

Exploring Physical Activity Awareness Among BMC Education Students, Kathmandu

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Abstract

Introduction: Physical activity is influenced by one's knowledge of the benefits of physical activities as well as positive attitudes towards participation in such activities. Several studies have pointed out a decline in physical activity among adolescent and youths upon enrolling to university life with such decline being on a rising trend. Enhancing university youths' knowledge on physical activities and fostering positive attitudes towards physical activities is crucial to promote healthy lifestyles, enhance their wellbeing and possibly also influence their study positively.

Objective: The objective of this study is to assess the knowledge and attitudes regarding physical activity among Bachelor of Education students of Baneshwor Multiple Campus, Kathmandu, Nepal.

Methods: A descriptive cross-sectional study was conducted using a self-administered semi-structured questionnaire collecting primary data from 142 1st to 4th year bachelor of education students. Descriptive statistics like frequency, percentage, mean and standard deviation were used in data analysis.

Results: Mean age of study participants was 20.37 years ($SD \pm 2.36$) with higher representation of females (68.31%) than that of males (31.69%). Over 90% students answered yes to five out of seven knowledge statements. The proportion of students responding yes to the remaining two statements was 89.44% and 78.17% respectively. Likewise, over 80% students agreed on six out of seven attitude statements. However, as many as 61% of students still believed that physical activity is injurious while 28.17% remained neutral and only 10.56% disagreed on it.

Conclusion: This study showed that the majority of BEd students possessed fairly good knowledge and attitude towards physical activity. Yet, this study revealed some gaps in both knowledge and attitudes regarding physical activities warranting campus management to take necessary measures for improvement in future.

Keywords: Bachelor students, Physical exercise, University adolescents and youths

Introduction

World Health Organization Global Action Plan 2018 defines physical activity (PA) as any bodily movement produced by skeletal muscles that requires energy expenditure and can be performed at a variety of intensities, as part of work, domestic chores and transportation or during leisure time, or when participating in exercise or sports activities. Regular physical activity is proven to help prevent and treat non-communicable diseases (NCDs) such as heart disease, stroke, diabetes and breast and colon cancer as well as improve mental health, quality of life and well-being ([WHO 2018](#)). Insufficient physical activity, on the other hand, has been reported as the fourth leading risk factor for the global mortality ([WHO 2023](#)) and, thus, has become a major public health concern in today's world.

Several studies have pointed out a decline in physical activity among adolescent and youths upon enrolling to university life, which is on the rising trend ([Kumar SP et al., 2021](#); [Kljajevic, V et al., 2022](#); [Kumar K et al., 2022](#)). Academic workload, lack of break time, poor access to sports facilities and increasing indulgence/engagement of adolescents and youths in sedentary activities such as use of cell phone and social media as well as the lack of self-discipline and laziness towards maintaining healthy behavior towards personal care might be the likely reasons for such decline, which negatively affects their health and wellbeing ([Chaabna K et al., 2022](#); [Thariyan P et al., 2023](#); [Oladejo T et al., 2023](#); [Nepal S et al., 2023](#); [Pate RR et al., 2006](#)). Moreover, studies done among school and university students have indicated likely correlation between physical activity and academic performances whereas physical inactivity likely exerting deleterious effect on academic performances ([Hariyanto A et al., 2023](#); [James J et al., 2023](#); [Zhai X et al., 2022](#)). Thus, it becomes vital for colleges and universities to create conducive environment encouraging students to participate in physical activities along with academic pursuit ([Fabunmi AA et al., 2019](#); [James J et al., 2023](#); [Pate RR et al., 2006](#); [Sharma S et al., 2023](#); [WHO 2022](#)).

However, individuals' physical activity is influenced by their knowledge on benefits of physical activity as well as their attitudes towards participation in it ([Aniodo DA et al., 2014](#); [Fabunmi AA et al., 2019](#); [Fredriksson SV et al., 2018](#)). Thus, enhancing university youths'

knowledge on physical activities and positively fostering their attitudes towards physical activities become crucial to promote healthy lifestyles in them ([Aniodo DA et al., 2014](#); [Thariyan P et al., 2023](#); [Oladejo T et al., 2023](#)). Studies done among university adolescents and youths in Nepal are suggestive of large proportion of them being physical less active and some even possibly ignoring it while others are deprived of practicing them due to various reasons ([Adhikari A et al., 2021](#); [Sharma S et al., 2023](#); [Nepal S et al., 2023](#)). Youth Vision 2025 Nepal has also acknowledged this and stressed the need for promoting exercises and sports among students right from the school level ([Government of Nepal 2015](#)).

Under such context, the need for assessing the gaps on knowledge and attitudes related to physical activity among bachelor of education (BEd) students of Baneshwor Multiple Campus (BMC) can't be understated. Hence, this study has been conducted with the objective of assessing the knowledge and attitudes regarding physical activity among BEd students of BMC. Findings of this study will help in adopting appropriate strategies to improve participation of students in physical activity and, thereby, help enhance their health and well-being in future.

Literature Review

Review of relevant literatures from different researchers and authors regarding knowledge and attitudes to physical activities of school, college and university students have been presented below in the order of global, regional and national context. The search engine 'Google Scholar' has been used for this. The review is limited to the literatures published in English language.

A cross-sectional descriptive study conducted in 2022 in South Africa evaluated the relationship between PA level and health-related quality of life (HRQoL) among 262 undergraduate health science students. The results showed physical inactivity among one fourth of students along with obesity and PA levels being significant predictors of HRQoL. The results also showed the potential of an increased prevalence of non-communicable diseases among the students owing to the combined effects of physical inactivity and obesity on HRQoL ([Oladejo T et al., 2023](#)).

A cross-sectional study done in Surabaya Indonesia among 377 undergraduate students of 18-22 years during Covid-19 epidemic showed a correlation between university students' academic success and socio-demographic characteristics and health related behaviors. The result was indicative of likely correlation between student's academic performance with physical exercise ([Hariyanto A et al., 2023](#)).

A cross-sectional survey done among 2,324 students from three universities in 2022 in China showed poor academic performance being related to low overall physical fitness. The probability of having poor academic performance was significantly lower among students with high physical fitness than those with low physical fitness ([Zhai X et al., 2022](#)).

A cross-sectional study done in 2023 in India among 230 students with the aim of assessing undergraduate students' attitudes about physical activity and fitness exercise revealed a moderate to high attitude towards physical activity but highlighted the need for ample

opportunities to participate in physical activity programmes so as to turn positive attitude into a good practice that can result in a healthy way of life ([Thariyan P et al., 2023](#)).

A cross-sectional study conducted in 2023 among 424 secondary school students in Nepal with the aim of assessing students' physical activity levels and factors associated with it revealed that only 25.31% of students were engaged in physical activity quite often or always whereas only 23.10% met the daily WHO recommendation of at least 60 minutes of physical activity per day. Moreover, females were less likely to achieve the recommended physical activity level compared with males ([Nepal S et al., 2023](#)).

A cross-sectional study done in 2021 with the aim to assess the physical activity status among 370 health science students in Nepal revealed that more than two-thirds of students reported their status as low active. Nearly 7% were physically inactive. About 93% of the health science students met the minimum WHO recommendation for physical activity (≥ 600 MET-minutes/week). The difference in physical activity status according to gender and age groups was found to be statistically significant ($p < 0.005$) ([Adhikari K et al., 2021](#)).

Research Method

A descriptive cross-sectional study was conducted in Feb-Mar 2024 among bachelor of education (BEd) students of BMC, a community college affiliated to Tribhuvan University in Kathmandu, which enrolls students of diverse background from all over Nepal. The study site was selected based on the researcher's convenience and familiarity with the institution. The census method was employed to collect data from 1st to 4th year BEd students currently studying at BMC and those providing consent. A self-administered semi-structured questionnaire developed in Nepali language was used to collect primary data on the knowledge and attitudes of participating students regarding physical activity.

The questionnaire was adapted from locally used study tools and published literatures that accessed university level students' physical activity in Nepal ([Sharma S et al., 2023](#); [Adhikari K et al., 2021](#)). The questionnaire contained three sections, 1st on socio-demographic characteristics, 2nd on knowledge related to physical activity, and 3rd on attitudes regarding physical activity of participating students.

Approval for the study was obtained from the Research Management Committee (RMC) of BMC. Informed consent was obtained from all study participants. Confidentiality and anonymity of the respondents was maintained. Students' break time and/or vacant slots were utilized for completing the survey. Students who were absent or could not be reached despite three attempts were excluded from the study.

Data from completed questionnaires were entered into KoboToolbox (<https://kf.kobotoolbox.org/>) and then transferred to Microsoft Word. Descriptive statistics like frequency, percentage, mean and standard deviation were used in data analysis.

Results

A total of 145 BEd students studying at BMC participated in the study but data from 142 completed surveys were included in analysis. Descriptive statistics were generated to show the socio-demographic characteristics as well as the distribution of knowledge and attitudes regarding physical activity of the students.

Socio-demographic characteristics of BEd students

The mean age of study participants was 20.37 years (SD \pm 2.36) with age ranging from 17 to 35 years. Out of 142 participants, 97 (68.31%) were females, 106 (74.65%) were from rural areas, 63 (44.37%) were of *Brahmin/Chhetri* ethnicity and 86 (60.56%) responded agriculture as the main source of their family income, (Table 1).

Table 1: Socio-demographic characteristics of BEd students of BMC, Kathmandu, Nepal, 2024 (n=142)

Variables	N	%
Age		
Mean Age 20.37 years SD \pm 2.36		
Sex		
M	45	31.69
F	97	68.31
Place of Resident		
Rural	106	74.65
Urban	36	25.35
Ethnicity		
Hill dalit	5	3.52
Terai dalit	6	4.23
Hill janajati	39	27.46
Terai janajati	9	6.34
Madhesi	10	7.04
Muslim	3	2.11
Brahmin/Chhetri	63	44.37
Others	7	4.93
Main source of family income		
Agriculture	86	60.56
Business	20	14.08
Service	22	15.49
Contract/Wage	6	4.23
Others	8	5.63

Knowledge regarding physical activity among BEd students

Out of seven knowledge statements, over 90% participants answered yes to five statements: 138 (97.18%) answered that the physical activity improves obesity, 137 (96.48%) answered that physical activity improves mental health, 136 (95.77%) answered that physical activity improves sleep, 135 (95.07%) answered that physical activity improves overall aerobic fitness and 128 (90.14%) answered that physical activity reduces incidence of hypertension. Of the remaining 2 statements, 127 (89.44%) affirmed that physical activity reduces incidence of diabetes, and 111 (78.17%) affirmed that physical activity reduces site specific cancers like bladder, breast and colon cancers.

However, as many as 31 (21.83%) of participants didn't know that physical activity reduces site specific cancers like bladder, breast and colon cancers whereas participants who didn't know that physical activity reduces incidence of diabetes was 15 (10.55%) and incidence of hypertension was 14 (9.86%) respectively, (Table 2).

Table 2: Knowledge regarding physical activity among BEd students of BMC, Kathmandu, Nepal, 2024 (n=142)

S.N	Variables	Yes N (%)	No N (%)
1	Physical activity improves overall aerobic fitness	135 (95.07)	7 (4.93)
2	Physical activity improves mental health	137 (96.48)	5 (3.52)
3	Physical activity improves obesity	138 (97.18)	4 (2.42)
4	Physical activity improves sleep	136 (95.77)	6 (4.23)
5	Physical activity reduces incidence of diabetes	127 (89.44)	15 (10.55)
6	Physical activity reduces incidence of hypertension	128 (90.14)	14 (9.86)
7	Physical activity reduces site specific cancers like bladder, breast, colon cancers	111 (78.17)	31 (21.83)

Attitudes regarding physical activity among BEd students

Out of seven attitude statements, over 80% of participants agreed on five statements while only 61% agreed on remaining two statements. Of 142 participants, 138 (97.18%) agreed that physical activity helps them to stay healthy while 2 (1.41%) remained neutral on it and other 2 (1.41%) disagreed on it. Of 142 participants, 135 (95.07%) agreed that physical activity improves their recreational ability while 5 (3.52%) remained neutral and other 2 (1.41%) disagreed on it. Out of 142 participants, 133 (93.66%) agreed that physical activity makes them more energetic while 5 (3.52%) remained neutral and other 4 (2.82%) disagreed on it. Out of 142 participants, 130 (91.55%) agreed that physical activity improves their academic performance while 9 (6.34%) remained neutral and other 3 (2.11%) disagreed on it. Out of 142 participants, 116 (81.96%) agreed that physical activity makes oneself happy while 18 (12.68%) remained neutral and other 8 (5.63%) disagreed on it. Of 142 participants, 88

(61.97%) agreed that s/he feel sad without physical activity while 37 (26.06%) remained neutral and other 11 (11.957%) disagreed on it. However, as many as 87 (61.27%) of participants concurred that physical activity is injurious while 40 (28.17%) remained neutral and only 15 (10.56%) disagreed on it, (Table 3).

Table 3: Attitudes regarding physical activity among BEd students of BMC, Kathmandu, Nepal, 2024 (n=142)

S. N	Variables	Agree N (%)	Neutral N (%)	Disagree N (%)
1	Physical activity helps to stay healthy	138 (97.18)	2 (1.41)	2 (1.41)
2	Physical activity makes more energetic	133 (93.66)	5 (3.52)	4 (2.82)
3	I feel sad without physical activities	88 (61.97)	37 (26.06)	17 (11.97)
4	Physical activity make me happy	116 (81.69)	18 (12.68)	8 (5.63)
5	Physical activity improves recreational ability	135 (95.07)	5 (3.52)	2 (1.41)
6	Physical activity improves academic performance	130 (91.55)	9 (6.34)	3 (2.11)
7	Physical activity is injurious	87 (61.27)	40 (28.17)	15 (10.56)

Discussion

The mean age of study participants was 20.37 years as this study was done among bachelor level students who got enrolled upon completing their higher secondary education. This study assessed the knowledge regarding physical activity and its benefits among BEd students using seven statements. Out of these seven knowledge related statements, over 90% of participants answered yes on five statements while the percentage of participants answering yes on the remaining two statements were also as high as 87.4% and 78.11% respectively. Findings of this study were found to be much higher for all seven knowledge statements than that shown by a study done in Nepal ([Sharma S et al., 2023](#)). Findings of this study were also higher for five out of seven knowledge statements than that shown by other studies, which also explored these five statements in common, conducted in Saudi Arabia, Turkey and India ([Almutairi N et al., 2022](#); [Dayi A et al., 2017](#); [Kumar K et al., 2022](#)). The two knowledge statements which were not assessed in common by studies from Saudi Arabia, Turkey and India were physical activity improving sleep and physical activity reducing site specific cancers. Large majority of participants (95.77%) in this study answered that physical activity improves sleep, which was also found to be much higher than that shown by studies done in Nepal (73.6%) and Sudan (69%) respectively ([Sharma S et al., 2023](#); [Fadul MH et al., 2023](#)). Likewise, large majority of participants (78.17%) in this study answered that physical activity reduces site specific cancers, which was also found to be much higher than that reported by studies done in Nepal (42.6%), Turkey (55.7%) and Sudan (10.8%) respectively ([Sharma S et al., 2023](#); [Dayi A et al., 2017](#);

[Fadul MH et al., 2023](#)). These findings suggested that the large majority of participants in this study had fairly good knowledge regarding physical activities and their benefits. Higher level of findings in this study might have occurred because the study was mostly done among late adolescents and youth studying in capital city with potentially having higher opportunity of exposure to information and education regarding physical activity as well as possibly having better exposure about it during their school years. Moreover, differences in age, educational level, socio-economic contexts and cultures of study cohorts across these studies conducted in different parts of the world might have resulted into varying findings.

This study also assessed the attitudes of BEd students towards physical activity using three point likert scales on seven attitude related statements. A large majority of participants (97.18%) agreed that physical activity help them to stay healthy, which was very close to the findings shown by studies done in Nepal (96.89%), India (97.53%) and Iran (96%) ([Sharma S et al., 2023](#); [Alagappan TR et al., 2022](#); [Hosseinzadeh K et al., 2017](#)) but slightly higher than that shown by a study done in South Africa (90.87%) ([Mangoejane PK., 2016](#)). The finding on physical activity improving participants' recreational ability as shown by this study (95.07%) was found to be much higher than that shown by another study done in Nepal (79.07%) and almost three-fold higher than that shown by a study done in Iran (32%) ([Sharma S et al., 2023](#); [Hosseinzadeh K et al., 2017](#)). On physical activity making participants more energetic as shown by this study (93.66%) was found to be slightly lower than that shown by studies conducted in Nepal (94.57%) and Iran (94.5%) but much higher than that shown by a study done in South Africa (81.27%) ([Sharma S et al., 2023](#); [Hosseinzadeh K et al., 2017](#); [Mangoejane PK., 2016](#)). The finding on physical activity improving their academic performance as shown by this study (91.55%) was found to be much higher than that shown by another study done in Nepal (56.6%) and was also concurred by a study done in South Africa ([Sharma S et al., 2023](#); [Mangoejane PK., 2016](#)). Similarly, the findings on physical activity making participants happy as shown by this study (81.69%) was lower than that shown by studies done in Nepal (83.72%), South Africa (85.4%) and Iran (91.5%) respectively ([Sharma S et al., 2023](#); [Mangoejane PK., 2016](#); [Hosseinzadeh K et al., 2017](#)). On participants feeling sad without physical activity as shown by this study (61.97%) was nearly double than that shown by a study done in Nepal (33.3%) while lower than that shown by a study done in Iran (79.5%) ([Sharma S et al., 2023](#); [Hosseinzadeh K et al., 2017](#)).

However, as high as 61.27% of participants in this study concurred that physical activity is injurious which was found to be much higher than that reported by another study done in Nepal (6.2%) and also higher than that shown by studies done in India (54.7%) and South Africa (44.18%) respectively ([Sharma S et al., 2023](#); [Alagappan TR et al., 2022](#); [Mangoejane PK., 2016](#)). Such discrepancies in findings among various studies might have been due to differences in population, social, economical and cultural variations among study participants in different parts of the world.

Limitations

Several limitations must be considered for taking inferences from the findings of this study. First, this study was done among bachelor of education students of one community campus in Kathmandu valley and data was collected from those who attended campus during the data collection period. Thus, the study findings may have limitation for generalization to all higher

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educational settings. Second, the descriptive cross-sectional design of this study limits to draw inferences for causal relationship among variables of this study.

Conclusion

This study showed that the large majority of BEd students of a community campus in Kathmandu possess fairly good knowledge on physical activity and its benefits. However, one out of five students was unaware of physical activity reducing certain cancers and about one in seven didn't realize that physical activity could reduce incidence of diabetics as well as hypertension. Likewise, this study also revealed that the majority of BEd students seemed to possess fairly good attitudes towards physical activity. However, three out of five still accepted that physical activity is injurious and one out of five couldn't acknowledge that physical activity can make oneself happy. Thus, the findings of this study indicated some gaps in students' knowledge as well as attitudes and warranted improvement through educational interventions.

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Conflict of interests: None.

Author Contribution

Principal (the first) author Labanya Devi Ghimire (LG): concept, literature review, methodology, study tool, data collection, processing, analysis, and writing of manuscript.

Co-author Shamila Lamichhane (SL): concept, literature review, data processing, analysis, and reviewing of manuscript.

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