

Physical Activity Management in Female College Students:

The Improvement of Health Related Fitness Through Zumba Fitness Workout

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Abstract—The lack of physical activity is a major cause of health problems and even leads to death; around 3.2 million deaths each year are caused by inadequate physical activity. The global comparative estimation from 2010 showed that 23% of adults and 81% of adolescents (aged 11-17 years) do not meet WHO recommendations for physical activity to improve health. The lack of physical activity in adults is found to be the highest in eastern Mediterranean, American, European, and western Pacific countries, while Southeast Asia is the lowest. This study was aimed at examining the effect of Zumba fitness Workout to improve Health Related Fitness (HRF) on female students. The method used was Quasi Experiment with pretest-posttest control group design. The sample of this research were 30 female students of Universitas Pendidikan Indonesia. The intervention was in form of physical activity through Zumba Fitness Workout that was conducted regularly 16 times with a frequency of 3 times / week and duration of 60 minutes. The instruments used were Fitness gram, Shuttle run Test, Stork Stand Test, Soft ball throw, Nelson hand reaction time, vertical jump, and dash test. Data Analysis used were paired sample t-test and descriptive frequencies analysis. The result shows that Zumba Fitness Workout can improve the Students Health Related Fitness (HRF).

Keywords: *physical activity, zumba fitness, health-related fitness, skill-related fitness, students, female*

I. INTRODUCTION

The habit of physical activity is very beneficial for health, it can reduce the risk of heart and cardiovascular disease, hypertension, diabetes, and several types of cancer. Habits of physical activity also have a positive effect on mental health, delay the onset of dementia, and maintain a healthy weight [1]. Physical activity habits of students can improve aerobic and non-aerobic fitness to achieve the Healthy Fitness Zone (HFZ) and this is positively correlated with academic achievement [2]. Lack of physical activity is a major cause of health problems and even leads to death, around 3.2 million deaths each year are caused by in-adequate physical activity [3]. Unfortunately, in fact most adolescents fail to meet the weekly recommended levels of weekly physical activity [4] and spend approximately half of their leisure time engaged in sedentary activities [5]. Sedentary behaviour increases and physical activity decreases in adulthood [6] making it critical to understand factors that

influence the continuity in health behaviours through-out this transition to prevent obesity and other poor health outcomes in adulthood [6,7]. Diseases caused by lack of physical activity contribute to death as many as 6-10% every year [8]. Lack of physical activity occurs to people in countries with developing economic levels. In some economically advanced countries, lack of a physical level can reach 70% due to transportation pat-terns, use of technology, and urbanization [3]. Lack of physical activity affects the expenditure that must be incurred by a country, according to WHO data in 2013 developed countries have to spend health costs as much as 54 billion dollars plus 14 billion dollars in costs caused by the loss of community productivity. In Europe and America 1-3% of national health care costs are spent on public health care for illnesses caused by lack of physical activity [9].

WHO created a Global Action Plan on Physical Activity 2018-2030 with the theme of the program "More Active People for Healthier World". This program has a mission to ensure that everyone in every country in the world can have access and opportunities to be physically active in their daily lives to improve the health of individuals or groups, the community health and wellness is expected to be able to contribute to the development of nation in the sector of health, socio-cultural and economic. Through the Program, WHO targeted the reduction of at least 15% of physical inactivity in adolescents and adults. In order to achieve these targets, WHO create "a system based approach" through 4 policies namely create active societies, create active environment, create active people, and create active systems. Based on this information, this research is important to conduct to support the WHO program as a world health organization, this program can lead more people to carry out physical activities for a better quality of human life and a healthy nation. Through this research, UPI as an educational institution can be a continuation of WHO in creating an active system as a "multisectoral national and subnational partnership to increase physical activity" which will then enhance the image of UPI at the international level.

The level of physical activity is influenced by cultural values. In some countries, women, people with low economic levels, people with disabilities and chronic dis-eases have fewer opportunities to access programs, also affordable and

appropriate places for physical activity. Some traditional views about physical activity causes people to be lazy in their activities, the assumption that physical activity are boring, expensive, and not fun become a factor to the low of participation in physical activity. This study tries to conduct Controlled Exercise trials (RCTs) through dance and aerobic-based physical activities designed for female students, this is done because in adolescent girls their involvement in physical activity decreases when entering higher education [10,11]. Zumba fitness activities combining dance elements (salsa, merengue, cumbia, raggaeton) and fitness elements (aerobics, strength, balance, endurance, etc.) have been examined on several physical variables, but the effects on Health Related Fitness (HRF) is still unclear. Therefore, the purpose of this study was to examine the effect of physical activity through Zumba fitness workout on Health Related Fitness (HRF) that would support the quality of life especially on female students.

II. METHOD

The method used is Quasi Experiment with pretest-posttest control group design. The sample of this research is 30 female students at Universitas Pendidikan Indonesia. The intervention was physical activity through Zumba Fitness Workout who done regularly 16 times with a frequency of 3 times / week and duration of 60 minutes. The instruments used were Fitnessgram are consist of Shuttle run Test, Stork Stand Test, Soft ball throw, Nelson hand reaction time, vertical jump, and dash test. Data Analysis used are paired sample t-test and descriptive frequencies analysis. Assessments of Student Health related fitness were undertaken after finished physical education course program at the end of semester. Each participants was tested by all item test in fitnessgram which based on 5 item test above. Finally all data collection was analysed using Paired sample t-test with significance level at .05 to inference the effect of Zumba fitness workout on female students Health Related Fitness (HRF).

III. RESULTS AND DISCUSSION

TABLE I. DESCRIPTIVE STATISTICS FOR PRE-TEST AND POST-TEST ON THE EXPERIMENTS

Non intervensi		intervensi	
Pre test	Post Tes	pre test	post test
\bar{x} = 1.43 SD=0.33 N = 20	\bar{x} = 1.36 SD=0.21 N = 20	\bar{x} = 2.12 SD=0.40 N = 20	\bar{x} = 3.36 SD=0.36 N = 20

TABLE II. PAIRED SAMPLE T-TEST FOR HEALTH RELATED FITNESS

Variable	t	df	Sig (2 tailed)
Health related fitness	5.98	29	0.01

Based on the results of descriptive data analysis and inference using paired sample t-tests with the assumption that the data are normal and tested using a significance level of .05, it is known that there was a significant increase in health related fitness (HRF) of students after physical activity through Zumba workout was done. Thus it can be concluded that

Zumba workout as physical activity management is effective to improve female students' Health Related Fitness (HRF). The increase occurred because the treatment through Zumba sports carried out fulfils the principles of training. The intended training principle is the frequency, intensity, duration, and type or type of exercise that is implemented. The recommendation for future research is to increase the use of models or types of interventions and involve a larger and wider sample. In addition, future studies are expected to be able to use different research methods or add more relevant variables and instruments.

IV. CONCLUSIONS

The research conclude that Zumba fitness workout is one of physical activity which effective to improve health related fitness of female student. The recommendation of next research is fidelity of the method.

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