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EFFECT OF PLANKPAD GAMING AND ISOMETRIC EXERCISE ON THE CORE STRENGTH OF SELECTED HIGH SCHOOL STUDENTS

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ABSTRACT: HEALTHCARE EXPERTS ARE ARGUING THAT THERE IS A NEED FOR AN ALL-INCLUSIVE AND RESULT ORIENTED FITNESS FOR CHILDREN IN INDIA. CHILDREN'S HEALTH IS BECOMING A MATTER OF CONCERN IN GLOBALLY. ACCORDING TO THE WORLD HEALTH ORGANISATION OBESE CHILDREN TEND TO FALL PREY TO LIFESTYLE DISEASE TO THE EXTENT OF 60-70% WHEN THEY REACH THEIR 30S AND 40S (THE MOST PRODUCTIVE YEARS OF LIVES). BEING THE SECOND MOST POPULATED COUNTRY OF THE WORLD, THE SITUATION IS EVEN MORE ALARMING IN INDIA. STATISTICS PROVIDED BY INDIAN JOURNAL OF ENDOCRINOLOGY AND METABOLISM SHOWS THAT 5.74 TO 8.82 % SCHOOL CHILDREN IN INDIA ARE OBESE. MEANWHILE, A STUDY PUBLISHED IN PAEDIATRIC OBESITY PREDICTS THAT INDIA WILL HAVE ABOUT 17 MILLION OBESE CHILDREN BY 2025. ANOTHER STUDY SHOWS THAT ABOUT 97,000 CHILDREN IN INDIA SUFFER FROM TYPE 1 DIABETES. POOR EATING HABIT AND SEDENTARY LIFESTYLE AMONG CHILDREN ARE TWO OF THE MAJOR REASONS FOR THE DECLINING LEVELS OF PHYSICAL FITNESS IN CHILDREN, LEADING TO CHILDHOOD OBESITY, DIABETES AND OTHER LIFESTYLE DISEASES WHILE HEALTH AND FITNESS EDUCATION PROVIDED IN SCHOOLS IS SEEN AS AN IMPORTANT TOOL IN DEALING WITH THIS HEALTH ISSUE, EXPERTS HAVE NOTICED THAT THE PHYSICAL EDUCATION PROGRAMS BEING PURSUED BY THE SCHOOLS IN INDIA ARE EITHER OBSOLETE OR INADEQUATE IN ADDRESSING THE EMERGING HEALTH CHALLENGES SINCE THEY MOSTLY REVOLVE AROUND THEORETICAL ASPECTS OR RANDOM SPORTS. EDUCATION AND HEALTHCARE EXPERTS POINT OUT THAT IN INDIA NO MORE THAN 10% SCHOOL GOING CHILDREN ARE INTO ACTIVE AND COMPETITIVE SPORTS. THIS IS BECAUSE THE SCHOOLS TEND TO FOCUS ONLY ON THE DIET OF THE KIDS WHO ARE EXPECTED TO REPRESENT THE SCHOOL AT LOCAL, REGIONAL, STATE AND NATIONAL LEVEL EVENTS, EXCLUDING A MAJORITY OF CHILDREN WHO END UP AS FAIENCE – SITTERS IN THE PE PERIODS.

KEYWORDS: PLANKPAD, GAMING, DIABETES, OBESITY, HEALTHCARE, PHYSICAL EDUCATION, ENDOCRINOLOGY

1. INTRODUCTION

According to Dr Bakul Parekh, Senior Pediatrician, "Fitness in children can power them for a healthy future. Schools should focus physical education and school health checkups around physical literacy. It means that children should understand the importance of exercises, fitness and sports. So there's a need for our physical education to move beyond the romantic landscape of sports general fitness for every child". Home to the world's largest youth population, experts believe that India needs to introduce a mass child fitness programme, a programme that is scientific, workable, accurate and verifiable aided by data and technology.

1.1 PLANKPAD

Plankpad combines a fitness device with games and workouts on your smartphone or tablet. It is the perfect solution if you want to train your whole body. Planking is one of the most effective workouts. It will get you in shape, make you lose fat and gain muscles, even prevent backpain and can also relieve it. Plankpad makes the plank workout more dynamic and way more fun. The very effective plank exercise strengthens the entire body. Arms, shoulders, back, abs, glutes and legs are trained simultaneously and highly efficient. Plankpad comes with a fitting app with many games and workouts. Your training is much more fun. The app is synchronized with the Plankpad. The movements you perform control the games and workouts. The playful training distracts you and makes you last much longer during the exercises.

1.2 PLANKPAD GAMING

Plankpad comes with a fitting app with many games and workouts. The app is synchronized with the Plankpad. The movements you perform control the games. The app and the gyroscope of your mobile device are in perfect sync with the Plankpad. There is a game for everyone like, Candy Monster, Duck Shoot, Pong Goal, Meteor Madness, Wave Rider, and Snow Cruisin'. And in the future, there will be even more. The games will challenge you to collect more and more points and you will forget about the time. By playing a game, your focus is more into the game than on counting every second. This makes you plank much longer, reaching your goals faster while the time flies by having fun.

1.3 ISOMETRIC EXERCISE

Iso-metric exercise or Iso-metrics are a type of strength training in which the angle and muscle length do not change during contradiction. Iso-metrics are done in static position rather than being dynamic through a range of motion.

2. METHODOLOGY

The purpose the study was to find out effect of plankpad gaming and isometric exercise on the core strength of a total of forty (N=40) male and female high school students will be selected from the M.V.M Residential HSS, Valayankulam Malappuram. The selected subject will be randomly divided into two groups of twenty (N=20) each. Group I will be administered with Plank pad gaming and group II will be administered with Isometric training. The age will range from 13 to 19 years. Core strength was tested subjects were tested prior PlankTest. The data collected from various subjects were subjected to statistical analysis using appropriate statistical tools. The following statistical tools were employed in the present investigation.

Descriptive statistics: descriptive statistics such as mean and standard deviation of the scores were calculated to summarize the collected raw data.

Paired sample t test: Paired sample t test has been applied to compare two variable isometric exercise and plankpad gaming on high school level male and female students level of significance was fixed at 0.05 levels

P value: A calculated than 0.05 is considered to be statistically significant.

2.1 RESULT AND DISCUSSION

The study is on comparing isometric exercise and Plankpad gaming on high school level male and female students. When compared I got intrinsic value and more significant is .000, and this the original p value is 0.05hence, my significant is proved.

TABLE 4.1

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|---------------------|--------|----|----------------|-----------------|
| Pair 1 | Isometric pretest | 1.4360 | 20 | .32902 | .07357 |
| | Isometric post test | 1.6100 | 20 | .57609 | .12882 |
| Pair 2 | Planpad pretest | 1.4055 | 20 | .32890 | .07354 |
| | Plankpad post test | 1.9940 | 20 | .65102 | .14557 |

TABLE 4.2

Paired Samples Correlations

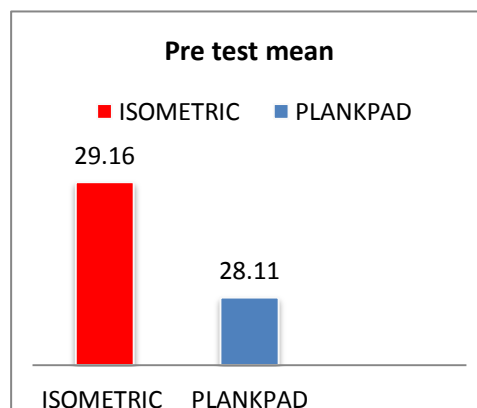
| | | N | Correlation | Sig. |
|--------|---|----|-------------|------|
| Pair 1 | Isometric pretest & Isometric post test | 20 | -.212 | .370 |
| Pair 2 | Plankpad pretest & Plankpad post test | 20 | -.106 | .655 |

Indicates that there was significant difference in on isometric exercise and Plankpad gaming on high school level male and female students on obtained t – ratio value .000 and it determines that it is less than 0.05.

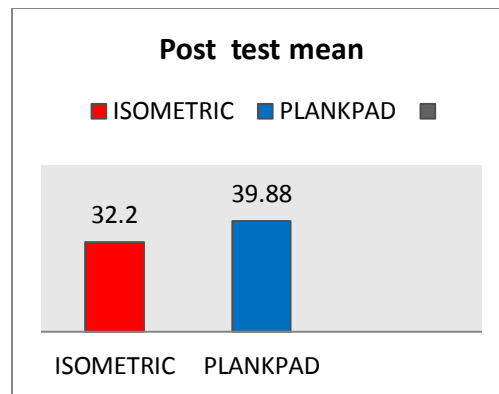
TABLE 4.3

Paired Samples Test

| | Paired Differences | | | | t | df | Sig. (2-tailed) | | |
|--------|---|----------------|-----------------|---|---------|---------|-----------------|-------|------|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | | |
| | | | | Lower | | | | Upper | |
| Pair 1 | Isometric pretest - Isometric post test | -.17400 | .72141 | .16131 | -.51163 | .16363 | -1.079 | 19 | .294 |
| Pair 2 | Planpad pretest - Planpad post test | -.58850 | .76000 | .16994 | -.94419 | -.23281 | -3.463 | 19 | .003 |



't' test reveals that there is significant difference between Isometric exercise and Plankpad gaming on high school level male and female students .and it determines that it is less than 0.05 and P value is .000 thus signified is hence proved that it is less than 0.05.



Recommendations

In the light of conclusions draw, the following recommendation are made

The Following recommendations are made for future investigations

- The Similar Comparative Studies can be done on different sex and age groups.
- Similar Comparative Studies can be done with Virtual Reality Games
- Similar Comparative Studies can be done with Mobile Fitness Applications

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