

## KNOWLEDGE, ATTITUDE AND PRACTICE ON PHYSICAL ACTIVITIES AMONG UNDERGRADUATE MEDICAL STUDENTS OF DEVDAHA MEDICAL COLLEGE AND RESEARCH INSTITUTE

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### ABSTRACT

### INTRODUCTION

Physical activities are one of the major contributors to one's physical fitness and health. Physical activities are known to prevent many globally leading non-communicable diseases. Medical students are even taught in their curriculum about these diseases and the role of physical activities in their prevention. They might be adopting different types of physical activities in their daily life and some might be ignoring or being deprived of practicing physical activities due to various reasons.

### MATERIAL AND METHODS

A descriptive cross-sectional study using pre designed questionnaire was conducted among first to final year medical students of Devdaha medical college to assess knowledge, attitude and practice on physical activities where 162 students were selected purposively and thus obtained data were analyzed using IBM SPSS version 24.

### RESULTS

Majority of the students had a good knowledge of physical activity and a positive attitude towards physical activities. Most of them (97.67%) have performed physical activities in their life and a majority of them (79.07%) were currently involved in physical activities. cardio training was the most practiced physical activity followed by sports and yoga practices. Lack of company and lack of time were identified as factors abstaining physical activities among them who left practicing physical activities.

### CONCLUSION

This study was done to explore knowledge, attitude and practice on physical activities of medical students. The majority of the students had a good knowledge regarding benefits of physical activities, and positive attitude towards physical activities however only a moderate number of students practiced physical activities.

### KEYWORDS

Attitude, Curriculum, Knowledge, Medical students, Physical activities.

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## INTRODUCTION

Physical activity is any bodily movement produced by the skeletal muscles that needs energy expenditure.<sup>1</sup> In adults of age 18-64 years, physical activity provides many benefits for the following health outcomes: improved all-cause mortality including cardiovascular disease mortality, incidence of hypertension, incidence of site-specific cancers (of bladder, breast, colon, endometrial, oesophageal adenocarcinoma, gastric, and renal), incidence of type-2 diabetes, mental health (reduced symptoms of impaired mental health like anxiety and depression); cognitive health, and sleep; measures of adiposity may improve too.<sup>1</sup> According to the recommendations, adults need to do; a) 150 minutes (2 hours and 30 minutes) of moderate-intensity aerobic physical activity every week (such as walking or tennis), b) 75 minutes (1 hour and 15 minutes) of vigorous-intensity aerobic physical activity each week (such as jogging or swimming).<sup>2</sup> College life is also a period during which people are for the most part exposed to stress and lack of time, posing a barrier to adoption of healthy practices.<sup>3</sup> Healthy habits among medical students are even more important as they're physicians in future and the students who personally ignore practicing healthy lifestyle are likely to fail to determine health promotion opportunities for their patients.<sup>4</sup>

In 2016, global estimates of physical inactivity point out that 27.5% of adults and 81% of adolescents did not meet the WHO recommendations.<sup>1</sup> The target of Global Action Plan on Physical Activity 2018–2030 is a 15% relative reduction in the global prevalence of physical inactivity in adults and in adolescents by 2030 and hence made policy actions on physical activity will directly contribute to achieving sustainable developmental goal 3 (good health and well-being).<sup>5</sup> In study done among health science students of a district in Nepal showed nearly 7% of the health science students were physically inactive and about 93% of the health science students met the minimum WHO recommendation for physical activity.<sup>6</sup> Another study done among medical students in a medical college of India quoted that the students involved in exercises in order to increase stamina, increase fitness and lose weight, whereas lack of time, laziness and exhaustion from academic activities were hindering factors among students who didn't exercise.<sup>4</sup>

A knowledge, attitude and practice (KAP) survey is a representative study of a particular population to collect information on what is known, believed and done in relation to a specific topic.<sup>7</sup> This study is conducted in order to access the knowledge, attitude and practice on physical activities among MBBS students of Devdaha Medical College Research Institute.

## MATERIAL AND METHODS

This cross-sectional descriptive study was conducted at Devdaha Medical College from 1 June 2021 to 22 June 2021. Ethical clearance was taken from Institutional Review Committee of Devdaha Medical College (Ref No.308/079/080 dated 27.04.2022). Also, online consent was taken from each participant while distributing the questionnaire.

Statistical analysis was done using SPSS (Statistical Package for Social Sciences) and MS Excel were used for data entry,

coding and analysis. Purposive sampling method was used. The sample size of the study was a total of 162 students from four years.

The inclusion criteria were there for MBBS students of Devdaha medical college from first to fourth year. The exclusion criteria were those Intern doctors of MBBS and students and faculties other than MBBS.

## RESULTS

The sample size of 162 students from all four years was chosen purposively for the research, out of which 129 (79.62%) students had participated in the study. Among the students who had participated in the study, 77 (59.69%) were male and 52 (40.31%) were female.

### General profile of participants

The participants ranged from 18 to 38 years of age, with a mean age of  $22.15 \pm 2.312$  years.

The height of female participants ranges from 1.34 to 1.78 metres with the mean height of  $1.57 \pm 0.07$  metres. The weight of female participants ranges from 40 to 82 kilograms with the mean weight of  $54.61 \pm 7.68$  kilograms. The body mass index (BMI) of female participants ranges from 16.02 to 36.94  $\text{kg/m}^2$  with the mean BMI of  $22.10 \pm 3.42 \text{ kg/m}^2$ .

The height of male participants ranges from 1.50 to 1.90 metres with the mean height of  $1.68 \pm 0.07$  metres. The weight of male participants ranges from 45 to 90 kilograms with the mean weight of  $65.42 \pm 9.91$  kilograms. The body mass index (BMI) of male participants ranges from 14.02 to 32.98  $\text{kg/m}^2$  with the mean BMI of  $23.06 \pm 3.54 \text{ kg/m}^2$ .

### Knowledge on physical activity

Out of 129 respondents, 127 (98.44%) believed that they knew about physical activities. Their source of knowledge about physical activity is from various sources such as multimedia (84.49%), friends (61.2%), books (48.1%), physician (29.4%), celebrity (28.7%) and family (1.5%)

Knowledge about physical activity and its benefits among the study participants is shown in Table 1.

**Table 1. Knowledge of participants on physical activities**

Statements on physical activity	Number of participants who knew
Physical activity improves mental health.	112 (86.82%)
Physical activity improves overall cardiovascular endurance.	113 (87.59%)
Physical activity improves adiposity.	78 (60.4%)
Physical activity improves sleep.	95 (73.6%)
Physical activity reduces incidence of diabetes.	94 (72.8%)
Physical activity reduces incidence of hypertension.	97 (75.2%)
Physical activity reduces certain site specific cancers like bladder, breast, colon cancers.	55 (42.6%)

### Attitude on physical activities

The result of three point likert scale on statements relating to attitude towards physical activities is shown in table 2.

**Table 2. Attitude on physical activities**

Statements on physical activity	Agree	Neutral	Disagree
Physical activities helps me to stay healthy.	125 (96.89%)	2 (1.5%)	0 (0.0%)
Physical activity makes me more energetic.	122 (94.57%)	4 (3.1%)	1 (0.7%)
I feel sad without physical activities.	43 (33.3%)	12 (9.3%)	72 (55.9%)
Physical activities make me happy.	108 (83.72%)	18 (13.9%)	1 (0.7%)
Physical activities improves my recreational abilities	102 (79.07%)	25 (19.4%)	0(0%)
Physical activities improves my academic performance.	73 (56.6%)	50 (38.8%)	4 (3.1%)
Physical activities are injurious.	8 (6.2%)	40 (31.0%)	79 (61.2%)

### Practice of physical activities

About 126 (97.67%) participants quoted that they have tried practicing physical activities. Among them 107 practiced cardio training (walking, running, jumping), 82practised sports (football, cricket, basketball, tennis, badminton), 46 practiced yoga, 31 practiced weight training while only nine of them practiced calisthenics.

102 participants (79.07%) said that they were currently involved in physical activities. Out of those currently practicing physical activities, 45 performed physical activities almost every day, 44 were involved in physical activities three days or more in a week while 13 of them were involved in physical activities only one to two days per week. 38 of those currently practicing physical activities stated that their physical activities were restricted due to lockdown relating with SARS-CoV2 pandemic, 37 stated that their physical activities were neither restricted nor increased due to lockdown, while 27 stated that they were able to practice physical activities more than usual during the lockdown period.

Among 24 participants (18.6%) who practiced physical activities in the past but not currently practicing physical activities 12 participants left practicing physical activities three to six months back, eight participants left practicing six months to one year back while three of them abstained practicing physical activities more than one year back. Among those participants, 15 of them practiced physical activities for less than three months, seven of them were engaged in physical activities for three to six months while two of them were performing physical activities for more than six months. On questioning the reason for leaving physical activities, nine of them attributed it to lack of company (friends performing similar activities), seven of them said that lack of time was the factor restraining them from physical activities, four of them didn't find physical activities much useful and lost interest, two of them had injuries or their own health problems preventing them from practicing physical activities, and two of them opined that lack of space impeded practicing physical activities.

## DISCUSSION

This study aimed to explore the knowledge, attitude and practice on physical activities among undergraduate medical students of Devdaha Medical College. In our study, majority of the participants knew about physical activities from multimedia (84.49%), friends (61.2%) and books (48.1%). A majority of participants knew about the benefits of physical activities regarding improvement in cardiovascular endurance (87.59%), improvement in mental health (86.82%), reduction in incidence of hypertension (75.2%), reduction in incidence of diabetes (72.8%) and improvement in sleep (73.6%). A moderate number of participants (60.4%) knew

about improvement in adiposity by physical activities while less than half of them (42.6%) knew about reduction in certain site specific cancers like bladder, breast, colon cancers.

In a study done among 200 nursing and midwifery students of Quazvin university of medical sciences, majority of students (96%) agreed that physical activities help them to stay healthy and 94.5% of students agreed that physical activities make them more energetic.<sup>2</sup> Similar attitude towards physical activities has been found in our study as well. Studies in Thailand and Turkey have shown less than half of the medical students to be physically active.<sup>8,9</sup> One study done among health science students of Chitwan district, Nepal showed that only 23% of MBBS students were physically active.<sup>6</sup> In contrast to these, current study showed that 79.07% of the MBBS students were practicing physical activities at the time of study and 68.9% were practicing three days or more in a week. However, this is lower to very high prevalence of physical activities among Nepalese adults (97% in male and 98% in females) shown by a study done among urban and rural population of Nepal.<sup>10</sup>

This study was done amidst the pandemic due to SARS CoV-2 and related nationwide lockdown. Studies have shown to increase mental disorders such as depression, posttraumatic stress, anxiety, irritability, exhaustion, and other trauma related mental health disorders among people under quarantine.<sup>11</sup> Physical activities have been shown to improve these disorders.<sup>12</sup> But because of the pandemic, outdoor exercises, gym and exercises done in group are limited and alternatives are to be discovered by individuals to keep mental and physical balance.<sup>13,14</sup> In our study, only 49.6% of participants stated to be practicing physical activities as usual or more than usual during the lockdown and 29.4% of participants stated to be practicing physical activities lesser than normal days as restricted by lockdown, while others were not involved in any physical activities. Regardless the findings, we would like to advise other researchers to explore other mediators of physical activities and physical fitness among medical students.

## CONCLUSION

This study was done to explore knowledge, attitude and practice on physical activities of medical students. The majority of the students had a good knowledge regarding benefits of physical activities, however only a moderate number of students practiced physical activities. They had a positive attitude towards physical activities in general. Physical activities are more important to medical students as they help to cope up stress, enhance physical fitness, and also influence their counselling to their patients in future. A good environment should be created in medical school enrolling as much students as possible in physical activities in parallel to the academic part.

## LIMITATIONS

Only one medical college was selected for research purpose. All the study sampled population did not fill the questionnaire. Many students did not fill the form as the form was filled online and also due to COVID crisis during the time of research.

## CONFLICT OF INTEREST

None

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