

**PHYSICAL FITNESS TRAINING MODEL
FOR MIDDLE-AGES 45 TO 55 YEARS OLD**



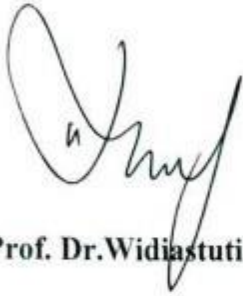
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**POSTGRADUATE
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2026**

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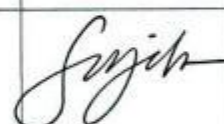


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No	Nama	Saran Perbaikan	Letak Tindak Perbaikan	Paraf (ACC)
1.	Prof. Dr.Dedi Purwana E.S.,M.Bus (Ketua)	Are there any books related to the model design	P119-131	
2.	Prof. Dr.Widiastuti,M.Pd. (Sekretaris)	Incorporate five relevant theories	P37-42	
3.	Dr. Yasep Setiakarnwijaya,M.Kes. (Anggota)	Explain the theory of cardiorespiratory endurance	P41	
4.	Dr.Aan Wasan,M.Si (Anggota)	Add more references	P114	
5.	Dr.Sugiharto.M.Kes (Anggota)	The group test results are to be added to Chapter 4.	P76	
6.	Susilo,D.Ed (Anggota)	Add the raw data	P154	
7	Dr.Ucok Hasian Refiater,M.Pd (Penguji Luar)	Reasons for selecting this group	P38-39	

Judul Disertasi :

Physical fitness training model for middle-ages 45 to 55 years old

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PHYSICAL FITNESS TRAINING MODEL FOR MIDDLE-AGES 45 TO 55 YEARS OLD

Shang yuanfang

Doctor of Physical Education

ABSTRACT

This study aims to develop and test the effectiveness of a physical fitness training model for middle-aged people aged 45 to 55 years old. The research used a Research and Development (R&D) design based on the Borg and Gall model. A total of 80 eligible participants from Xinxiang, Henan Province were selected and randomly divided into an experimental group and a control group, with 40 subjects in each group.

A 12-week intervention was implemented, with 3 training sessions per week and approximately 30 minutes per session. The experimental group received a systematically designed physical fitness training model focusing on cardiopulmonary endurance, muscle strength, flexibility, and balance & core stability under professional guidance. The control group performed a conventional community fitness program with independent training and no targeted guidance.

After data collection, no missing data were found. Descriptive statistics, normality tests, and the Shapiro-Wilk test revealed that the Ngain_Score data of physical fitness indicators were not normally distributed ($p < 0.05$) in both groups, mainly due to extreme outliers. Therefore, non-parametric tests were applied instead of parametric tests.

The Mann-Whitney U test results showed a statistically significant difference in the Ngain_Score between the two groups ($U = 322.000$, $Z = -4.600$, $p < 0.001$). The experimental group had a significantly higher mean rank and greater improvement in physical fitness than the control group.

It can be concluded that the developed physical fitness training model is effective and feasible for improving the physical fitness of individuals aged 45–55 years. This model is scientifically based and can be recommended as a practical fitness program for the middle-aged population.

Keywords: Models, Exercises, Fitness for 45 to 55 years old

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Model Latihan Kebugaran Jasmani untuk Usia Paruh Baya 45 hingga 55 Tahun

Shang yuanyang

Program Doktor Pendidikan Jasmani

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan dan menguji efektivitas model latihan kebugaran jasmani untuk orang dewasa pertengahan usia 45 hingga 55 tahun. Penelitian menggunakan desain Research and Development (R&D) berdasarkan model Borg and Gall. Sebanyak 80 partisipan yang memenuhi syarat dari Kota Xinxiang, Provinsi Henan dipilih dan dibagi secara acak menjadi kelompok eksperimen dan kelompok kontrol, dengan 40 subjek pada setiap kelompok.

Intervensi dilaksanakan selama 12 minggu, dengan 3 sesi latihan per minggu dan durasi sekitar 30 menit per sesi. Kelompok eksperimen menerima model latihan kebugaran jasmani yang dirancang secara sistematis, berfokus pada daya tahan kardiorpulmonal, kekuatan otot, fleksibilitas, serta keseimbangan dan stabilitas inti, di bawah bimbingan profesional. Kelompok kontrol melakukan program kebugaran komunitas konvensional dengan latihan mandiri dan tanpa bimbingan terarah.

Setelah pengumpulan data, tidak ditemukan data yang hilang. Statistik deskriptif, uji normalitas, dan uji Shapiro-Wilk menunjukkan bahwa data *Ngain_Score* indikator kebugaran jasmani pada kedua kelompok tidak berdistribusi normal ($p < 0,05$), terutama disebabkan oleh outlier ekstrem. Oleh karena itu, uji non-parametrik digunakan sebagai pengganti uji parametrik.

Hasil uji Mann-Whitney U menunjukkan perbedaan yang signifikan secara statistik pada *Ngain_Score* antara kedua kelompok ($U = 322,000$; $Z = -4,600$; $p < 0,001$). Kelompok eksperimen memiliki rerata peringkat yang jauh lebih tinggi dan peningkatan kebugaran jasmani yang lebih besar dibandingkan kelompok kontrol.

Dapat disimpulkan bahwa model latihan kebugaran jasmani yang dikembangkan efektif dan layak untuk meningkatkan kebugaran jasmani pada individu berusia 45–55 tahun. Model ini memiliki dasar ilmiah dan dapat direkomendasikan sebagai program kebugaran praktis untuk populasi dewasa pertengahan.

Kata kunci: Model, Latihan, Kebugaran untuk usia 45 hingga 55 tahun

PREFACE

The dissertation, entitled Physical Fitness Training Model for Middle-Aged Adults Aged 45 to 55, is the research outcome of the author's doctoral Physical Education Studies at the State University of Jakarta.

The results of this research can be completed due to the support and involvement of from various parties. On this occasion, the author would like to thank to :

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Jakarta, Januari 2026

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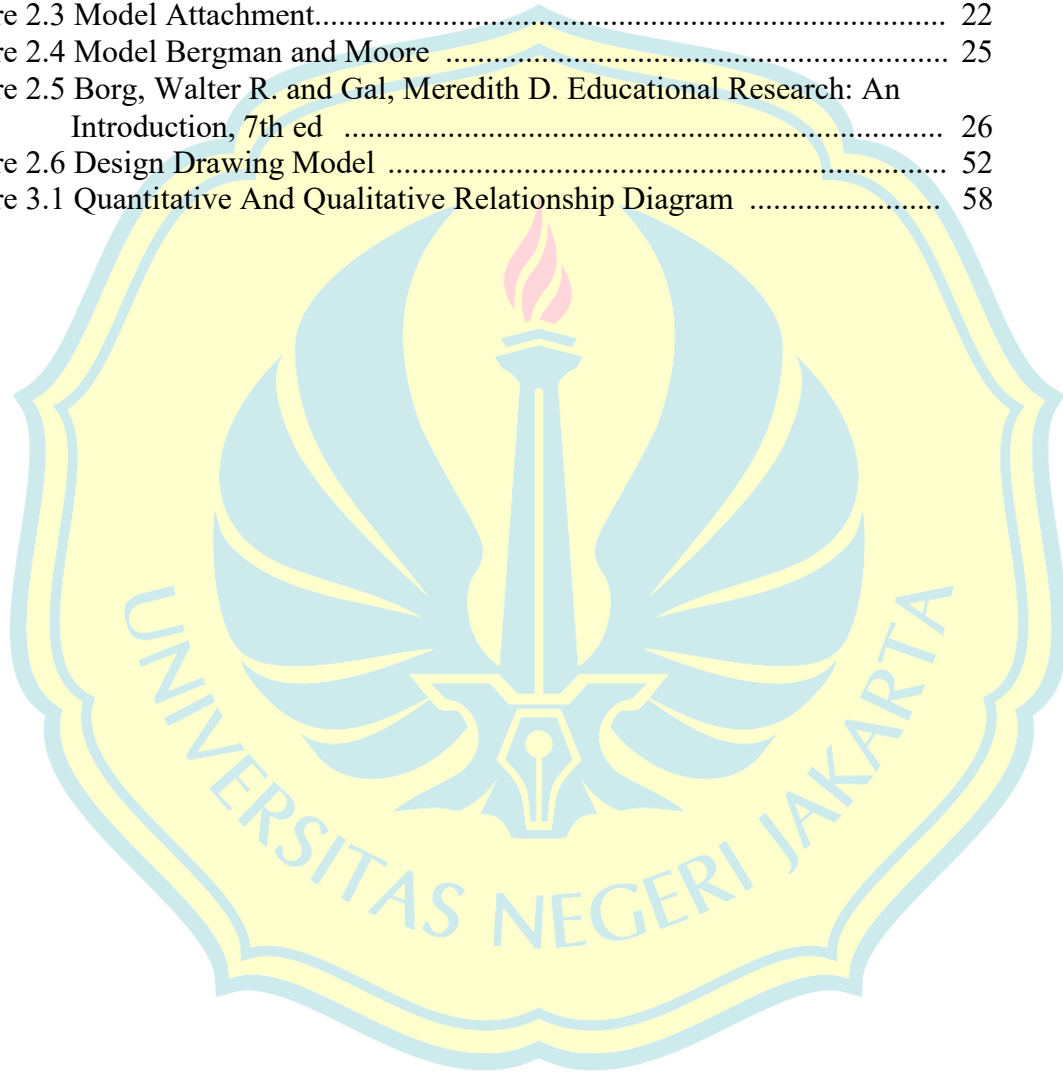
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