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MODEL OF BASED PHYSICAL FITNESS EXERCISE GURILAPSS GYMNASTICS (MOUNTAIN, RIMBA, OCEAN, BEACH, RIVER, CULTURAL ARTS) AGE 20-40 YEARS

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Abstract This study aims to produce a model of Physical Fitness training based on GURILAPSS Gymnastics for ages 20-40 years and to test the effectiveness of this exercise model. This research is a research and development model from ADDIE which consists of 5 steps (1) Analysis, (2) Design, (3) Development, (4) Implementation, (5) Evaluation. Data collection was carried out through observation, filling out questionnaires and testing the maximum volume of oxygen using the Rockport Walking Test to determine the level of cardiopulmonary endurance aged 20-40 years. Based on the results of testing the effectiveness of the model using the experimental method and the one group pretest-posttest design approach. The sample in this effectiveness test was an experimental class of 40 people aged 20-40 years who were given the GURILAPSS Gymnastics based Physical Fitness exercise model. The results of statistical calculations using the paired sample t test for the experimental class show a significance value of $0.000 < 0.05$. The conclusion from the results of this study is that the GURILAPSS Gymnastics-Based Physical Fitness exercise model can increase the cardiorespiratory endurance of people aged 20-40 years and is effectively used as a model of GURILAPSS Gymnastics-based Physical Fitness exercises for people aged 20-40 years.

Keywords: Physical Fitness; GURILAPSS; gymnastics; cardiorespiratory



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INTRODUCTION

Physical fitness is defined as the ability to carry out daily work and adapt to physical loads without causing excessive fatigue and still have energy reserves to enjoy leisure time or sudden work and be free from illness (Ferdinato & Prihanto, 2017). A good level of fitness can be seen from the two elements put forward by (Pate, 2012), namely carrying out daily activities with enthusiasm and also avoiding hypokinetic diseases associated with physical activity.

Physical fitness is the body's ability to function efficiently and effectively (Charles et al 2008). In addition, (Giriwijoyo, 2017) suggests that a person who is physically fit will have a state of physical ability that can adjust the function of his body's organs to certain physical tasks and/or to the environment which must be handled efficiently, without excessive fatigue and has fully recovered before coming the same task the next day.

Cardiorespiratory endurance is the ability to perform dynamic exercises using the body's muscles at moderate to high intensity for a long period of time which is related to the response of the heart, blood vessels and lungs to

transport oxygen to the muscles. Cardiorespiratory endurance can be increased through the adaptation of the cardiorespiratory system to physical exercise by the body.

Regular physical training according to the right dosage can improve a fit physical condition. Getting the community fit is a strategic sports mission, because building a fit community is the main foundation and enforcement pillar that is relied on for the implementation of the sport for all movement.

Collective awareness about the need for a fit culture needs to be increased as well as related to the increasing tendency of degenerative diseases caused by an unhealthy lifestyle and lack of movement. The increasing trend of hypertension, obesity, diabetes, coronary heart disease, and others, of course, must be an awakening to how vital physical fitness is.

This new situation is related to new values of life and livelihood which have an impact on new forms of social relations. The birth of a new generation of technology makes life easier to exist. On the one hand, technology makes life more efficient and effective, but on the other hand, it creates excesses, one of

which is the phenomenon of lack of movement.

Nationally, based on data from 34 provinces, the vo_2max figure is 27.62 ml/kg/min. There are three provinces with the highest vo_2max , namely North Maluku, Maluku and West Papua. Meanwhile, the provinces with the lowest vo_2max are North Kalimantan, DKI Jakarta and DI Yogyakarta.

For West Java itself, it is at 26.26%, which means that it is sufficient. Meanwhile, for Sukabumi Regency, based on data from West Java's SP3OR (Bachelor of Support for Sports Development) in 2021, it shows a figure of 36% taken as a sample of 8 sub-districts out of 47 sub-districts.

The development of sports fitness must meet the general and specific characteristics and characteristics of sports health. Gymnastics using music rhythms can be used as an option to develop fitness training models.

The GURILAPSS gymnastics-based fitness training model with varied movements and regional characteristics can be developed as an effort to improve physical fitness, so that people don't get bored because they have their own pride

in the gymnastic movements that are characteristic of their region.

The fitness training model that is applied must also be as needed and based on the general characteristics and characteristics of health sports. The exercises must be systematically arranged starting from the easiest to the most difficult exercises done in stages. Gymnastics exercises that are carried out from low intensity to adequate intensity will create the foundation of good physical fitness.

Therefore, the introduction of GURILAPSS gymnastics is very important to be developed in the future, where Sukabumi Regency with 47 sub-districts is the second largest in Java and Bali with very high potential and enthusiasts of gymnastics, where the creation of GURILAPSS gymnastics is supported by the local government of Sukabumi district and KORMI of Sukabumi Regency and will become an icon of the Sukabumi district in the field of sports, health and fitness, and will be marketed at the weekly mobile activities in 47 sub-districts. If ordinary people with a healthy lifestyle, also make exercise a habit, then prevention of certain diseases.

With the existence of the GURILAPSS Gymnastics, the spirit of the vision and mission of Sukabumi Regency through Innovation and Collaboration is not only visible in development in general but also in the field of sports will continue to live up. So that sports activities can be the energy to achieve the vision and mission. In disseminating information, outreach and introduction to GURILAPSS Gymnastics, Future Researchers.

METHOD

This study used the Research & Development (R&D) method to develop and validate a product in the form of a GURILAPSS Gymnastics-based Physical Fitness training model for ages 20-40 years. This study uses the Research and Development model from ADDIE which consists of 5 steps (1) Analysis, (2) Design, (3) Development, (4) Implementation, (5) Evaluation. This research was conducted in Sukabumi Regency with community research subjects aged 20-40 years. Limited product trial subjects totaled 120 people, and for the effectiveness test there were 40 people.

Data collection techniques used were observation, interviews, questionnaires and cardiorespiratory

endurance tests using the Rockport Walking Test. The data analysis technique used in this study is in the form of qualitative and quantitative data analysis techniques, qualitative data analysis techniques are summaries of data obtained from observations and expert assessments to make it easier to understand, while quantitative data analysis techniques are used to analyze data generated from tests conducted carried out on the pretest and posttest of the experimental class and the control class using SPSS.16, namely paired samples t test

RESULTS AND DISCUSSION

RESULT

Based on the results of a satisfaction survey of 119 participants in the GURILAPSS exercise, it was found that 56.3% felt happy and 43.7% felt happy after receiving the GURILAPSS exercise training.

Furthermore, a survey regarding the effectiveness of GURILAPSS gymnastics on the health of gymnastic training participants, which consisted of 1-10 ratings obtained a 7 score of 5.9%, an 8 score of 26.1%, a score of 9 23.5%, and a value of 10 was 43.7%. Based on these data, the people who took part in the gymnastics training acknowledged

that GURILAPSS gymnastics was effectively given to the community as a training medium so that people remained healthy and fit.

Furthermore, to test the effectiveness of the GURILAPSS gymnastics-based physical fitness training model, the researchers made a selection based on the age of 20-40 years with various work backgrounds. After selecting 40 people, a pre-test was carried out using the Rockport test to measure physical fitness.

Then the researcher gave treatment by giving GURILAPSS gymnastics exercises 12 times after being given treatment then a post test was carried out with the same instrument as when the pre-test was carried out.

Testing the effectiveness of the developed model was carried out by pre-test and post-test. The results of the data are as follows:

Table 1.

VO₂Max data Fitness test results

Name	Pre Tets	Post Test
Subject 1	40	49
Subject 2	40	49
Subject 3	47	52
Subject 4	42	47
Subject 5	39	45
Subject 6	36	42
Subject 7	33	42
Subject 8	39	44

Continued table 1.

VO₂Max data Fitness test results

Name	Pre Tets	Post Test
Subject 9	37	42
Subject 10	39	45
Subject 11	39	46
Subject 12	38	44
Subject 13	37	43
Subject 14	37	42
Subject 15	37	42
Subject 16	38	45
Subject 17	41	47
Subject 18	41	47
Subject 19	39	44
Subject 20	36	43
Subject 21	31	37
Subject 22	34	39
Subject 23	31	39
Subject 24	28	37
Subject 25	29	35
Subject 26	25	31
Subject 27	28	37
Subject 28	33	40
Subject 29	30	35
Subject 30	29	37
Subject 31	31	36
Subject 32	30	37
Subject 33	34	39
Subject 34	31	37
Subject 35	31	37
Subject 36	31	37
Subject 37	31	37
Subject 38	31	37
Subject 39	27	35
Subject 40	28	36
Jumlah	1378	1635
Rata-rata	34	41

The pre-test and post-test results obtained were then analyzed to determine whether there was an increase before and after being given treatment. Analysis of the data used to test the

hypothesis was carried out by testing the mean difference using SPSS 16.0 for windows.

The data on the results of the pre-test and post-test of cardiorespiratory fitness after carrying out fitness exercises based on GURILAPS gymnastics obtained an average $VO_2\max$ pre-test of 34 and post-test of 41. If seen from the naked eye from the results of the pre-test to post-test, there is an average difference, and the results of the post-test are greater than the results of the pre-test, it can be concluded that fitness exercises based on GURILAPSS gymnastics can improve cardiorespiratory fitness.

The difference in the mean pre-test and post-test was not enough to conclude that the fitness of the people who were given the GURILAPSS exercise experienced a significant increase.

Table 2.
Results of the Paired Samples Test for Group Cardiorespiratory Fitness

Pair	Paired t test		
	Mean	Std. Dev	Std. Error Mean
Pre-test - Post-test	-6,425	1.338	.211
	t	df	Sig. (2-tailed)
	-30.380	39	.000

Table 2 shows a pre-test mean of 34.45 and a post-test of 40.88 with a

standard deviation of 5.038 and 4.805. In the t-test table with a significance level of 0.05 has Sig. (2-tailed) 0.000. This value has indicated that H_0 is rejected because the p-value Sig. (2-tailed) < 0.05, meaning that the GURILAPSS gymnastics-based fitness training model that is applied can significantly improve the fitness of people aged 20-40 years.

Thus, H_0 in this study was rejected, so that H_i was accepted, meaning that there was a significant increase in cardiorespiratory fitness. The receipt of this H_i proves that the developed GURILAPSS exercise-based fitness model is an effective effort to improve cardiorespiratory fitness for people aged 20-40 years.

DISCUSSION

Based on the data that the researchers obtained from the results of field trials and discussion of the results of the study, it can be concluded that the test results for the average $VO_2\max$ value of the community before being given the GURILAPSS exercise was 34 ml/kg/minute per minute and the value after being given the treatment of the GURILAPSS exercise-based fitness model was 41 ml/kg/minute.

It can be concluded that the fitness training model based on

GURILAPSS gymnastics for people aged 20-40 years is feasible and effective in improving cardiorespiratory fitness for people aged 20-40 years. In the significant difference test with SPSS 16 $p\text{-value} = 0.00 < 0.05$ which means there is a significant difference between before and after being given the treatment of the GURILAPSS exercise-based fitness model.

In general, everyone knows that exercising or doing physical activity is beneficial to health (Dinkes Provinsi Aceh, 2018). Regular participation in a healthy physical fitness program will provide substantial health benefits and significantly lower the risk of many chronic diseases (Hoeger, et, al 2010). Physical activity is categorized as sufficient if a person does physical exercise or sports for 30 minutes every day or at least 3-5 days a week. The physical activity he does can be recreational, competitive, and sports for health or fitness (Oktriani, 2019).

Previous research on the effect of mix impact aerobic exercise concluded that "mix impact aerobic exercise is more effective in improving physical fitness" (Maryani, 2021). The gymnastics-based physical fitness training model is proven to have an

effect on increasing physical fitness, this is evidenced by the many supporting studies. In addition, according to (Latifatur, 2021), in his research, he stated that infrastructure is a factor in increasing appetite. Infrastructure is not only interpreted as buildings or tools, training models can also be considered as infrastructure facilities that must be fulfilled, achievement is closely related to physical fitness, because achievement must be supported by good physical condition, in this case optimal physical fitness that must be possessed by every people, both athletes and non-athletes.

CONCLUSION

Based on the data that the researchers obtained from the results of field trials and discussion of the research results, it can be concluded that:

1. Producing the final product in the form of a fitness training model based on GURILAPSS gymnastics for people aged 20-40 years consisting of 9 phases of gymnastic movements namely transitional movements, warm-up movements, core movements 1-5 and cool-down movements.
2. The test results for the average VO2Max value of the community before being given GURILAPSS

gymnastics was 34 ml/kg/minute per minute and the value after being given treatment of the media-based rhythmic gymnastics training model, the GURILAPSS gymnastics-based fitness training model was 41 ml/kg/minute.

It can be concluded that the fitness training model based on GURILAPSS gymnastics for employees aged 20-40 years is feasible and effective in improving cardiorespiratory fitness for people aged 20-40 years. In the significant difference test with SPSS 16 p-value = 0.00 <0.05 which means there is a significant difference between before and after being given the treatment of the GURILAPSS exercise-based fitness model.

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REFERENCE

- Ali Maksum. *Metode Penelitian Dalam Olahraga* (Surabaya: Unesa University Press, 2012).
- Anik M., Fahmy F., & Ramdan. (2021). The effectiveness of mix impact aerobic gymnastics exercises with skj 2000 on improvement of physical freshness. *Gladi: Jurnal Ilmu Keolahragaan*, 12 (03) Special Issue 2021, 39-44 Permalink/DOI: <https://doi.org/10.21009/GJIK.123.06>
- Ballinger, Debra, *Physical Education for Lifelong Fitness: Physical Best Teacher's Guide, National Assosiation for Sport and Physical education*, eds. Quinn et. al., USA : Human Kinetic, 2011.
- Borg, Walter R., & Gall, Meredith D., *Educational Research An Introduction*, New York : Longman, 1983.
- Budiyono, K. (2013). Amplikasi Senam Aerobic High Impact Dan Low Impact Terhadap Penurunan Presentase Lemak Tubuh Pada Kepala Sekolah Dasar Se-Kecamatan Banjarsari Surakarta. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Corbin, Charles B., Welk, Gregory J., Corbin, William R., Welk, Karen A., *Concepts of Physical Fitness: Active Lifestyles for Wellness*, eds. Emily Barrosse, New York : The McGraw-Hill Companies,

- 2008.
- Depdiknas Puskesjas, *Tes Kebugaran Jasmani Indonesia*, Jakarta, 1999.
- Dinas Pemuda dan Olahraga Provinsi Jawa Barat. Survey Angka Partisipasi Masyarakat dalam Berolahraga.
<https://www.radarbandung.id/2021/04/06/tingkat-partisipasi-masyarakat-berolahraga-meningkat-di-tengah-pandemi/>.
- Dinkes Provinsi Aceh. (2018). *Lakukan Aktifitas Fisik 30 Menit Setiap Hari*. 1–4.
- Ferdinato, T. P., & Prihanto, J. B. (2017). Hubungan aktivitas fisik harian dengan tingkat kebugaran jasmani (studi pada siswa kelas VIII SMP Negeri 2 Candi, Siduarjo). 05(Physical activity, Levels of physical fitness), 925–928.
- Giriwijoyo, Santoso. & Sidik, Dikdik Z., *Ilmu Faal Olahraga*, Bandung : PT. Remaja Rosdakarya, 2012.
- Hoeger, Werner W.K., Hoeger, Sharon A., *Principles and Labs for Physical Fitness*, Seventh Edition, USA : Wadsworth, Cengage Learning, 2010.
- James Tangkudung & Wahyuningtyas Puspitorini. *Kepelatihan Olahraga “Pembinaan Prestasi Olahraga Edisi II”* (Jakarta: Cerdas Jaya, 2012)
- Johansyah Lubis. *Panduan Praktis Penyusunan Program Latihan* (Depok: Raja Grafindo Persada, 2013), h.11.
- Kementerian Pemuda dan Olahraga Republik Indonesia.
<https://deputi3.kemenpora.go.id/detail/93/menggagas-peningkatan-partisipasi-masyarakat-berolahraga-melalui-sinergi-kemenpora-bkkbn>. Diakses online 11 april 2022 pkl 23.06 wib.
- Latifatur. R. A., Lungit. W., Wahyuni. H. (2021). Aerobic gymnastic gymnastics development survey, lampung province. *Gladi : Jurnal Ilmu Keolahragaan* 12 (01) 2021, 26-30 Permalink/DOI: <https://doi.org/10.21009/GJIK.121.04>
- Pate, R. R. (2012). The Evolving Definition of Physical Fitness. April 2015, 174– 179. <https://doi.org/10.1080/00336297.1988.10483898>.
- P2PTM Kemenkes (2018) Manfaat Aktivitas Fisik Retrieved from [p2ptm.kemkes.go.id/ website : http://p2ptm.kemkes.go.id/infographic-p2ptm/hipertensi/manfaat-aktivitas-fisik](http://p2ptm.kemkes.go.id/infographic-p2ptm/hipertensi/manfaat-aktivitas-fisik).
- Putra, Nusa., *Researc & Development*, Jakarta : PT. Raja Grafindo Persada, 2012.
- Rosidah, N. (2013). Perbedaan Pengaruh Latihan Senam Aerobik Low Impact Dan Mix Impact Terhadap Tingkat Kesegaran Jasmani Pada Siswa Putri Smk Negeri 1 Surakarta Tahun Pelajaran 2012/2013. *Phederal: Physical Education, Health and Recreation Journal*, 1(1).
- Sharkey, Brian J., *Kebugaran Jasmani*, terjemahan Eri Desmarini Nasution, Jakarta : PT. Raja Grafindo Persada, 2003.
- Soraya, N. (2017). Perbandingan Senam Aerobik Mix Impact dengan Senam SKJ 2012 dan Motivasi Berprestasi Terhadap Daya Tahan Cardiorespirator. *Sport Area*, 63(3), 63–75.
- Sugiyono. (2016). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Alfabeta
- Wen, C. P., Wai, J. P. M., Tsai, M. K.,

- Yang, Y. C., Cheng, T. Y. D., Lee, M. C., ... & Wu, X. (2011). Minimum Amount of Physical Activity for Reduced Mortality and Extended Life Expectancy: A Prospective Cohort Study. *The lancet*, 378(9798), 1244-1253.
- Wiarso, Giri., *Fisiologi dan Olahraga*, Yogyakarta : Graha Ilmu, 2013.
- Yuliasih, Junaidi, & Setiakarnawijaya, Y. (2015). Pengaruh Latihan Senam Aerobik Mix Impact terhadap Penurunan Presentase Lemak Tubuh pada Wanita Penghuni Panti Sosial Karya Wanita Mulya Jaya Pasar Rebo Jakarta Timur. *Segar*, 3, 102–110.