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# Impact of Fitness Applications on Level of Physical Activity And BodyComposition Among Students

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The physical activity level (PAL) is a way to express a person's daily physical activity as a number, and is used to estimate a person's total energy expenditure. Body composition is the proportion of fat and non-fat mass in your body. Purpose of this study is to find the effect of fitness app on level of physical activity and body Composition among students from Savitribai Phule Pune University. This study was carried out on 100 students 50 in control and 50 in experimental group. Data was collected by using Physical activity indexquestionnaire andbody composition excel sheet formula in the form of google form. Analysis of data was Quantitative, independent sample t test was computed to find the effect of Use of fitness app on levelof physical activity and body composition among students of SavitribaiPhule Pune university. In case of Level of Physical Activity, the calculated t value is 1.775 which is not significant at 0.05 level of significance. (P=0.080)similarly for Body composition,calculated t value is 1.973 which is not significant at 0.05 level of significance (P=0.54). All the statistical analysis was done by SPSS version 19. Findings of this study indicated that there is no significant effect of fitness app on levelof physical activity and body composition among students.

**Keywords:** Fitness App, Level of Physical Activity and Body Composition

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## Introduction

Physical activity is one of the most important factors in providing and maintaining health life to all. The health benefits of physical activity are well established to a great extend for college going students. To students' physical activity includes playing games, sports, planned exercise etc. Nowadays students experience weight gain that can change the body composition and can contribute to serious health issues.

In order to obtain health benefits of physical activity. WHO has recommended that adult aged 18-64 should do accumulate at least 150 minutes of moderate intensity aerobic physical activity or do 75 minutes of vigorous intensity aerobic physical activity for whole week or equally combine proportion of moderate and vigorous intensity activity throughout week?

During past decades physical activity in adults has been seen reducing and therefore, promoting physical activity among adults has received considerable attention.In century of progressive technology and competition, the chances of being physically active in daily life has been reduce in greater extend. Most of the people especially adults are now becoming fingerly active instead of being physically active. All they currently exist in e-world. Nowadays sedentary behaviour of adult has become a measure issue. Students are spending most of the time on screen-based activities. As a result, there is much worry about physical activity among students. As it has been replaced by sedentary behaviour.

Physical activity is closely associated with health benefits. A low level of physical activity is likely to translate into unfavourable health outcomes. Regular physical activity increases health related fitness. This implies an increase in cardio vascular endurance, decrease in blood pressure, decrease in whole body adiposity etc. Such improvements in fitness are likely to have favourable effect on overall health.Physical fitness has many components and can be grouped as either health related physical fitness or skill related physical fitness. Health related physical fitness involves activities that you do in order to try to improve your physical health and stay healthy, which includes cardiovascular endurance, muscular strength, flexibility, muscular endurance and body composition.

Body composition is last factor in Health-related physical fitness as by working on first four factors (cardiovascular endurance, muscular strength, flexibility, muscular endurance) it also gets improve.–Body composition is the**proportion of fat and non-fat mass in your body.**

## Fitness Apps

Fitness apps is an application that can be downloaded on any mobile device and used anywhere to get fit. Fitness app have been very popular in recent years, it motivates people to do physical activity. Fitness apps provide fitness goal, tracking calorie intake, workout ideas and sharing progress on social media. Health and fitness app statistics show that users are loyal to their favourite apps. Almost 96% use only fitness app. Over 75% of active users open their app at least two times a week. As well, 25% of the most engaged users open health or fitness apps more than 10 times a week (flurry analytics Survey,2017). Physical activity and Body Composition are closely linked with health and wellbeing. However, many students do not engage in regular exercise. Those with overloaded schedules and high socioeconomic status especially at risk for Poor health greatly due to the sedentary lifestyle. Moving less or sitting more is directly linked to number of health condition. Nowadays fitness Technology including fitness app, fitness trackers has become increasingly popular for measuring and encouraging physical activity, so researches has undertaken to study how utilisation of fitness app effects level of physical activity and Body Composition among students from Savitribai Phule Pune University.

## Materials and Methods

**Subject**:from 500 students a total of 100 students are selected using utilization of fitness app questionnaire,students are grouped using purposive sampling technique. 50 formed control group and 50 formed experimental group.

**Variables and Tools:** For measuring level of physical activity researcher have usedPhysical activity index by Thomas D. Fahey, Paul M. Insel, Walton T. Roth. This questionnaire measures level of physical activity. Similarly, to measure body composition researcher has used weighing machine, stadiometer and body composition excel sheet formula.

**Procedure:**

This study will be carried out in two different phases the first phase is pilot study where questionnaire will be given to 500 students from Savitribai Phule Pune university in order to find out how many of them are using fitness app on the phone and which are the common apps used by the students. From 500 students 100 students those who are not using fitness app will be the sample for study. Second phase 50 students will form control group and 50 will formed experimental group. Pre-test will be administered and data will be authenticated. Most common use fitness app will be given to experimental group. After 3 months again post-test will be conducted in order to find out change in performance due to fitness app.

## Results

To determine if utilization of fitness app has effect on level of physical activity and body composition activity index questionnaire and BMI testing was administered on 50 students from experimental group and 50 from control group .Once the data is collected its descriptive statistical analysis are shown in the below table.

**Table No. 1:**

**Descriptive Statistics of level of physical activity and body composition among students.**

| Group | Pre-Test | Post-Test | BMI pre test | BMI post test | |
|---|---|---|---|---|---|
| experimental | Mean | 26.06 | 35.94 | 23.49 | 23.22 |
| | Std. Deviation | 16.18 | 27.75 | 4.51 | 3.97 |
| control | Mean | 24.78 | 25.12 | 25.24 | 25.24 |
| | Std. Deviation | 11.38 | 11.96 | 5.57 | 5.57 |

From the above table no. 1, Samsung health fitness app was given to 50 students who formed experimental group. Who's mean of level of physical activity and body composition when assessed before giving fitness app was 26.06 and 23.49 respectively. And that after using fitness app 35.94 and 23.22. similarly mean of control group level of physical activity and body composition before was 24.78 and 25.12 respectively. And that after 25.24 and 25.24.

**Table No. 2:**

**Independent sample t test of physical activity and body composition of students**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | |
|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference |
| ChangeinPAprepost | Equal variances assumed | 17.762 | .000 | 1.775 | 98 | .079 | -12.100 |
| | Equal variances not assumed | | | 1.775 | 75 | .080 | -12.100 |
| ChangeinBMIprepost | Equal variances assumed | 28.663 | .000 | 1.973 | 98 | .051 | .26360 |
| | Equal variances not assumed | | | 1.973 | 49 | .054 | .26360 |

From the above table no. 2, in order to determine change in performance of physical activity and body composition of students' independent sample t test was computed, in case of independentsample't' test we need to test equality of variances between two groups for which Levine's test for equality of variances was calculated. The calculated 'F' value for change in level of physical activity is 17.769 and significant value is 0.00. The significance value is less than 0.05, hence the equal variances are not assumed. Similarly, the calculated 'F' value for change in body composition is 28.663 and significant value is 0.00. The significance value is less than 0.05, hence the equal variances are not assumed.

In case of level of physical activity an increase of 9.88 can be seen in the change in performance of the experimental group, where, for degree of freedom 75 calculated t value is 1.775 which is not significant at 0.05 level of significance. (P=0.080) similarly for Body composition an increase of 0.34 can be seen in the change in performance of the experimental group, where, for degree of freedom 49 calculated t value is 1.973 which is not significant at 0.05 level of significance (P=0.54)

## Discussion

The result of this study shows no significant effect of fitness app on level of physical activity and body composition among students from Savitribai Phule Pune University. Similar studywas conducted by (B. Daniel et al.) on mild to moderate mobility disability individuals. They highlighted that Smartphones apps has effect on physical activity, Cardio Respiratory fitness and body composition.According to study conducted by (Amelia, R.2001) (Sarah,E.2013) (Ronald, P.2014) physical activity apps that target Physical activity in isolation were more effective than apps that targeted physical activity in isolation with diet. Physical activity apps increase physical activity.

## Conclusion

From the findings of this study it can be concludedthat use of fitness app has no significant effect on level of physical activity and body composition among students.

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