Abstract

50~60 percent of factors which determine health are conditioned by everyday habits. The WHO (World Health Organization) recommend for children and teenagers aerobic activities and physical activities for the strengthening of muscles and bones amounting to more than 60 minutes per day. However, upon analyzing the physical exercises of boys and girls between 11 and 17 in 146 nations, 81.1 percent was found lacking the amount of exercise recommended by WHO, and Korean students lacking exercise was found to be 94.2%, the highest among 146 countries, in the “worst” category, which shows a serious deficiency of exercise among Korean students internationally.

A lack of exercise leads to numerous problems, ranging from overweight-ness, obesity and teenage scoliosis. Scoliosis in particular has no clear prevention method so early detection and treatment due to school screening are the only solution, and through early detection 63 percent of scoliosis which range up to more than 40 degrees can be cured.

Taking into consideration the nature of scoliosis in teenagers in their period of growth, a functional training program effective in improving its symptoms through schools or regional facilities, rather than appliances or surgical methods, is necessary.

In order to improve the problem of the lack in teenager exercise, an encouragement for physical activities in general and the inducing of behavioral changes are important. After-school programs regarding health run by schools, or the supplying of exercise programs for prevention in approximately 11,000 Taekwondo Studio within Korea, can lead to the formation of exercise programs which is easily accessible by students themselves. By offering an affective functional exercise at an appropriate time, recognition on the importance of health care on the part of students can happen, information can be provided, and these can be used as means of prevention and improvement.

[Keywords] Taekwondo Studio, Teenagers, Health Improvement, Scoliosis, Obesity

1. Preface

1.1. The need for research

In the extent that a healthy body must be maintained and bodily energy improved, we in the past often emphasized that “health is our nation’s strength” and that “in a sound body is a sound mind”. But with the development of information technology and rapid growth of cultural factors, in our generation we only move our eyes and fingers, which led to the bodily health being dismissed as unimportant.

50 to 60 percent of the factors which determine health are reported to be decided by the type of posture in everyday life[1], and WHO recommends more than 60 minutes of aerobic exercises and activities for the strengthening of muscle and bone in the case
of children and teenagers. However, upon analyzing the body activity statistics among boys and girls between 11 and 17 among 146 nations in 2016, 81.1 percent had deficiency in the physical activities and did not meet the level of WHO recommendation, and 94.2 percent of Korean students among them were lacking exercise, the highest among the 146 nations. Especially among girls, 97.2 percent were found to not exercise at all, and technically all of them were found not committing to body activity sufficient for the maintaining of mental and bodily health. Thus, the Korean teenager’s situation was found to be in the “worst” category, and their exercise deficit was found to be a serious problem.

For individual’s happiness in the future and the continual development of the nation, bodily health and a sound mind must be fostered, and this is a task which the nation and schools together must take responsibility for, and is not optional now but a must.

Considering the attributes of teenagers in their growth season, the health improvement of children of age for school through conservative treatment, taking use of schools or local facilities, are keenly needed, rather than chemical and surgical methods. However, the programs and institutions related to functional training in group form is lacking.

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1.2. The aim of this research

The present research primarily aims to offer a directional guide for policies related to health improvement through general encouragement for physical activities and behavioral changes using school’s health classes and Taekwondo Studio, to tackle the problem of a teenager exercise deficiency.

2. The Improvement Measures for Teenager Health

2.1. The expanding of health/fitness classes

Lack of exercise can lead to numerous problems, and according to the Physical Activity Promotion System (PAPS) can cause overweight-ness, obesity, a low energy level and teenage year scoliosis. Also, lack of physical activity in teenage years in which one is sensitive to change of appearance and the muscular and bone systems grow radically, not only threatens health but can cause irregularities in the bone and muscular system and various ailments.

It is a serious problem that health and body energy level are failing rather than advancing at a time when physical activity must be most fervent, and due to our education system which focuses on college preparation and rivalry, grade 1, the best level, is tending to decrease and the level 5, the poorest, is tending to increase. Thus, I have proposed “School Physical Education Improvement Law” which focuses on increasing the members of Health and Physical Ability Classes for students so it would constitute of ordinary students and expanding the body ability examination which is conducted from 5th grade on to below 3rd grade.

2.2. Exercises and posture for teenage scoliosis

In 2008, according to the recorded population, 380 thousand children and teenagers among 7.8 million total has received treatment due to spinal symptoms, which were the most common ailments after cold, in which low back pain, a form of Muscular and skeletal system nitrification, constitutes 29.0%, and scoliosis 13.5 %. Scoliosis often occurs in growing children[2].

Scoliosis is a disease in which the spinal cord curves and twists to the side, and the scoliosis which occurs in youths before and after 10 years of age are mostly structural scoliosis. It is assumed that the irregularities in the nerve system and hormone which connects cranial nerves and spinal muscles is very likely the cause but often no special cause is found, and such a structural scoliosis is categorized as idiopathic, taking up 85% of all scoliosis cases[3].

According to the Health Insurance Service(2000), students in their growth season suffer from the malalignment of the body due to an overwhelming academical load and wrong postures, and there is an increasing amount of cases in which they are treated for the failing of muscular function and academic abilities, and also lower back pain. The underlying cause for scoliosis is thought to be mental stress related to academics, long hours of computer usage in an inappropriate posture, the chairs and desks which is not suited for body size, heavy backpacks, and a lack of exercise[4]. It was said that an opportunity for education and the taking of certain measures were needed for teens[5].

The teenage years are when bones and muscular systems grow rapidly, and so this problem cannot be overlooked, and the irregularities and ailments of muscle and bone structure and spinal anomalies has an intimate relationship with the amount of exercise and life habits. Unless health care is actively done from a young age on, these may lead to various ailments after the student’s becoming a grown up, resulting in social and economic costs and affecting life quality negatively due to loss of a desire to do better and also confidence[6].

2.3. The early discovery of scoliosis and exercise

The stability of the spinal posture is related to three systems: bone and ligament, muscle, and nerve systems. If there is any imbalance
Scoliosis does not have a clear prevention method so the only solution is early discovery and treatment through school screening[8]. Also, according to Malmo General Hospital in Sweden, the level of scoliosis over 40 degrees can be reduced by 63 percent through early discovery[9].

The research on the frequency of Scoliosis occurrence and early detection which started in Minnesota, USA in 1947, through a mass examination in a school, received attention from 1960 on; school screening is now being done obligatorily in 21 states(Morriissy, 1999). The School Health Management of Korea specifies that examinations on spinal anomalies be done for the early detection and prevention of scoliosis. The School Health Association examines whether the spine curves in a desirable way by the chest radiograph to check for tuberculosis for first years in middle school(7th grade) and first years in high school(10th grade). While checking for scoliosis through chest photographs cannot detect the arc of the lower back, it can find chest curves, and as for students who is found to have anomalies according to its result, they are instructed to undergo a detailed examination in school health centers or professional medical organizations, and allow them to be surveyed and treated accordingly.

For students, who are undergoing a period in which habits form, the activities and posture midst their growth season affects the bone structure which sustains the body, and school is where students can be trained to have the right posture[10].

Exercise therapy for teenagers with scoliosis causes about 70% of the symptoms disappearing, and body correction was also possible by about 50% percent[11]. For scoliosis of teenagers who still has spinal growth, an exercise program needs to be done periodically, continuing in tandem with domestic education, and with care from the people around

Brooks et al.,(1975); Rogalaet al.,(1978) emphasized the importance of early detection[12][13]., and that the physical activities which goes in hand with regular instruction on posture can lessen the rate of teenage scoliosis[14]. And as for mild symptoms, even the early detection induces a sense of caution, and improvement of symptom and correction are reported. Due to efforts to correct one’s posture after having been diagnosed with scoliosis, a Hawthorne Effect was observed, not to mention the concerned monitoring of parents, and attention paid to physical exercise and bodily activity.

In early young adulthood in which growth continues rapidly, the possibility for advances is quite high, unlike as is the case for grown-ups. Early detection leading to posture correction and exercise therapy can prevent the spine’s shift and prevent complications, and is being mentioned as a major issue of the school health system[15].

Considering the character of scoliosis in growing teens, it is important to not depend on appliances and surgeries but prevent and treat student’s scoliosis due to lack of exercise through the education of an instructor in school or regional facilities. Also, the establishing of a preventive exercise program effective in improvement is much desired, and a functional training in groups is needed. However, according to the participation in Korean Council of Sports for All, while 80.7 percent responded positively on the health and bodily capacity maintenance effect, due to lack of time(50.8%), the cost and lack of information and the need for a person to accompany, participation in physical activities could not be done. Our citizens show an exercise participation rate which does not suit the “Global Recommendation on Physical Activity for Health” by the WHO[16].

The management of health and bodily capacity is crucial not only for happy school days, but in that it fosters the basic bodily energy on the course of becoming a grown up, and working measures are needed for students to be able to know objectively and care about their health and energy, and take care of themselves consistently.

Due to the effect of functional exercises in school or in a regional facility, the bodily activity and the education in posture
straightens the spinal cord, leading to the improvement of under-activated muscles such as spinal root muscles and the relaxation of muscles overtly used, aiding in curing obesity, low body energy, and irregularities in body form. These measures must be conducted more regularly and consistently on students who are of an age when there is rapid growth.

3. Conclusion and Suggestion

The WHO counted a highly competitive academic environment, technological advancements and the electronic revolution as the reasons for teen exercise deficit not improving too easily, since it caused the teens to sit in longer intervals.

According to the Survey on Participation in National Sports, the considerations for increase in physical activity participation must be preceded by the securing of various gymnastic facilities in close distance, the development of public gym facilities and usage activation. For a scientific managing of the body, efforts on the level the country and regional organizations rather than the individual must be made, and in order to improve the problem of teen exercise deficit, the general encouragement for bodily activity and inducing of behavioral changes are needed.

For students of milder symptoms who do not need hospital treatment, running a health class for students in their growth season as an after school activity or supplying exercise programs in 11 thousand Taekwondo Studio in the country for prevention, can serve solutions. Taekwondo is a cultural content representing Korea with the number of its trainees increasing explosively in and out of the country. With the training system for kids at the main, it is being reincarnated as an every day sport which all citizens can enjoy. A Taekwondo Studio has long served private exercise facilities in regions, and it is expected that programs everyone can enjoy, instructors and a space for training would be provided, and programs for the treating of obesity, low energy level and body distortion can be offered, which will lead to positive outcomes.

The discovery of obesity, low energy level and scoliosis through the school’s health evaluation and spinal cord inspection, the offering of exercise programs the student can easily access, the constitution of a program with adequate time, cost and environment in which many can take part, and the offering of effective functional exercises at an appropriate time, will result in the students being mindful of health management, providing information, and taking use of them as ways of prevention and improvement.

4. References

4.1. Journal articles

[12] Brooke-Wavell K & Prelevic GM & Bakridan C & Ginsburg J. Effects of Physical Activity...


4.2. Books


4.3. Additional references

