

Development of Low Impact Aerobics Gymnastics Model for the Elderly Level at Sanggar Mawar Jingga Palembang City

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Abstract: The problem in this study is that the members of gymnastics in the Mawar Jingga studio in Palembang City have reached the age of elderly, but they are still enthusiastic about participating in gymnastics. The problem is that they have difficulty during gymnastics because the movement and tempo of the music do not match their abilities. Therefore, researchers aim to develop a low impact aerobic exercise model for the elderly level at the Mawar Jingga studio in Palembang City. This research is research and development, this research is carried out through the stages of needs analysis, planning, making initial product designs, material and media expert validation. Furthermore, the product is tested on the elderly through small-scale trials, revisions, large-scale trials, revisions and final products. The product test subjects were elderly in the Sanggar Mawar Jingga studio in Palembang City. The data from the expert validation results got a value very valid category. It can be concluded that the low impact aerobic exercise model product developed is suitable for use by the elderly.

Keywords: Aerobic Gymnastics, Elderly, Low Impact

A. Introduction

Humans basically need exercise so that their bodies stay healthy, fit and not susceptible to disease. In the year 2020, the number of elderly individuals in Indonesia is estimated to rank as the sixth largest in the world, surpassing the elderly populations of Brazil, Mexico, and European countries (Primana, 2006). Doing regular exercise will not have a negative impact, but it will have a positive impact on the body. Sport is an activity carried out by humans so that it has an influence on the culprit. From a sports science point of view. Exercise is a series of regular and planned physical movements that people do consciously to improve functional abilities, according to the purpose of doing exercise. Sports are divided based on their nature or purpose, namely achievement sports, recreational sports, health sports, and educational sports (Adi, 2018). Health sports is a form of sports activities for health

purposes. The general characteristics or characteristics of health sports are: (1) bulk, (2) easy, (3) cheap, (4) festive, (5) benefits and safe (Sapto, 2018).

From the explanation above, it can be concluded that health exercise is a sports activity that has health needs for the body. Health sports tend to be mass in number besides that it is also cheap, easy, festive, many benefits, especially for physical, spiritual, and safe health. One of the goals of health sports is to maintain physical fitness. According to (Sapto, 2018) said that "gymnastics is a form of physical exercise that is arranged systematically by involving selected and planned movements to achieve certain goals". Gymnastics is a sport in the form of physical exercise that is created intentionally, arranged systematically and carried out consciously. The gymnastic movement requires strength and speed to produce a good impact on the body. Gymnastics is beneficial for both men and women, both young and old. Whatever type of gymnastics exercise is chosen. All of them provide benefits for the body, namely for health, fitness and beauty. As long as you do it in the right way and regularly.

Gymnastics is very important for the formation of body flexibility, which becomes an important meaning for human survival. There are various kinds of gymnastics including aerobic exercises, floor gymnastics, pregnancy exercises, scout gymnastics, healthy heart gymnastics, healthy gymnastics, Physical Fitness Gymnastics (SKJ), etc. Sapto, (2018) currently, people prefer sports that are fun, cheerful, cheap, and have many health benefits, especially for the body. Especially for teenagers and housewives who are experiencing boredom at home during the current Covid-19 pandemic quarantine period. In everyday we find various recreational sports such as aerobic exercises. Aerobics in Palembang City is very popular with people from young and old. But most who follow gymnastics are women. But in fact, low impact aerobic exercise with low intensity is very suitable for the elderly. According to Sapto, (2018) that "Elderly is one of the phases or cycles in life that will be experienced by long-lived individuals". It can be concluded that the elderly or commonly abbreviated as elderly is someone who experiences changes both physically and mentally. These changes affect all aspects of life, including health. According to (Sugiyono, 2016) clarifies that "Elderly humans consist of middle age group 45-59 years, elderly age group 60-74 years, old age group between 75-90 years, very old age group over 90 years.

The reality of the description above is very different from the problems in the field. The results of my interview with an aerobic gymnastics coach at Sanggar Mawar Jingga. During their time as gymnastics coaches there, members of mothers who have reached their old age remain enthusiastic in exercising, namely doing aerobic

exercises. But some of these mothers have difficulty in aerobic gymnastics movements, especially in the rhythmic tempo of the gymnastics music. So, they find it difficult to balance between the movement and tempo of the song properly. Based on observations with mothers who live around Sanggar Mawar Jingga. Some mothers want to take part in gymnastics at the studio, but they are embarrassed because of age. Related to this problem, researchers plan to make a model for the development of low-impact aerobic exercise at the elderly level and video in the form of a DVD that suits their needs so that the elderly can do aerobic exercise while being able to live healthy and fit.

B. Methods

This research was conducted using the “Research and Development” to produce a certain product and test the effectiveness of the product (Holtzman, 2011; Karlsson et al., 2004). In this study, Research and Development was used to produce aerobic gymnastics models. This study aims to produce a product in the form of a DVD and guidebook containing a low impact aerobic exercise model at the elderly level in the Mawar Jingga studio in Palembang City. The method used for the first time is a research method that is needs analysis which is used to test and find out new products so that they can be known to their effectiveness so that new products can function in the community.

Researchers examine only up to 7 stages because it is in accordance with the needs of researchers. The place of research is the object and source of data from the place under study so that the information obtained can provide accurate data and its truth in research. In this case, the researcher took place in the Mawar Jingga studio in Palembang City. This stage contains product trials that have been revised by experts, the revised results are then tested on the elderly in the Mawar Jingga studio in Palembang City, namely small group trials using 15 elderlies as a population, sampling is carried out by random sampling. Large-scale trials were carried out after small-scale trial products and expert revisions, this large-scale trial was carried out on the elderly in the Mawar Jingga studio in Palembang City as many as 30 elderly participants. After large-scale tests are carried out, the product is further revised by experts and becomes the final product.

Data from questionnaire results obtained from users of gymnastics models. the data analysis technique used by this researcher aims to measure instruments or questionnaires, namely using the likert scale. The likert scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about social

phenomena. then the answer to each instrument item has a gradation from very positive to very negative in the form of words (Batterton & Hale, 2017).

C. Results and Discussion

Needs Analysis

Gymnastics is one sport that has a good effect on the body, because this sport requires energy, agility, and accuracy when doing it (Werner et al., 2012; Hrysomallis, 2011). Gymnastics is no stranger to the public because there are quite a lot of gymnastics enthusiasts from various groups of young, old, women, and men. The development of the era of gymnastics activities is not only carried out outdoors but indoors as well, therefore many open gymnastics studios, for example in this study choose to research in the rose orange gymnastics studio located in housing. So, what has been explained above cannot be separated from various problems, to find out the problems that occur in a gymnastics studio, and know the forms of solving the problems faced, it is necessary to do a needs analysis. This needs analysis process includes several processes including making observations, analyzing gymnastics activities in the field, conducting interviews with related parties such as studio owners, instructors and elderly, and conduct literature studies. By doing this analysis can overcome problems that occur during gymnastics. The results of interviews and observations, information was obtained that, not all gymnastics members in the studio could follow the movements led by the instructor, this was because there were some members who had difficulty when doing gymnastics because the movements and tempo of the music were not in accordance with their abilities.

The problem that arises during the gymnastics activity is because the gymnastics instructor does not pay attention to its members, when the instructor performs gymnastic movements, some members can follow the movement and other members have difficulty so they do irregular and directed gymnastic movements. If this problem occurs continuously, fear will have a negative impact on the body, for example the occurrence of injury. According to the statement above, it is important to develop a low impact aerobic exercise model for the elderly level in the Mawar Jingga studio in Palembang City. The products developed by researchers are expected to overcome problems in the studio and are expected to be used to maintain body immunity for the elderly even at home.

Planning

After the researcher made observations to the field. Researchers found a problem. Then the researcher planned to make a low impact aerobics gymnastics model product at the elderly level in the form of DVD products and movement manuals as a solution to the problems in the Mawar Jingga studio in Palembang City. Desain product the following is the initial design of the product development of the low impact.

Design Validation

Expert Validation Phase I

The validator who was used as a material expert in this development research was Husni Fahritsani, M.Pd as the Faculty of Physical Education Teacher Training, Universitas PGRI Palembang.

Material Expert Data Analysis Phase I

Data from product evaluation by the first stage of material experts in table "4.2" shows that the development of a low impact aerobics gymnastics movement model at the elderly level in the Sanggar Mawar Jingga Palembang City, the results of development from the aspect of material quality get 70% and the content aspect get 72%, the score is then converted into values based on the assessment scale table. Thus, it can be stated that according to material experts, the development of a low impact aerobic exercise model at the elderly level in the Mawar Jingga studio in Palembang City which has been developed from the aspect of material quality gets the "Valid" category and the content aspect gets the "Valid" category.

Media Expert Phase I

Results Data The results of product evaluation by the first stage media experts in table 4.4 show that the development of a low impact aerobic exercise model at the elderly level in the Mawar Jingga studio in Palembang City, the results of the product display aspect get 66.7%, the audio / music used gets 80%, Video content gets 56.4%, and alternative media users get 53.3%. The score then scores the results into values based on the assessment scale table. Thus, it can be stated that according to media experts, the development of a low impact aerobics gymnastics model at the elderly level in the Mawar Jingga studio in Palembang City which has been developed from the product display category "Valid", the audio/music used gets the category "Valid", the content of the video category "Enough", and alternative media users' category "Enough".

Expert Validation Results Data Phase II

Material Expert Data Analysis Phase II

Data on the results of product evaluation by the first stage of material experts in table 4.6 show that the development of a low impact aerobics gymnastics movement model at the elderly level in the Sanggar Mawar Jingga Palembang City, the development results from the aspect of material quality get 93.3% and the content aspect get 92%, the score results become values based on the assessment scale table. Thus, it can be stated that according to material experts, the development of low impact aerobics gymnastics Models at the elderly level in the Mawar Jingga studio in Palembang City that have been developed from the aspect of material quality get a score with the category "Very Valid" and the aspect of content gets a score with the category "Very Valid".

Media Expert Data Analysis Phase II

Data from product evaluation by phase II media experts in table 4.8 shows that the development of a low impact aerobic exercise model at the elderly level in the Mawar Jingga studio in Palembang City, the results of the development of the product display aspect get 80% and the audio/music aspect used gets a score of 100%, The development results of the video content aspect get 92.7%, the alternative media aspect of users get 80%. The results of the score then become a value based on the assessment scale table. Thus, it can be stated that according to media experts, the development of the media model of low impact aerobics gymnastics at the elderly level in the Mawar Jingga studio in Palembang City which has been developed from the aspect of display gets the category "Valid", the audio/music aspect gets the "Very Valid" category, the video content aspect gets the "Very Valid" category, and the alternative media aspect of the user gets the "Valid" category.

Product Revision

Revision of Small-Scale

Trial Products In the trial of elderly products in the Mawar Jingga studio in Palembang City, providing advice on the media model of low impact aerobic exercise movements at the elderly level in the Mawar Jingga studio in Palembang City was very good. From the observations of observers and observer companions (Gymnastics instructor at Sanggar Mawar Jingga) There are several things that must be considered operationally, namely: 1) When carrying out a small scale the position of the elderly

must be given a distance of purpose so as not to collide with each other when doing gymnastics, 2) Wear clothes with comfortable shoes, to reduce the risk of injury, 3) Before doing gymnastics you should check the health of the body, if the body condition is not healthy you should not follow gymnastics (Gymnastics instructor at Sanggar Mawar Jingga). There are several things that must be considered operationally, namely: 1) When carrying out a small scale the position of the elderly must be given a distance of purpose so as not to collide with each other when doing gymnastics, 2) Wear clothes with comfortable shoes, to reduce the risk of injury, 3) Before doing gymnastics you should check the health of the body, if the body condition is not healthy you should not follow gymnastics.

Revision of Large-Scale

Trial Products Large group trials were given to 30 elderly people in the Mawar Jingga studio in Palembang City. The process of conducting this large group trial was carried out by presenting low impact aerobics gymnastics model products at the elderly level at the Mawar Jingga sangar Palembang City. After the presentation was completed, then to find out the quality of the products developed, researchers gave assessment sheets to the elderly. The data obtained from the trial use will then be followed up for product revision.

End Products

The resulting product is a DVD model of low impact aerobics gymnastics at the elderly level at the Mawar Jingga studio in Palembang City. The discussion in this product includes a series of gymnastic movements that have been assembled according to the needs and abilities of users. The product developed contains opening remarks, warm-up movements, core movements, cooling movements and thank you. The look and movement in this video have been validated by subject matter experts and media experts. This product has also been tested for the elderly in the Mawar Jingga studio in Palembang City and the results of every aspect are very good. The following is the final result of the development of a low impact aerobic exercise model at the elderly level.

D. Conclusion

This study produced a product in the form of a low impact aerobic exercise model at the elderly level at the Mawar Jingga studio in Palembang City in the form of DVD and gymnastics guidebooks. The results of material expert research for aspects of material quality 93.3% get the category "Very Valid", aspects of content with values

get the category “strongly agree”. The assessment results from media experts for the product display aspect 80% get the category “Very Valid”, the audio/music aspect used 100% gets the “Very Valid” category, the video content aspect 92.7% gets the “Very Valid” category, for the alternative media aspect 80% users get the “Very Valid” category. Based on the validation test from product feasibility trials with the results obtained, it can be concluded that the low impact aerobic exercise model at the elderly level in the Mawar Jingga studio in Palembang City is feasible to be used as a source of material for doing gymnastics that does not cost much and is practical.

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