

FUNCTIONAL STATUS OF FEMALE MEDICAL STUDENTS

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خلاصہ

جسمانی فعالیت کی پیمائش کے لیے انسانی جسم کا فعال ہونا ایک انتہائی اہم جز ہے، یہ تحقیقی مقالہ انسانی جسم کے اس پہلو کے لیے انتہائی اہم اور قابل ذکر ہے۔ یہ ایک بین الاقوامی حقیقت ہے کہ جسمانی غیر فعال دنیا میں اموات واقع کرنے میں چوتھے نمبر پر ہے، مزید یہ کہ جسمانی غیر فعال بہت سے امراض کا بھی پیش خیمہ ثابت ہوتی ہے یا سبب کا باعث بھی ہے۔ مثال کے طور پر زیا بطیس، سرطان اور دل کے مختلف امراض قابل ذکر ہیں۔ اس تحقیقی مقالے کے بنیادی اغراض و مقاصد طبی طالبات کے درمیان جسمانی حرکات کا تعین کرنا ہے۔ اس مطالعی مشاہدے کی جانچ کیا مریڈ میکا کے بنائے گئے سوالنامہ کے تحت کی گئی ہے۔ SPSS Version 16 کے ذریعے جمع شدہ اعداد و شمار جانچے گئے اور مقدار کی پیمائش کی گئی۔ اعداد و شمار ڈاؤن لوڈیو ر سٹی آف ہیلتھ سائنس سے جمع کیے گئے اس کے اندر تین مہینوں کا جسمانی فعالیت کا ریکارڈ جمع کیا گیا اور مزید یہ کہ جسمانی فعالیت، ورزش اور طبی شکایات کے درمیان ایک موازنہ بھی کیا گیا۔ اس تحقیق کے مطابق اس بات کے سب سے کم امکانات پائے گئے کہ اگرچہ کچھ طالبات کم درجے کی جسمانی ورزش میں حصہ بھی لیتی ہیں، وہ پھر بھی WHO کے معیار کے مطابق نہیں پائی گئی جو کہ 150 ہفتہ / منٹ ہے۔ وہ کسی بھی جسمانی ورزش کے پروگرام میں حصہ لیں۔ اس تحقیق میں مزید یہ حقائق بھی سامنے آئے ہیں کہ بہت کم خواتین انتہائی درجے کی جسمانی ورزش کرتی ہیں۔ نتائج کے مطابق یہ بات ظاہر ہوتی ہے کہ تناسب کے حساب سے بہت کم طالبات انتہائی درجے کی جسمانی ورزش کرتی ہیں اور ان کے اندر جسمانی ورزش بڑھانے کی عدم دلچسپی پائی جاتی ہے حالانکہ بہت سی طالبات اس بات کو سمجھتی ہیں کہ جسمانی ورزش انسانی صحت کے لیے کتنی ضروری ہے

Abstract

Functional status is one of the significant indicators for the physical activity assessment. This research study evidenced to be very effective and productive in this perspective. It is worldwide estimated that physical inactivity is considered as the 4th major threats for death. It is also one of the contributing aspects in the development of many infectious diseases such as diabetes mellitus, cancer and heart diseases. This study was conducted to find out the functional level of physical activity among female medical students. A standard questionnaire of American academy of family physicians was implemented. The sample size was estimated by WHO software of EPI. Data was collected within the premises of Dow University of health sciences and analyzed through SPSS 16 version. In this research the association of common reported vigorous and moderate activities within last 3 months was evaluated. The relation of moderate and vigorous activities regarding health complains was also established. The statistics revealed that the females are less likely to participate in the high level of physical activities. Even though, females who participated in some of the moderate physical activities, did not indulge in recommended time of physical activity per week i.e. 150 mints/week. On the other hand, very few of the female students reported that they take part in vigorous activities. The overall mean age of the participants was (20.72±1.985) years. The moderate activity days were reported as average last 7 days activity, while vigorous activity means days of (2.69 ± 2.50) per week. This research revealed that the physical activity among female students was of low level but they were also unwilling to increase their physical activity levels. Though most of the students also realized the importance of being physically active as they were experiencing many of the health benefits as well.

Key Words: Physical activity, hypertension, vigorous activities, skeletal muscles, Functional activities

Introduction

Medically speaking, a physical activity is defined as a human body movement that is made by skeletal muscles at the expense of energy (Caspersen *et al*, 1985). According to The World Health Organization (WHO) around 60% of the worldwide populations do not meet the suggested minimum activity of everyday (WHO, 2002). Physical activity include areas in activities of daily living (ADLs), instrumental ADLs (IADLs), body power and movement (Sanes TV *et al*, 2016). It has been revealed that the rate of physical activities declines in college life and most college-goers report a decline in their physical activities (Rajappan R *et al*,

2015). There is a certain proof that medical students have little physical-doing stages because of the great amount of work and a lesser amount of free time available (L. Ángyán *et al*, 2003). Evidence-based literature shows that medical students do not meet the mentioned level of physical activity, commonly students were considered as doing restrained level of physical activity (Dabrowska-Galas M *et al*, 2013).

This study emphasized on the assessment of the functional status of female medical students because the sexual category difference shows the dissimilar level of physical activity with little enthusiasm (Egli T *et al*, 2011). Investigators emphasized the reasons affecting an overall participation in physical activities in 1st world countries as it shows a vital role in inhibiting ailments (Wicker P *et al*, 2009). To lead a healthy life, moderate aerobic activities must be a part of routine life (Haskell WL, *et al*, 2007).

Physically active students show a good performance in academics (Kamal and Yusari, 2014). Physical inactivity leads to obesity. Being overweight can cause severe complications, such as high blood pressure, high cholesterol, coronary heart disease and stroke (Rajappan R *et al*, 2015). It is presumed that medical students have a general understanding about fitness and physical activity (MC Guigan FJ, 1999). Particularly, female medical students are more susceptible to mood swing, i.e. anxiety or depression (Al-Drees A *et al*, 2016). Experimental research work emphasized good physical shape in the female population of KSA, recording a disturbing rise in physical inactivity and non-communicable diseases (Khalaf A, *et al*, 2013).

It is important that health experts and physical therapists should promote physical activity ((Al-Drees A *et al*, 2016). Regular workout reduces the threat of certain cancers (prostate, lung, colon cancers) and improves perceptive functioning (Garber MC, 2017). Physical activity keeps muscles and bones fit, decreases obesity, lessens stress, anxiety and stimulates happiness and healthy lifestyle (Ekun OA *et al*, 2017 and Simona-Pia *et al*, 2015). More than half people in the United States and Canada are not physically active, while the similar condition is also seen among the European students (Radu LE, *et al*, 2015).

Materials and Methods

The targeted populations for this research study were female medical students belonging to different departments of DUHS Ojha campus within age group of 18-30 years. The sample size $n=281$, was calculated by using the WHO software EPI. Non probability convenience sampling technique was used for this cross sectional survey research. Participants with any physical disability/impairment (uncontrolled hypertension, anemic, asthmatic) related to physical activity. A standardized questionnaire of physical activity assessment as recommended by American Academy of Family Physicians was implemented to evaluate the physical fitness level among the female medical students (Rebecca A *et al*, 2008). Before the data collection was started, official permission was taken by the concerned authorities of the respective departments. The consent form and the questionnaire was explained to the individuals and asked them to read the consent form wisely before filling the data into the questionnaire. We also assure them about the confidentiality of data. The data was analyzed through SPSS 16.0 after the completion of the sample size.

Results and Discussion

The overall mean age of the participants was (20.72 ± 1.985) years, while moderate activity days were reported as average last 7 days activity with mean (3.35 ± 2.60) , while vigorous activity in last 7 days with means days of (2.69 ± 2.50) per week. On the other hand, moderate activity minutes in last 7 days were reported with mean of (39.13 ± 51.31) . Meanwhile vigorous activity minutes reported by participants with means of (19.86 ± 24.28) . The descriptive characteristics of the students are presented in table 1

Table 1. Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Age (years)	281	11	18	29	20.72	1.985
Mod activity days	281	7	0	7	3.35	2.609
Mod activity minutes	281	360	0	360	39.13	51.319
Vig activity days	281	7	0	7	2.69	2.503
Vig activity minutes	281	200	0	200	19.86	24.280

In moderate activities most reported were reported as walking downstairs (19.9%), standing 198 (18.7%), house works 154 (14.5%), playing with children 115 (10.8), dancing 72 (6.8) and the activities with less response rates are represented together as other activities (i.e. aerobics, low impact baseball, softball, bicycling (less than 12mph), housework etc. The frequencies of 29 moderate activity done in table 2

Table 2. Frequency table of M.A

Moderate activity:	N (%)
Dancing	72 (6.8)
Standing	198 (18.7)
Walking downstairs	211 (19.9)
Playing with children	115 (10.8)
Housework	154 (14.5)
Other activities	310 (29.4)

In vigorous activities most reported activities were Running 120 (24.8%), jogging 68 (14.0%), vigorous walking upstairs 82(16.9), and the least reported are added up together as other activities. The frequencies of 21 vigorous activities done in table 3.

Table 3. Frequency table of Vigorous Activities

Vigorous activity:	N (%)
Jogging	68 (14.0)
Running	120 (24.8)
Vigorous walking upstairs	82 (16.9)
Other activities	214 (43.9)

Trend seen in most reported health benefits of physical activity were for my health 197 (22.6%), control my weight 155 (17.8%), look better 94 (10.8), feel better 90(10.3), improve my fitness and the least reported are represented as other benefits Participants reported their choice for importance of doing physical activity in affecting health related benefits out of 16 benefits in table 4.

Table 4. Frequency of Health benefits

HEALTH BENEFITS:	N (%)
For my health	197 (22.6)
control my weight	155 (17.8)
look better	94 (10.8)
feel better	90 (10.3)
improve my fitness	97 (11.1)
Other benefits	236 (38.3)

The study was conducted to assess the current physical-activity levels among female medical students of the Dow University of Health Sciences (DUHS). In the study, a total of 281 female students (aged 18 to 30 years) were surveyed. In contrast to men, the decline of physical activities among girls and women is not merely a local, but a global phenomenon. This study corroborates the fact that even though most females take part in such moderate physical activities as sweeping the floor, walking briskly downstairs, dancing, etc., an alarmingly few number of girls tend to participate in such vigorous activities as jogging, running, sprinting or vigorously walking upstairs in the last 7 days.

Journal of Health, Population and Nutrition 2017 published that four out of five-young adult in Dhaka city do not meet the standard of physical activity requirement set by WHO (Uddin R *et al*, 2017). According to our study, most females do not indulge in recommended time of PA per week (39.13 minutes per week in total), as compared to the WHO's recommendations of 150 minutes per week (WHO, 2002). Another research study shows that females students were more unlikely to take part in high active levels of physical activity than male ($p < 0.05$). The prevalence of insufficient physical activity is high in both males and females. However, females are found to be more inactive with low (3.35 days) and moderate (2.69 days) levels of physical activity per week (Poh BK *et al*, 2010). A study done in Bangalore, India in 2013 suggest difference in PA in genders 259 medical students (Men: Women = 116:143) 41.3 % showed high levels of physical activity, 43.2% and 15.4 % moderate level and low level of physical activity respectively. There was significant gender difference observed with women having low physical activity (Padmapriya K *et al*, 2013). Youth at age of 21, are more active than any of other ages; on the other hand, at the age of 22 and more, they reduce their physical activities. (Salamuddin and Harun, 2013) The global physical inactivity pandemic is reflected by the fact that females unanimously report a

higher number of physical inactivity levels (23.7) out of 21.4 % (Lee IM *et al*, 2012). Our study notes that many people fall short of standard levels of physical activity participation as set by the World Health Organization (WHO). Early age participation in PA should be made compulsory in schools and it should also be promoted in overall socio-economic activities (Malambo P *et al*, 2013). 15-24 age group has the lowest physical activity and highest level of physical activity is found among age group of 55-64 years of age (Jurakić D *et al*, 2009). Another study further suggests that female students are less likely to take part in high (vigorous) physical activity than males (Lapa TY, 2015 and Poh BK *et al*, 2010). As per the finding of the study, most female students believe the main benefits of regularly participating in physical activity are: health improvement (22.6%), weight control (and weight loss) (17.8%), psychological benefits (feeling better) (10.8%), facial enhancement (looking better) (10.3%) and physical fitness (11.3 %). In general, one's self-interest and self-motivation leads an individual to take part in physical activity - both indoor and outdoor- as a part of a healthy lifestyle. On the other hand, females tend to engage in physical activities to reduce weight and to take care of their overall physique (Egli T *et al*, 2011). It has been found that male and pre-clinical students are found more physical active than the rest (Wattanapisit A *et al*, 2016). Female medical students have less leisure time activity and high-level physical activities than male medical students (Peleias M *et al*, 2017). A systematic review done in 2015 suggests that psychological wellbeing is directly related to physical activity despite of age, gender and race (Stults-Kolehmainen and Sinha, 2014).

A study carried out in Poland, signifying the fact that most students are well aware of the effectiveness of physical activity regardless of the fact that most of them don't meet the WHO's recommended level of physical activities (Dabrowska-Galas M *et al*, 2013). Genetic factors have shown some impact on effectiveness of physical activity in an individual training response (Bouchard and Rankinen, 2001). According to a global survey, Netherlands reported as highest in activity with (39.43 METS-hours/week), Germany had (34.65) and Luxembourg had (31.55 METs-hour/week). Northern Ireland (11.55 METs-hours/week), Sweden (18.65) and France (19.55) had the lowest estimates of MET activity per week. (Rütten and Abu-Omar, 2004). It is generally understood that physical inactivity leads to major incommunicable diseases worldwide. Physical inactivity is responsible for more than 56 million global deaths in 2008 (Lee IM *et al*, 2012).

This indicates that if we improve lifestyle of students which can leads to the overall improvement in health and socio-economic status. Similarly, a systematic review suggests that university students are most likely to adapt a healthy lifestyle and partake in vigorous physical activities if they are provided with proper counseling and guidance (Plotnikoff RC *et al*, 2001). One adult out of five is physically inactive it is more commonly found in developed countries especially in females and old age people. (Dumith SC *et al*, 2011)

Conclusion

The results of the study unearthed concerns about the lower levels of physical activity among female medical students. It also suggests that female students with higher physical inactivity level have more health complains than those with higher activity levels. The moderate activity minutes were found to be (39.13 ± 51.31). Whereas vigorous activity minutes reported by participants with means of (19.86 ± 24.28). Therefore the findings of the study reveal that behind lower physical activity levels there is a widespread unwillingness among female students to increase their physical activity levels. This study covers a limited number of females studying in a single university. Therefore, there is a dire need to carry out a large-scale study covering the majority of population to evaluate and assess the lifestyle patterns and trends in terms of physical activity levels.

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