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TITLE -"A CROSS SECTIONAL OBSERVATIONAL STUDY OF PHYSICAL ACTIVITY AMONG MEDICAL STUDENTS IN MEDICAL COLLEGES OF CENTRAL INDIA"

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Abstract:

Background: One of the most important measures of health is physical activity. Studying the prevalence and trends of physical activity among young adults was the goal.

Methods: First- and second-year M.B.B.S. students at the teaching hospital were sampled. All consenting students met inclusion criteria. Students answered a pre-approved, validated questionnaire. Physical activity was measured by the amount of time spent playing outside, using a gym membership, taking brisk walks or jogs during the week, and commuting to campus by car. All 330 medical students were given a structured, pre-validated questionnaire via Google form and asked to voluntarily participate. 285 students volunteered for the survey. Excel and a statistical website were used to analyse the data.

Results: 92.6% of participants had no medical history, 6.3% had physical illness, and 1.1% had mental illness. 65.3% of participants were active. Vigorous, moderate, and combined exercise weekly. Medium 20.7% of participants exercised for less than 150 minutes and 12.6% for 150 or more. Exertion 12.3% of participants had less than 75 minutes of vigorous

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exercise, and 5.6% had more than 75 minutes. 14% of participants exercised vigorously and moderately for over 100 minutes.

Conclusion: The results of this study offer a new standard of knowledge concerning the levels and patterns of physical activity among medical students.

Keywords: Physical activity, Medical Students, vigorous exercise, moderate exercise.

Introduction: Several persistent diseases have been linked to diminished physical activity (1). Regular physical activity is low among adolescents and young adults, according to surveys (2, 3). There is a lack of research on the relationship between physical activity (PA) and sedentary behaviour among Indian adults and adolescents (4, 5, 6), and there are noticeable differences in PA levels between different populations (7). Stressful situations will arise at various points during medical school. There are many potential sources of mental strain in higher education, including the sheer volume of material to be learned, feelings of alienation from peers, the weight of final exams, and gaps between expectations and outcomes. (8) Unfortunately, stress is an inevitable reality for all aspiring doctors and cannot be mitigated on the same level as college life. From a preventative standpoint, other modifiable factors, such as increased fast food consumption, increased soft drink consumption, increased television and computer viewing, and decreased participation in outdoor games, are more crucial. (9)

Materials and Methods: The institution's ethics committee approved the use of undergraduate medical students in this online cross-sectional survey-based study. All first- and second-year M.B.B.S. (Bachelor of Medicine and Bachelor of Surgery) students at the tertiary care teaching hospital made up the sampling universe. All students who provided informed consent met the inclusion criteria. The students were questioned using a pre-approved, validated questionnaire. Physical activity was measured based on the amount of time spent playing outside on the playground, using a gym membership, going for brisk walks or jogs during the week, and using a car for regular campus travel or college commute. All 330 medical students were given access to a structured and pre-validated questionnaire through an online survey link we created using Google form, with the request that they voluntarily participate. Additionally, 285 students freely chose to participate in the survey. The data was compiled and examined using Excel and an online statistical website.

Results- 285 students out of 300 agreed to participate. **Table 1 shows** that 52.6% of participants were female, 47.4% were male, and 71.6% were 20–30 years old, compared to 28.4% younger than 20. First-year participants made up 58.59% and second-year 41.41%. 10.17% of participants had a family income of more than 10 lac, compared to 29.82% with between 5 and 10 lac, 34.73% with between 2 and 5 lac, and 29.82% with less than 2 lac.

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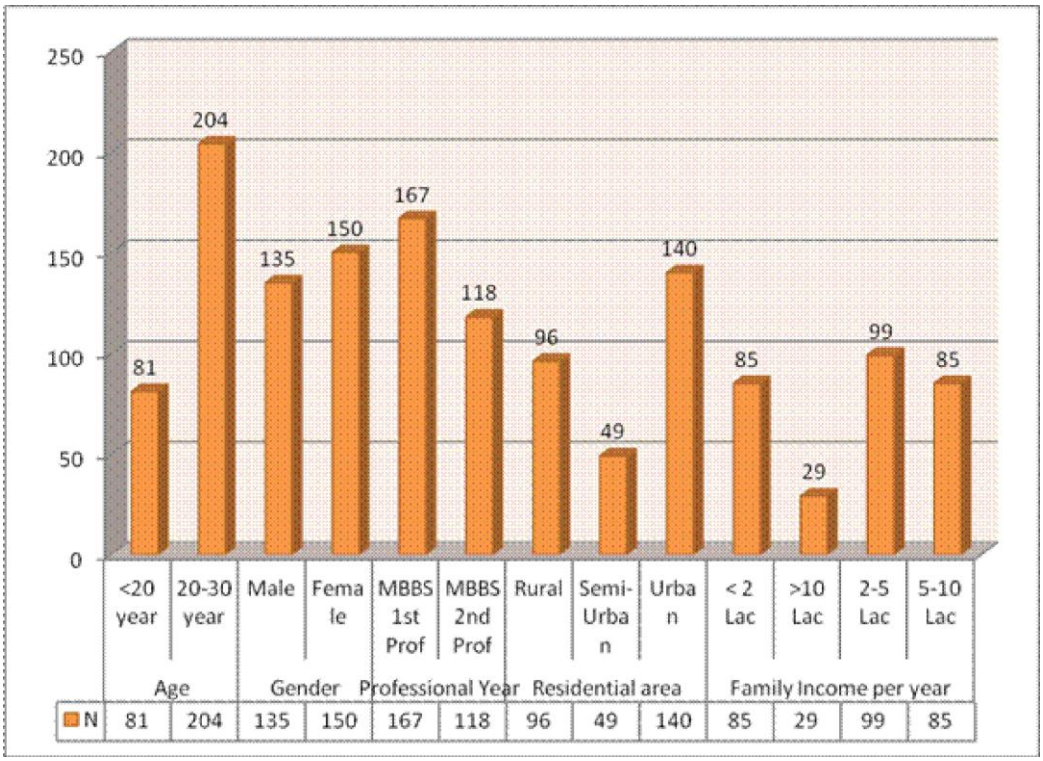
Table1 : Demographic profile of students

Particulars	Sub-particulars	N	Percent
Age	<20 year	81	28.42
	20-30 year	204	71.57
Gender	Male	135	47.36
	Female	150	52.63
Professional Year	MBBS 1st Prof	167	58.59
	MBBS 2nd Prof	118	41.40
Residential area	Rural	96	33.68
	Semi-Urban	49	17.19
	Urban	140	49.12
Family Income per year	< 2 Lac	85	29.82
	>10 Lac	29	10.17
	2-5 Lac	99	34.73
	5-10 Lac	85	29.82

Table 2 shows 92.6% participants were not having any medical history while 6.3% were having some sort of physical illness while 1.1 % participants were having psychological illness. Physical activity were observed only in 65.3% of participants. Weekly pattern of



exercise categorised as vigorous, moderate and combined. In moderate category Less than 150 min vigorous exercise were observed among 20.7% and 150 or more than 150 min moderate exercise observed in 12.6% participants. Vigorous exercise Less than 75 min

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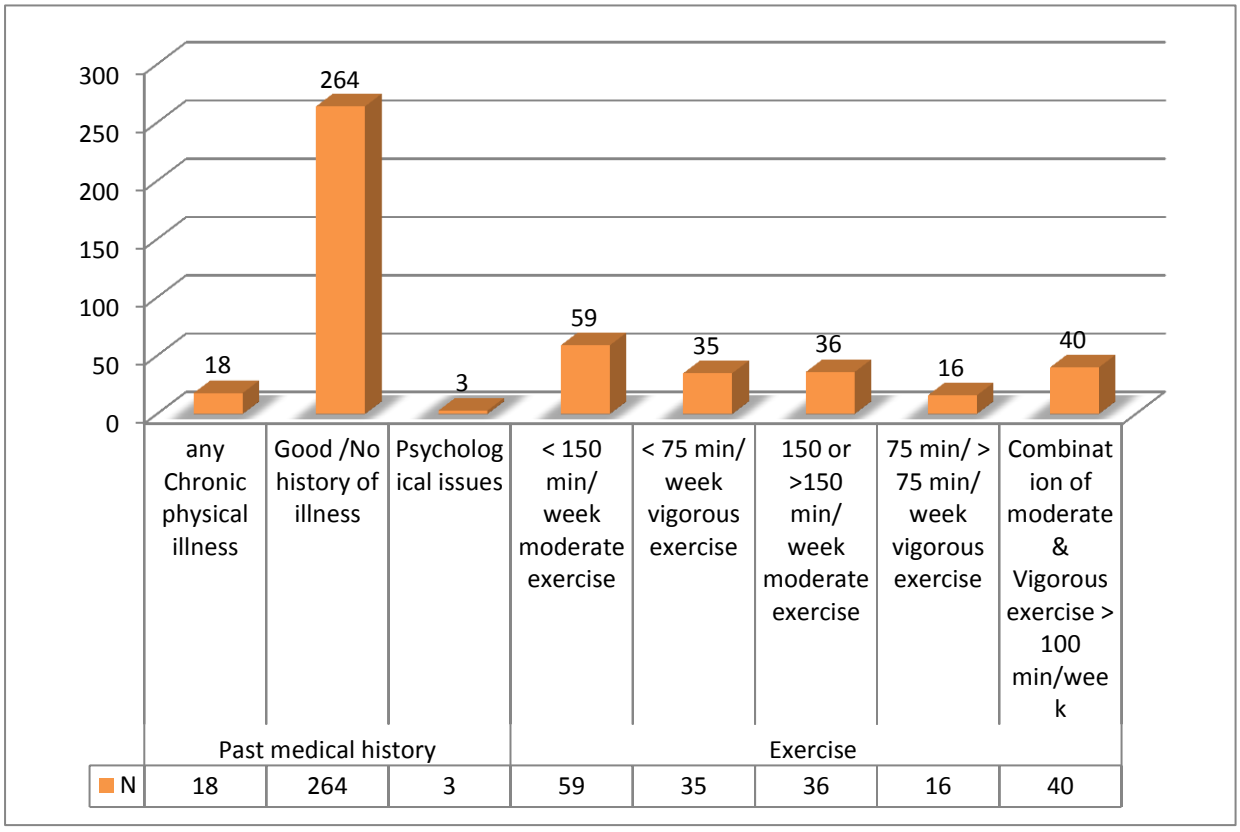
vigorous exercise were observed among 12.3 % and 75 minor more than 75 min vigorous exercise observed in 5.6% participants only. And combination of vigorous and moderate exercise for more than 100 min observed in 14% participants.

Table- 2 : Medical history and Physical activity

Particulars	Sub-Particulars	N	Percent
Past Medical History	Any Chronic Physical Illness	18	6.3%
	Good /No History Of Illness	264	92.6%
	Psychological Issues	3	1.1%
Exercise	Yes	186	65.3%
	No	99	34.7%
If yes weekly Pattern	< 150 Min/ Week Moderate Exercise	59	20.7%
	< 75 Min/ Week Vigorous Exercise	35	12.3%
	150 Or >150 Min/ Week Moderate Exercise	36	12.6%
	75 Min/ > 75 Min/ Week Vigorous Exercise	16	5.6%
	Combination Of Moderate & Vigorous Exercise > 100 Min/Week	40	14.0%



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Discussion- The current study reports on the prevalence of physical activity as well as the patterns of participants aged 18-30 years old. 65.3% of young adults across all age groups participated in high to moderate levels of physical activity, as defined by the IPAQ's high active and moderate active categories. The levels of activity level that were reported for Indian adults in the IPS study and for Asian adolescents were lower than the levels that were reported for the prevalence of activity level (4, 7). More than half, or 61%, of medical students in the United States reported having a comparable amount of physical activity (10). The total sample had a median PA score of 39.13 MET/hour/week for physical activity. The average score was significantly different from the activity scores that were reported in studies conducted in other European countries on adult populations of various age groups (11). In the current study, activity related to work was the primary contributor to the expenditure of physical energy, while domestic activity and gardening were the least significant contributors. Other studies found that the majority of total physical activity came from leisure time activities (12-14), but ours found that the amount of physical activity done during domestic and leisure time was relatively low, indicating that students did not have sufficient time for these activities.

Compared to Indian adults (9.4%)(15), there was a higher prevalence of reported physical inactivity (34.7%). Inactivity was noted in urban Indians (14%) in another study (6). Numerous studies indicate that, as in our study, the youngest age group has the highest rates of physical inactivity (16). Total score physical activity and leisure time activity have shown various associations with educational level in earlier studies (11, 17). However, despite having a high total PA, the current study's MBBS students engage in very little free time activity. It is significant to note that the studies discussed above link cross-sectional PA with educational level but not while studying. Since the sample for this study was made up of medical students and may not accurately represent young adults in the general population, its findings cannot be applied to other populations.

Conclusion-One of the main goals fit India 2019 is to To make fitness reach every school, college/university, panchayat/village. increase the proportion of adults who regularly engage in moderate physical activity for at least 30-60 minutes per day. Physical activity is one of the leading health indicators. More than half of the participants in the current study had already reached the recommended levels of physical activity. Therefore, it is important to make an effort to emphasise to students the advantages of physical activity so that they will continue to be active in the future.

Conflict of Interest:

There is no conflict of interest to be declared.

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