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The influence of barriers on the active sports participations among medical and health sciences students, A cross sectional study from RAKMHSU – Ras Alkhaimah-UAE

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Abstract

Physical activity barriers can affect the student's participation in sports in response to the concern that medical college students face different difficulties and fall under tremendous stressors, which can interfere with the desired academic performance. The current study aimed to identify the barriers hindering the effective students' participation in physical activities at RAK Medical and Health Sciences University. The study demonstrated significant negative correlation between physical activity and overload of study ($r = -0.305$ $p < 0.001$). However, the correlation was higher for female students with significant difference. Correlation among colleges showed significant correlation with the lack of facilities. This study will allow concerned people to find solutions and increase students participation in physical activities, which in turn promotes positive self-esteem and gives them confidence to do things and confront social challenges and ultimately improve their academic performance.

Keywords: University students, sports, medical university, Barriers, physical activity

1. Introduction

Regular physical activity remains an important behavior for promoting health, postponing or preventing prevalent musculoskeletal disorders such as mechanical low back pain, neck and shoulder pain and decreasing the risk of developing coronary heart disease, hypertension, diabetes, osteoporosis, obesity and colon cancers^[1, 2]. The period of adolescence represents the transition from childhood to adulthood and lifetime habits such as regular exercise are normally begun at this time^[3]. But unfortunately research indicated that physical activity rates decline consistently during the adolescent years^[4, 5]. There are many factors that affect participation in physical activity including demographic variables, knowledge, attitudes and beliefs about physical activity^[6]. There are two cognitive variables, which account for physical activity levels: perceived benefits and perceived barriers. Perceived benefits can positively, barriers can negatively influence the participation in activity^[7]. These barriers have been classified in different ways. In recent years, examination of perceived physical activity barriers was considered important to contribute to physical inactivity in samples of adolescents. Many studies which were completed in some countries evaluated perceived benefits and barriers to physical activity among young people^[8, 9, 10, 11] Some studies had shown that perceived internal barriers were as important as perceived external barriers in young people^[12, 13]. Two internal barriers, lack of motivation and fatigue were widely cited barriers among sedentary teenagers and young adults^[14, 15] while "not having enough time" was the most important barrier for not participating in physical activity among another research sample^[16]. Other studies reported lack of confidence as an important barrier to physical activity among adolescents^[17, 18].

The sports officers in medical universities in our region are finding a lot of difficulties in encouraging students to participate in sports activities because of the highly demanding medical education. To our knowledge, no study in this region measured the influence of barriers on the effective sports participations among medical and health sciences students. Hence, the purpose of this study is to analyze the influence of various barriers on the active sports participation among the students of RAK Medical and Health Sciences University.

2. Methods

A questionnaire-based study was conducted in RAK Medical and Health Sciences University - Ras Al-Khaimah – UAE from the period of October 2014 to December 2014 after obtaining the ethical approval from the University Research and Ethics Committee. The study aimed to include participants from both genders in the four constituent colleges; Medical, Dental, Pharmacy and Nursing. The questionnaire was online-based including barriers data; fourteen indicators were used to characterize the barriers status: lack of interest, lack of time, lack of self-confidence, lack of transportation, lack of facilities, physical education is lower priority, shortage of qualified trainers, peer pressure, social and cultural barriers, obesity, chronic disease or disabilities, limited opportunities, overload of study work and frequent sickness. The indicators were rated on a 4-point Likert scale as follows, [Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1)]. The questionnaire also included graded evaluation of the students’ physical activities and academic performance during the academic year (2013-2014). The sports participation claimed by the students was crosschecked with the sports officer records. The questionnaire was constructed with reference to similar previous studies and according to the recommendation of World Health Organization (WHO) [19]. Finally, administrative and academic faculty validated the questionnaire. The incomplete entries were excluded then the data were collected in a worksheet and analyzed statistically using the SPSS Software (IBM SPSS version 19).

3. Results

The total number of participants was 122 with 84 male students (69%) and 38 females (31%). There were 59 participants from Medical College and 31 Dental students, while Pharmacy and Nursing students constituted 27 and 5, respectively. The students’ age ranged from below 18 years to above 24 years with majority (56%) in the age range (18-20 years) followed by (35%) in the range (20-22 years old). Higher level of physical activity was clearly reported among male students in all levels (Fig 1). On the other hand, most of the MBBS students fall in the high physical activity levels while most of BSN students fall in the low physical activity levels as in (Fig 2).

The nationality of the participants did not affect the level of physical activity, as there were no significant differences in their means among the different nationalities.

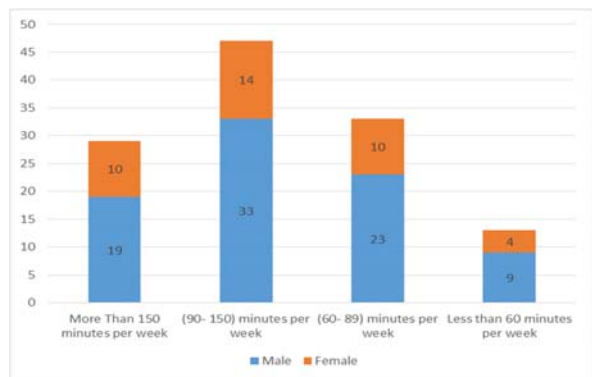


Fig 1: Distribution of Physical Activity participation Gender wise.

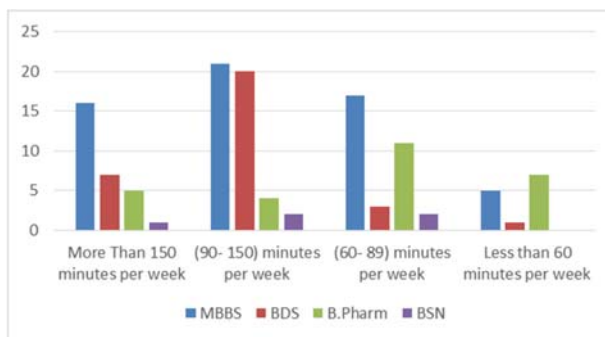


Fig 2: Distribution of Physical Activity Participation College wise.

As shown in table 1, the most frequently reported barriers to sports participations among our students were lack of time, lack of facilities, peer pressure, overload of study work and lack of transportation (89%, 70%, 61% 34% and 27%, respectively) whereas the majority of them disagreed that chronic disease or disabilities, social and cultural barriers, frequent sickness, obesity and lack of self-confidence represent important barriers to their active sports participation.

The frequency of students responses for the barriers showed that 108 students strongly agree with the lack of time as the main barrier, secondly the lack of facilities with 86 students and peer pressure was selected from 74 students as a “strongly agree” barrier. Adding “strongly agree” and “agree” responses together reveals that lack of transportation and overload of study work were two other important barriers scoring 108 and 95 positive responses, respectively. On the other hand, majority of participants strongly disagreed to consider chronic diseases or disabilities as a barrier as per 115 responses. Second to that was the social and culture barriers with 109 students strongly disagreed followed by frequent sickness which got 100 “strongly disagree” responses. The combined negative responses, “strongly disagree” and “disagree”, indicated that lack of self-confidence (118), limited training and competition (105) and shortage of qualified trainer (104) could not be considered as barriers according to this population.

Further analysis showed that the most frequently cited barriers among female students were lack of time (27%), peer pressure (24%), lack of facilities (20%), overload of study work (17%) and lack of transportation (8%) (table 2), compared to lack of time (89%), lack of facilities (73%), peer pressure (54%), lack of transportation (27%), and overload of study work (25%) among male students (table 3).

Table 1: The frequency of responses for the barriers

Overall students population	Strongly Agree	Agree	Disagree	Stringly Disagree
Lack of time	108	14	0	0
Lack of facilities	86	29	5	2
Peer pressure	74	32	8	8
Overload of study work	42	53	19	8
Lack of transportation	33	75	9	5
Lack of interest	7	16	65	34
Limited training and competition	6	11	41	64
Lower priority	5	43	34	40
Shortage of qualified Trainers	3	15	45	59
Lack of self-confidence	1	3	22	96
Obesity	1	1	23	97
Social and Cultural barriers	0	4	9	109
Chronic disease or disabilities	0	1	6	115
Frequent sickness	0	1	21	100

Table 2: The frequency of responses for the barriers among female students

Female	Strongly Agree	Agree	Disagree	Stringly Disagree
Lack of time	33	5	0	0
Peer pressure	29	6	1	2
Lack of facilities	25	13	0	0
Overload of study work	21	15	2	0
Lack of transportation	10	27	1	0
Limited training and competi	3	2	11	22
Lack of interest	2	3	20	13
Lower priority	1	16	9	12
Lack of self-confidence	0	0	3	35
Shortage of qualified Trainers	0	4	11	23
Social and Cultural barriers	0	1	1	36
Social and Cultural barriers	0	0	6	32
Chronic disease or disabilities	0	0	0	38
Frequent sickness	0	0	10	28

Moreover, no significant difference was demonstrated between the students of the different academic programs with regard to their perceived barriers.

Table 3: The frequency of responses for the barriers among male students

Male	Strongly Agree	Agree	Disagree	Stringly Disagree
Lack of time	75	9	0	0
Lack of facilities	61	16	5	2
Peer pressure	45	26	7	6
Lack of transportation	23	48	8	5
Overload of study work	21	38	17	8
Lack of interest	5	13	45	21
Lower priority	4	27	25	28
Shortage of qualified Trainers	3	11	34	36
Limited training and competi	3	9	30	42
Lack of self-confidence	1	3	19	61
Obesity	1	1	17	65
Social and Cultural barriers	0	3	8	73
Chronic disease or disabilities	0	1	6	77
Frequent sickness	0	1	11	72

Interestingly, physical activity and overload of study work were negatively and significantly correlated ($r=-0.330$, $p<0.001$) among male students, where among female students physical activities was correlated negatively and significantly with both lack of time and overload of study work ($r=-0.332$, $p<0.05$), ($r=-0.372$, $p<0.05$), respectively. Overall, the physical activity and overload of study work barrier followed the same trend for the whole population ($r = -0.305$, $p<0.001$). Similarly, the strength of correlation between physical activity and lack of time barrier did not differ very much ($r = -0.205$, $p<0.05$). On the other hand, physical activity and lack of interest barrier showed weak positive correlation ($r = 0.187$, $p<0.05$). (Table 4)

Table 4: The correlation between perceived barriers and students' physical activity.

Barriers	Physical Activity	
	r	P-value
Lack of interest	.187*	.039
Lack of time	-.205*	.024
Lack of self-confidence	.043	.639
Lack of transportation	.018	.844
Lack of facilities	-.110	.228
Lower priority	.108	.238
Shortage of qualified Trainers	.052	.567
Peer pressure	-.087	.340
Social and Cultural barriers	.024	.793
Obesity	.123	.178
Chronic disease or disabilities	-.001	.991
Limited training and competition	-.001	.993
Overload of study work	-.305**	.001
Frequent sickness	.057	.536

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

4. Discussion

Medical and health sciences student's life is subjected to different kinds of stressors, such as, lack of time and pressure of academics with success obligation, factors that can definitely affect the level of sports participation for any medical student. Several studies were conducted to identify the barriers of student's participation in physical activity. However, only few studies focused on medical college students.

It is noteworthy to mention that perceived barriers to physical activities vary by age [20]. Our cohort comprised of university students with a relatively higher mean age than most of the previous studies. Furthermore, the students' participation in physical activity sessions is exclusively optional and self-driven.

The current study revealed that lack of time, lack of facilities, peer pressure, overload of study work and lack of transportation were the most frequently perceived barriers of sports participation among our students. Moreover, overload of the study work and lack of time had a significant negative effect on the level of the students' physical activity ($r = -0.305$, $p<0.001$ and $r = -0.205$, $p<0.05$ respectively). The barriers to physical activity reported in our student population are consistent with most of the previous studies. Not having enough time was the most important barrier for not participating in physical activity among one research sample [16]. One study reported that the greatest barrier was time constraint due to school work, social and family activities on high school students [21]. In other two studies, similarly, lack of time was cited as most common barrier by students [22, 23]. Furthermore, studies found that perceived internal barriers were inversely related to participation physical activity among high school students [24].

Our findings showed that barriers for student's participation in physical activities are not affected by gender. According to a new study, the most frequently cited barriers among adolescent females were listed as: "I don't have time", "I'm too tired" and also "exercise doesn't interest me" [25].

In spite of the positive finding in this study, it is worthy to mention that Medical and Health Sciences colleges' students fall under tremendous stress due to overloaded curriculum and thus we would not expect satisfactory level of physical activity.

5. Conclusion

The study demonstrated the perception of RAK Medical and Health Sciences University students about the barriers for their physical activity participations. Most agreed barriers were external rather than internal ones. Statistically significant negative correlation between physical activity and overload of study work barrier was observed. In the same direction the correlation between physical activity and lack of time barrier did not differ very much as a significant negative correlation. On the other hand, the correlation between physical activity and Lack of interest barrier was weak positive. For the same cohort, no correlation was showed in some barriers such as limited training and competition, chronic disease or disabilities and lack of transportation.

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