

## INTISARI

Proses penuaan menyebabkan tubuh mengalami perubahan - perubahan yang menyebabkan involusi dan degradasi jaringan serta kemunduran fungsi organ baik fisik maupun mental. Penelitian ini bertujuan untuk mengetahui perbedaan frekuensi denyut jantung anggota senam lansia Tera dan anggota senam meditasi Yoga saat sebelum dan sesudah latihan di Yogyakarta. Senam lansia Tera tergolong jenis *aerobic low impact* dan dikhususkan bagi usia lanjut. Senam meditasi Yoga adalah suatu teknik pernafasan dan meditasi, memperbaiki koordinasi otot serta keseimbangan, konsentrasi mental, relaksasi dan kedamaian dalam batin.

Penelitian ini bersifat eksperimental terbuka yaitu membandingkan frekuensi denyut jantung sebelum dan sesudah mengikuti senam lansia Tera dan senam meditasi Yoga. Pengambilan sampel menggunakan teknik *purposive sampling* dengan ciri - ciri sebagai berikut; 1) Usia lanjut yang tergabung dalam kelompok senam lansia Tera di Perum Candi Gebang dan lapangan kantor Angkatan Darat, Jl.Beo no.35 Yogyakarta serta senam meditasi Yoga di lapangan Sewu Husada Bakti, Jl.Pramuka no.70 Yogyakarta, 2) Lansia usia 60 - 85 tahun, 3) Aktif dalam mengikuti latihan. Jumlah subyek penelitian ada 60 orang lansia, terbagi menjadi 2 kelompok dan masing - masing kelompok 30 orang. Kelompok I (K I) mengikuti senam lansia Tera dan kelompok II (K II) mengikuti senam meditasi Yoga. Pengambilan data menggunakan metode palpasi, menghitung denyut nadi di arteri radialis dengan menggunakan jari tengah untuk meraba. Penelitian ini memperoleh data frekuensi denyut jantung dalam skala numerik dari 3 kali pengamatan, 3 data frekuensi denyut jantung sebelum latihan (minggu 1, 2 dan 3) dan data frekuensi denyut jantung sesudah latihan (minggu 1, 2 dan 3). Status gizi subyek dinilai secara langsung dengan menghitung Indeks Massa Tubuh (IMT). Penelitian ini juga meneliti tekanan darah sistole dan diastole subyek penelitian.

Analisis statistik penelitian menggunakan uji - t menunjukkan rata - rata IMT secara statistik tidak terdapat perbedaan yang bermakna ( $p > 0,05$ ) antara K I: 24,30 dan K II: 24,23 dengan  $t: 0,1523$  dan  $p: 0,8880$ . Rata - rata tekanan darah sistole K I: 132,61 dan K II: 138,57 secara statistik terdapat perbedaan yang bermakna ( $p < 0,05$ ), dengan  $t: -1,5498$  dan  $p: 0,1320$ . Terdapat perbedaan yang bermakna ( $p < 0,05$ ) rata - rata tekanan darah diastole secara statistik antara K I: 76,04 dan K II: 79,93 dengan  $t: -2,3110$  dan  $p: 0,0281$ . Terdapat perbedaan yang bermakna ( $p < 0,05$ ) antara rata - rata frekuensi denyut jantung sebelum latihan K I (66,00) dan sesudah latihan K I (63,40), dengan  $t: 4,176$  dan  $p: 0,000$ . Terdapat perbedaan yang bermakna ( $p < 0,05$ ) antara rata - rata frekuensi denyut jantung sebelum latihan K II (67,00) dan sesudah latihan K II (64,07) dengan  $t: 5,518$  dan  $p: 0,000$ .

Kesimpulan hasil penelitian ini menunjukkan bahwa aktivitas fisik berupa senam lansia Tera maupun senam meditasi Yoga dapat mempengaruhi homeostasis frekuensi denyut jantung lansia. Rata - rata frekuensi denyut jantung sesudah latihan K I lebih rendah yaitu sebesar 63,40 dibandingkan dengan rata - rata frekuensi denyut jantung sebelum latihan K I yaitu sebesar 66,00

dengan  $t:4,176$  serta  $p < 0,05$ . Rata - rata frekuensi denyut jantung sesudah latihan K II lebih rendah, yaitu sebesar 64,07 dibandingkan dengan rata - rata frekuensi denyut jantung sebelum latihan K II, yaitu sebesar 67,00 dengan  $t: 5,518$  serta  $p < 0,05$ .

**Kata Kunci: Frekuensi Denyut Jantung, Senam Lansia Tera, Senam Meditasi Yoga**

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## ABSTRACT

Aging process causing body changes that made involution and degradation network with decreased physical and mental organ function. Regular exercise able to help a person to normal act when he or she approaches advances ages. This research aimed at understanding the differences of heartbeat frequency between Lansia Tera and Yoga Meditation Gymnastics members, pre and post exercise in Yogyakarta. Lansia Tera is classified into a kind of aerobic low impact and specialized for advanced age people. Yoga Meditation Gymnastics is a kind of breath and meditation, improves muscle coordination as well as balance, mental concentration, relaxation and inner place.

This research has open experiment nature, that is comparing heartbeat frequency pre and post exercise Lansia Tera and Yoga Meditation gymnastics. Sampling techniques used was purposive sampling one whose characteristics were as follow; 1) Advanced ages whom were classified into Lansia Tera Gymnastics group at Perum Candi, Gebang and Army office's field at Jl. Beo no. 35 Yogyakarta as well as Yoga Meditation gymnastics at Sewu Husada Bakti field at Jl. Pramuka no. 70 Yogyakarta, 2) Advanced people whom age were 60–85 years old and 3) Active in following exercise. The subject of research amount in Group One (K I) followed Lansia Tera gymnastics whereas in Group Two (K II) followed Yoga Meditation gymnastics. Data collection used palpation method, calculating artery beat at artery radial by using middle finger to touch. This research obtained frequency data of heartbeat in numerical scale out of three times observation, three frequency data of heartbeat pre exercise (week 1,2 and 3) and also frequency data of heartbeat post exercise (week 1,2 and 3). Subject's nutrient status was valued directly by calculating Body Mass Index (BMI). This research also investigated systole and diastole blood tensions of subjects of research.

Statistic analysis of research using t - test showed that, on average, Body Mass Index statistically had no significant difference ( $p > 0,05$ ) between K I: 24,30 and K II: 24,23 with t: 0,1523 and p: 0,8880. Systole blood tension on average of K I: 132,61 and K II: 138,57. There was significant difference ( $p < 0,05$ ) with t: -1,5498 and p: 0,1320. There was significant difference ( $p < 0,05$ ) on diastole blood tension on average statistically between K I: 76,04 and K II: 79,93 with t: -2,3110 and p: 0,0281. There was significant difference ( $p < 0,05$ ) between heartbeat frequency on average pre exercise of K I (68,80) and post exercise of K I (75,73) with t: -9,434 and p: 0,000. There was significant difference ( $p < 0,05$ ) between heartbeat frequency on average between pre exercise on K II (67,00) and post exercise of K II (64,07) with t: 5,518 and p:0,000.

Conclusion of the result in this research showed that physical activities both in forms of Lansia Tera and Yoga Meditation gymnastics able to effect the homeostatic of heartbeat frequency of advanced people. Heartbeat frequency of K I on average post exercise was lower, amount of 63,40 compared with heartbeat frequency of K I on average pre exercise amount of 66,00 with t: 4,176 and  $p < 0,05$ . Heartbeat frequency post exercise of K II on average was lower, amount