

Abstract of thesis presented to the Senate of University Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy.

**EFFECTS OF LOW INTENSITY AEROBIC DANCE EXERCISE ON
PHYSIOLOGICAL AND PSYCHOLOGICAL WELL-BEING AMONG
WORKING WOMEN**

By

MASTURA JOHAR

February 2012

Chairman: Associate Professor Mohd Sofian Omar Fauzee, PhD

Faculty: Educational Studies

The purpose of this investigation was to evaluate the effect of a 12-week low intensity aerobics dance exercise intervention in the treatment of physiological and psychological well-being among sedentary overweight employed women. Forty subjects were recruited from both the government and private sectors of Putrajaya, Bangi, Serdang and the surrounding community. Subjects were between the ages of 40 and 55 years, had a diagnosis of total stress score above the mean, were not enrolled in any exercise program over the period of one year (sedentary), overweight (Body Mass Index 25 and above) and had a cardiovascular endurance score below the mean. Subjects were randomly either assigned to a 12-week low intensity aerobics dance exercise intervention ("SenamSeri") or a conventional aerobics dance exercise as the control group. A

pretest-posttest control research design was utilized. Both groups met for 50 minutes, three times a week (36 sessions). The Transactional Approach Multidimensional (Derogatis Stress Profile) examined Total Stress Score while Rosenberg's Scale measured self-esteem; both were to assess changes in the psychological well-being. Additionally, physical fitness for health related components (ACSM) which included body composition, flexibility, muscle strength & endurance, cardiovascular endurance and the selected health parameters namely body mass index, resting heart rate and blood pressure were used to assess changes in the physiological well-being, respectively, as a result of the intervention at one, eight and 12-weeks. Statistical analysis included (group \times time) repeated measures ANOVA and MANOVA to determine between and within group mean differences. The hypotheses of the thesis received significant support. When the results for physiological well-being variables were considered separately, the only difference to reach statistical significance, using a Bonferroni adjusted alpha level of 0.01, was body composition, $F(1, 38) = 6.65, p < .01, \eta^2 = .149$, and Flexibility $F(1, 38) = 13.72, p < .01, \eta^2 = .265$. An inspection of the mean scores indicated that the treatment group reported an improvement for body composition ($M = 27.85, SD = 1.15$) and for flexibility ($M = 49.85, SD = 1.63$) compared to the control group which reported body composition of ($M = 27.85, SD = 1.14$) and flexibility of ($M = 49.85, SD = 1.63$). Interestingly, the most obvious finding to emerge from this thesis was that the intervention group benefited significantly

in terms of psychologically well-being, total stress score, $F(1, 38) = 4.69, p < .05$, eta square = .11, and self-esteem $F(1, 38) = 4.27, p < .05$, eta square = .10. An inspection of the mean scores indicated that the treatment group "SenamSeri" reported lower levels of stress after 12 weeks ($M = 39.00, SD = 2.36$) and improvement in self-esteem ($M = 34.45, SD = 1.18$) than the control group which underwent the conventional aerobics dance exercise and charted a higher total stress level ($M = 40.75, SD = 1.94$) and lower self-esteem ($M = 30.50, SD = 2.36$). It is concluded that low intensity aerobics dance exercise intervention of "SenamSeri" had contributed greatly to the positive findings concerning the physiological and psychological well-being among sedentary overweight employed women.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai keperluan ijazah Doktor Falsafah.

**KESAN TARIAN SENAMAN AEROBIK BERINTENSITI RENDAH
TERHADAP KESEJAHTERAAN FISILOGI DAN PSIKOLOGI DI
KALANGAN WANITA BEKERJA.**

Oleh

MASTURA JOHAR

Februari 2012

Pengerusi: Professor Madya Mohd Sofian Omar Fauzee, PhD

Faculti: Pengajian Pendidikan

Kajian ini adalah untuk menilai kesan senaman 12 minggu terhadap intervensi tarian aerobik berintensiti rendah dalam rawatan terhadap kesejahteraan fisiologi dan psikologi di kalangan wanita bekerja yang berlebihan berat badan dan mengamalkan gaya hidup sedentari. Sejumlah empat puluh subjek telah dilatih dan subjek merupakan wanita yang bekerja dan berumur di antara 40 hingga 55 tahun yang mengalami diagnosis skor jumlah tekanan melebihi mean, skor komponen ketahanan jantung pula di bawah mean dan tidak terlibat dalam sebarang program senaman lebih dari setahun serta berlebihan berat badan (Indeks Jisim Badan 25 dan ke atas). Subjek secara rawak mendaftar sama ada kumpulan senaman berintensiti rendah bagi tempoh 12 minggu ataupun kumpulan kawalan bagi senaman tarian aerobik konvensional dan

menggunakan kaedah kajian kawalan, iaitu ujian pra dan pasca (*pretest and posttest*). Kedua-dua kumpulan ini mengadakan perjumpaan selama 50 minit, tiga kali seminggu (36 sesi). Pendekatan Multidimensi Transactional (Derogatis Stress Profil - DSP) digunakan untuk menguji Skor Jumlah Tekanan sementara Skala Rosenberg diguna untuk mengukur penghargaan sendiri; kedua-duanya adalah untuk mendapatkan perubahan dalam kesejahteraan psikologi. Komponen kecergasan fizikal untuk kesihatan melibatkan komposisi badan, fleksibiliti, kekuatan otot dan ketahanan, ketahanan kardiovaskular dan angkubah kesihatan terpilih seperti indeks jisim badan, kadar denyutan jantung semasa berehat dan tekanan darah telah juga digunakan bagi mendapat perubahan dalam kesejahteraan fisiologi dan psikologi. Selain dari analisis statistik deskriptif, statistik ulangan ukuran ANOVA dan MANOVA juga diaplikasikan bagi menentukan keberkesanan dalam peningkatan perbezaan mean bagi kedua-dua kumpulan kajian. Keputusan menunjukkan bahawa subjek dalam kedua-dua kumpulan intervensi dan kawalan mengalami peningkatan yang positif dalam ketiga-tiga objektif kajian. Menariknya, dari lima komponen kesejahteraan fisiologi, hanya dua menunjukkan perbezaan yang signifikan iaitu komponen fleksibiliti $F(1, 38) = 13.72, p < .01, \eta^2 = .265$ dan komposisi badan $F(1, 38) = 6.65, p < .01, \eta^2 = .149$ setelah tahap alpha Bonferroni 0.01 di ambilkira, dengan perbezaan peningkatan kumpulan intervensi, iaitu komposisi badan ($M = 27.85, SD = 1.15$) dan fleksibiliti ($M = 49.85, SD = 1.63$) berbanding kumpulan kawalan komposisi badan ($M =$

27.85, SD = 1.14) dan fleksibiliti (M = 49.85, SD = 1.63). Kesejahteraan psikologi telah mempamerkan kesan yang signifikan dengan skor jumlah tekanan F (1, 38) = 4.69, $p < .05$, eta square = .11, dan penghargaan sendiri F (1, 38) = 4.27, $p < .05$, eta square = .10. Pemeriksaan skor mean menunjukkan kumpulan intervensi "SenamSeri" mengalami penurunan skor jumlah tekanan selepas 12 minggu (M = 39.00, SD = 2.36) dan peningkatan penghargaan sendiri (M = 34.45, SD = 1.18) berbanding kumpulan kawalan skor jumlah tekanan lebih tinggi (M = 40.75, SD = 1.94) dan penghargaan sendiri lebih rendah (M = 30.50, SD = 2.36). Kesimpulannya, kumpulan intervensi iaitu "SenamSeri" senaman aerobik berintensiti rendah telah menyumbang dapatan yang positif terhadap kesejahteraan fisiologi dan psikologi di kalangan wanita berkerja yang sedentari dan berlebihan berat.