promotion (Biddle *et al.*, 2004; Marcus *et al.*, 2006). It is also important that a package of components such as family-based interventions, organization-based policy interventions (such as school-based skills-oriented interventions, classroom curricula, physical education curricula), community-wide policy interventions for example policies or legislation establishing financial incentives for organizations and communities to provide access to physical activity opportunities, Health education classes to change knowledge and attitudes about benefits of exercise, are provided as ways to increase access to exercise and physical activity. Such initiatives should be aligned

with special support mechanisms such as telephone support, counseling, physical activity and exercise clubs, family-based programs and school-based social support (Kahn *et al.*, 2002).

Although the family-based approaches to promote physical activity are underutilized at present, they are considered a good opportunity for helping to counteract barriers to promote physical activity (Brustad *et al.*, 2010). The family unit is considered one of the most important source to understand the individual's physical activity behaviors (Centers for Disease Control and Prevention., 2011) and it is plays a considerable role in promoting physical activity among its members (Brustad *et al*., 2010).

This is particularly important in the context of childhood obesity (Perryman, 2011), as several studies have pointed out that individuals tend to be extremely similar to the other family members in their regular physical activity levels (Davison & Birch, 2001; Salmon *et al.*, 2005; Brustad *et al.*, 2010), and that family members like parents, brothers and sisters provide a model that children follow and copy their behavior from (Salmon *et al.*, 2005; Marcus *et al.*, 2006). This further enhances the findings of who found that the child has a 40% chance of becoming overweight if there is one member of his/her family is overweight and this chance will increase to 80% if there are two members of his/her family were overweight (Sears *et al.*, 2006).

The family-based intervention provides an opportunity to understand children physical activity patterns based on habits, beliefs and values expressed in the family environment (O'Connor *et al.*, 2009). There is strong evidence that interventions involving family members are more likely to lead to positive changes in physical activity levels in both boys and girls (Van Sluijs*et al.*, 2007; NICE, 2008). However, there is still a challenge to embed all family members including fathers to engage in a regular physical activity (Marcus *et al.*, 2006).

2.8 Physical Activity Measurement

Although physical activity is a very important factor for maintaining public health among whole world's population, there is no consistent standard for monitoring and determining its rates (Bauman *et al.*, 2009). Warren *et al.* (2010) divided physical activity assessment into two types of methodologies; the first category of instruments are usually named self-reports and consist of questionnaires, diaries, logs and recalls, With this second category consists of the most objective measures such as heart rate and controlled, acceleration, pedometer, motion sensor and direct control devices, double the water parameter. Using all of these different methods, it is important to note that there can be a significant discrepancy between the prevalence data of individuals to the recommended levels of physical activity when accelerometer is measured compared with self-determination in England(Townsend *et al.*, 2012b).

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The key variables monitored in assessing physical activity are volume, intensity and type of activity being measured; monitoring is also complicated or contaminated by functional activities of day-to-day lifestyle, such as stair climbing, use of escalators or lifts. In relation to physical activity measurement in children, the appropriate physical activity measurement needs to identify the type and intensity of physical activity, in order to accurately quantify against published recommendation thresholds (Timmons *et al.*, 2007). Researchers have shown that although questionnaires are a valid measure for measuring habits of physical activity among individuals, the current measurements for physical activity also need to include the ongoing changes in the activities of the population.

The measurements also need to highlight the biological implication and meaning of the intensity of exercise such light, heavy and moderate (Shepherd, 2003). Objective methods are more in use for measuring sedentary behavior and physical activity intensity compared to self-reports, and provide a more accurate and reliable assessment than subjective methods (Reilly *et al.*, 2008).Self-report measures are commonly used to assess physical activity (Warren., et al 2010) as they allow a large amount of data to be collected at low cost (British Heart Foundation Report., 2012), the information they provided is limited however and there are difficulties in assessing the frequency, duration and intensity of physical activity (Warren., et al 2010). Furthermore, participants may have a different understanding of what 'moderate intensity' or 'exercise' actually means (British Heart Foundation Report., 2012). Moreover, the data obtained by self-report has been shown to be over-reported compared to objective data such as assessment of physical activity by accelerometer (Kowalski et al., 2012).

2.9 International Physical Activity Questionnaire (IPAQ)

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., 2014). The researchers were informed of studies using the Arabic version in (Saudi Arabia, Egypt, and Sudan).

The IPAQ measurement tool is based on four general items including seven 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.

The results of a World Health Organization report show that there is a significant prevalence of patterns of physical inactivity in all countries and this is associated with an increased risk associated with the increased prevalence of communicable diseases (WHO, 2010). As a result, Guidelines as recommendations for promoting physical activity in the population to raise public health (Marcus et. al., 2006) and to reduce the time spent in idle (Biddle et. al., 2012).

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 (WHO 2009). 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 2014) showed the benefits of regular physical activity for a healthy life. Great number of authors in literatures such as Salandy and (Mary2012) and Matthew et have discussed this. The research on the effect of physical activity on quality of life has been alarming and this quest has not been surprise as it is reporting to add longevity to all population (Rejeski and Mihalko, 2001). Some scholars examine existing literature that may help to explain what may mediate or moderate relationship between physical activity and quality of life. In addition, the period of activity is also considered by previous literature (Salandy and Mary, 2012, Kim, 2014). In this regard, The American Heart Association recommends at least 150-minutes of moderate physical activity each week. This further suggested a simple technique to remember such activity by using 30-minutes session at least five days a week.

Apart from health and psychological improvement aspect of physical activity, many engaged for fitness and cosmetic reasons especially among youth. Among the youth of school age, member States could consider various measures to ensure the nationwide implementation of quality physical education classes and physical activity promotion programmers in preschools and schools as suggested by (WHO 2013). To achieve wider participation of population in physical activity, Safe and engaging environments is required to serve as a most powerful ways to reach all people and to change social norms and behaviour in the longer term.

The European member states have an average guideline of physical activity of 30-minutes daily five days a week for age between 18-65 years old, also same principle can be employed by aged adult. Nevertheless, the challenge is that large number of the population (60%) involved in sedentary lifestyle that contribute to idleness.

The average daily density of adults including the elderly are recommended to have such activity in the member states for general guideline, and followed by each country to issue national recommendations for its physical activity (EU Working Group, Sport and Health 2008; UK Ministry of Health 2011). However, because of the lack of national guidelines for national recommendations for physical activity for health in low- and middle-income countries, there was an urgent need for (WHO) to play its part and to develop global recommendations for physical activity on the relationship between the frequency, type and total amount of physical activity required to prevent (Global recommendations on physical activity for health) and made available on the official website of the Organization and in many languages, including Arabic (World Health Organization 2009).

Regular physical activity for individuals can help to facilitate healthy ageing by reducing the risk of chronic illnesses and disability and rely on subsequent life (DiPietro, 2001; McMurdo, 2000; Nelson et al., 2007). However, a large number of elderly people with low movement or settled, as they participate in the levels of physical activity is not sufficient to achieve health gains (Drewnowski & Evans, 2001; Mummery, Kolt, Schofield, & McLean, 2007; Wester terp & Meijer, S.N., 2001). Referring to recent data from the survey of the global population to 66

percent of older people do not uphold the principles of the national physical activity and that 24 percent of older persons known to be sedentary (Mummery et al., 2007; Sport and Recreation, 2008).

The development of the Green Prescription program formula was as an initiative to tackle low levels of physical activity at the level of the country (Pringle, 1998). That is where it describes the primary care doctors and nurses practice (registered nurses employed in primary care practice) physical activity for patients movement and patients, including those who have medical condition is stable. Adopt the green prescription to national guidelines that recommend for 30 minutes of moderate intensity physical activity in 5 days or more of the week.

The Green Prescription program is the recipe for three months, and during that time, the patient receives monthly support over the phone of physical activity. A number of randomized controlled trials have evidence of effectiveness of green recipe in increasing physical activity and earnings linked to the health of individuals are less active and who has no history of their movement, including the elderly demonstrated the efficacy of the Green Prescription in increasing physical activity and health-related gain in previously low-active and sedentary individuals, including older adults (Elley, Kerse, Arroll, & Robinson, 2003; Kerse, Elley, Robinson, & Arroll, 2005; Colt and others, 2012; Luton and others, 2008; Swinburn, Walter, Arroll, Tilyard, & Russell, 1998).

Research also indicates that individuals who receive a green prescription program know this program is useful in increasing physical activity (Elley, Dean, & Kerse, 2007; Sports and Recreation, 2007). This may reflect the fact that green recipe is individually designed to accommodate a variety of demographics. This is important, where there is a group of older persons. There is strong evidence that special demographic factors based on gender, ethnicity, cultural factors, age and weight, a chronic medical condition that can affect barriers and interest in physical activity and maintenance interventions (Belza et al. Kolt, Giles, 2004); Kirkby, Kolt, Abel, & Adams, 1999; Kolt Driver, & Giles, 2004). To encourage participation in physical activity later in life, it is necessary to provide information on barriers and approaches to motivations that may exist in age, such as a group, to

ensure the success of initiatives such as green recipe and long-term help in good relationship. Benefits (Cohen-Mansfield, Marx, & Guralnik, 2003).

Evidence suggests that health benefits can be given through regular physical activity, which includes short bouts of accumulated throughout the day and the eventual the recommended level of 30 minutes of daily activity (Boreham, Wallace, Neville, 2000; Pescatello & Murphy, 1998; Wong, Wong, Pang, Aziah, & Dass, 2003). Among the steps could be used to monitor physical activity through the usual number of steps. It may be using the pedometer to control the accumulation of daily physical activity as a stimulus and the commitment of the best for older preparation standard goals based on time, providing real-time pedometer (immediately) and objective information about the level of activity of the individual (Lauzon& Tudor - Locke, 2008; Van Wormer, 2004).

This study is a sub-study to produce the largest study of sound steps. The study of sound steps was controlled by a randomized trial and designed to compare the effectiveness of a pedometer build versus a time-level green recipe rate and their maintenance in increasing physical activity in 330 low-activity, living in the elderly community. The objective of this study is threefold: first, identifying the obstacles, tangible benefits and motivations of physical activity encountered during the health steps. Secondly, determine whether the barriers and interest and perceived motivations vary based on the allocation of the Green Prescription based on a pedometer or based on time.

Thirdly, examining whether the barriers and interest and perceived motivations vary as a function of demographic factors relating to sex, age and chronic health conditions and the case of weight. We assume that the participants to intervene based on pedometer will provide more rationale, benefits and lower barriers to participation of physical activity.

3. STUDY METHODOLOGY AND PROCEDURES

3.1 Methodology of Study

Researcher descriptive approach used for the study, where the study was conducted at the University of Tripoli during the fall (2017-2018) to measure physical activity patterns and examine the barriers and motives of male students.

To measure physical activity patterns, the researcher distribute the questionnaire to students. Data were collected from the questionnaire and calculate the repetitions of number in order to replicate the intensity of moderate and high density to show the number of minutes a day of moderate and high intensity of physical activity and the number of days per week performed moderate and high intensity of physical activity using average and Standard deviation.

To examine barriers and motivations, the researcher collects data from the questionnaire and calculate recurrence of a number of questions to view the repetitions, the percentage distribution of the questionnaire and what are the most important factor of barriers and motives.

3.2 Population of Study

The study society is undergraduate male students at the University of Tripoli in the Libyan capital city Tripoli.

3.3 Sample of Study

The students at the University of Tripoli chose the sample of the study deliberately, their ages ranged from 18 to 22 years.

The sample selected was only male students due to several social and cultural factures, as well as there was a lack of female staff members to assist the researcher to collect female physical activity data.

Where the faculties were Faculty of Economics and Political Science, Faculty of Languages, Faculty of Literature, Faculty of Science, Faculty of Engineering, faculty of Pharmacy, 6 colleges out of 16 and had 515 students to measure the

physical activity patterns.

The total number of students at colleges and the number of students participating in study (1) and the percentage.

Table 1. Distribution of sample members by colleges

Faculty	Number of Students	%
Economics	110	21.
Languages	93	18
Literature	119	23
Science	74	14
Engineering	62	12
Pharmacy	57	11

The Second sectionhad 520 students to examine the barriers and motivations.

The total number of students at colleges and the number of students participating in study (2) and the percentage.

Table (2) Distribution of Sample Members by Colleges

Faculty	Number of Students	%
Languages	119	23
Economics	111	21
Literature	93	18
Engineering	91	17.5
Science	67	13
Pharmacy	39	7.5

3.4 Procedures

The researcher distributed the questionnaires within the sample at the university in Section B, which was in a series of foxes, and each group was about 25 students, and has been distributed to participants, Thirty-five respondents did not return their questionnaires and their data were not included in the analysis.

To measure the physical activity patterns the researchers distributed the questionnaire during the fall semester 3 – 5 July (2017-2018) to examine the barriers and motivations the questionnaires were distributed during the fall semester 16 – 18 July (2017-2018).

The International Physical Activity Questionnaire (IPAQ) short version was used to identify the physical activity levels among the participants. To examine the barriers the researcher used (Barriers to physical Activity Questioner) and used (Exercise Regulation Questioner) (BREQ-3) to examine the motivations.

3.4.1Validity and Reliability

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.

Correlation between the first and second apply of the questionnaire shows the statistical significance.

Table (3) shows the correlation of validity and reliability

Apply 1 and 2 to the questionnaire	**Correlations**
Correlations between High Intensity per day 1 and High Intensity per day 2	**.703****
Correlations between High Intensity per minute 1 and High Intensity per minute 2	**.828****
Correlations between Moderate Intensity per day 1 and Moderate Intensity per day 2	**.711****
Correlations between Moderate Intensity per minute 1 and Moderate Intensity per minute 2	**.885****
Correlations between Walking per day 1 and Walking per day 2	**.766****
Correlations between Walking per minute 1 and Walking per minute 2	**.863****

The International Physical Activity Questionnaire (IPAQ) was built in 1998 in Geneva, and in 2000, many tests were conducted to achieve a high level of honesty and consistency. These tests included 12 countries. After conducting several studies, on this scale, the results showed that it has an acceptable degree of validity and reliability 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).

3.5 Reasons of Study

3.5.1 Classification

In Eastern Mediterranean includes 7 Arabic countries (Iraq, Kuwait, Lebanon, Libya, Saudi Arabia, Tunisia and United Arab Emirates) the non-communicable diseases prevalence by percentage of 7.8% coronary heart disease, 9.6% type 2 diabetes, 14.1% breast cancer 13.8% Colon cancer and all-cause mortality by 12.5% (WHO, 2013).

In the Eastern Mediterranean includes seven Arab countries which as Iraq, Kuwait, Lebanon, Libya, Saudi Arabia, Tunisia, and United Arab Emirates prevalence of non-communicable diseases by 7.8 percent of coronary heart disease, 9.6 percent of type 2 diabetes, 14.1% of breast cancer 13.8 percent of colorectal cancer incidence and mortality for all causes by 12.5% (WHO, 2013).

3.5.2 The Culture

All the people in Libya, relying on car use most of the time instead of using bicycles or walk.

3.5.3 Lifestyle

There are no many parks and gardens in Libya, which makes most people, spend their time in coffee and cafeteria.

3.6 Data Analysis

The researcher used the descriptive approach to achieve the study objectives.Five hundred and fifteen undergraduate male students were selected from six faculties of University of Tripoli for measuring their physical activity and five hundred and twenty to examine the barriers and motivations

3.7 Statistical Analysis

The results were obtained through questioners and the reported values are mean variability (%) ± standard deviation. The data were analyzed with Excel version 2007 to measure the physical activity patterns.

The Second section analysis the presentation of Barriers and Motivations of the variables using the SPSS Statistical package IBM version 20 for the analysis was used frequencies and percentages distribution of university students' respondents.

4. THE STUDY RESULTS

4.1 Results of Study (1) Physical Activity Levels

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

Figure 1: Shows the moderate intensity and higher intensity per day in a week

Figure 1: Physical Activity per Day

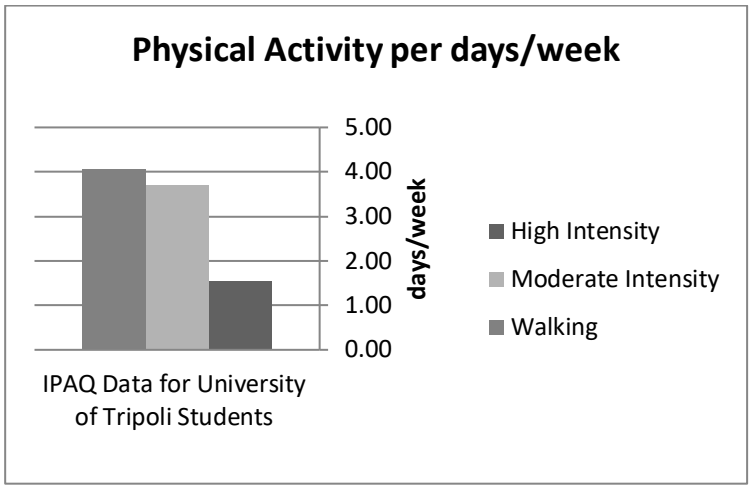
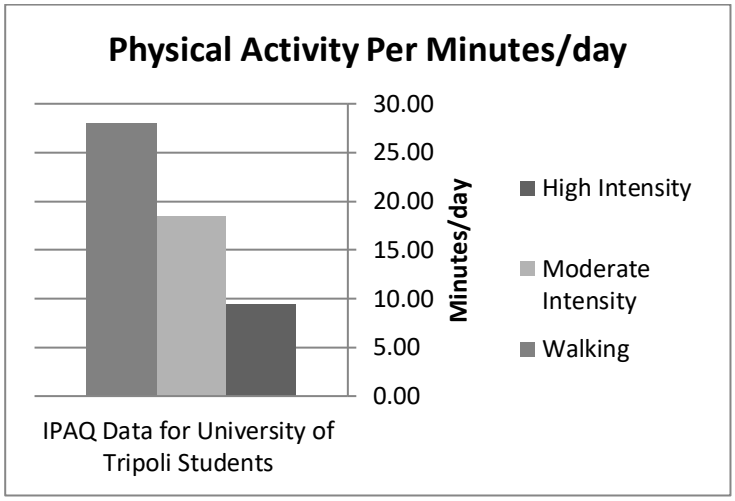


Figure 2: shows the moderate intensity and highest in the minutes a day

Figure 2: Physical Activity per Minute



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

4.2 Result of Study (2) Barriers and Motivation

4.2.1 Barriers to Physical Activity

The findings from this research are from the 530 population of male undergraduates students from universities in Libya. Of the study, population520 subjects completed and returned the questionnaire.

The questions were subjected to main two factors towards the study; barriers to physical activities and what are sources of motivations of the respondents. To the questions, frequencies were assigned which ranged from 1-10 (≤1-5 as least and ≥5-10 as high impact) to determine respondent`s scope of agreeing to the questions.

Some barriers to the PA - the previous negative experience, lack of time, knowledge and motivation shown in Table 5.

Table 4: Showing some barriers to PA

Questions	Frequencies	Percent	Number of questions
1 - Previous negative experience with physical activity	**232**	**43.9**	**5**
	189	**35.7**	**6**
	47	**8.9**	**4**
	31	**5.9**	**7**
	18	**3.4**	**8**
	3	**6**	**9**

T	**520**	**100%**	
2 - Lack of time	**329**	**62.2**	**5**
	159	**30.1**	**6**
	12	**2.3**	**4**
	11	**2.1**	**7**
	6	**1.1**	**8**
	3	**0.6**	**9**
T	**520**	**100%**	
3 - Cost of activity	**361**	**68.2**	**7**
	120	**22.7**	**6**
	29	**5.5**	**5**
	7	**1.3**	**8**
	1	**0.2**	**9**
	1	**0.2**	**4**
	1	**0.2**	**3**
T	**520**	**100%**	
4 - Lack of knowledge	**210**	**39.7**	**4**
	181	**34.2**	**5**
	113	**21.4**	**6**
	14	**2.6**	**7**
	1	**0.2**	**8**
	1	**0.2**	**3**
T	**520**	**100%**	
5 - Lack of motivation	**257**	**48.6**	**8**
	233	**44.0**	**9**
	20	**3.8**	**10**
	10	**1.9**	**7**
T	**520**	**100%**	

Number of questions: Means repeating the number of the question T:Total

The first questions on the barriers to the physical activity were focused on whether the respondents have had previous negative experience with physical activities and the results displayed on the table (4). On this, majority of the population, 232 (43.9%) indicated that previous negative experience had effect on them, therefore it was a barrier to their physical activity and that only a small percentage (9%) has been identified as a barrier.

Similarly, lack of time has been major barriers to most of the respondents on this study, representing 329 (62.2%). Another important factor as a barrier to the Palestinian Authority is the cost of activity.

As many PA center fix a high amount for membership and many could not afford to. In this regard, cost of activity as a barrier to PA is 361 (68.2%).

In this study, lack of knowledge as a barrier to PA is considered as the least factor 210 (39.7%) as shown in table (4). In addition, the result also revealed that lack of motivation as a barrier to have 257 (48.6%); this indicated the role of motivation in influencing PA.

Talking about personality and responding to physical activity in table 5.

Table 5: Showing other sets of barriers to PA.

Questions	Frequencies	Percent	Number of questions
6 - Lack of skills	**271**	**51.2**	**8**
	200	**37.8**	**9**
	30	**5.7**	**10**
	17	**3.2**	**7**
	2	**0.4**	**1**
T	**520**	**100%**	
7 - Feeling uncomfortable (intimidated in exercise surroundings)	**203**	**37.4**	**6**
	161	**30.4**	**8**
	152	**28.7**	**7**
	3	**0.6**	**9**
	1	**0.2**	**5**
T	**520**	**100%**	
8 - Fear of injury (or re-injury)	**207**	**39.1**	**9**
	197	**37.2**	**8**
	110	**20.8**	**7**
	4	**0.8**	**6**
	2	**0.4**	**10**
T	**520**	**100%**	
9 - Fear of making an existing illness worse	**195**	**36.9**	**6**
	192	**36.3**	**5**
	90	**17.0**	**4**
	31	**5.9**	**7**
	5	**0.9**	**3**
	4	**0.8**	**8**
	3	**0.6**	**9**
T	**520**	**100%**	
10 - How I see my body	**329**	**62.2**	**5**
	98	**18.5**	**6**
	43	**8.1**	**4**
	41	**7.8**	**7**
	9	**1.7**	**3**
T	**520**	**100%**	

Similarly, skills shortages also saw a significant impediment to the PA 271 (51.2%). As for other barriers include the unease (intimidation in the vicinity of exercise), fear of infection (or the injury), fear of contracting the disease worse as the current 203 (37.4%), 207 (39.1%) and 195, (36.9) respectively, among people who have been subjected to the study, 329 (62.2%) see how they affected the PA on the appearance of their bodies and 1.7 percent have ignored the role of the PA in the structure as in table (5).

Questions about the goals that can achieve and the security situation is as shown in Table 6.

Table 6: Shows the constrains to PA

Questions	Frequencies	Percent	Number of questions
11 - Failure to achieve goals in previous attempts to become active	**282**	**53.3**	**5**
	147	**27.8**	**4**
	54	**10.2**	**6**
	34	**6.4**	**3**
	2	**0.4**	**2**
	1	**0.2**	**7**
T	**520**	**100%**	
12 - Know that I can't achieve the results I want so why bother	**342**	**64.7**	**4**
	95	**18**	**3**
	71	**13.4**	**5**
	6	**1.1**	**2**
	3	**0.6**	**6**
	2	**0.4**	**1**
	1	**0.2**	**7**
T	**520**	**100%**	
13 - Lack of access to opportunities such as nearby facilities	**248**	**46.9**	**3**
	176	**33.3**	**4**
	54	**10.2**	**5**
	37	**7.0**	**2**
	3	**0.6**	**6**
	2	**0.4**	**1**
T	**520**	**100%**	
14 - Keep talking myself out of it	**265**	**50.1**	**6**
	129	**24.4**	**5**
	105	**19.8**	**7**
	18	**3.4**	**4**

	2	**0.4**	**3**
	1	**0.2**	**8**
T	**520**	**100%**	
15 - Lack of safe places	**205**	**38.8**	**5**
	193	**36.5**	**4**
	106	**20.0**	**3**
	7	**1.3**	**6**
	5	**0.9**	**2**
	2	**0.4**	**7**
	1	**0.2**	**9**
	1	**0.2**	**8**
T	**520**	**100%**	

Take an average of 53.3 percent of the sample non-realization goals in previous attempts to become active as a barrier to the PA, in a similar way, it was feared a large proportion of that they could not achieve results that they want as a barrier 342 (64.7%). There is another barrier to students by the PA and is the lack of access to the nearby facilities opportunities such as the result points to 248 (46.9%) with just one (0.2%) pointed out that this access is not a barrier to the PA.

Other questions such as barriers include, continue to talk about myself, there is no safe places, the lack of childcare, the absence of a partner and no programs available and appropriate to my level, their results showed 265 (50.1%), 205 (38.8%), respectively and displays the results in the table (6).

The questions he talked about support for access to find the right time (Table 7).

Table 7:Showsthe last sets of barriers to PA

Questions	**Frequencies**	**Percent**	**Number of questions**
16 - Lack of child care	**205**	**38.8**	**7**
	165	**31.2**	**8**
	113	**21.4**	**9**
	36	**6.8**	**6**
	1	**0.2**	**5**
T	**520**	**100%**	

17 - Lack of a partner	**216**	**40.8**	**6**
	148	**28.0**	**5**
	140	**26.5**	**7**
	13	**2.5**	**4**
	2	**0.4**	**3**
	1	**0.2**	**8**
T	**520**	**100%**	
18 - Lack of available and suitable programs at my level	**237**	**44.8**	**4**
	148	**28.0**	**3**
	127	**24.0**	**5**
	4	**0.8**	**6**
	4	**0.8**	**2**
T	**520**	**100%**	
19 - Lack of support from others	**261**	**49.3**	**8**
	138	**26.1**	**7**
	110	**20.8**	**9**
	8	**1.5**	**6**
	2	**0.4**	**5**
	1	**0.2**	**4**
T	**520**	**100%**	
20 - Lack of transportation	**201**	**38.0**	**6**
	159	**30.1**	**5**
	145	**27.4**	**7**
	7	**1.3**	**4**
	5	**0.9**	**8**
	3	**0.6**	**3**
T	**520**	**100%**	

The study also took a shortfall in support of others and emerged as a result of 261 (49.3%) 205 (38.8%), and 216 (40.8%), and 237 (44.8%), lack of communication of 201 (38%) the results showed in the table (7).

Questions are questions that speaks for itself in Table 8.

Table 8: Shows the results of barriers to PA

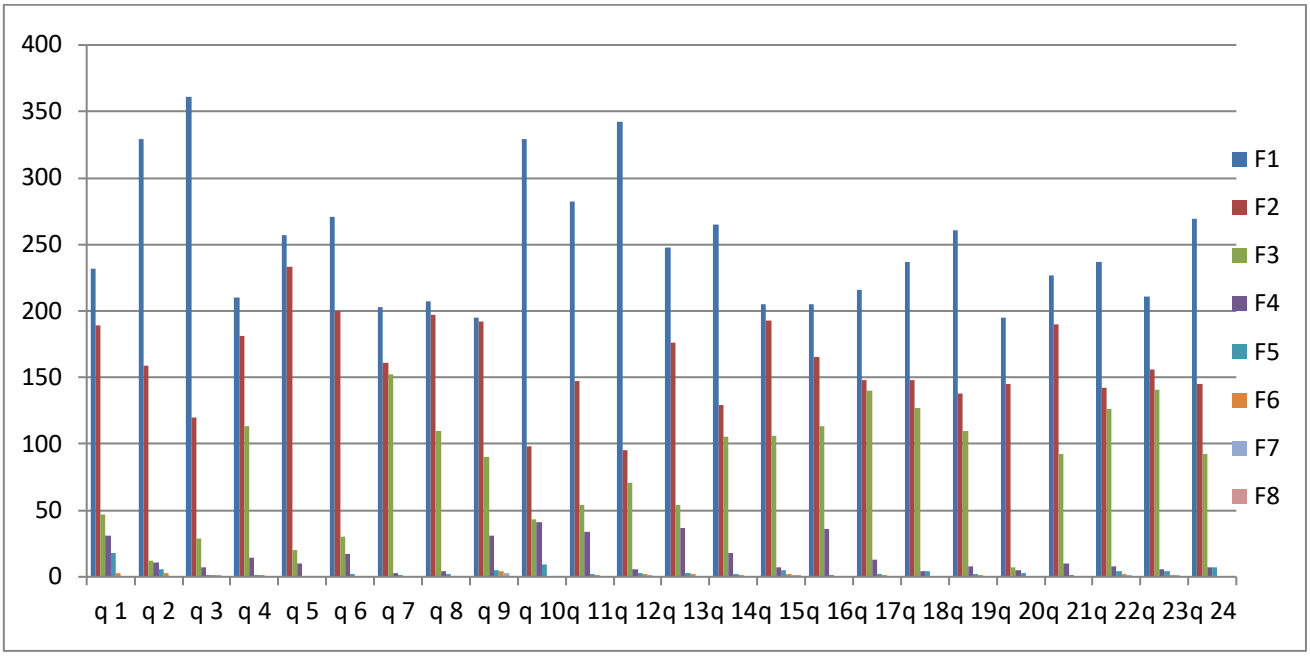
Questions	Frequencies	Percent	Number of questions
21 - Have other areas in my life that I feel must take priority in my day	**227**	**42.9**	**2**
	190	**35.9**	**3**
	92	**17.4**	**1**
	10	**1.9**	**4**

	1	**0.2**	**5**
T	**520**	**100%**	
22 -- Don’t feel that I have the ability to exercise at a sufficient level for it to be	**237**	**44.8**	**4**
	142	**26.8**	**5**
	126	**23.8**	**3**
	8	**1.5**	**6**
	4	**0.8**	**2**
	2	**0.4**	**7**
	1	**0.2**	**1**
T	**520**	**100%**	
23 –Don’t feel that I have the ability to exercise at a sufficient level for it to be worthwhile	**211**	**39.9**	**4**
	156	**29.5**	**3**
	141	**26.7**	**5**
	6	**1.1**	**6**
	4	**0.8**	**2**
	1	**0.2**	**7**
	1	**0.2**	**1**
T	**520**	**100%**	
24 - Pain when I exercise	**269**	**50.9**	**4**
	145	**27.4**	**3**
	92	**17.4**	**5**
	7	**1.3**	**6**
	7	**1.3**	**2**
T	**520**	**100%**	

The recent series of questions that conducted the study to verify the barriers to PA by samples; We have other areas in my life I feel that they must take priority on, does not feel able to exercise the adequate level to be, I don't feel able to exercise enough level to be meaningful and pain when the practice of sport and the results have been made clear as follows 227 (42.9%), and 237 (44.8%), and 211 (39.9%) and 269 (50.9%), respectively. Overall, results referred questions to measure the barriers to the Palestinian Authority to the existence of the average percentage in table (8).

The most important questions that got the biggest repetition of barriers

Chart 1:Shows Frequencies of Questions for barriers



4.2.2 Motivations Towards Physical Activity

The main reason for stimulating university-level students in Libya to join the Palestinian Authority was seen as a source of joy and outcome presented in Table 9

.

Table 9: Showing questions that motivate PA

Questions	Frequencies	Percent	Number of questions
1 - It's important to me to exercise regularly	**306**	**57.5**	**4**
	214	**40.3**	**3**

T	**520**	**100%**	
2 - I don’t see why I should have to exercise	**313**	**58.9**	**3**
	200	**37.6**	**2**
	5	**9**	**1**
	2	**4**	**4**
T	**520**	**100%**	
3 -I exercise because it’s fun	**452**	**85.0**	**4**
	62	**117**	**3**
	4	**8**	**2**
	2	**4**	**1**
T	**520**	**100%**	
4 - I feel guilty when I don’t exercise	**474**	**89.1**	**4**
	46	**8.6**	**3**
T	**520**	**100%**	
5 - I exercise because it is consistent with my life goals	**366**	**68.8**	**4**
	148	**27.8**	**3**
	5	**9**	**2**
	1	**2**	**1**
T	**520**	**100%**	

The result revealed that up to 452 (85%) of respondents reported that they have benefited from the fun in the PA, and not stimulate only 2 (4%) of this factor. that a closer look at data suggest that the drive towards the PA to influence through a view of life, such as many goals such as priority 366. (68.8%).

Similarly, the offending wave served as a catalyst towards the Palestinian Authority. The result is provided in Table (10). Astonishingly, many did not see the farewell to training, and therefore not be motivating them, results were presented in Table (10), with high 313 (58.9%) and 2 (4%)

It is expected to be several motives for the fact that the PA is important for well-being and the result displayed on the table (9), which represents the 306 (57.5) and the strange 214 (40.3%) unpaid for this reason.

The data generated by this study to investigate the motivational factors to PA by the respondents showed the influence of other people has impact on PA in table (10)

The data generated it had reached the study to investigate the motivational factors of the PA by respondents to the impact of other people have an influence on the PA in the table (10)

Table 10: Determination of motivations towards PA

Questions	Frequencies	Percent	Number of questions
6- I exercise because other people say I should	**378**	**71.1**	**3**
	132	**24.8**	**4**
	9	**1.7**	**2**
	1	**2**	**1**
T	**520**	**100%**	
7- I value the benefits of exercise	**308**	**57.9**	**3**
	197	**37.0**	**4**
	13	**2.4**	**2**
	2	**1**	**4**
T	**520**	**100%**	
8- I can't see why I should bother exercising	**481**	**90.4**	**3**
	23	**403**	**2**
	13	**2.4**	**4**
	3	**0.6**	**1**
T	**520**	**100%**	
9- I enjoy my exercise sessions	**436**	**82.0**	**4**
	68	**12.8**	**3**
	10	**1.9**	**2**
	6	**1.1**	**1**
T	**520**	**100%**	
10-I feel ashamed when I miss an exercise session	**458**	**86.1**	**4**
	57	**10.7**	**3**
	4	**0.2**	**2**
	1	**2**	**11**
T	**520**	**100%**	

Indicated in table (10). The question of whether people are working as an inspiration to others referred to as a result of large 378 (71.1%), while one (2%) just are not influenced by others. Moreover, the findings reveal a large number saw no reason for the PA, 481st (90.4%), and less responsive to this question is the three (1%). For the purpose of the benefits of the value of the PA, a large number of well

paid, 308 (57.9%), while others are motivated by the fact that they do not want to be ashamed when they miss their session, 458 (86.1%) with little response from one (2%) only those who do not feel ashamed when they miss exercise session. Large numbers driven also by the fact that it derives happiness in exercise and the result shown in Table (11) such as 436 (82%).

Another sets of questions investigated in this study include consideration of exercise as part of identity in table 11

Table 11: Reasons for motivation to PA

Questions	Frequencies	Percent	Number of questions
11- I consider exercise part of my identity	**450**	**84.6**	**4**
	60	**11.3**	**3**
	5	**9**	**1**
	5	**9**	**2**
T	**520**	**100%**	
12- I take part in exercise because friends/family/partner say I should	**432**	**81.2**	**4**
	67	**12.6**	**3**
	16	**3.0**	**2**
	5	**9**	**1**
T	**520**	**100%**	
13- I think it is important to make the effort to exercise regularly	**489**	**91.9**	**4**
	31	**5.8**	**3**
T	**520**	**100%**	
14- I don't see the point in exercising	**409**	**76.9**	**3**
	78	**14.7**	**2**
	24	**4.5**	**1**
	9	**1.7**	**4**
T	**520**	**100%**	
15- I find exercise a pleasurable activity	**494**	**92.9**	**4**
	24	**4.5**	**3**
	2	**4**	**2**
T	**520**	**100%**	

In Table (11), taking part of exercise because family and friends asked, and important of the exercise, the results is presented in table (11) as 450 (84.6%), 432

(81.2%) and 489 (91.9%) respectively. Other questions include if the respondents see any reason for undertaking exercise and if they find any pleasure in PA. The data indicated that 409 (76.9%) do not see any point in exercise while almost all the respondents do not derive any pleasure in PA 494 (92.9%).

Table 12:talk about exercise, people and self-satisfaction.

Table 12: Data showing motivation to undertake PA

Questions	Frequencies	Percent	Number of questions
16- I feel like a failure when I haven't exercised in a while	**498**	**93.6**	**4**
	15	**2.8**	**3**
	4	**0.8**	**2**
	3	**0.**	**1**
T	**520**	**100%**	
17- I consider exercise a fundamental part of who I am	**501**	**94.2**	**4**
	13	**2.4**	**3**
	5	**0.9**	**2**
	1	**.02**	**1**
T	**520**	**100%**	
18- I exercise because others will not be pleased with me if I don't	**502**	**94.4**	**4**
	14	**2.5**	**3**
	2	**4**	**2**
	2	**4**	**1**
T	**520**	**100%**	
19- I get restless if I don't exercise regularly	**483**	**90.8**	**3**
	18	**3.4**	**4**
	12	**2.3**	**2**
	4	**0.8**	**1**
T	**520**	**100%**	
20- I think exercising is a waste of time	**273**	**51.3**	**2**
	233	**43.8**	**3**
	7	**1.3**	**1**
	7	**1.3**	**4**
T	**520**	**100%**	

Of the 520 respondents, 498 (93.6%) are motivated by their feelings to avoid failure while other considered PA as part of their routines and this represented a big

number 501 (94.2%) with insignificant (0.02%). Similarly, 502 (94.4%) are motivated to avoid hurting others while other see PA as part of them and felt restless if they don't do exercise regularly and the result indicated 483 (90.8%). Conversely, 273 (51.3%) felt exercise is a waste of time but nearly to such respond still motivated (43.8%) table (12).

Table 13: Talk about the exercise and relationship with family and friends.

Table 13: measures of motivation to PA

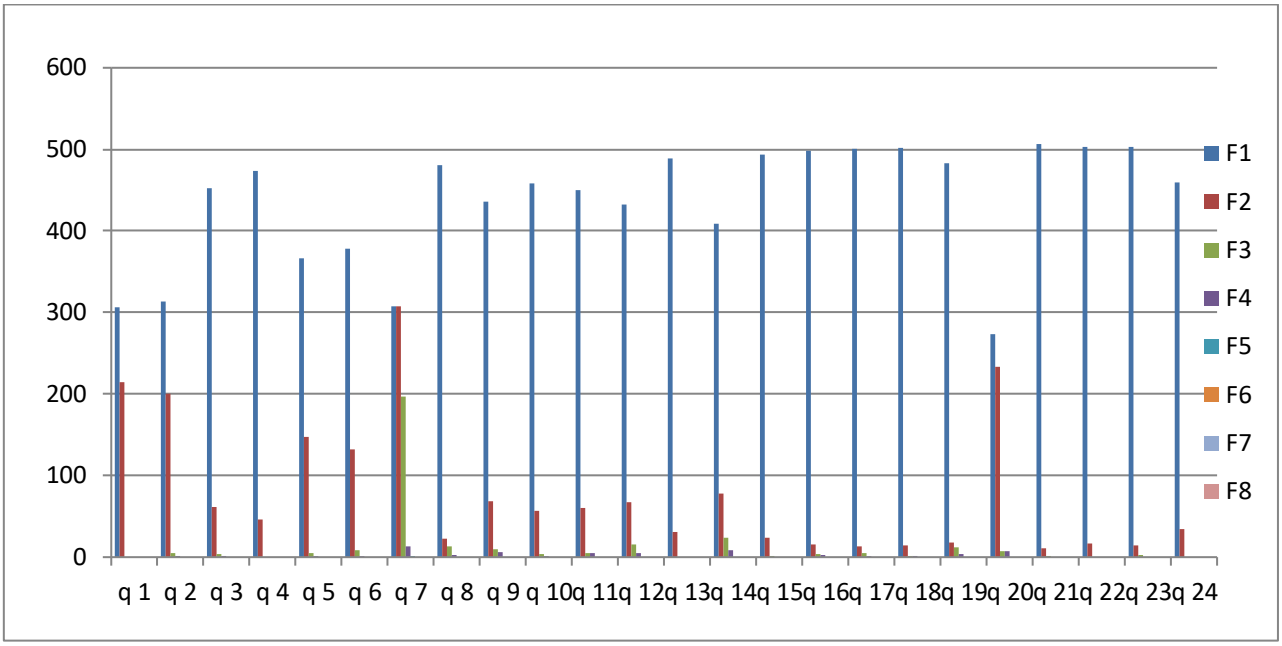
Questions	Frequencies	Percent	Number of questions
21- I get pleasure and satisfaction from participating in exercise	**507**	**95.3**	**4**
	11	**2.1**	**3**
	2	**4**	**2**
T	**520**	**100%**	
22- I would feel bad about myself if I was not making time to exercise	**503**	**94.5**	**4**
	17	**3.2**	**3**
T	**520**	**100%**	
23- I consider exercise consistent with my values	**503**	**94.5**	**4**
	14	**2.6**	**3**
	3	**0.6**	**2**
T	**520**	**100%**	
24- I feel under pressure from my friends/family to exercise	**459**	**86.3**	**2**
	34	**6.4**	**1**
	27	**5.1**	**3**
T	**520**	**100%**	

The results of the questions that looked at some psychological point of view such as how the respondents would feel if they couldn't find to exercise or the pressure of family and friends revealed significant percentage are motivated by

such, For instance, 507 (95.3%) derived pleasure in PA, hence served as a motivation. In addition, others felt bad if they couldn't find time for PA, if not consistent with their values, pressure from others such as family and friends and feeling and bad about oneself and the results are 503 (94.5%), 503 (94.5%) and 459 (86.3%).

The most important questions that got the biggest repetition of Motivations

Chart 2:Shows Frequencies of Questions for Motivations



5. DISCUSSION

5.1 Discussion of Study (1) Physical Activity Levels

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

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 (Al-Hazzaa. 2006) (El-Gilanyet. al., 2011) (Awadallaet. 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 subjects 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).

5.2 Discussion of Study (2) Barriers and Motivations

5.2.1 Barriers

As shown in the results, on effect of previous experience, majority of the population, 232 (43.9%) indicated that previous negative experience had effect on them, hence a barrier to their physical activity and only small percentage (9.0%) identified this as a barrier.

As presented in table (5), time constraint has been major barrier to PA, this also agreed with previous studies (Scott et al., 2006; Scott et. al., 2010). Other studies have shown that a range of constraints, such as language barriers, lack of time and money, discrimination, and lack of awareness about physical activities (Livengood & Stodolska, 2004).

Regarding cost of activity as a barrier to PA as shown in the result 361 (68.2%).In terms of barrier patterns, a key finding in this study also stood out as a constraint, followed by lack of motivation and psychological constraints. Another constraint considered significant barrier to PA is lack of skill that is represented as 271 (51.2%). This as a barrier has to do with either characteristic of the person or general lifestyle as reported in a research by (Cohen et al., 2007).

Simultaneously, this study also looked at other feeling uncomfortable (intimidated in exercise surroundings), Fear of injury (or re-injury), Fear of making an existing illness worse are represented in table (5). Respondents constrained by these are likely been influenced by sedentary lifestyle that encouraged less physical activity. Setting goal to achieve has been a barrier to many respondents, the study found that 53.3 % of the sample considered failure to achieve goals in previous

attempts to become active as a barrier to PA, similar it, significant percentage fear that they cannot achieve the results they want.

This agreed with the study conducted by (CDC 2017) and further suggested way to overcome it by learning how to warm up and cool down to prevent injury and choose activities involving minimum risk. Another barrier to PA by the students is lack of access to opportunities such as nearby facilities and the result indicated 248 (46.9%) with only 1 (0.2%) indicated that such access not being a barrier to PA.

This study found that many respondents expect to have complex facilities before they take physical activities contrary to the fact that a minimal facilities or equipment are required, and activities such as walking, jogging, jumping rope, or calisthenics could actually serve. Like previous studies (CDC, 2007; Bautista et. al., 2011), the current study found that , Lack of safe places, lack of child care, lack of a partner and lack of available and suitable programs at my level, taking it as priority day to day activities, not feeling that I have the ability to exercise at a sufficient level for it to be, don't feel that I have the ability to exercise at a sufficient level for it to be worthwhile and Pain when I exercise, which are all related to personal and psychological perceptions which became hindrance to physical activity.

5.2.2 Motivations

This research extensively looked at the various motivations to the university students in Libya. Previous also look at some of the motivations but no current information related to Libyan students. The current study found that as 452 (85%) of the respondents reported to have derived fun in PA and with the least among the respondents that are not motivated in any way are only 2 (4%).

This finding is not surprising, and is in agreement with previous studies (Adam and White, Barry and Howe, 2005; 2003; Cardinal et al., 1998; Callaghan et. al., 2002).

The key motivation also found in this study is influence by life goal, as many set such as priority 366 (68.8%).

Studies have consistently shown self-efficacy to be the strongest predictor of exercise behavior (Buckworth, 2001; Bucukworth and Dishman, 2002; Buckworth and Nigg, 2004; Standage et al., 2003). Thus, the outcome of this study is not surprising. Surprisingly, many did not see reason to exercise, hence are not motivated and the resulted is presented also in table (10), with 313 (58.9%) high and two (4%). Expectedly, many are motivated for the fact that PA is important for well-being and the result is presented in table (10) which represented 306 (57.5) and strangely 214 (40.3%) are not motivated for that reason.

Another dimension this study looked is motivations by the influence of family and friends and significant number of the respondents are motivated by the feeling to avoid their training session and failure to achieved fitness. results of the questions that looked at some psychological point of view such as how the respondents would feel if they couldn't find to exercise or the pressure of family and friends revealed significant percentage are motivated by such, For instance, 507 (95.3%) derived pleasure in PA, hence served as a motivation. In addition, others felt bad if they couldn't find time for PA, if not consistent with their values, pressure from others such as family and friends and feeling and bad about oneself and the results are 503 (94.5%), 503 (94.5%) and 459 (86.3%) respectively.

Generally, the study looked into three aspects that include the level of physical activities among undergraduate students in Libyan, the barriers to the PA and their motivation towards it.

The level of physical activities has been reported in different parts of the world among age different groups (Craig et al., 2003; Awadalla et al., 2014; Clemente et al., 2016). Therefore, this study went further to look on barriers to PA and motivations to those partook in exercise.

This study found out that the respondents didn't meet the minimum WHO guidelines towards PA but only 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).

This finding agreed with study of (Paragas et al., 2015) in which the authors reported the level of physical activities remained relatively low. This similarity of low participation of students in physical activity could be attributed to the increase to sedentary life and ease access to transport system. (Hasse et al., 2004) also evaluated the physical activity of university students and revealed that the physical conditions of students are very much associated with their own attitudes toward health promotion and illness prevention.

Another evidence from this study showed that the results indicated that the sample spent 28.02 minutes for walking which was not compatible with their physical activity rates.

Similar study was conducted to compare the pattern of physical activities and sedentary life time among undergraduates students in Nigeria and the results showed that spent more of their time (about 7.5 hours/day) in sedentary activities, much less time in moderate-intensity activities (about 1 hour/day) and a negligible time in vigorous intensity activities (about 2 minutes/day) (Oyeyemi et al., 2017).

The authors' findings of high sedentary time and extremely low vigorous-intensity physical activity are in agreement with studies of objective physical activity among university and college students in other parts of the world such as Spain, Portugal and the United States, as also observed in the current study. Contrary to this study, (Oyeyemi et al., 2017) looked into mixed gender samples populations, though there was no significant difference on the level of physical activity among the different gender.

As speculated in this study, academic schedules including timetable, class periods and tutorials and non-academic routines like religious obligations at both weekdays and weekend days are ubiquitously contributed to low PA among university students.

The generally high sedentary time and low vigorous intensity physical activity accumulated by students in Libya is a source for concern.

Evidence indicates that physical inactivity and excessive sedentary behaviour are distinct constructs with effects on health status and fitness.

Another focus of this research is the barriers that hinder students to undertake physical activity.

For this reason, various questions were put to assess the main barriers towards PA.

The first questions on the barriers to the physical activity were focused on whether the respondents have had previous negative experience with physical activities and the results are presented on table (5). It was clear that such experience had become a barrier to PA. This constrain was also cited by study conducted by (Allison et al.,1999). Other barriers cited by the authors are time constraints due to schoolwork, other interests, and family activities were considered most important barriers to PA as equally noticed by the current study.

As stated above, lack of time has been major barriers to most of the respondents on this study, representing 329 (62.2%).

Another important factor that serves as a barrier to PA is cost of activity. The finding of this study also suggested that lack of knowledge is another barrier to PA, with respondents indicated that about 210 (39.7%) as shown in table (1). In addition, the result also revealed that lack of motivation as a barrier to have 257 (48.6%); this indicated the role of motivation in influencing PA.

These consistently higher levels of perceived barriers to PA in students of university are also revealed by (Allison et al., 1999). Generally, many find it difficult to work out alone, thus lack of motivation could also serve as a barrier to PA.

In this study, we found out that lack of skill also considered significant barrier to PA 271 (51.2%). For other barriers include Feeling uncomfortable

(intimidated in exercise surroundings), Fear of injury (or re-injury), Fear of making an existing illness worse are represented with 203 (37.4%), 207 (39.1%) and 195 (36.9) respectively. In a multivariate study by (Gyurcsik et al., 2006) found that lack of skill and fear could considered as barrier to PA among university students.

The study also took lack of support from others as a barrier and the result showed 261 (49.3%) and lack of transportation with 201 (38.0%) and the results is showed in table (4).

These results are in conformity with study of (Trost et al., 2002) in which the authors like this study examined intrapersonal variables including attitudes, barriers to physical activity, enjoyment of physical activity, expected benefits, value of physical activity outcomes, intentions, exercise self- schemata, perceived behavioral control, normative beliefs, knowledge of health and exercise, perceived health, psychological health, self-efficacy, self-motivation, and stage of change.

The third phase of this study is to determine some motivations to physical activity by university students. The results of this study revealed that the latent structure of the types of sports students' motives consisted of some factors such as the importance of exercise regularly, sport action with friend, popularity, fitness & health, social status, sports events, relaxation through sports and also motivations from family.

This study also found few among the subjects that are less significant people that are not motivated to participate in physical activities.

Additionally, this found that those motivated with considering exercise consistent with their values to be very high 503 (94.5%) this proved the point that motivation to physical activity is tandem with self-value and goals. In the context of pleasure and satisfaction from participating in exercise could find physical activity (sport) important for their health, and guilty conscious of failing to participate in Physical activity but not as means for socializing, this study found high grading of over 95%, this showed that many are aware of the role of exercise in good health. This agreed with the studies of (Rhodes et al., 2004).

Conversely, despite significant number of the population are motivated for various reasons, others are not any way been motivated, this question represents 409 (76.9%), and would be assumed to be with individual's behavior. It is evidently clear that physical Activity has had a significant effect on both exercise intention and exercise behavior from the results found in this study.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The present study demonstrates that:

1- All the sample of students in selected faculties achieved moderate physical activity rates of 18.49 minutes per day, which was higher than the high intensity physical activity that was only 9.38minutes per day.
2- Moderate physical activity rates of 18.49 minutes per day had been achieved with an average of 3.69days per week, 20 while the high intensity physical activity took an average of 1.54 day per week. The walking activity was done during 4.05 days per week.
3- The results of the study indicated that the sample could not reach the level of physical activity that is recommended by the World Health Organization (WHO) toward physical activity and health neither in moderate physical activity nor in high intensity physical. (WHO) recommended that adults should perform at least (150 minutes per week moderate physical activity, 75 minutes high intensity physical) weekly.

Conclusively, Motivation for physical activities and barriers to it has become a very alarming area of interest in different aspect of life. In this research, it was found the main barriers to PA to include increase to sedentary life and ease access to transport system, lack of time due to school and this can attributed to nature of timetable and other academic activities that are similar as in other researches.

In addition, the study found statistically significant factors as barriers to PA is negative pass experience to physical activities. Concerning motivations, the study found significant differences in motivation to participate in sport activities among sports students, some are motivated due to pressure from family while other due to peer group.

This study also found significant motivation to participate in sport activities for all sports students due to health benefits and personal values.

The originality of the research is first to find the rates of physical activity and what are the barriers and motivations to physical activity and write the basics in this area research.

Crucially the main barriers were lack of time and money, discrimination and lack of awareness about physical activity, and the lack of safe place reduces the performance of physical activity, but respondents said they developed the joy of physical activity as a driver

6.2 Recommendations

1- The University administration should adopt a set of procedures to increase physical activity rates among students at the university.
2- At the results of the study, there was a need for further studies on samples of students, with females and the largest number of college.
3- There is a need for further studies to determine rates of physical activity, based on the tools to measure and data collection of substance3 -.
4- Other qualitative studies are needed to identify the factors that lead to physical inactivity among students in order to enhance their physical activity, as well as to increase physical activity rates among those who have reached the WHO rates of physical activity.
5- I enlightenment of the risk of physical inactivity as well as the benefits of physical activity within the campus.
6- Providing facilities, equipment and sports tools within the university that will encourage students in different colleges to exercise sports activities that will promote public health
7- Recommends this study further study on how to intervene to increase the level of physical activity between university studies, this must include a model for intervention.

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APPENDICES

INTERNATIONAL PHYSICAL ACTIVITY QUESTIONNAIRE

(August 2002)

SHORT LAST 7 DAYS SELF-ADMINISTERED FORMAT

I. FOR USE WITH YOUNG AND MIDDLE-AGED ADULTS (15-69 YEARS)

The International Physical Activity Questionnaires (IPAQ) comprises a set of four questionnaires. Long (5 activity domains asked independently) and short (4 generic items) versions for use by either telephone or self-administered methods are available. The purpose of the questionnaires is to provide common instruments that can be used to obtain internationally comparable data on health–related physical activity.

Background on IPAQ

The development of an international measure for physical activity commenced in Geneva in 1998 and was followed by extensive reliability and validity testing undertaken across 12 countries (14 sites) during 2000. The results suggest that these measures have acceptable measurement properties for use in many settings and in different languages, and are suitable for national population-based prevalence studies of participation in physical activity.

A. Using IPAQ

Use of the IPAQ instruments for monitoring and research purposes is encouraged. It is recommended that no changes be made to the order or wording of the questions as this will affect the psychometric properties of the instruments.

B. Translation from English and Cultural Adaptation

Translation from English is supported to facilitate worldwide use of IPAQ. Information on the availability of IPAQ in different languages can be obtainedat www.ipaq.ki.se. If a new translation is undertaken, we highly recommend using the prescribed back translation methods available on the IPAQ website. If possible, please consider making your translated version of IPAQ available to others by contributing it to the IPAQ website. Further details on translation and cultural adaptation can be downloaded from the website.

II. FURTHER DEVELOPMENTS OF IPAQ

International collaboration on IPAQ is ongoing and an ***International Physical Activity Prevalence Study*** is in progress. For further information, see the IPAQ website.

A. More Information

More detailed information on the IPAQ process and the research methods used in the development of IPAQ instruments is available at www.ipaq.ki.se and Booth, M.L. (2000). *Assessment of Physical Activity: An International Perspective*. Research Quarterly for Exercise and Sport, 71 (2): s114-20. Other scientific publications and presentations on the use of IPAQ are summarized on the website.

INTERNATIONAL PHYSICAL ACTIVITY QUESTIONNAIRE

We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the **last 7 days**. Please answer each question even if you do not consider yourself an active person. Please think about the activities you do at work, as part of your house and yard work, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the **vigorous** activities that you did in the **last 7 days**. **Vigorous** physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. Think *only* about those physical activities that you did for at least 10 minutes at a time.

1. During the **last 7 days**, on how many days did you do **vigorous** physical activities like heavy lifting, digging, aerobics, or fast bicycling?

_____ **days per week**

☐ No vigorous physical activities → ***Skip to question 3***

2. How much time did you usually spend doing **vigorous** physical activities on one of those days?

_____ **hours per day**

_____ **minutes per day**

☐ Don't know/Not sure

Think about all the **moderate** activities that you did in the **last 7 days**. **Moderate** activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

3. During the **last 7 days**, on how many days did you do **moderate** physical activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking.

_____ **days per week**

☐ No moderate physical activities → ***Skip to question 5***

4. How much time did you usually spend doing **moderate** physical activities on one of those days?

_____ **hours per day**
_____ **minutes per day**

☐ Don't know/Not sure

Think about the time you spent **walking** in the **last 7 days**. This includes at work and at home, walking to travel from place to place, and any other walking that you have done solely for recreation, sport, exercise, or leisure.

5. During the **last 7 days**, on how many days did you **walk** for at least 10 minutes at a time?

_____ **days per week**

☐ No walking → ***Skip to question 7***

6. How much time did you usually spend **walking** on one of those days?

_____ **hours per day**

_____ **minutes per day**

☐ Don't know/Not sure

The last question is about the time you spent **sitting** on weekdays during the **last 7 days**. Include time spent at work, at home, while doing course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading, or sitting or lying down to watch television.

7. During the **last 7 days**, how much time did you spend **sitting** on a **week day**?

_____ **hours per day**

_____ **minutes per day**

☐ Don't know/Not sure

This is the end of the questionnaire, thank you for participating.

استبانة النشاط البدني الدولية(يوليو 2014)

لقياس مستوى النشاط البدني في الأيام السبعة الماضية (للشباب والكبار 15-69 سنة)

الصيغة المختصرة للاستبانة، للاستخدام عن طريق التعبئة الشخصية

تتضمن استبانة النشاط البدني الدولية (IPAQ) أربع مجموعات من الاستبانات؛ صيغة مطولة (تتكون من 5 حقول مستقلة من الأنشطة البدنية)، وصيغة مختصرة (مكونة من 4 بنود عامة). لكل صيغة من الصيغتين استبانتان، إحداها للاستخدام بواسطة الهاتف، والأخرى للاستخدام الذاتي (يتم تعبئتها من قبل الشخص نفسه). إن هدف هذه الاستبانات هو توفير أداة مشتركة يمكن من خلال استخدامها الحصول على بيانات عن مستوى النشاط البدني المرتبط بالصحة، قابلة للمقارنة دولياً.

خلفية عن استبانة النشاط البدني الدولية

بدأت عملية بناء مقياس دولي للنشاط البدني في مدينة جنيف في عام 1998م، وتبع ذلك في عام 2000م إجراء اختبارات مكثفة لصدق المقياس وثباته، شملت 12 دولة (14 موقعاً). ولقد أظهرت النتائج النهائية أن المقاييس المستخدمة تمتاز بخواص قياس مقبولة، لاستخدامها في أماكن متعددة وبلغات مختلفة، مع صلاحيتها للاستعمال في الدراسات الوطنية لمعرفة شيوع ممارسة النشاط البدني لدى السكان.

استخدام استبانة النشاط البدني الدولية

يُحث على استخدام استبانة النشاط البدني الدولية لمراقبة مستوى النشاط البدني، ولغرض البحث العلمي. ويوصي بعدم إحداث أي تغيير في ترتيب الأسئلة أو في الكلمات المستخدمة، لأن ذلك يؤثر في الخصائص السيكومترية للأداة.

الترجمة من اللغة الإنجليزية والملاءمة الثقافية

إن ترجمة استبانة النشاط البدني الدولية من اللغة الإنجليزية إلى لغات أخرى أمر يستحق التأييد، مما يسهل استعمالها على نطاق واسع. ويمكن الحصول على المعلومات المتعلقة بتوفر الاستبانة الدولية للنشاط البدني بلغات مختلفة من الموقع التالي: www.ipaq.ki.se ، وفي حالة الشروع في ترجمة الاستبانة، فإننا نوصي بشدة أن يتم استخدام طريقة الترجمة العكسية (Back translation) الموضحة على موقع الاستبانة الإلكتروني. فضلاً، إذا كان ممكناً، ضع في الاعتبار إتاحة النسخة المترجمة من الاستبانة الدولية للآخرين، وذلك بوضعها في الموقع الإلكتروني، ويمكن الحصول على معلومات إضافية حول الترجمة والملاءمة الثقافية من خلال موقع استبانة النشاط البدني الدولية.

إدخال البيانات وترميزها

ملحق مع إجابات كل سؤال من أسئلة استبانة النشاط البدني الدولية رموز مقترحة للمتغيرات والمدى المتوقع للإجابات، لتسهيل عملية إدخال البيانات والتعامل معها، وللمساعدة في عملية تدريب القائمين على إجراء المقابلات، ويوصي بأن يتم بالضبط تسجيل الإجابة الفعلية للمجيب، فعلى سبيل المثال: " 120 دقيقة " تكتب 120 في خانة الدقائق، وفي حالة الإجابة بساعتين، فتكتب 2 في خانة الساعات، أما في حالة كون الإجابة " ساعة ونصف " فتكتب على أساس 1 في عامود الساعات، و 30 في عامود الدقائق.

تطورات استبانة النشاط البدني الدولية

إن التعاون الدولي حول استبانة النشاط البدني الدولية مستمر، وحالياً يتم إنجاز دراسة دولية حول شيوع ممارسة النشاط البدني. ولمزيد من المعلومات، يمكن الرجوع إلى الموقع الإلكتروني لاستبانة النشاط البدني الدولية.

معلومات إضافية

يتوافر في الموقع الإلكتروني التالي: www.ipaq.ki.se معلومات إضافية حول إجراءات استبانة النشاط البدني الدولية وطرق البحث المستخدمة في بنائها، ويمكن الرجوع للمرجع التالي: .(2000) .Booth, M. L Assessment of Physical Activity: An International Perspective. Research Quarterly for Exercise and Sport, 71 (2): s 114-20.كما يتوفر، على الموقع
الإلكتروني، عرض موجز لبحوث أخرى نشرت أو ألقيت في مؤتمرات علمية، حول استخدام استبانة النشاط البدني الدولية.

الصيغة المختصرة لاستبانة النشاط البدني الدولية، للاستخدام بواسطة التعبئة الشخصية

_____

نحن مهتمون بمعرفة أنواع الأنشطة البدنية التي يقوم بها الأفراد كجزء من حياتهم اليومية. الأسئلة التالية ترتكز حول الوقت الذي قضيته في ممارسة أنشطة بدنية خلال الأيام السبعة الماضية. فضلاً أجب عن كل سؤال من الأسئلة التالية حتى وإن كنت تعتبر نفسك غير نشيط بدنياً. فكر في الأنشطة البدنية التي تمارسها خلال عملك، وكجزء من أعمالك المنزلية، وأثناء تنقلك من مكان لآخر، وتلك التي تقوم بها في وقت فراغك بغرض الترويح أو التمرين أو الرياضة.

الآن فكر في جميع الأنشطة البدنية التي تتطلب جهداً بدنياً مرتفع الشدة والتي قمت بممارستها خلال الأيام السبعة الماضية. الأنشطة البدنية مرتفعة الشدة هي تلك الأنشطة التي تجعل تنفسك أعلى بكثير من المعتاد، مثل رفع أشياء ثقيلة، أو حرث الأرض، أو ركوب الدراجة بسرعة عالية، أو الجري، أو ممارسة كرة القدم، أو كرة السلة، أو السباحة، أو نط الحبل. فكر فقط في الأنشطة البدنية مرتفعة الشدة التي قمت بممارستها لمدة 10 دقائق على الأقل في كل مرة.

1- خلال الأيام السبعة الماضية، كم يوماً مارست فيه نشاطاً بدنياً مرتفع الشدة؟

____ يوم في الأسبوع

☐ **لا أقوم بأي نشاط بدني مرتفع الشدة.** ⟵ **انتقل مباشرة إلى السؤال رقم 3**

2- في المعتاد، كم من الوقت قضيته في ممارسة نشاط بدني مرتفع الشدة في أحد تلك الأيام؟

_____ ساعة في اليوم

_____ دقيقة في اليوم

☐ لا أدري/ أو غير متأكد.

الآن فكر في جميع الأنشطة البدنية التي تتطلب جهداً بدنياً **معتدل الشدة** والتي قمت بممارستها خلال الأيام السبعة الماضية. الأنشطة البدنية معتدلة الشدة هي تلك الأنشطة التي تجعل تنفسك أعلى من المعتاد إلى حداً ما، ويمكن أن تتضمن رفع أشياء خفيفة، أو ركوب الدراجة بسرعة عادية، أو ممارسة كرة الطائرة، أو ممارسة تنس الطاولة، أو كنس المنزل، أو غسل الملابس يدوياً، أو غسل السيارة. لا تحسب المشي ضمن هذه الأنشطة. مرة أخرى، فكر فقط في الأنشطة البدنية معتدلة الشدة التي قمت بممارستها لمدة 10 دقائق على الأقل في كل مرة.

3- خلال الأيام السبعة الماضية، كم يوماً مارست فيه نشاطاً بدنياً معتدل الشدة؟

_____ يوم في الأسبوع

☐ لا أقوم بأي نشاط بدني معتدل الشدة. ← **انتقل مباشرة إلى السؤال رقم 5**

4- في المعتاد، كم من الوقت قضيته في ممارسة نشاط بدني معتدل الشدة في أحد تلك الأيام؟

_____ ساعة في اليوم

_____ دقيقة في اليوم

☐ لا أدري/ أو غير متأكد.

الآن فكر في الوقت الذي قضيته في المشي خلال الأيام السبع الماضية، ويتضمن ذلك المشي إلى العمل، والمشي أثناء العمل، وفي البيت، وخلال انتقالك من مكان لآخر، أو أي نوع من أنواع المشي بغرض الترويح أو الرياضة.

5- خلال الأيام السبعة الماضية، كم يوماً مارست فيه المشي لمدة 10 دقائق على الأقل في كل مرة؟

_____ يوم في الأسبوع

☐ لا أقوم بممارسة المشي إطلاقا. ← **انتقل مباشرة إلى السؤال رقم 7**

6- في المعتاد، كم من الوقت قضيته في ممارسة المشي في أحد تلك الأيام؟

____ ساعة في اليوم

____ دقيقة في اليوم

☐ **لا أدري/ أو غير متأكد.**

الآن فكر في الوقت الذي قضيته جالساً خلال الأيام السبعة الماضية. أحسب وقت الجلوس في العمل، وفي المنزل، وفي الدراسة، وفي الترفيه. من الممكن أن يتضمن ذلك وقت الجلوس على المكتب، وأثناء العمل على الكمبيوتر، وأثناء زيارتك لصديق، وأثناء القراءة، والجلوس أو الاستلقاء لمشاهدة التلفزيون.

7- خلال الأيام السبعة الماضية، كم من الوقت قضيته جالساً في أحد هذه الأيام من غير أيام الإجازة الأسبوعية؟

____ ساعة في اليوم

____ دقيقة في اليوم

☐ **لا أدري/ أو غير متأكد.**

(نهاية الاستبانة، شكراً لمشاركتكم)

EXERCISE REGULATIONS QUESTIONNAIRE (BREQ-3)

Age: _____ years **Sex: male female** **(please circle)**

WHY DO YOU ENGAGE IN EXERCISE?

We are interested in the reasons underlying peoples' decisions to engage or not engage in physical exercise. Using the scale below, please indicate to what extent each of the following items is true for you. Please note that there are no right or wrong answers and no trick questions. We simply want to know how you personally feel about exercise. Your responses will be held in confidence and only used for our research purposes.

	Not true for me		**Sometimes true for me**		**Very true for me**
1 - It's important to me to exercise regularly	0	1	2	3	4
2 I don't see why I should have to exercise	0	1	2	3	4
3 I exercise because it's fun	0	1	2	3	4
4 I feel guilty when I don't exercise	0	1	2	3	4
5 I exercise because it is consistent with my life goals	0	1	2	3	4
6 I exercise because other people say I should	0	1	2	3	4
7 I value the benefits of exercise	0	1	2	3	4
8 I can't see why I should bother exercising	0	1	2	3	4
9 I enjoy my exercise sessions	0	1	2	3	4
10 I feel ashamed when I miss an exercise session	0	1	2	3	4
11 I consider exercise part of my identity	0	1	2	3	4
12 I take part in exercise because my friends/family/partner say I should	0	1	2	3	4
13 I think it is important to make the effort to exercise regularly	0	1	2	3	4
14 I don't see the point in exercising	0	1	2	3	4

	Not true for me		Sometimes true for me		Very true for me
15 I find exercise a pleasurable activity	0	1	2	3	4
16 I feel like a failure when I haven't exercised in a while	0	1	2	3	4
17 I consider exercise a fundamental part of who I am	0	1	2	3	4
18 I exercise because others will not be pleased with me if I don't	0	1	2	3	4
19 I get restless if I don't exercise regularly	0	1	2	3	4
20 I think exercising is a waste of time	0	1	2	3	4
21 I get pleasure and satisfaction from participating in exercise	0	1	2	3	4
22 I would feel bad about myself if I was not making time to exercise	0	1	2	3	4
23 I consider exercise consistent with my values	0	1	2	3	4
24 I feel under pressure from my friends/family to exercise	0	1	2	3	4

Thank you for taking part in our research

التنظيمية (BREQ-3)

العمر: _____ سنوات الجنس: ذكر أنثى يرجى وضع دائرة

لماذا تشترك في تمرين؟

نحن مهتمون بالأسباب الكامنة وراء قرارات الشعوب للمشاركة أو عدم الانخراط في المادية ممارسه الرياضه.
باستخدام المقياس أدناه ، يرجى الإشارة إلى مدى توافق كل من العناصر التالية يرجى ملاحظة أنه لا توجد إجابات صحيحة أو خاطئة ولا أسئلة خدعة. نحن ببساطة نريد أن نعرف كيف تشعر شخصيا عن ممارسة الرياضة.

سوف يتم الاحتفاظ ردودكم في سرية وتستخدم فقط لدين إغراض البحث

	غير صحيح بالنسبة لي		في بعض الأحيان صحيح بالنسبة لي		صحيح جدا بالنسبة لي
من المهم بالنسبة لي أن أمارس الرياضة بانتظام	**0**	**1**	**2**	**3**	**4**
لا أرى لماذا يجب أن أمارس الرياضة	**0**	**1**	**2**	**3**	**4**
أمارسها لأنها ممتعة	**0**	**1**	**2**	**3**	**4**
أشعر بالذنب عندما لا أمارس الرياض	**0**	**1**	**2**	**3**	**4**
أنا تمارس لأنه يتفق مع أهداف حياتي	**0**	**1**	**2**	**3**	**4**
أنا ممارسة لأن الآخرين يقولون يجب أن أفعل	**0**	**1**	**2**	**3**	**4**
أنا أقدر فوائد ممارسة الرياضة	**0**	**1**	**2**	**3**	**4**
لا استطيع ان ارى لماذا يجب ان ازعج التمارين	**0**	**1**	**2**	**3**	**4**
أنا أستمتع بجلسات التمارين الخاصة بي	**0**	**1**	**2**	**3**	**4**
أشعر بالخجل عندما أفتقد جلسة تدريبية	**0**	**1**	**2**	**3**	**4**
أنا أعتبر ممارسة جزء من هويتي	**0**	**1**	**2**	**3**	**4**
أنا أشارك في التمرين لأن					
أصدقائي / عائلتي / شريكتي أقول أنه يجب عليّ ذلك	**0**	**1**	**2**	**3**	**4**
أعتقد أنه من المهم بذل الجهد لممارسة الرياضة بانتظام	**0**	**1**	**2**	**3**	**4**

لا أرى نقطة في ممارسة الرياضة	0	1	2	3	4
أجد ممارسة نشاط ممتع	0	1	2	3	4
أشعر بالفشل عندما لم أمارسها منذ فترة	0	1	2	3	4
أنا أعتبر ممارسة جزء أساسي من أنا	0	1	2	3	4
أمارس الرياضة لأن الآخرين لن يكونوا راضين عني إذا لم أفعل	0	1	2	3	4
أشعر بالقلق إذا لم أمارس الرياضة بانتظام	0	1	2	3	4
أعتقد أن ممارسة الرياضة مضيعة للوقت	0	1	2	3	4
أحصل على المتعة والرضا من المشاركة في التمرين	0	1	2	3	4
سأشعر بالسوء عن نفسي إذا لم أكن أفعل الوقت لممارسة الرياضة	0	1	2	3	4
أنا أعتبر ممارسة متسقة مع قيمي	0	1	2	3	4
أشعر تحت ضغط من أصدقائي / عائلتي لممارسة الرياضة	0	1	2	3	4

شكرا لك على المشاركة في بحثنا

Barriers to Physical Activity Questionnaire

Barriers	Step 1. Rate the importance of each perceived barrier to engaging in sufficient physical activity from 1-10
Perceived barriers	Perceived as: No Barrier Major Barrier whatsoever
Previous negative experience with physical activity	1 2 3 4 5 6 7 8 9 10
Lack of time	1 2 3 4 5 6 7 8 9 10
Cost of activity	1 2 3 4 5 6 7 8 9 10
Lack of energy	1 2 3 4 5 6 7 8 9 10
Lack of knowledge	1 2 3 4 5 6 7 8 9 10
Lack of motivation	1 2 3 4 5 6 7 8 9 10
Lack of skills	1 2 3 4 5 6 7 8 9 10
Feeling uncomfortable (intimidated in exercise surroundings)	1 2 3 4 5 6 7 8 9 10
Fear of injury (or re-injury)	1 2 3 4 5 6 7 8 9 10
Fear of making an existing illness worse	1 2 3 4 5 6 7 8 9 10
How I see my body	1 2 3 4 5 6 7 8 9 10
Failure to achieve goals in previous attempts to become active	1 2 3 4 5 6 7 8 9 10
Know that I can't achieve the results I want so why bother	1 2 3 4 5 6 7 8 9 10
Lack of access to opportunities such as nearby facilities	1 2 3 4 5 6 7 8 9 10
Keep talking myself out of it	1 2 3 4 5 6 7 8 9 10
Lack of safe places	1 2 3 4 5 6 7 8 9 10
Lack of child care	1 2 3 4 5 6 7 8 9 10
Lack of a partner	1 2 3 4 5 6 7 8 9 10
Lack of available and suitable programs at my level	1 2 3 4 5 6 7 8 9 10
Lack of support from others	1 2 3 4 5 6 7 8 9 10
Lack of transportation	1 2 3 4 5 6 7 8 9 10

Have other areas in my life that I feel must take priority in my day	1 2 3 4 5 6 7 8 9 10
Don't feel that I have the ability to exercise at a sufficient level for it to be worthwhile	1 2 3 4 5 6 7 8 9 10
Pain when I exercise	1 2 3 4 5 6 7 8 9 10
CHRONIC vs. ACUTE barriers	**Step 2**. Look at each response over '5' and ask yourself "Is this barrier around all the time 'C' or just once in awhile 'A'?" In column 2. mark the corresponding C or A beside that barrier.
SEDENTARY vs. LESS ACTIVE outcomes	**Step 3**. Look at the same "over 5" responses and ask yourself, "When it's around does this barrier stop me from exercising altogether 'S', or just less than normal 'L'?" In column 3. mark the corresponding S or L beside that barrier.

Make a goal to shift your 'C' chronic (always there) barriers toward **'A'** acute (around once in awhile) barriers, and during stressful or busy times, rather than **'S'** stopping activity all together **make a goal** to keep active, even if it'**s** '**L**' less than normal. Re-assess your barriers in 6 months and note changes. **Successful change comes from you!**

الحواجز التي تعترض النشاط البدني (استبيان)

تجربة سلبية السابقة معالنشاط البدني	1 2 3 4 5 6 7 8 9 10
قلة الوقت	1 2 3 4 5 6 7 8 9 10
تكلفة النشاط	1 2 3 4 5 6 7 8 9 10
نقص الطاقة	1 2 3 4 5 6 7 8 9 10
نقص المعرفة	1 2 3 4 5 6 7 8 9 10
عدم وجود الحافز	1 2 3 4 5 6 7 8 9 10
الافتقار إلى المهارات	1 2 3 4 5 6 7 8 9 10
شعور غير مريح (تخويف في محيط الممارسة	1 2 3 4 5 6 7 8 9 10
(الخوف من الإصابة (أو إعادة الإصابة	1 2 3 4 5 6 7 8 9 10
الخوف من جعل المرض الموجود أسوأ	1 2 3 4 5 6 7 8 9 10
كيف أرى جسدي	1 2 3 4 5 6 7 8 9 10
الفشل في تحقيق الأهداف في السابق يحاول أن يصبح نشطا	1 2 3 4 5 6 7 8 9 10
أعلم أنني لا أستطيع تحقيق النتائج تريد ذلك فلماذا تهتم	1 2 3 4 5 6 7 8 9 10
عدم الوصول إلى الفرص مثل المرافق القريبة	1 2 3 4 5 6 7 8 9 10
استمر في الحديث عن نفسي	1 2 3 4 5 6 7 8 9 10
عدم وجود أماكن آمنة	1 2 3 4 5 6 7 8 9 10
عدم وجود رعاية الطفل	1 2 3 4 5 6 7 8 9 10
عدم وجود شريك	1 2 3 4 5 6 7 8 9 10
عدم وجود البرامج المتاحة والمناسبة في مستواي	1 2 3 4 5 6 7 8 9 10
عدم وجود دعم من الآخرين	1 2 3 4 5 6 7 8 9 10
عدم وجود وسائل النقل	1 2 3 4 5 6 7 8 9 10
لدي مناطق أخرى في حياتي أشعر بها يجب أن تأخذ الأولوية في يومي	1 2 3 4 5 6 7 8 9 10
لا أشعر أن لدي القدرة على ذلك ممارسة على مستوى كاف ليكون جدير بالاهتمام	1 2 3 4 5 6 7 8 9 10
ألم عندما تمارس	1 2 3 4 5 6 7 8 9 10
مقابل الحواجزCHRONIC	الخطوة 2. انظر إلى كل رد على "اس" واسأل نفسك "هل هذا الحاجز حول كل شيء ؟ "في العمود 2. ضع علامة "أ" أو مرة واحدة في لحظة "سي" الوقت سيأوأالمطابق بجانب هذا الحاجز
نشط النتائج LESS مقابل SEDENTARY	الخطوة الثالثة. اطّلع على الردود "أكثر من 5" نفسها واسأل نفسك: "عندما تمامًا أو أقل من المعتاد "S" يكون المكان قريبًا يمنعني هذا الحاجز من ممارسة المقابل بجانب هذا الحاجز L أو S ؟ في العمود 3. ضع علامة على"L".