

Efektivitas Penambahan Latihan Penguatan Ekstremitas Atas terhadap Peningkatan Kebugaran Kardiorespirasi Calon Jemaah Haji yang Mendapatkan Latihan Berjalan

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ABSTRAK

Latar Belakang : Ibadah haji membutuhkan aktivitas fisik yang tinggi dan kebugaran kardiorespirasi yang baik. Ketidaksiapan kondisi fisik jemaah haji tercermin dari masih tingginya angka morbiditas dan mortalitas akibat penyakit kardiovaskular. Program latihan fisik para calon jemaah haji seperti latihan berjalan belum optimal karena kurangnya tingkat partisipasi, pembinaan dan pemantauan. Oleh karena itu, diperlukan kombinasi latihan aerobik dan penguatan ekstremitas atas untuk mendapatkan kebugaran kardiorespirasi lebih baik.

Tujuan : Untuk mengetahui efektivitas penambahan latihan penguatan ekstremitas atas terhadap kebugaran kardiorespirasi calon jemaah haji yang mendapatkan latihan berjalan.

Metode : Penelitian ini merupakan *randomized controlled trial*. Subjek adalah 36 calon jemaah haji yang dibagi menjadi 2 kelompok secara acak. Kelompok perlakuan (n=19) mendapatkan penambahan latihan penguatan ekstremitas atas 2 kali per minggu pada latihan berjalan 5 kali per minggu selama 6 minggu. Kelompok kontrol (n=19) mendapatkan latihan berjalan 5 kali per minggu selama 6 minggu. Kebugaran kardiorespirasi dinilai dengan uji jalan 6 menit untuk mendapatkan nilai VO₂max pada sebelum dan setelah perlakuan.

Hasil : Terdapat perbedaan yang bermakna kebugaran kardiorespirasi yang diukur dengan rerata nilai VO₂max sebelum dan sesudah latihan pada kelompok perlakuan (19,15±4,01; p=0,0002) dan kelompok kontrol (18,67±3,42; p=0,000). Peningkatan perubahan rerata selisih nilai VO₂max antar kelompok lebih tinggi pada kelompok perlakuan dibandingkan kelompok kontrol (4,81±3,06 vs 2,68±1,78; p=0,011).

Kesimpulan : Penambahan latihan penguatan ekstremitas atas pada latihan berjalan selama 6 minggu meningkatkan kebugaran kardiorespirasi calon jemaah haji.

Kata Kunci : *Latihan penguatan ekstremitas atas, latihan berjalan, calon jemaah haji, kebugaran kardiorespirasi*

The Effectiveness of Additional Upper Extremity Strengthening Exercises to Increase Cardiorespiratory Fitness of Hajj Pilgrims Candidate Who Received Walking Exercise

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ABSTRACT

Background : *The pilgrimage requires high physical activity and good cardiorespiratory fitness. The physical unpreparedness of the pilgrims was reflected in the high morbidity and mortality rates due to cardiovascular disease. The physical exercise program for pilgrims candidate, such as walking exercise was not optimal due to the lack of participation, guidance and monitoring. Therefore, a combination of aerobic and upper extremity strengthening exercises were needed to improve cardiorespiratory fitness.*

Objective : *To determine the effectiveness of additional upper extremity strengthening exercises on the cardiorespiratory fitness of hajj pilgrims candidate who received walking exercise.*

Methods : *This research was a randomized controlled trial. Subjects were 36 hajj pilgrims candidate which were divided randomly into 2 groups. The treatment group (n = 19) received additional upper extremity strengthening exercises 2 times per week for 6 weeks and walking exercise 5 times per week for 6 weeks. The control group (n = 19) received only walking exercise 5 times per week for 6 weeks. Cardiorespiratory fitness was measured with 6-minute walking test to obtain VO₂max values before and after intervention.*

Results : *There was significant difference on cardiorespiratory fitness measured by mean VO₂max before and after intervention in the treatment group (19,15±4,01; p=0,0002) and the control group (18,67±3,42; p=0,000). The increase of the mean difference VO₂max between groups was higher in the treatment group than the control group (4,81±3,06 vs 2,68±1,78; p=0,011).*

Conclusion : *The additional upper extremity strengthening exercises to walking exercise for 6 weeks increase the cardiorespiratory fitness of hajj pilgrims candidate.*

Keywords : *upper extremity strengthening exercise, walking exercise, hajj pilgrims candidate, cardiorespiratory fitness*