

# Assessing Health Enhancing, Physical Activity Level and Attitude of Students in St. Monica's College of Education using the International Physical Activity Questionnaire (IPAQ)

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**Abstract:**-The main purpose of this study was to assess physical activity level of Students in St. Monica's College of Education using the International Physical Activity Questionnaire (IPAQ). Descriptive survey design was adopted for the study. A sample size of 350 was selected from a population of 750 and simple random sampling technique was used to select participants for the study. Questionnaire was used for data collection. Descriptive statistics (percentages, mean and standard deviation) were used in analyzing and discussing the result. The study revealed that students of St. Monica's college of education have a strong negative attitude ( $M=2.78$ ,  $SD=1.43$ ) towards participation in the physical activities. It also revealed that students have low participation in Physical Activity (78%). It is recommended that after school games and activities should be made fun and the games should not be male dominated. Student must be educated on the importance of physical activity.

**Keywords:** College of education, physical activities.

## I. INTRODUCTION

Physical activity is any human actions formed by skeletal muscles that necessitate energy expenditure including actions commenced while playing, at work, doing household task, travelling, and engaging in leisure pursuits (23). This definition gives us a wider rank of events which we can do to achieve the benefits of participating in physical activity. Individuals who participate in physical activities are often happy, friendly, competitive and kind, meaning people with a life including physical activities are creative and dynamic in nature (13). In accordance with this view, physical activity creates an emotionally, physically and physiologically healthy community.

Physical sedentariness is on the increase in numerous states, it is testified to be the fourth top risk factor for worldwide mortality and causes 6% of all deaths, accumulating to the burden of non-communicable diseases distressing general health nationwide (22). Seventy percent of Ghanaian children not having adequate physical activity (16). Engaging in physical activity can help reduce the risk of colon cancer, obesity, and reproductive cancer in females, diabetes, ischemic heart and osteoporosis. In addition, physical activity is related to positive mental health and enhanced quality of

life (23). (4) also found out that females who have been active throughout their lives as well as those who start to be physically active, encouragingly reduce their poor joint mobility, and risk of breast cancer. Exercise has also been proposed as a treatment for depression, which is twice as prevalent in women as in men (14).

The level to which an individual's participate in physical activity determines how much benefit they derive from the activities they engage in. It is recommended that every individual participate in 20 minutes of vigorous activity 3 days in a week (20). A stated goal of Healthy People is to increase the percentage of adults who participate in recommended levels of vigorous physical activity to 85% by the year 2020.(20) A recent position statement from the national Association for sport and physical education (14) is consistent with this theme and recommends that adolescents as well as adults engage in 30 minutes of moderate activity on most days. Looking at the significance and contribution of physical activities in the development of the participant, society and the nation as a whole, it is quite essential that extreme attention be ascribed to women partaking in physical activity. Students in St. Monica's College seem to be putting on weight virtually every semester and it gets worse when they go for out station teaching segment. Looking at the high risk associated with physical inactivity there is an urgent need to ascertain their physical activity level to be able to find means of inculcating physical activity into to day to day activity to prevent any unforeseen circumstances. However, there is limited empirical evidence on how much physical activity these students engage in. therefore the need for this research. The aim of this study is to assess the physical activity level and attitude towards participating of students in St Monica's College of Education, Mampong in the Ashanti region of Ghana using the international physical activity questionnaire (IPAQ).

## II. METHODS

Descriptive survey design was adopted for the study. 351 students were randomly selected from 750 total

population of level 100 and 200 using simple random sampling technique. A soft copy of the sampling frame (School Register) of 2018/19 was input into a computer. Ms. Excel and it generated and assign random numbers for students to be selected in to the sample. This process was done separately for all levels. It was done with the help of research assistants.

Questionnaires were used in collecting data. Some of the questions was designed by the researcher, and IPAQ questionnaire used in assessing one's physical activity level was also adopted. The items formulated for the questionnaire were scrutinized to ensure that they were based on the content of the literature. Again, the content and face validity of the instrument was checked by experts in the Department of Physical Education of the College of Education Studies, University of Cape Coast who are well knowledgeable about participation in sports and physical activities to ensure that they were devoid of ambiguities.

A pilot test of the instrument was conducted to check its validity and reliability before the main study. The instrument was pilot tested in Ola College of Education in order to ensure that items were worded correctly and were understandable to respondents. This was done to sharpen and fine tune it by correcting possible weaknesses, inadequacies and ambiguities that could characterise the items. The students in Ola were used because I considered them as having similar characteristics with respondents that were sampled for the actual study. I used Cronbach coefficient alpha to determine the reliability coefficient of the instrument. The questionnaire yielded an internal consistency reliability coefficient of 0.80. This was considered to be acceptable and reliable, since according to researchers (4), the reliability coefficient should be at least 0.70 and preferably higher.

#### Data Collection Procedures

Since the study involved human beings, ethical procedures were followed in the data collection. The data collection began from 10th May, 2019 to 15<sup>th</sup> May, 2019. Before, the data collection, an introductory letter was obtained from the Department of Health, Physical Education and Recreation (HPER) of University of Cape Coast to college and letter were sent to the principal. Before the exercise I explained to them the reason for carrying out the research and if they could permit me to use their students for the study. They gave me permission to administer the questionnaires.

The questionnaire was administered by me with the help of one research assistants from the college. The research assistant assisted me to arrange the classroom and the distribution of the questionnaires. The sampled students were arranged in a classroom and they were briefed on the reason for carrying out the research work and also solicited from them the need to respond to the items on the questionnaire. The questionnaires were given to them and they were given ample time to respond to them. The completed questionnaires were collected from the respondents.

#### Data Processing and Analysis

Data screening was done to test for normality. The analyses and discussion were done according to research question, using descriptive statistics (frequency, percentages, mean and standard deviation). Exploring students' attitude towards participation in physical activities mean and standard deviation were used to analyse the data. A mean of 3.1 and above indicates a positive attitude while a mean of 2.99 and below indicates negative perception towards participation in physical activities.

NB: a mean of 3 as undecided (U).

Frequency counts and percentages were also used to determine students' level of participation in physical activity.

### III. RESULTS

The main purpose of this study was to assess students of St. Monica's Collage attitude towards participation in the physical activities. The result was discussed using mean and standard deviation. The result was presented in Table 1.

Table 1- St. Monica's students Attitudes towards Participation in Physical Activities?

Statement	Mean	SD
The pursuit of physical activities in the colleges makes individual physically, mentally and morally strong	3.53	1.28
The time provided for participation in physical activities influence my participation.	2.60	1.55
The environment influence my participation in physical activities in my colleges	2.73	1.47
Physical activities teachers are presenting a good picture about what goes on in the classroom and on the play field	2.27	1.40
Total Means /SD	11.13	5.70
Mean of Means/ SD	2.78	1.43

Source: Filed survey, Nkrumah (2019)

Table 1 shows the result of the students in St. Monica's College of Education attitude towards participation in the physical activities. The findings showed that on the average, students have a negative attitude ( $M=2.78$ ,  $SD=1.43$ ) towards participation in the physical. The standard deviation score revealed that there is a heterogeneous response among students towards participation in the physical activities.

From example, in Table 1, it was found that most of the respondents had positive attitude ( $M=3.53$ ;  $SD=1.28$ ) towards the statement that the pursuit of physical activities in the colleges makes individual physically, mentally and morally strong. This result indicates a positive attitude of the students towards participation in the physical activities. This finding is in agreement to the study of (18) who asserted that positive attitude inspires students to involve in physical activities which contribute to their development, not only physically but also emotionally, socially and mentally.

According to Tuckman (1999), individuals develop strong positive attitudes toward physical activities given the benefits inherent in participating in physical activities and sports. Moreover, positive attitude motivate students to engross in physical activities contributing to their development not only physically but emotionally, socially and mentally, whereas negative attitudes on the other hand tend to hinder such development (7).

On the other hand, it was observed that most of the respondents showed negative attitude ( $M=2.60$ ;  $SD=1.55$ ) towards the statement that the time provided for participation in physical activities influence my participation. This result implies that time provided for participation in most physical activity was not sufficient and adequate to the students and this could discourage them from participating any physical activities. This finding contradicts the result of (11) who preached that students have positive attitude towards participation in physical activities and sports because of they spend their time without pressure of academic success in Physical Education lessons.

Similarly, to the statement “the environment influences my participation in physical activities and sport in my colleges”, it was realized that most of the students had negative attitude ( $M=2.73$ ;  $SD=1.47$ ) towards the statement. This finding contradicts the assertion by (9) that physical activities and sport learning setting should inspire the mastery and modification of performance, acquisition and application of knowledge and development of values and beliefs.

As regards to the statement “physical activities and sport teachers are not presenting a good picture about what goes on in the classroom and on the play field” it was noted that most of the respondents showed negative attitude ( $M=2.27$ ;  $SD=1.40$ ) towards the statement. This finding is in line with the study of (15) who conceded that students pursuing physical activities and sports programme at the college are viewed by their peers and community at large as gloomy and unintelligent and that this deficiency limits their potential to pursue more “academic subjects”.

To determine the level of physical activity (PA) participation among the students, World Health Organization’s International PA Questionnaire (IPAQ) short form was used. It assesses the frequency and duration of past-week walking, moderate-intensity and vigorous-intensity PA that lasted for at least 10 minutes (24). The students were asked to consider all PA on campus, at home and during leisure time. Classification of PA participation is done at three levels by the use of algorithms provided in the short-form scoring protocol version of November 2005, developed by the IPAQ group (WHO, 2005). The three categories used in this study are as follows:

Low: (a) No activity reported or (b) Some activity reported but do not meet any of the categories in (moderate) or (high) below (24). Moderate (any of the following standards): 5 or more days of combination of walking,

moderate or vigorous-intensity activities achieving a minimum of at least 600 Metabolic Equivalent Task (MET)-min week (24).

High (any of the following criteria): 7 or more days of combination of walking, moderate or vigorous-intensity activities, accumulating at least 3000 MET-min week (24). Participants in ‘High’ Physical activity category were deemed to meet PHR for Physical activity. Thus, they have reached health-enhancing PA threshold (WHO, 2005). The MET at each Physical activity level was converted to median and thus calculated in frequency and percentage.

Table 2- Level of Physical Activity Participation

Level of participation	Frequency	Percent
Moderate	65	18.6
Low	285	81.4
Total	350	100.0

Source: Filed survey, Nkrumah (2019)

From Table 2, the results indicated that out the total of 350 students, none met high level of PA, 18.6% ( $n = 65$ ) participated moderately while 81% ( $n = 285$ ) were classified as having low participation level. Therefore, majority of students in St. Monica’s College of have low participation in PA. The findings of this study among females are consistent with studies conducted in Saudi Arabia (5). These studies showed that the prevalence of physical inactivity levels ranged between 43% and 99% among Saudi adults.

In a Brazilian survey using the IPAQ short-form instrument, physical inactivity prevalence of 41.1% was found among adults aged 20 years and above (8). In comparison to the present study that showed a high prevalence of students not meeting the WHO recommendations for PA at a high-intensity level where none of them attained that level is very alarming and disheartening ( $L=19\%$ ,  $M=81\%$ ). Results from other international studies conducted in different cultures with similar lifestyle patterns to that of Ghana (2) also indicated high inactivity levels among female students (21).

Reasons for the observed similarities may be explained in terms of a trend towards replacement of an active lifestyle with an increasing frequency of sedentary routines in daily life and a growing trend towards unhealthy weight gain. In addition, global physical inactivity patterns were reported to be more prevalent and it is supported by (1). Physical inactivity has been said to be associated with diseases like obesity, hypertension, diabetes, back pain, poor joint mobility and psychosocial problems which poses a serious threat to societal growth (10). Therefore, public policies are needed to encourage active living and discourage sedentary habits.

#### IV. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

##### *Key Findings*

The following are the key findings from the study:

1. The findings showed that on the average, students of St. Monica's College of Education had a negative attitude ( $M=2.78$ ;  $SD=1.43$ ) towards participation in the physical activities and sports. The standard deviation score revealed that there is a strongly heterogeneous response among the female teacher-trainees' towards participation in the physical activities and sports.
2. The results indicated that the majority 285(81%) of students of St. Monica's College of Education have low participation in Physical Activity while 65 (19%) participated moderately.

### Conclusions

The main purpose of the study was to assess health enhancing physical activity level and attitude of students in St. Monica's College of Education using the International Physical Activity Questionnaire (IPAQ). There is an adage that says that, a sound mind is in a sound body. Involving one's self in physical activity can help prevent most degenerative disease that has become so prevalence in our country.

The study concluded that, the students on the average, had a negative attitude towards participation in physical activities and sports. This leads to the thought that these students might be disgruntled by the subject taught in the colleges. Participation in physical activities requires strong attitudes toward physical exercise.

The study as well concluded that student's participation in physical activities was very low. Instructions in physical education should positively influence students' attitude towards participation in physical activities. Their attitude towards physical activities and sports would be enhanced when they engage in activities that recognize their individual abilities. To combat the decreasing levels of physical activity in students in St. Monica's College, physical education tutors in the college must equip students with the skills and knowledge necessary to become physically active for a lifetime.

### Recommendations

Grounded on the findings and the conclusions of the study and bearing in mind its boundaries, it is recommended that:

1. Physical activities should be organized regularly in the college, and the activities should be made fun to motivate all students to participate.
2. Students must be educated on the importance of participating in physical activity.
3. The college management should build more facilities that will motivate the students to participate in regular physical activity.

### V. SUGGESTIONS FOR FURTHER RESEARCH

Further studies involving more samples using both males and females in the colleges of education in Ghana should be understudied.

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