Physical activity and health-promoting practices among female medical students

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ABSTRACT

This Cross sectional observational study was conducted to determine the level of physical activity and its association with health-promoting practices of female medical students at Azra Naheed Medical College, Lahore from 11th January 2016 to 14th March 2016. In this study, over a sample of 158 students, Rapid Assessment of physical activity tool was used to check the level of physical activity and Health-promoting life style profile-II scale was used to measure the health promoting behaviors of the participants.
On Rapid Assessment of physical activity-I scale 5.1% females were scored as sedentary and 44.4% females were scored as active. The mean value of Rapid assessment of physical activity-I was suboptimal i.e. Mean±SD=4.74±1.89.The Average score of Health promoting lifestyle profile-II was 2.41±.404.Physical activity and health promoting practices showed weak correlation (p=0.41).
Conclusion: Female medical students were less physically active. Health promoting practices had no influence on physical activity level of females.
Keywords: Medical student, Female, Physical activity, Physical activity assessment, Life style, Health-promoting practices

How to Cite This:
Sattar A, Ehsan S, Mahmood T, Khalil R, Arshad S. Physical activity and health-promoting practices among female medical students. Isra Med J. 2019; 11(4)-Part B: 334-337.

INTRODUCTION

Health promoting behaviors play a vital role in determining the of health status of individuals. The underlying cause of most of the health related issues of young people is attributed to the health-compromising behaviors according to the International Association for adolescent health. The World Health Organization (WHO) states that decreased physical activity is the biggest causes of mortality and impairment[1]. The students have been found to give less attention towards a healthy lifestyle irrespective of a superior knowledge of health-promoting habits as compared to non-medical students. According to the youth risk behavior survey the prevalence of health-compromising behaviors has been found to be higher in females as compared to males[2]. Evidence suggests that the physical activity habits and the health-related behaviors of the medical personnel does have an influence on their clinical attitudes towards physical activities and other attributes of health promotion[3]. Teenage boys are more active than teenager girls. In one longitudinal study on the association of health behaviors and the body satisfaction in adolescents has shown a lower body satisfaction associated with a higher level of health-compromising behaviors and practices[4]. A research results showed that there was a decrease in the level of physical activity among senior girls as compare to junior class with the passage of time[5].

Rye in the study compared the health behaviors of medical residents and students. It was reported that the medial residents were less adherent to the health-promoting behaviors as compared to medical students[6]. Nisar conducted a survey on the dietary habits and lifestyle of medical college students. The study showed a higher prevalence of unhealthy lifestyle amongst the students[7,8]. Wileum Van Mechelenl studied physical activity in Amsterdam people for health. It was concluded that physical activity level decline over the period of time. Males performed more habitual physical activity than females[9]. In studies by Stock, the gender specific health behaviors of university students using a questionnaire survey. It was concluded that women showed more interest in individual counseling programs for health-promotion[10] A few researches have been conducted regarding physical activity among females. Mostly comparative studied have been done. This study will help out the medical students for motivation and change in behavior towards a healthy life style. The objective of

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Received for Publication: June 17, 2019
1st Revision of Manuscript: July 04, 2019
Accepted for Publication: July19, 2019

this study was to determine the physical activity level among females and its association with health-promoting practices of female students of Medical College.

METHODOLOGY

This cross sectional observational study was conducted after the approval from the ethical review board of Azra Naheed Medical College from 11th January 2016 to 14th March, 2016 in Azra Naheed Medical College, Lahore. A sample of 158 females was selected using simple random sampling from all departments of medical college. Females in age range of 19-25, from 3rd -5thyear were included in the study. The females with any Systemic or pathological disease, any recent surgery or history of trauma, psychological disorders i-e taking medicine for depression or stress, any chronic illness and congenital abnormalities, Married female were also excluded. The questionnaires were consisting of three parts. Part A was consist of a self-report questionnaire in which Name, Age, Social status, Residential area, Height, Weight; Body mass index will be included. Part B was consisting of an instrument to measure the health-promoting practices of female medical students. The instrument was the Health-promoting life style profile-II, which was a validated tool to measure the health promoting behaviors. The content validity and test-retest reliability of the revised tool was high. Part C consisted of Rapid assessment of physical activity. This tool was valid to measure the level of physical activity. Female requested to fill the questionnaires. All three sections of questionnaire were completed in 30 minutes. The Health-promoting lifestyle profile-II is a 52-item questionnaire which consists of six subscales i.e. spiritual growth, interpersonal relations, nutrition, physical activity, health responsibility and stress management. Each item on the scale has to be numbered on a 4-point Likert scale where '1' shows 'never', '2' for 'sometimes', '3' for 'often' and '4' is marked for 'routinely'. The mean scores for each subscale calculated individually. The α-coefficient for the internal consistency has been found for the scale to be .943 and for subscales are 0.793 to 0.872.

The test-retest reliability is 0.892.Physical activity is defined as any bodily movement produced by skeletal muscle that requires energy expenditure. (WHO) This scale is reliable to check the level of physical activity among people. It has three parts Aerobic, flexibility and strength level. Specificity and sensitivity of this scale is 0.75 and 0.73 respectively[11].

Data Analysis: Data Analysis was done by IBM SPSS Statistics version 21. Frequency, Mean and standard deviation was calculated for the health promoting lifestyle profile scale and rapid assessment of physical activity tool was used as outcome measurement tool. Linear Regression and Pearson correlation were used to measure the correlation between health promoting practices and physical activity level. P value of <0.05 was considered significant.

RESULTS

After data analysis of Rapid assessment of Physical activity scale, out of158 females, only 5.1% females scored as sedentary lifestyle (n=8) and 44.4% females scored as active that showed a high level of physical activity (n=70) After data analysis of Rapid Assessment of Physical activity II scale, out of 158 females only 8.2% females performed strengthening exercise once a week or more (N=13) and 38% females performed no strength or flexibility activities (N=60).

Table-I: Frequency distribution of strength and flexibility activities (N=158)

	Frequency n(%)
No strength or flexibility activities	60 (38%)
Strengthening, once a week or more	13 (8.2%)
Flexibility, once a week or more	56 (35.4%)
Both flexibility and strength	29 (18.4%)

The mean value of Rapid assessment of Physical activity-I was 4.74(SD=1.893) while minimum value was 1 and maximum value was 7.The mean for Rapid assessment of Physical activity-II was 1.34 (SD=1.166) while minimum value was 0 and maximum value was.

Table-II: Descriptive statistics of rapid assessment of physical activity-I and rapid assessment of physical activity-II (N=158)

	Mean±SD	Minimum	Maximum
Rapid Assessment of Physical Activity-I	4.74±1.893	1	7
Rapid Assessment of Physical Activity-II	1.34±1.166	0	3

SD*=Standard deviation

Regarding mean value of Health promoting life style profile II was 2.41(SD=.404) while minimum value was 1 and maximum value was 4 which showed females follow less health promoting behavior. Out of 6 subscales of health promoting lifestyle profile, Spiritual growth scored maximum Mean value 2.57(SD=.558) while Health responsibility scored lowest value 2.21(SD=.471).

Table-III: Descriptive statistics of subscales of health promoting lifestyle profile II (N=158)

	Mean±SD	Maximum	Minimum
Health responsibility	2.21±.471	4	1
Nutrition	2.23±.516	4	1
Spiritual growth	2.57±.558	4	1
Interpersonal relationship	2.55±.537	4	1
Stress management	2.52±.540	4	1

DISCUSSION

This study comprehensively defined the life style of female medical students. Level of physical activity in teenager females was found less as compared to males[8]. Mostly females had suboptimal level of physical activity on Rapid assessment of physical activity scale because they had scored less than 6 that showed they were less physically active. Overall their level of physical activity was labeled as underactive regular physical activity.

Most of the females did not perform any flexibility and strengthening exercise. While comparing studies conducted on the Saudi females in which results reveal that females had low physical activity level. They were less physical active due to lack of health beliefs. Pedometer was used to check the level of physical activity in that study[2].This study also has been described the health promoting behavior of female students. Data analysis concluded that overall mean value of 52 questions was low. That showed females had unhealthy behavior and lifestyle. Out of 6 subscales of Health promoting lifestyle profile, health responsibility scored lowest mean value while spiritual growth scored as highest mean value. Result showed females did not pay attention to their health but they had strong spiritual beliefs. A study has been conducted on post-partum females which showed that Health promoting lifestyle profile score was low. Out of 6 subscales physical activity was scored as lowest. They find out the positive relationship between Health promoting lifestyle and social support[12.] While in another research which has been conducted on students which reveal different result.

Females had positive health promoting behaviors. But there was no such correlation between health promotion and academic excellence [13,14].But in our study the association between physical activity and health promoting practices was also determined. A research has been conducted to find out the association between physical fitness and participation of health promoting program. This study showed that there was strong association between physical activity and health promoting program participation. Same was also seen in results of our study .These people had low frequency of hospital admission as compared to those which did not perform physical activity and participate on health promoting program .A research result showed that a higher personal physical activity level was related with greater physical activity-promoting practices, as well as that health specialists with positive attitudes regarding physical activity were further expected to promote physical activity to their patients[15]. The results of our study were in opposite compared to our study.

In one of the study results showed that there was convincing suggestion to support health promotion approaches that highlight that health benefits can be added at a lower intensity of physical activity. Community health strategies are required that decrease the barriers to physical activity contribution so that everybody can gain the benefits of physical activity[16],

In other research described that students who encountered vigorous physical activity recommendations were less likely to report poor mental health than students who did not meet recommendations. This study reveals results contradictory to our research. Another research that is in support this research that self-determination or promoting practices had a weak, negative association with physical activity[17].

In summary we observed that the female medical students are less active. They had unhealthy lifestyle. As the only 8.2 % were involved in exercise for strengthening while females not involved in Strength training were 38%. So, results revealed that females had suboptimal level of physical activity and Health promoting behavior as they also scored them low in numbers.

CONCLUSION

Results of the study revealed that female medical students were found physically less active. Health promoting practices had no influence on physical activity level of females.

CONTRIBUTION OF AUTHORS

Sattar A: Conceived idea, Designed research methodology, Data collection
Ehsan S: Manuscript drafting, Manuscript writing
Mahmood T: Final critical review of manuscript and Final Approval
Khalil R: Statistical analysis, Literature search
Arshad S: Data collection and compilation, Literature review

Disclaimer: None.
Conflict of Interest: None.
Source of Funding: None.

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