



Development of Physical Fitness Testing Instruments in Adult Women Middle-Aged

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ABSTRACT

Physical fitness for the adult women middle-age has various components of physical fitness that cannot be compared to other sports, for this reason, it is necessary to develop a series of special physical fitness tests that can measure and develop each component of physical fitness needed by the adult women middle-age. This study uses developmental research. So this study will develop the types of general physical fitness tests into a series of special physical fitness tests for adult women according to their characteristics. In this study, it took about 3 (three) months, from September to December 2022. Data collection in this study was carried out in the morning. The place of this research is in a gymnastics club in Surabaya. This study uses research procedures using research development steps from Borg and Gall. It was concluded that research on the development of physical fitness test instruments in adult women middle-age can be used as a reference for further research, and is useful for practitioners conducting tests and measurements on adult women middle-age.

Keywords: *Physical Fitness; Woman Adult Women Middle-Age; Testing Instrument.*

INTRODUCTION

Whether we realize it or not, the physical fitness of adult women in our country is still far from what is expected by all parties. Almost physically closely related to health-related quality of life (Álvarez-Gallardo et al., 2019). Physical fitness can also be used as an indicator of one's health (Henriques-Neto et al., 2020). Good physical fitness will support one's cognitive function and quality of life (Sampaio et al., 2020). The component of physical fitness that is most often associated with academic achievement is cardiorespiratory fitness (Rodriguez et al., 2020). Physical fitness also has a positive impact on motor skills (Li et al., 2020). For example, the flexibility component is related to the maximum joint range of motion without causing injury (Nuzzo, 2020). Agility is also a

component of physical fitness in changing the direction of the position of the body quickly (Achmad Rifai et al., 2020). Strength is also an important component that is influenced by physical fitness (Treuth et al., 2005). Physical activity has an important role in physical fitness (Chen et al., 2018). However, physical fitness can also be affected by other factors such as sleep duration (Lee et al., 2020) and other daily activities which also have the potential to affect a person's quality of life (Perez-Cruzado et al., 2018). Physical activity is influenced by the intensity, frequency, and duration of physical activity (Lockwood, Park and Wohl, 2012).

Sport is an activity that is of interest to all ages and sport is a physical activity that is useful for maintaining and improving the quality of one's health after exercising (Ramadhan & Bulqini, 2018). Suitable activities that can be carried out by adult women to achieve endurance with proper physical fitness are accompanied by strength training plus balance and stretching movements (Mulyadi & Rifki, 2021). Gymnastics positively affects the condition of the movement system, improves muscle and functional fitness and fosters movement performance (Deineko & Belenkaya, 2020; Hedbavny et al., 2017). In gymnastics, most skills incorporate rotation around one or more body axes (Heinen et al., 2012). Physical preparation is required before learning the elements of gymnastics to increase general and explosive strength and flexibility should be primary (Radanovic et al., 2016).

To measure each component of physical fitness, many types of tests have been developed, but they are still measuring physical fitness in general. While physical fitness for the adult women middle-age has various components of physical fitness that cannot be compared to other sports, for this reason, it is necessary to develop a series of special physical fitness tests that can measure and develop each component of physical fitness needed by the adult women middle-age. The series of special physical fitness tests are expected to be able to describe the prime physical quality of an adult woman middle-aged person. So the types of physical fitness tests specifically to measure the physical fitness components of adult women are urgently needed because the series of physical fitness tests does not yet exist. Thus, a series of special physical fitness tests for adult women and middle-aged are needed and needed.

METHOD

This study uses developmental research. Development research is research that aims to develop a new product or perfect an existing product (Maksum, 2012). So this study will

develop the types of general physical fitness tests into a series of special physical fitness tests for adult women according to their characteristics. In this study, it took about 3 (three) months, from September to December 2022. Data collection in this study was carried out in the morning. The place of this research is in a gymnastics club in Surabaya. This study uses research procedures using research development steps from Borg and Gall.

RESULTS AND DISCUSSION

Results

Stage I

From the results obtained from the material expert's assessment of this product. Get results worth using.

Table 1.
Eligibility criteria

Criteria	Percentage	Frequency
Very worth it	10%	1
Worthy	80%	8
Enough	10%	1
Not enough	0%	0
Very less	0%	0

Stage II

From the results of the experts' assessment of this product in phase II, it was declared feasible.

Table 2.
Distribution of frequency of physical aspects assessment by stage II experts

Criteria	Frequency	Percentage
Very worth it	1	20%
Worthy	4	80%
Enough	0	0%
Not enough	0	0%
Very less	0	0%

Analysis of data from small group trials

The trial was followed by randomly selected adult women middle-age. The assessment consisted of 8 items indicating that the physical fitness instrument test product in adult women middle-age that was developed had very feasible criteria. This can be seen in Table 3

Table 3.
 Frequency distribution of small group trial results

Percentage	Criteria	Frequency
80%	Very worth it	8
20%	Worthy	2
0%	Enough	0
0%	Not enough	0
0%	Very less	0%

Analysis of data from large group trials

The test products were assessed in small group trials and revised, then the products were tested on adult women with the same characteristics. The trial was attended by adult women and middle-aged people who were selected based on their level of ability and consisted of adult women middle-aged women. The assessment consists of 8 items indicating that the developed physical fitness instrument product for adult women middle-age has a "very decent" quality. This can be seen in Table 4.

Table 4.
 Frequency distribution of large group trial results

Percentage	Criteria	Frequency
90%	Very worth it	18
5%	Worthy	1
0%	Enough	1
0%	Not enough	0
0%	Very less	0

Final product revision needs data analysis

The physical fitness test instrument for adult women middle-age is made based on the results of a needs analysis, meaning that after obtaining various information about the physical fitness condition of adult women middle-age and the most important thing is the need for an accurate physical fitness test instrument for the adult women middle-age. From the observations and some of the data obtained, the researchers decided to make a physical fitness test kit for adult women, especially in the lower extremities.

Initial product description

After making observations and the form of observation of test instruments to measure physical fitness for adult women middle-age is determined, the next step is to carry out the manufacture and development of this test. Initial finished products are consulted with material experts and physical condition experts, then trials are carried out. The tryout was carried out in 2 stages, namely a small group tryout and a large group tryout.

Final product description

The initial product produced, the product needs to be evaluated by experts through the validation stage and needs to be tested through various stages of trials. The validation stage was carried out by material experts and media experts, while the trial phase was carried out in the trial stage which consisted of small group trials and large group trials. In the process of validating material experts, data is generated that can be used to revise the initial product. After the product is validated by material experts, the product is then validated by test and measurement experts. After that, it's ready to be tested. There are two stages of the trial, namely small groups and large groups. According to the expert, the quality of this product is feasible. Overall, according to the expert, this development product must be developed as much as possible so that this instrument can be used as a standard measuring tool and can be used as material for evaluating and assessing the abilities of adult women. product development is expected to be used as well as possible.

Discussion

Researchers believe that physical fitness in adult women of middle age is a success of a good and regular lifestyle and activity pattern. Developing components of physical fitness to get fit needs and in good condition is development in the field of sports. As is the case in development research, this also seeks to adjust between the needs and conditions of the adult women middle-age. In this development research, the researcher wanted to develop a physical fitness test instrument for adult women middle-aged people.

Product eligibility product development of physical fitness test instruments in adult women and middle-aged people is carried out by researchers validated by experts to achieve product perfection so that it is suitable for use. Experts who provide validation and provide input are experts on measurement tests and physical fitness. The score results of what has been evaluated and validated by experts will show the results in the form of several proportions which can then be viewed and classified based on predetermined criteria.

Based on the results of expert validation which states that the product of developing physical fitness test instruments in the adult women middle-age is feasible or can be used without revision. Thus, the product development of physical fitness test instruments is in the very good category. So that the product developed in the form of a physical fitness test instrument is suitable for use for reference and further research. In line with this, efforts can be made to overcome activity intolerance such as through physical exercise and

exercise in adult women middle-age (Vincent et al., 2020). Physical activity will increase physical fitness so that it can slow down cognitive development and physical decline in adult women and middle-aged people with dementia (Fitri et al., 2020). Physical activity has positive effects on cognitive function, spatial learning and memory, for maintaining brain health and treating neurodegenerative and/or psychiatric conditions with aerobic and resistance training in the adult and adult women middle-age population.

CONCLUSIONS AND SUGGESTIONS

Conclusions

It was concluded that research on the development of physical fitness test instruments in adult women middle-age can be used as a reference for further research, and is useful for practitioners conducting tests and measurements on adult women middle-age.

Suggestions

Researchers' suggestions in developing this instrument in a further direction are as follows, Further development of the physical fitness test instrument is carried out to determine the effectiveness of the product being developed, For the selection of components of physical fitness to be reproduced even more.

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