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## Promoting exercise as an input of physical fitness to grade-school pupils

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### Abstract

The physical fitness of grade-school aged pupils was investigated and analyzed in this study. Two groups of 30 students were the participants, to test whether exercise contributes to a person's well being. The first group of students was subjected to exercise while the second group was observed as they perform their daily routine. Students who performed the series of exercises have a mean weight of 33 kilograms while the other group has a mean weight of 27 kilograms. In terms of the amount of sleep taken by the respondents, it was found out that they have longer sleeping time compared to the control group. Thus, exercise had a positive effect on the students, physically and emotionally.

**Keywords:** Exercise, physical fitness, grade-school aged pupils

### Introduction

Exercise has been defined by Merriam-Webster (2012) as schemed instructions of physical activities devised to develop and maintain physical fitness, and is proven to constitute a physically fit individual. Just like food and water, exercise is essential to the well being of a person, serving as the lubricant to our body parts and its mechanisms. As important as it may be, exercise and its principles are often neglected, giving us with the mentality that it is only for athletes, sport enthusiasts and the likes.

What we don't realize is that exercise plays a pivotal role in the development of our fitness as well as health, which are two different but equally related entities. Paffenbarger and Olsen (1996) <sup>[4]</sup> defined fitness as a quantifiable and definable state of an individual that is sometimes affected by heredity while health is also a state of a person but are not quantifiable or definable in its exact value compared to fitness. Health is further narrowed into a complete state of physical, emotional and social well being that represents the whole self.

Through exercise, we can improve and nurture our body by providing ourselves with the stepping-stone from a sickly and frail body to a healthy and fit one. Exercise is an integral part of our body's day-to-day activities. It may prove to be hard at first, but through regular execution, it will just be a routine that our body will keep on looking for. It will surely just be a thing that will be a part of our lives and will be hard to let go once started with determination and perseverance. Remember that it is not just a simple thing achievable through minimal effort: it requires time, effort, persistence, and at times, money.

This study aimed to determine the effect of exercise on the thorough wellness of students and to promote it as a medicine for improving one's health. Grade-school pupils were the respondents to facilitate easy observations and to instill in their minds the value of exercise. While they are young, it is essential to incorporate exercise in their everyday lives through simple exercises that are not hard to execute.

The specific objectives of the study were:

1. To describe the effect of exercise to the respondents;
2. To explain the changes brought about by exercise to the respondents; and
3. To know the source of errors in the study for its improvement and for future studies.

### Review of related literature

This chapter presents survey of related literature of recognized experts, of which have significant bearing or relation to the problem under investigation.

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This may serve as the basis for sorting out and solving problems that may be encountered in the development of the proposed study on promoting exercise as an input of physical fitness.

According to Pippig (2013), our children are our future—and understanding and supporting their natural yearning for physical activity will help lead them to a lifetime of happy and healthy living. If we joyfully teach them how to include healthy exercise from the early stages of their development, we will be giving our children a gift that will endure throughout their lives. Among the many benefits are physical fitness, confidence and stronger self-esteem, more energy, better memory, and simply a good feeling about themselves—and they are easy to achieve. Outdoor games and playful workout routines can be the tools that instill lasting joy of exercise.

The American Heart Association (2013) also said that exercise is important to children especially to grade school kids. Increased physical activity has been associated with an increased life expectancy and decreased risk of cardiovascular disease. Physical activity produces overall physical, psychological and social benefits. Inactive children are likely to become inactive adults. And physical activity helps with controlling weight, reducing blood pressure, raising HDL ("good") cholesterol, reducing the risk of diabetes and some kinds of cancer and, improved psychological well being, including gaining more self-confidence and higher self-esteem

The evidence speaks loud and clear that regular exercise can improve test scores, IQ levels and task efficiency. Among elementary school students, 40 minutes of daily exercise increased IQ by an average of nearly 4 points. Among 6th graders, the fittest students scored 30 percent higher than average students, and the less fit students scored 20 percent lower. Among older students, those who play vigorous sports have a 20 percent improvement in Math, Science, English and Social Studies. Students who exercise before class improved test scores 17 percent and those who worked out for 40 minutes improved an entire letter grade (Mercola, 2012)<sup>[11]</sup>.

Otto (2011)<sup>[3]</sup> stated that exercise is a crucial part of obesity prevention and health promotion in children. Indeed, there are ongoing national agendas to increase activity among children, with recommendations from the US Centers for Disease Control and Prevention and First Lady Obama's Let's Move campaign serving as prime examples.

Unfortunately, fewer and fewer students are able to bike or walk to school each day, and afterschool programs focus more on academics than on exercise. These are two missed opportunities for physical activity for our school children. A non-profit organization formed specifically to address the epidemic of childhood obesity, Action for Healthy Kids, reported that 75 percent of kids get less than 20 minutes of vigorous exercise per day (Action for Healthy Kids, 2004)<sup>[7]</sup>.

A recent report on childhood obesity released by the Government Accountability Office identified "increasing physical activity" as the first priority to combat the epidemic. Program officials identified multiple challenges in implementing key strategies, including a lack of or inconsistent physical education requirements by school districts, and infrastructure concerns, like the need for sidewalks. Other strategies to increase physical activity, according to the experts cited in the GAO report, were for incentives to encourage activity during recess or at other times throughout the day, or pedometers to older children to encourage walking. Proper policies must be implemented in

districts in order to support health education and skills-based learning, which are important steps to lifelong behavior change. (Retrieved on November 12, 2016 from [http://www.education.com/reference/article/Ref\\_Getting\\_Kids\\_Up/](http://www.education.com/reference/article/Ref_Getting_Kids_Up/))

Arnett (2012) on the other hand, draws attention to the fact that physical inactivity is a major risk factor for developing coronary artery disease. It also increases the risk of stroke and such other major cardiovascular risk factors as obesity, high blood pressure, low HDL ("good") cholesterol and diabetes. The American Heart Association recommends that children and adolescents participate in at least 60 minutes of moderate to vigorous exercise every day.

A subcategory of physical activity is exercise. The most distinguishable characteristics of exercise are that it is planned, structured, repetitive, purposeful, and requires moderate to high levels of activity (Livingstone, Robson, Wallace, & McKinley, 2003)<sup>[14]</sup>. The National Association for Sport and Physical Education (NASPE) has issued specific activity guidelines for elementary school-age children. NASPE recommends that children engage in some form of moderate to high physical activity (i.e., exercise) for 30 to 60 minutes almost every day of the week (Corbin & Pangrazi, 2000)<sup>[13]</sup>. Children who meet or exceed these minimums have stronger and healthier cardiovascular systems, lower blood pressure, more favorable blood lipid profiles, stronger bones, and less body fat (Witzke & Snow, 2000)<sup>[16]</sup>.

Clearly, finding ways to increase children's daily and weekly exercise opportunities should become a priority for parents, teachers, and practitioners. Conferences such as the one sponsored by the Centers for Disease Control and Prevention, Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People (1997), suggest focusing on the infrastructures in schools and communities to promote healthy physical activity patterns. Intervention programs that target children, their schools, and communities have been successful in increasing children's level of exercise in school but have been less successful with influencing exercise outside of school (Sallis *et al.*, 1997)<sup>[15]</sup>.

Mercola (2012)<sup>[11]</sup> claims that exercise encourages your brain to work at optimum capacity by causing nerve cells to multiply, strengthening their interconnections and protecting them from damage. Animal tests have also illustrated that during exercise their nerve cells release proteins known as neurotropic factors. One in particular, called brain-derived neurotropic factor (BDNF), triggers numerous other chemicals that promote neural health, and has a direct benefit on brain functions, including learning.

In summary, exercise produces overall physical, psychological and social benefits. Physical activity helps children with controlling weight, reducing blood pressure, raising HDL ("good") cholesterol, reducing the risk of diabetes, and improved psychological well-being, including gaining more self-confidence and higher self-esteem. Thus, it is an input for physical fitness to grade school pupils.

## Methods

**Population and sampling:** Sixty students from Public Elementary School were involved in the study. This population was divided into two groups: 30 pupils for the experimental group, and the other 30 constituted the control group, regardless of the gender. Public Elementary School is an academic institution located in Los Banos, Laguna, which offers primary education to grade-school. Just like other elementary schools, pupils of the said school consist of

playful children, though there are also pupils who prefer to stay inside the classrooms and are denied of the opportunity to experience outdoor activities.

**Research instrument:** In order to determine the effectiveness of exercise in promoting physical fitness for improving one's health, a survey was conducted to the said population. The survey involved the measurement of the respondents' individual weight and average amount of sleep per day as the initial variables. These were the determinant of the effect of the suggested series of exercise to students.

The said exercises performed by the thirty students from the experimental group included stretching, series of jumping jacks and running after the flag ceremony each morning. The students were subjected to this exercise for a span of two weeks. The students of the control group, on the other hand, do not have exercise administered on them.

Every single day, the changes on the weight and number of hours of sleep of all the respondents were measured. Other observed effects of the exercise to the experimental group were gathered as well. After two weeks, the final weight and the amount of sleep of each student being tested were recorded.

### Results and discussions

Results showed that exercise as an input to physical fitness to grade school pupils yielded positive results.

Thirty grade five pupils from ages 9-10 respectively and has the same weight of 30kg were studied and were observed for two weeks to see if their nutritional status had improved.

The mean weight computed was 33 kilograms for the experimental group and 27kg for the control group. Another factor was the amount of sleep of the children. It was found out that students in the experimental group have higher amount of sleep compared to the control group. The study showed that with proper food intake daily and regular exercise, they tend to become normal from one condition. They become stronger and didn't get tired easily, thus, can do things more efficiently.

### Summary and conclusion

Subjecting them to a series of exercises tested the effect of exercise on the well being of grade-school pupils. The changes in the weight of the respondents was measured and recorded as well as the changes in their amount of sleep.

Results of the study revealed that children who performed the exercises on a daily basis has a mean weight of 33 kilograms for the experimental group which is significantly higher than the 27 kilograms of the students in the control group. Unlike the students of the experimental group who had an everyday exercise, students comprising the control group were just doing desk-bound activities most of the time. It is therefore concluded that daily exercise has affected their weights and their amount of sleep as well as their personal well-being.

Further experiments must be conducted to determine the validity of the study. It is also recommended that more variables be tested in the experiment and better statistical tools must be used to provide a better analysis of the obtained data. Lastly, longer time span for observation of the respondents is needed to facilitate a much significant result.

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