

Depression in inactive and active elderly women practitioners of dance, weight-lifting or meditation

Juracy C Castro¹, Tania S Giani²,

Márcia A Ferreira³,

Fernando AC Bastos¹,

Thales HP Cruz¹,

Rosane Boechat¹,

Estélio HM Dantas^{1,4}

¹ *Sensu Stricto Post-graduation Program in Human Kinetics Sciences of Castelo Branco University, RJ, Brazil*

² *Estácio de Sá University, RJ, Brazil*

³ *Rio de Janeiro Federal University, RJ, Brazil*

⁴ *Research Grant of National Council of Research*

Background. The aim of the study was to confront inactive (control group) to active (practicing weight-lifting, dance or meditation) elderly women for investigating the impacts of depression. Analysing the hypothesis that depression in old age is commonly associated with inactivity, this study compares depression in randomly selected elderly women of similar parameters – active practitioners of different activity programs (dance, weight-lifting and meditation) – and in women with a sedentary way of living (control group).

Materials and methods. The sample was divided into four groups: dance (DG, n = 20, age 67 ± 4 years), weight-lifting (WG, n = 15, age 67 ± 5 years), meditation (MG, n = 15, age 68 ± 4 years) and control (CG, n = 20, age 68 ± 6 years). The Kruskal–Wallis and Shapiro–Wilk tests were employed. To evaluate depression, the Beck Depression Inventory (BDI) was utilized. The expected level II error was 10%, and the accepted level I error was 1%.

Results. The Kruskal–Wallis test revealed a significant difference ($p < 0.001$) among the groups. Satisfactory results were found in multiple comparisons between DG × CG (CI = -47.723–6.671), WG × CG (CI = -55.024–10.676) and MG × CG (CI = -62.024–17.676). The practice of activity, either physical (dance and weight-lifting) or meditation, showed statistically reliable satisfactory results ($p < 0.05$) as regards depression versus the control group.

Conclusions. This original research, comparing the groups of active and non-active elderly women, has shown that the activity programs, either physical (dance and weight-lifting) or meditation, as compared with inactivity (control group), contributed to a lower level of depression.

Key words: depression, elderly women, inactivity, meditation, weight-lifting, dance

INTRODUCTION

Ageing promotes progressive psychological, social, motor and functional changes caused by decreasing muscular strength, joint amplitude and cardio-respiratory resistance. The literature consensus on activity and depression moods in older adults is that those factors contribute to the functional autonomy reduction, compromising the elderly self-esteem, self-image, and quality of life (1). Ageing brings considerable changes in needs (2), and sedentary life can interfere with the quality of life, driving the elderly to depression (3, 4). Depression constitutes a mental infirmity frequent in elderly persons, deeply compromising their quality of life. Regular and well-planned activity contributes (4) to minimizing depression in elderly individuals, offering them an

opportunity of psychosocial engagement and increasing their self-esteem.

Quality of life is a multifactorial concept defined by the World Health Organization Quality of Life Group (WHO-QOL-Group) (5) as an individual's perception on his / her position in life, in the value system and in the cultural context of the environment in relation to his / her goals, expectations, patterns and concerns. Improvement in the quality of life through activity can come from its prophylactic effects on the physical and mental state because an active life drives to a healthy ageing (6, 7), whereas a sedentary life in the elderly can interfere negatively with their quality of life, driving them into depression (3, 4). Furthermore, a reduction of daily activity is already a suggestion of depression characterized by a set of signals and symptoms such as the loss of interest and pleasure in the activities that used to be meaningful, a decrease of energy, presence of somatic anxiety, terminal and intermediary insomnia, reduction of sexual interest, psychomotor retard, cognitive difficulties, loss of hope, reduction of self-esteem, reflections on death, etc. (7, 8).

Correspondence to: Juracy Correa Castro, Coordenação de Educação Física, Centro Federal de Educação Tecnológica do Pará, Av. Almirante Barroso, No 1155. ZIP: 66093-020. Belém, Pará, Brasil.
E-mail: jura_teclado@yahoo.com.br

The process of ageing varies among people. It is influenced by genetic factors as much as by lifestyle. Maintaining a healthy lifestyle with no inactivity prevents and minimizes the harmful effects of ageing (9, 10), producing beneficial effects on the psychosocial aspects (10). Within this perspective, the present study confronts inactivity with activity by investigating the levels of depression in elderly women involved in programs of weight-lifting, dance or meditation and comparing those levels with the ones found in non-active elderly women.

MATERIALS AND METHODS

This original *ex post facto* research involved 70 randomized volunteer elderly women. Of them, 50 participated in the activities of the Belém do Pará Municipal Health Program and the other 20 were inactive elderly women living in their neighborhood. The active elderly women were divided into three activity groups: dance (DG, $n = 20$, age 67 ± 4 years and body mass index (BMI) = 25.78 ± 3.93), weight-lifting (WG, $n = 15$, age 67 ± 5 years, BMI = 27.12 ± 4.66) and meditation (MG, $n = 15$, age 68 ± 4 years, BMI = 27.17 ± 2.46). The inactive women comprised the control group (CG, $n = 20$; age 68 ± 6 years, BMI = 26.19 ± 4.09).

The general inclusion criteria to participate in this trial were to be healthy as defined by the researchers and to sign the consent form of a volunteer. The inclusion criterion for the active elderly women was to attend at least 75% of the group activities (dance, weight-lifting or meditation) for at least six months. The inclusion criterion for non-active elderly women was not to practise any physical activity for at least three months (11–13).

To evaluate the body mass and stature, we used a mechanical balance and calculated the body mass index (BMI) or the Quetelet index (15, 16) by dividing weight (kg) by square height (m^2).

To evaluate depression, the Beck Depression Inventory (BDI) was utilized. This questionnaire contains 21 groups of questions with four options (from 0 to 3) of answers each. The total sum is the general score of individual depression. The highest score shows the highest depression (17). The four ranges suggested by Beck are as follows: (a) below 10 – no or minimum depression, (b) 10 to 18 – mild to moderate depression, (c) 19 to 29 – moderate to serious depression, (d) 30 to 63 – severe depression.

Concerning the three activity groups, the routines were as follows.

For the meditation group, the sessions were held three times a week and lasted 50 minutes each. The elderly were sitting, with their eyes closed, in a quiet ambiance, listening to soft slow music. Each session was divided into three stages: (1) breathing control with deep slow breathing, reducing the breathing frequency and learning a proper sequence to mobilize the thoracic chamber, followed by an exercise of concentrating in many parts of the body from head to pelvis;

(2) the mental repetition of the word “peace”, trying to avoid any other thought and breathing freely / openly; this stage was based on the relaxing-answer technique; (3) meditating pleasant and healthy thoughts.

For the dance group, sessions were held three times a week and lasted 50 minutes each. The variety of rhythms included foxtrot, waltz, rumba, swing, cha-cha and tango. The basic structure of the class was the same for each elderly woman, although each one showed her own progression (development) according to her physical capacity, energy level, motivation and cognitive ability. The classes started with a flexibility and warming session and ended with relaxing.

For the weight-lifting group, sessions were held three times a week and lasted 45 minutes each. Like in the dance classes, they were also composed of three phases: warming, main work and relaxing. The training (2×8 –10 repetitions; 75–85% of 1-MR), alternating by body segments, included the following exercises: straight supine, leg press 45° , backwards pull, leg flexion, biceps curl with halters, leg extension, triceps row pushdown, and abdominals.

The statistical treatment of data comprised descriptive analysis by localization (mean M and median M_d) and dispersion (standard deviation SD , mean standard error e) measures. Sample normality was tested by the Shapiro–Wilk (SW) inferential analysis (14). To check the differences among the groups, the Kruskal–Wallis (KW) test was employed, followed by multiple comparisons according to the confidence interval (CI). The statistical package for social sciences (SPSS) 14.0 and the Excel program were used.

The study was carried out in compliance with the Helsinki Declaration (18) on Human Being Research and was approved by the Castelo Branco University Ethics Committee.

RESULTS

Evaluating the elderly women’s depression level in the three groups of activities (dance, meditation and weight-lifting), the results were statistically significant ($p < 0.05$) as compared to the data on inactive elderly women of the control group. Although the purpose of this research was to compare the level of depression between inactive and active elderly women, the activity groups were also compared among themselves, but no significant difference was found.

Table shows the descriptive data and the SW inferential statistics evaluating a sample’s normality / homogeneity. One can see that in each group the distribution of the data is heterogeneous. As the SW test revealed data to be heterogeneous, the KW was preferred to ANOVA for depression evaluation by BDI via KW. As regards the confidence interval (CI), the result is satisfactory as it contains no zero.

The graph makes it possible to visualize that the groups that practiced activities (DG, WG and MG) showed the lowest BDI scores. Satisfactory results were found in multiple comparisons among DG \times CG (CI = -47.723 – 6.671), WG \times CG (CI = -55.024 – 10.676) and MG \times CG (CI = -62.024 – 17.676).

Table. The Shapiro–Wilk descriptive and inferential sample analysis

		M	e	Md	SD	SW
BDI	GD	3.05	0.95	1.50	4.26	p < 0.001
	WG	2.00	0.65	1.00	2.51	0.002
	MG	0.67	0.16	1.00	0.62	0.001
	CG	13.20	1.65	11.50	7.36	0.045

DG – dance group; WG – weight-lifting group; MG – meditation group; CG – control group; M = mean; e = mean standard error; Md = median; SD = standard deviation; SW – Shapiro–Wilk test statistical; BDI – Beck Depression Inventory.

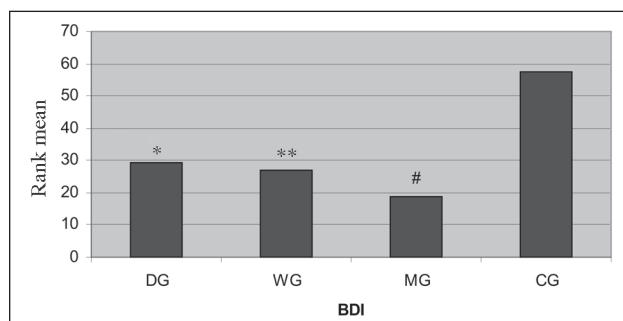


Figure. Evaluation of the difference by Beck Depression Inventory rank mean.

* $p < 0.05$; DG \times CG

** $p < 0.05$; WG \times CG

$p < 0.05$; MG \times CG

DG – dance group; WG – weight-lifting group; MG – meditation group; CG – control group; BDI – Beck Depression Inventory.

As mentioned above, in the BDI the highest score shows the highest depression. In this graph, one can see that DG (29) and WG (26) were in the *c* rank, MG (18) in the *b* rank, while the CG mean (57) was at the top of the *d* rank, i. e. that the meditation group showed moderate depression, the G and WG serious depression, and the inactive elderly women (CG) were scored with severe depression.

DISCUSSION

Considering that inactivity in old age leads to depression, maintaining a healthy lifestyle with activity programs (weight-lifting, dance or meditation) should prevent or minimize the depression in elderly women. In our research, the meditation group showed the best results concerning the depression level. This finding is in agreement with the data of a research in which practising meditation resulted in a significant reduction of depression and improved the functional capacity and quality of life of elderly persons (19) as compared to a group of individuals that attended solely “health education” classes. Practicing meditation resulted in a significant reduction of depression in the elderly (19), although more studies are needed on this issue (20).

Although the neurobiological and psychological mechanisms involved in the elderly depression are not very clear (20), it has been revealed (21) that regular activities contribute to minimizing the suffering caused by depression. In a similar way, in a retrospective research with 860 elderly

(aged 75.3 ± 10.0), sedentary elderly showed higher scores ($p < 0.05$) of depression assessed by the Montgomery–Åsberg Depression Rating Scale as compared to those practicing low or high intensity physical exercises many times a week (8). These findings agree with the results of our study in which the groups that practised any activity (DG, WG or MG) showed the lowest BDI scores.

The elderly that are active throughout their life have the highest probability of healthy ageing without depression (8, 9). Regular physical activity contributes to the minimization of the psychic suffering caused by the depressive state (21). The same result was found in a research that evaluated the effects of the aerobic training on the depression level (Geriatric Depression Scale, GDS) in healthy elderly persons (22). Their sample was divided into the experimental ($n = 23$) and control groups ($n = 23$). All the GDS variables showed a significant reduction ($p < 0.05$) in the intra- and inter-group results in favor of the experimental group. There was also an improvement in the quality of life, revealed by the short-form-36 (SF-36) questionnaire.

Contrary to the finding of the present research, in a study on aged people living in long-term care facilities, an isolated training of force and recreation did not offer a significant improvement of their depression level as assessed by the GDS(23). The result ($p < 0.05$) was significant exclusively in a group of complex activities as compared with the control group.

Population ageing needs specific studies involving the aged. It is being increasingly recognized that the impact of chronic diseases must be assessed in terms of their influence on quality of life (24), and depression is one of the most frequent chronic diseases in old age. There is a worldwide concern about studying the quality of ageing and designing interventions to ensure a healthy process of ageing. Therefore, researchers in geriatrics are increasingly interested in determining the factors that are relevant to the quality of life in older adults (25–37). The quality of life in the elderly, as well as variations or restrictions brought about by ageing, are the issues of scientific and social relevance (38). Those who report the poorest quality of life will be least likely to have met their own goals, expectations, standards and concerns (39–41), and physical activity may improve the self-perception of their physical well-being as compared to the individuals that remain sedentary and use anti-depressant medicines (42). Different factors determine the efficacy of group activities in the treatment of depression. Enhancement of social communication is secondary to the improvement of the “biological” background (endorphins, serotonin, cortisol): enhancing social communication among the members of a group is a nonspecific factor that may be similar to many social activities (43), plus exercising specific factors in the production of biological modifications (44–49), such as elevating the level of endorphins and decreasing the level of cortisol or improving the production of serotonin. In our research, the season was not considered, accepting that there is no evidence of

a systematic seasonal pattern in depression as no seasonality reached statistical significance (50).

Investigations of ageing disclose relevant and actual realities and contribute to a better understanding of this process and of the elderly subjects themselves (51).

CONCLUSIONS

This paper strives to make a useful contribution to the literature on activity and depressed mood in older adults. It describes a comparison between three different types of activity groups and a non-activity control group. The activity groups included aerobic activity (dancing), strength training (weight-lifting), and meditation. Analysis of the data allowed to infer that both activity programs, either physical (dance and weight-lifting) or practicing meditation, contributed to lowering the level of depression as compared to the control group (inactivity). In addition, the Beck Depression Inventory proved to be a sensible instrument to confirm the anti-depressive effects on the groups that had practised physical activity or regular meditation. The meditation group reported the lowest scores of depression, driving to the conclusion that this form of activity contributes most to improving the general well-being. As compared to the inactivity group, all the activity groups showed an improvement of depression patterns, meditation being the topmost factor.

Received 23 January 2009

Accepted 14 April 2009

References

- Vale RGS, Barreto ACG, Novaes JS, Dantas EHM. Efeitos do treinamento resistido na força máxima, na flexibilidade e na autonomia funcional de mulheres idosas. *Revista Brasileira de Cineantropometria & Desempenho Humano* 2006; 8(4): 52–8.
- Tareque V. Bangladesh population ageing and life expectancies: 1950–2050. *Ind J Gerontol* 2008; 22(1): 119–26.
- Hirvensalo M, Sakari-Rantala R, Kallinenc M, Leinonen R, Lintunen T, Rantanen T. Underlying factors in the association between depressed mood and mobility limitation in older people. *Gerontology* 2007; 53: 173–8.
- Stella F, Gobbi S, Corazza DI, Costa JLR. Depressão no idoso: diagnóstico, tratamento e benefícios da atividade física. *Motriz* 2002; 8(3): 91–8.
- WHOQOL-GROUP. Development of the World Health Organization WHOQOL-bref: Quality of life assessment. *Psychol Med* 1998; 28: 551–8.
- Matsudo SMM. Envelhecimento, atividade física e saúde. *Revista Mineira de Educação Física* 2002; 10(1): 193–207.
- Blay LS, Marinho V. Depressão na Terceira Idade: como diagnosticar e tratar. *Rev Brasil Med* 2007; 64(4): 151–5.
- Lindwall M, Rennemark M, Halling A, Berglund J, Hassmén P. Depression and exercise in elderly men and women: Findings from the Swedish national study on aging and care. *J Aging Phys Act* 2006; 15: 41–55.
- Cader SA, Pereira FD, Vale RGS, Dantas EHM. Comparación de la fuerza de la musculatura inspiratoria entre mujeres mayores sedentarias y practicantes de hidrogimnasia. *Rev Esp Geriatr Gerontol* 2007; 42(5): 271–5.
- Pereira FF, Monteiro N, Vale RGS, Gomes ALM, Novaes JS, Júnior AGF et al. Efecto del entrenamiento de fuerza sobre la autonomía funcional en mujeres mayores sanas. *Rev Esp Geriatr Gerontol* 2007; 42(6): 319–24.
- Misica MM, Rosengren KS, Woods JA, Evans EM. Muscle quality, aerobic fitness and fat mass predict lower-extremity physical function in community-dwelling older adults. *Gerontology* 2007; 53: 260–6.
- Kraemer WJ, Koziris LP, Ratamess NA, Hakkinen K, Triplett-Mcbride NT, Fry AC et al. Detraining produces minimal changes in physical performance and hormonal variables in recreationally strength-trained men. *J Strength Condit Res* 2002; 16(3): 373–82.
- Raso V, Matsudo SMM, Matsudo VKR. A força muscular de mulheres idosas decresce principalmente após oito semanas de interrupção de um programa de exercícios com pesos livres. *Rev Brasil Med Esporte* 2001; 7(6): 177–86.
- Thomas JR, Nelson JK, Silverman S. Métodos de pesquisa em atividade física. 5 ed. Porto Alegre: Artmed; 2005.
- Sánchez-García et al. Anthropometric measures and nutritional status in a healthy elderly population. *BMC Public Health* 2007; 7: 2.
- Dey DK, Rothenberg E, Sundh V, Bosaeus I, Steen B. Height and body weight in the elderly. A 25-year longitudinal study of a population aged 70 to 95 years. *Eur J Clin Nutr* 1999; 53(12): 905–14.
- Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. *Arch Ger Psych* 1961; 4: 566–71.
- Helsinki Declaration. 1996. Available from: URL: <http://www.ufrgs.br/bioetica/helsin5.htm> [Accessed 18 January 2008].
- Jayadevappa R, Johnson JC, Bloom BS, Nidich S, Desai S, Chhatre S et al. Effectiveness of transcendental meditation on functional capacity and quality of life of African Americans with congestive heart failure: A randomized control study. *Ethn Dis* 2007; 17(1): 72–7.
- Jagadehesan K, Chakraborty S, Sinha VK, Nizamie SH. Effects of exercise on depression in old age. *Brit J Psychiatry* 2002; 181: 532.
- Mather AS, Rodríguez C, Guthrie MF et al. Effects of exercise on depressive symptoms in older adults with poorly responsive depressive disorder. Randomized controlled trial. *Brit J Psychiatry* 2002; 180: 411–5.
- Antunes HKM, Stella SG, Santos RF, Bueno OFA, Mello MT. Depression, anxiety and quality of life scores in seniors after an endurance exercise program. *Rev Bras Psiquiatr* 2005; 27(4): 266–71.
- Paw MJCA, Poppel MNv, Twisk JW, Mechelen WV. Effects of resistance and all-round, functional training on

- quality of life, vitality and depression of older adults living in long-term care facilities: A 'randomized' controlled trial. *BMC Geriatrics* 2004; 4(5): 1-9.
24. Pibernik-Okanovic M. Psychometric properties of the World Health Organization quality of life questionnaire (WHOQOL-100) in diabetic patients in Croatia. *Diab Res Clin Pract* 2001; 51: 133-43.
 25. Evans S, Gately C, Huxley P, Smith A, Banerjee S. Assessment of quality of life in later life: Development and validation of the QuiLL. *Qual Life Res* 2005; 14: 1291-300.
 26. Fleck MPA, Chachamovich E, Trentini CM. WHO-QOLOLD Project: method and focus group results in Brazil. *Rev Saúde Pública* 2003; 37: 793-9.
 27. Xavier MF, Ferraz MPT, Marc N, Escosteguy N, Moriguchi E. Elderly people's definition of quality of life. *Rev Bras Psiquiatr* 2003; 25:31-9.
 28. Chachamovich E, Trentini CM, Fleck MP. Assessment of the psychometric performance of the WHOQOLBREF instrument in a sample of Brazilian older adults. *Int Psychogeriatr* 2006; 27: 1-12.
 29. Fleck MPA, Chachamovich E, Trentini CM. Development and validation of the Portuguese version of the WHOQOL-OLD module. *Rev Saúde Pública* 2006; 40(5): 785-91.
 30. Figueira HA, Figueira JA, Mello D, Dantas EHM. Quality of life throughout ageing. *Acta Med Lit* 2008; 15(3): 169-72.
 31. Ceremnych J. Focus Groups discussions with older adults and careers for development of pilot WHOQOL-OLD measure. *Acta Med Lit* 2003; 10: 03.
 32. Ganesh KS, Yadav A, Sajjan BS, Kotian MS. Epidemiology of Disability among geriatric population in the semi urban area of Mangalore city, Karnataka. *Indian Gerontol* 2008; 22(1): 35-42.
 33. Lima-Costa M, Barreto SM, Giatti L. Condições de saúde, capacidade funcional, uso de serviços de saúde e gastos com medicamentos da população idosa brasileira: um estudo descritivo baseado na Pesquisa Nacional por amostra de Domicílios. *Caderno de Saúde Pública* 2003; 19(3): 735-43.
 34. Kumar M, Bansal M, Bansal RK. The morbidity profile of the aged in Surat City. *Indian J Gerontol* 2008; 22(1): 73-84.
 35. Veras R. Em busca de uma assistência adequada à saúde do idoso: revisão de literatura e aplicação de um instrumento de detecção precoce e de previsibilidade de agravos. *Caderno de Saúde Pública* 2003; 19(3): 705-15.
 36. Basu S, Kumar-das P. Socio-economic and health implications of population ageing in India. *Indian J Gerontol* 2008; 22(1): 85-106.
 37. Carvalho JA, Garcia R. O envelhecimento da população brasileira: um enfoque demográfico. *Caderno de Saúde Pública* 2003; 19(3): 725-33.
 38. Fleck MP, Chachamovich E, Trentini CM. Quality of life in old adults: A perspective from focal groups in Brazil. *Brazil Psychiatry Rev* 2002; 24(2).
 39. Skevington SM, O'Connell KA. The WHOQOL Group. Can we identify the poorest quality of life? Assessing the importance of quality of life using the WHOQOL-100. *Quality of Life Research. Int J Quality of Life Aspects of Treatment, Care & Rehabilitation* 2004; 13(1): 23-34.
 40. WHO - WHOQOL-OLD MANUAL - <http://www.ufrgs.br/psiq/whoqol-old%20manual%20portugues.pdf>. 2008
 41. Zhang J, Huang H, Ye M, Zeng H. Factors influencing the subjective well-being (SWB) in a sample of older adults in an economically depressed area of China. *Arch Gerontol Geriatrics* 2008; 46: 335-47.
 42. Carta MG, Hardoy MC, Pilu A, Sorba M, Floris AL, Manu FA et al. Improving physical quality of life with group physical activity in the adjunctive treatment of major depressive disorder. *Clin Pract Epidemiol Mental Health* 2008; 4(1): 1-6.
 43. Moos RH, Cronkite RC. Symptom-based predictors of a 10-year chronic course of treated depression. *J Nerv Ment Dis* 1999; 187(6): 360-68.
 44. Sarbadhikari S, Saha A. Moderate exercise and chronic stress produce counteractive effects on different areas of the brain by acting through various neurotransmitter receptor subtypes: a hypothesis. *Theor Biol Med Model* 2006, 3: 3-33.
 45. Lobstein DD, Ismael AH, Rasmussen CL. Decreases in resting plasma beta-endorphin and depression scores after endurance training. *J Sports Med Phys Fitness* 1991; 31(4): 543-51.
 46. Blumenthal JA, Babyak MA, Moore KA, Craighead WE, Herman S, Khatri P, Waugh R, Napolitano MA, Forman LM, Appelbaum M, Doraiswamy PM, Krishnan KR. Effects of exercise training on older patient with major depression. *Arch Intern Med* 1999; 159: 2349-56.
 47. Brosse AL, Sheets ES, Lett HS, Blumenthal JA. Exercise and the treatment of clinical depression in adults: recent findings and future directions. *Sports Med* 2002; 32: 741-60.
 48. Gullele ED, Blumenthal JA. Exercise Therapy for the prevention and treatment of depression. *J Prac Psych and Behav Hlth* 1999; 5: 263-71.
 49. Pennix BH, Rejeski WJ, Pandya J. Exercise and depression symptoms: A comparison of aerobic and resistance exercise effects on emotional and physical function in older persons with high and low depressive symptomatology. *J Gerontol: Psychol Sci* 2002; 2: 124-32.
 50. Michalak EE et al. Estimating depression prevalence from the Beck Depression Inventory. *Psychiatry Res* 2004; 129(1): 99-106.
 51. Figueira HA, Giani TS, Beresford H, Ferreira MA, Mello D, Figueira AA, Figueira JA, Dantas EHM. Quality of life axiological profile of the elderly population served by the Family Health Program. *Arch Gerontol Geriatrics* 2008 (in press). Doi:10.1016/j.archger.2008.11.017

Juracy C Castro, Tania S Giani, Márcia A Ferreira,
Fernando AC Bastos, Thales HP Cruz, Rosane Boechat,
Estélio HM Dantas

NEAKTYVIŲ IR ĮVAIRIA VEIKLA (ŠOKIAIS, SVORIŲ KILNOJIMU AR MEDITACIJA) UŽSIIMANČIŲ VYRESNIO AMŽIAUS MOTERŲ DEPRESIJOS PALYGINIMAS

Santrauka

Įvadas. Šio tyrimo tikslas buvo palyginti neaktyvių (kontrolinė grupė) ir aktyvių vyresnio amžiaus moterų (užsiimančių svorių kilnojimu, šokiais ar meditacija) depresijos lygį. Analizuojant prielaidą, kad vyresnio amžiaus žmonių depresija yra susijusi su neveiklumu, šiame tyrime palyginama aktyvia veikla užsiimančių ir neaktyvių moterų depresija.

Medžiaga ir metodai. Tiriamosios buvo suskirstytos į keturias grupes: šokių grupė (DG, $n = 20$, amžius 67 ± 4 metai), svorių kilnoji-

mo grupė (WG, $n = 15$, amžius 67 ± 5 metai), meditacijos grupė (MG, $n = 15$, amžius 68 ± 4 metai) ir kontrolinė grupė (CG, $n = 20$, amžius 68 ± 6 metai). Tyrime naudoti Kruskal-Wallis ir Shapiro-Wilk testai. Depresija vertinta pagal Beko depresijos skalę (*Beck Depression Inventory* (BDI)). Tikėtina II lygio paklaida sudarė 10%, I lygio paklaida – 1%.

Rezultatai. Kruskal-Wallis testas atskleidė statistiškai patikimą ($p < 0,001$) skirtumą tarp grupių. Teigiami rezultatai buvo gauti lyginant įvairias grupes: DG \times CG (CI = $-47,723$ – $6,671$), WG \times CG (CI = $-55,024$ – $10,676$), MG \times CG (CI = $-62,024$ – $17,676$). Tyrimas atskleidė, kad bet kokia veikla, tiek fizinė, tiek meditacija, teigiamai veikia depresijos lygį ($p < 0,05$), palyginus su kontroline grupe (CG).

Išvados. Įvairūs užsiėmimai, tiek fiziniai (šokiai, svorių kilnojimas), tiek meditacija, teigiamai veikia vyresnio amžiaus moteris ir turi įtakos žemesniam depresijos lygiui.

Raktažodžiai: depresija, vyresnio amžiaus moterys, neaktyvumas, meditacija, svorių kilnojimas, šokiai