

Effect of Application of Fitness App on Daily Life Activity among Sedentary People from Barrackpore City in West Bengal

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ABSTRACT

This research aimed at studying the effect of Google fit app on the daily life activity and fitness of sedentary peoples and to compare the pre-test and post-test scores of the subjects participating in the experimental study. A group of 20 sedentary peoples were selected from the Barrackpore City W.B. West Bengal where the city was selected using non-probable technique and the subjects were selected by applying snowball sampling method. One fitness tests along with one paper pencil test were conducted pre and post fitness app programme for 14th weeks. Descriptive analysis was done for daily life activity. To determine the difference between pre-test and post-test, cross tabulation treatment was used. There was a positive effect found between pre-test and post-test. At the end of the experiment, one paper pencil test was given to the subjects for assessing their daily life activity. It was also found that subject's daily life activity improved with the help of physical activity programme using fitness app.

Keywords : Fitness app programme, Fitness, daily life activity, Experiment, Snowball sampling.

Background of the study

“Health is a state of complete physical mental and social well-being and not merely the absence of disease or infirmity” (WHO, 1946). According to this definition by the World Health Organization, health means overall well-being. The growing incidence of health problems attributed to contemporary lifestyles, and the limited resources of healthcare, has lead several stakeholders to look for alternative preventive healthcare

methods. Physical exercise has many good effects for health, but people often lack intrinsic motivation towards it. Smartphone applications can act as intrinsic motivational tools, as they are accessible on mobile devices, and have suitable technological abilities. During the past few years, a large number of mobile exercise applications have been launched and increasingly, fitness and wellness technologies have been researched in the field of human – computer interaction (HCI). However, the field lacks a comprehensive overview of the design strategies related to intrinsic motivational exercise applications. Additionally, research in the field has mostly been conducted in western cultures, and perspectives from the developing world are missing.

Increasing sedentary lifestyle has resulted in obesity and overweight. According to the World Health Organization, worldwide obesity has more than doubled since 1980 and 3 million deaths from heart disease, diabetes and certain cancers are caused by obesity and overweight. However, obesity is preventable. The current healthcare system does not have sufficient resources to prevent and manage these preventable health risks. Therefore, individual effort is paramount in disease prevention, i.e., managing the risks before they develop into more serious health problems. Regular physical activity can not only help individuals to prevent these health risks, but also would enable them to lead a healthy lifestyle. Mobile phone based interventions hold promise for health behavioral change. As the immediacy of consequences to a target behavior is important for behavior modification (Skinner, 1969), using mobile phones for promoting healthy behavior is more effective. The mobile phone will be in the user's vicinity almost all the time and enable immediate feedback to the user's behavior. Smartphones and mobile apps are the latest mobile interventions. Smartphone apps are embedded with sophisticated sensors that could monitor the user's behavior. Therefore, mobile apps are a viable, cost-effective solution for self-health management.

The purpose of this study was to study the effect of the Google Fit app on the daily life activity and fitness of sedentary people and to compare the pre-test and post-test scores of the subjects participating in the experimental study. It was delimited to 30-45 year old sedentary males of the Barrackpore city in West Bengal. All subjects were asked to use the Google Fit application while doing exercise.

Hypothesis of the Study

H1: There will be a significant change in daily life activity of the subjects due to a physical activity programme using a fitness app.

Method

In this study researcher has made a group of people doing exercise, they were given information about use of google fit app while they exercise. In this endeavor an experimental programme was implemented on the selected sample, hence this research is completed by following experimental research method.

Research Design (Pre – Experimental Design)

Pre-test Post-test Equivalent group design

- N= 20 (experimental group)

One Group Experimental Design

O1	X	O2
pre-test	using program	post-test

A population is any group of individuals that have one or more characteristics in common that there are interest to the researcher. In this research, the population is all the sedentary people's age range between 30-45 years; from in Barrackpore City of West Bengal will be considered as population of this study.

The sample is a small population of the population that is selected for observation and analysis. By observing the characteristics of the sample, one can make certain inferences about the characteristics of the population from which it was drawn. In this study the researcher are selected 20 sedentary peoples ranging from 30-45 years in Barrackpore city (West Bengal). With the help of Snowball sampling Method. The whole selected sedentary peoples were considered as a single experimental group. For this sample physical fitness app (Google Fit) used as dependent variable. The researcher has selected one group pre-test post-test single group of 20 sedentary male to be tested before and after the intervention of the Google Fit app.

Analysis and Interpretation of Data

Table 1 : Cross tabulation Summary of responses of Subjects regarding their Sleeping Habit before and after implementation of Physical Activity Programme using fitness App

		Post-test					Total
		8-9 pm.	9-10 pm	10-11 pm.	11-12 pm	After mid night	
Pre-test	8-9 pm.	0	0	0	1	0	1
	9-10 pm	1	0	0	1	0	2
	10-11 pm.	1	1	0	1	0	3
	11-12 pm	4	3	2	2	0	11
	After mid night	2	0	1	0	0	3
	Total	8	4	3	5	0	20

From table 1, it is clear that out of 20 subjects maximum 11 use to go to sleep between 11-12 pm, before implementing this experiment, three each use to go to sleep after midnight and between 10-11 pm respectively. While out of rest three two use go to bed between 9-10 pm and one at 8-9 pm.

After implementation of physical activity programme using fitness app it is found that no one out of 20 goes to sleep after midnight and all there have improved during habit. Out of 20 maximum numbers of subjects have found responding that they improve their habits of going to bed. Out of 20 eight and four said that they go to bed between 8-9 pm and 9-10 pm respectively. While out of rest eight there sleep between 10-11 pm and five found sleeping between 11-12 pm. This clearly shows that subjects have improved their sleeping habits and going to sleep before 10 pm.

Table 2 : Cross tabulation Summary of responses of Subjects regarding their Get up Habit before and after implementation of Physical Activity Programme using fitness App

		Post-test					Total
		5-5.30 am.	5.30-6 am.	6-6.30 am.	6.30-7 am.	After 7 am.	
Pre-test	5-5.30 am.	0	0	0	0	1	1
	5.30-6 am.	3	0	0	0	0	3
	6-6.30 am.	8	1	0	0	0	9
	6.30-7 am.	6	1	0	0	0	7
	After 7 am.	0	0	0	0	0	0
	Total	17	2	0	0	1	20

From table 2, it is clear that out of 20 subjects maximum 9 use to get up between 6-6.30 am, before implementing this experiment, seven and 3uses to get up 6.30-7 am and 5.30-6 am respectively. While out of active one get up from bed between at 5-5.30 am.

After implementation of physical activity programme using fitness app it is found that no one out of 20 get up between 6-6.30 am to 6.30-7am and all there have improved during habit. Out of 20 maximum numbers of subjects have found responding that they improve their habits of get up from bed. Out of 20 seventeen and two said that they get up between 5-5.30 am and 5.30-6 am respectively. While out of active one there get up after 7 am. This clearly shows that subjects have improved their habits and usually get up before 5.30-6 am.

Table 3 : Cross tabulation Summary of responses of Subjects regarding their Spend time for Watching Television, Using Mobile Phone and meeting Friends in a day Habit before and after implementation of Physical Activity Programme using fitness App

		Post-test					Total
		less than 2 hours	2 to 3 hours	3 to 4 hours	4 to 5 hours	more than 5 hours	
Pre-test	less than 2 hours	4	0	0	0	0	4
	2 to 3 hours	9	0	0	0	0	9
	3 to 4 hours	6	0	0	0	0	6
	4 to 5 hours	1	0	0	0	0	1
	more than 5 hours	0	0	0	0	0	0
	Total	20	0	0	0	0	20

From table 3, it is clear that out of 20 subjects maximum 9 use to between 2 to 3 hours, before implementing this experiment, six and one use to time spend 3 to 4 hours and 4 to 5 hours respectively. While out of four spend time less than 2 hours.

After implementation of physical activity programme using fitness app it is found that no one out of 20 spend time for watching television, using mobile phone and meeting with friend in a day between 2 to 3 hours to 4 to 5 hours and all there have improved during habit. Out of 20 all subjects have found responding that they improve their habits of time do you spend watching television, using mobile phone and meeting friends in a day. Out of 20 twenty said that they spend time for watching television, using mobile phone and meeting friends in a day less than 2 hours.

Table 4 : Cross tabulation Summary of responses of Subjects regarding their maintain health Habit before and after implementation of Physical Activity Programme using fitness App

		Post-test					Total
		Medicine	Walking	Running	Yoga	Other physical activity	
Pre-test	Medicine	0	6	0	0	0	6
	Walking	0	10	0	0	0	10
	Running	0	3	0	0	0	3
	Yoga	0	1		0	0	1
	Other physical activity	0	0	0	0	0	0
	Total	0	20	0	0	0	20

From table 4, it is clear that out of 20 subjects maximum 10 use to do for maintain health by walking, before implementing this experiment, three and one uses to do for maintain health by running and yoga respectively. While out of six do for maintain health by the medicines.

After implementation of physical activity programme using fitness app it is found that no one out of 20 do for maintain health by medicine, running, yoga and other physical activity, all there have improved during habits. Out of 20 all subjects have found responding that they improve their habits of do for maintain health. Out of 20 twenty said that they do for maintain his health by the walking.

Table 5 : Cross tabulation Summary of responses of Subjects regarding according to me Fitness app is before and after implementation of Physical Activity Programme using fitness App

		Post-test					Total
		Vary useful	Useful	I don't like to it	Not useful	No benefit	
Pre-test	Vary useful	4	2	0	0	0	6
	Useful	10	3	0	0	0	13
	I don't like to use it	0	1	0	0	0	1
	Not useful	0	0	0	0	0	0
	No benefit	0	0	0	0	0	0
	Total	14	6	0	0	0	20

From table 5, it is clear that out of 20 subjects maximum 13 uses useful option, before implementing this experiment, and one use I don't like to use it respectively. While out of five use fitness app is very useful.

After implementation of physical activity programme using fitness app it is found that no one out of 20 fitness app is no benefit, not useful, i don't like to use it, all there have improved during habits. Out of 20 all subjects have found responding that they improve their opinion better. Out of 20 twenty 14 said that fitness is very useful and 6 said that fitness app is useful for me.

Major Finding

It is found that the Google fit app daily life activity performance of the subjects was improved and maintain this workout through fitness app programme.

Conclusion

The fitness of the subjects has improved physical activity programme using fitness app.

The knowledge about health and fitness app of sedentary people was also improved.

Recommendations

In this research, the duration of the experiment was restricted to 14 weeks. Therefore the improvement of performance could not be measured to a large extent. Hence similar study can be conducted to study the effect of long term fitness app programme i.e. two years and more.

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