

Effectiveness Of Implementing The Pickleball Sports Training Model For Middle Age People 45 – 54 Years Old Among Journalists In Surabaya

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Abstract. *The study evaluates the effectiveness of implementing a pickleball training model for middle-aged journalists in Surabaya, focusing on those aged 45-54. The research utilizes a quantitative one-group pretest-posttest design, with 33 male journalists participating. Over three weeks, participants engaged in eight pickleball training sessions. The study measures improvements in executing forehand, backhand, and serve shots using observational criteria. IBM SPSS Statistics 26 was employed for data analysis, using the Wilcoxon signed-rank test due to the non-normal distribution of data. Results indicate significant improvements in all measured skills, evidenced by a p-value < 0.05. The average skill improvement was 65.53%, with specific gains in forehand, backhand, and serve skills noted. These findings suggest that pickleball not only enhances physical fitness but also contributes positively to emotional well-being, thanks to the enjoyable and social nature of the sport. The study highlights pickleball's low injury risk and its suitability for middle-aged individuals, promoting both physical health and social interaction. However, the absence of a control group is a limitation; future research should consider comparative studies to validate these findings further. Overall, pickleball appears to be an effective, enjoyable form of exercise for middle-aged professionals, enhancing both physical and psychological health.*

Keywords: *Health promotion, Social interaction, Training effectiveness, Journalists, Lifestyle integration*

Abstrak. Penelitian ini mengevaluasi efektivitas penerapan model latihan pickleball untuk jurnalis usia pertengahan di Surabaya, dengan fokus pada mereka yang berusia 45-54 tahun. Penelitian ini menggunakan desain kuantitatif satu kelompok pretest-posttest, dengan partisipasi 33 jurnalis laki-laki. Selama tiga minggu, para peserta mengikuti delapan sesi latihan pickleball. Studi ini mengukur peningkatan dalam pelaksanaan pukulan forehand, backhand, dan servis menggunakan kriteria pengamatan. IBM SPSS Statistik 26 digunakan untuk analisis data, menggunakan uji Wilcoxon signed-rank karena distribusi data yang tidak normal. Hasil menunjukkan peningkatan signifikan dalam semua keterampilan yang diukur, dibuktikan dengan p-value < 0.05. Peningkatan keterampilan rata-rata adalah 65,53%, dengan peningkatan spesifik pada keterampilan forehand, backhand, dan servis yang dicatat. Temuan ini menunjukkan bahwa pickleball tidak hanya meningkatkan kebugaran fisik tetapi juga berkontribusi positif terhadap kesejahteraan emosional, berkat sifat olahraga yang menyenangkan dan sosial. Studi ini menyoroti risiko cedera pickleball yang rendah dan kesesuaiannya untuk individu usia pertengahan, mempromosikan kesehatan fisik dan interaksi sosial. Namun, ketiadaan kelompok kontrol adalah sebuah keterbatasan; penelitian mendatang harus mempertimbangkan studi komparatif untuk memverifikasi temuan ini lebih lanjut. Secara keseluruhan, pickleball tampaknya merupakan bentuk olahraga yang efektif dan menyenangkan untuk profesional usia pertengahan, meningkatkan kesehatan fisik dan psikologis.

Kata kunci: Promosi Kesehatan, Interaksi Sosial, Efektivitas Pelatihan, Wartawan, Integrasi Gaya Hidup

BACKGROUND

In an increasingly dynamic pace of life, maintaining a balance between work and health is often a challenge (Jung et al., 2024). The time allocated for work is relatively more dominant than the time for maintaining health through exercise (Lynch et al., 2024). Exercising becomes a primary need when it comes to a person's physical fitness (Stults-Kolehmainen, 2023). Physical fitness is an important aspect that not only supports increased productivity but also overall quality of life (García-Azorín et al., 2024). Especially for middle-aged people, sport is not just an activity to fill free time, but a long-term investment in health (Dhuli et al., 2022). Maintained and prime body condition will reduce the risk of morbidity and mortality in middle-aged people (Standage-Beier et al., 2022).

Sports that are fun and flexible are needed by middle-aged people amidst their busy schedules (Ryu et al., 2022). The social process that occurs when exercising, as well as the absence of competition or achievement goals, means that anyone who plays it can enjoy it as a form of recreation (Fang et al., 2023). Sport in the form of games is a physical activity that can stimulate feelings of pleasure (Nutr & Helliwell, 2019). The feeling of pleasure when exercising is triggered by the hormone dopamine and endorphins (Myagkova et al., 2018). This is related to mental health, then the body responds by increasing the body's immune system (Nataatmadja et al., 2021). A good immune system influences a person's physiological and psychological condition (Silva-Santos et al., 2023).

Pickleball, as a sport that is starting to gain attention, is proven to have unique qualities that support physical and mental health (Caldarella et al., 2024). This sport, which is a combination of tennis, badminton and table tennis, offers an attractive alternative for middle-aged people to maintain fitness (Buzzelli & Draper, 2020). However, to what extent is it effective in improving and maintaining physical condition and psychological well-being, especially for sports journalists in Surabaya who incidentally have busy work schedules. This scientific article explores the effectiveness of implementing the Pickleball sports training model for people aged 45 - 54 years, with a focus on sports journalists in Surabaya. Through systematic empirical research, this article outlines how a Pickleball training routine can be integrated into a lifestyle, providing concrete benefits for physical fitness, as well as its impact on work efficiency and emotional well-being.

This research not only reflects the importance of physical activity appropriate to age and profession, but also broadens our insight into how sport can be an important tool in improving the quality of life. It is hoped that the results of this study can contribute to the development of sports training methods and health promotion among the general public, as

well as offering new perspectives for professionals and policy makers in developing inclusive and sustainable health programs. This research aims to evaluate how the Pickleball sports training model can be applied as a practical solution for sports journalists in Surabaya, who not only seek a balance between work and health but also want physical activities that are fun and social.

THEORETICAL STUDY

Sport and Middle Ages

Middle age, often defined as the period between 45 and 54 years, is an important phase in the human life cycle(Rahman et al., 2020). At this stage, many individuals experience significant physiological and psychological changes(Sen & Lei, 2023; Xu & Changzhou, 2022). A gradual decline in the body's physiological functions becomes a natural phenomenon, which, if not addressed, can affect the overall quality of life(Akazawa et al., 2021).

Regular physical activity, as a preventive intervention, has been recognized in the medical literature as an important factor in maintaining and improving cardiovascular function, strengthening the musculoskeletal system, and supporting mental health.(Chen et al., 2022). At this age, the increased risk of chronic conditions such as heart disease, type 2 diabetes and osteoporosis makes engagement in regular exercise even more crucial(Monma et al., 2019).

Pickleball as an Alternative Sport

Pickleball, which is a relatively new sport, has grown and attracted many players in various countries(Casper et al., 2024). This sport offers a unique combination of simple rules and fast-paced game dynamics, which makes it suitable for all groups, including middle age(Terrell & Ficquette, 2023). As a sport that does not require extreme physical strength, Pickleball is able to adapt the intensity of the game to individual needs, meaning a lower risk of injury and higher enjoyment compared to other racquet sports(Ryu et al., 2022).

Surabaya, as one of the metropolis cities in Indonesia, has dynamics that demand high involvement in daily life. Sports journalists in this city have busy schedules, with demanding jobs that require them to stay in top physical condition. However, limited time and resources are often barriers to living an active lifestyle.

RESEARCH METHODS

This research uses a quantitative research design of one group pretest and posttest. The research was carried out in 8 treatments within 3 weeks. Sampling was carried out using purposive sampling, namely selecting individuals who matched the established age and

profession criteria. The sample for this research was 33 male journalists who actively worked in the city of Surabaya. with a middle age range of 45 – 54 years. The variables measured in this study were the ability to execute forehand, backhand and serve strokes. The measurement instrument uses observation criteria with a test score of 1-4 (Table 1).

Table 1. Measurement Instruments

Score	Criteria
1	Cannot do it in a directed shot and the technique is not correct
2	The shot is aimed but the movement technique is not correct
3	The shot is directed with the correct movement technique
4	The shot is directed with the correct movement technique in various ball conditions

IBM SPSS Statistics 26 software is used as a medium for analyzing research data. The analysis carried out includes a normality test and a paired sample difference test or T test. If the data distribution is normal, a T test will be carried out using the Paired Sample T Test. Meanwhile, if the data distribution is abnormal, the Wilcoxon test will be applied in this study. An indication of the difference from the T test is shown by a p-value < 0.05 from the two tests. Data percentage calculations are also carried out to determine the increase that occurs in the test variables tested in the form of percentages. Data percentage calculations are carried out using the following formula.

$$Persentase\ Data = \frac{\text{mean posttest} - \text{mean pretest}}{\text{mean pretest}} \times 100\%$$

RESULTS AND DISCUSSION

Descriptive Data and Normality Test

The test using One Sample Kolmogorov Smirnov was carried out to determine the nature of the data distribution in this study. The test results show that the data distribution is not normal for all the test variables tested (Table 2). The significance value of the entire data shows a p-value < 0.05 (sig > 0.05).

Table 2. Normality Test

Variable	N	Mean	elementary school	Minimum	Maximum	p-value
Forehand Pretest	33	2.00	0.75	1.00	3.00	0.00
Backhand Pretest	33	2.12	0.89	1.00	3.00	0.00
Pretest Serve	33	2.06	0.86	1.00	3.00	0.00
Forehand Posttest	33	3.39	0.50	3.00	4.00	0.00
Backhand Posttest	33	3.48	0.51	3.00	4.00	0.00
Posttest Serve	33	3.36	0.49	3.00	4.00	0.00

* Sig > 0.05

Paired Sample Difference Test Results

The Wilcoxon test was carried out in the paired sample difference test for this study, because in the normality test the data distribution is not normal. The test results show that there is a difference between the pretest and posttest scores with p-value <0.05 (sig <0.05) (Table 3). The presentation of the Wilcoxon positive rank indicates that there has been an increase in the data resulting from this study. The forehand test variable shows that there are 27 increased samples. In the backhand test variable, there was an increase in the 25 samples tested. Meanwhile, the serve test variable experienced an increase of 25 samples. The test results also did not show a decrease in the three test variables, with a negative rank of 0 samples. Wilcoxon tie rank, which is shown by the Wilcoxon test results, means that there is no difference between the pretest and posttest scores.

Table 3. Paired Sample Difference Test

Variable	Rank	N	Mean Rank	p-value
Forehand	Negative	0	0.00	0.00*
	Positive	27	14.00	
	Ties	6		
	Total	33		
Backhand	Negative	0	0.00	0.00*
	Positive	25	13.00	
	Ties	8		
	Total	33		
Serve	Negative	0	0.00	0.00*
	Positive	25	13.00	
	Ties	8		
	Total	33		

* Sig < 0.05

Data Percentage Calculation

Data percentage calculations were carried out based on the mean value of each test variable in the descriptive data (Table 4). Based on data percentage calculations, the results obtained were that in the forehand test variable there was an increase of 69.50%. The backhand test variable increased by 64.15%, and the serve test variable increased by 63.11%. The average increase obtained from the results of this research was 65.53%.

Table 4. Calculation of Data Percentages

Variable	N	Mean Pretest	Mean Posttest	Percentage (%)
Forehand	33	2.00	3.39	69.50
Backhand	33	2.12	3.48	64.15
Serve	33	2.06	3.36	63.11
Average		2.06	3.41	65.53

Pickleball is a racket sport that has its own appeal for the middle age group to play it. The middle age group is still in the productive age group, where they need recreational sports to fill their free time amidst busy work. Pickleball is considered an easy sport to play with a low level of injury when playing it. Just like tennis, the need for recreation and building relationships can be channeled through pickleball.

Research with a one group pretest posttest design was carried out with the aim of finding out the effectiveness of pickleball as a practical solution for recreational exercise to maintain body condition in the midst of busy work. The research results showed a significant increase, marked by a p-value < 0.05 in the Wilcoxon test when the test variables were tested. These results are also supported by the absence of negative ranks for the three variables. In addition, the data percentage calculation strengthens the results of this research with an average increase of 65.53%.

CONCLUSIONS AND RECOMMENDATIONS

Pickleball is effectively used as a recreational sports solution for the middle age group to fill their free time to maintain health and physical fitness. This significant increase proves that there is a feeling of pleasure and enjoyment when playing pickleball. This happy feeling indirectly stimulates and improves their skills in playing pickleball. On the other hand, this research has limitations in the research design applied. The absence of a comparison group resulted in the results of this research not being maximized. Researchers suggest that in future research, it is necessary to add a comparison group as consideration in determining whether pickleball is effective as a solution to this problem. In this way, the development of research and the sport of pickleball can be carried out optimally.

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