88 - EXERCISES IN CIRCUIT AND ITS IMPACT ON THE QUALITY OF LIFE OF ELDERLY

FÁBIA AZAMBUJA PEREIRA SALVIANO;
ANAIRTES MARTINS DE MELO;
QUÍLVIA MOURA DA SILVA;
PRISCILA TEMOTEO DE MENEZES;
HERALDO SIMÕES FERREIRA
UNIVERSIDADE DO ESTADO DO CEARÁ – UECE
FORTALEZA – CEARÁ – BRASIL.
fabiasalviano@hotmail.com

INTRODUCTION

Health is not merely the absence of disease or illness, but a complete state of physical well-being, mental and social. Owning health and well being is paramount in all stages of life, not only as a human being is young adult but also when elderly (ROSA; SILVA, 2007). In this study it is understood as the subject elderly aged over 60 years.

According to the World Health Organization, the quality of life is presented as the view that human beings have of their position in life in relation to their values and culture, considering their expectations, goals and concerns (FREITAS et al., 2006).

Also important to report the definition of aging, whose consideration of the Pan American Health Organization and endorsed by the Ministry of Health determines how a sequential process, individual, cumulative, irreversible, universal, non-pathological, wear the body, which increases the possibility of death (GERHARDT, MORAL, RODRIGUES, 2008).

In a study conducted in 2010 in an interdisciplinary perspective, it was established that aging is complex and variable and may be defined as a gradual process, universal and irreversible, causing a progressive loss of function in the body which leads the individual to various physical changes psychosocial and accompanied by a number of effects on different body systems among the changes that we can perceive in the elderly: a decrease in reaction time to stimuli from the environment, major decline in physical capacity and facing many losses (MACIEL, 2010).

Life expectancy in Brazil tends to grow more and therefore there is proportionally increasing number of diseases and functional disability in this population, directly affecting the quality of life. It is estimated that by 2025 the population of the elderly in Brazil will grow 16 times, it will give us placing 6th country with the largest elderly population (MAZO; LOPES; BENEDETTI, 2004).

Regarding studies on the regular practice of physical activity for seniors, it is stated that physiological and psychosocial aspects are admittedly favored. Complementing this information is relevant to report that this population as part of a program of activity, social contacts sum thus improving self-esteem and quality of life (SAFONS; PEREIRA, 2004).

The relevance hereof to the scientific community and the professionals is the dissemination of resource utilization of therapeutic exercise in primary care. For the population studied, the relevance of this research is to provide improved quality of life for seniors , encouraging them to achieve healthy activities in their daily lives , in an attempt to reduce the problems of this age .

The justification found in the intervention proposed here is based on the need of providing healthy habits for life of the elderly, who have no alternative in such a reality, with an attempt to improve the quality of life, noting that this improvement may reflect the people who are in your family life, and in order also to sensitize them to extend this type of healthy practice in their lives would be constant.

Given the above study aimed to analyze the impact of exercise circuit in quality of life of elderly and specific objectives describe the application of these exercises in circuit for elderly and compare the quality of life before and after application.

METHOD

The research was quantitative and analytical type of intervention. The study population included 50 elderly and the sample analyzed specifically for this study according to the inclusion criteria, was formed by 10 individuals, females aged 60 to 70 years, healthy and sedentary.

The intervention, through the exercises in circuit, was held twice a week in an evangelical church hall located in the neighborhood Papicu in Fortaleza - Ceará, between July and August 2010. The location of the application of research was preferred due to the knowledge of the problems experienced by the elderly attending this religious group.

The inclusion criteria were women, elderly and did not practice any physical activity. Being excluded from the survey that the elderly population has some pathology, physical incapacity and / or mental.

Data collection was conducted in three phases: in the first questionnaire was applied to assess the quality of life Short Form - SF -36 (CICONELLI, 1997), in the second step were performed exercises in circuit , and in the last phase reapplication the questionnaire .

On the first day of the survey were explained all phases and the research method. They were then signed the consent forms, and then applied the research instrument . For this application, was first fully read aloud, explaining each question , and doubts raised were clarified . After this time has begun to act to respond to the questionnaire individually. At this time the researcher was present to clarify the doubts of interpretation of some issues. In subsequent meetings were held the sessions divided into three stages: first, the moment where all the assembled group performed stretching segmental; 10 minutes were elongated the trapezius muscles , biceps , triceps , flexor and extensor muscles of the wrist, the quadratus lumborum the adductor muscles of the lower limbs and quadriceps muscles.

Shortly thereafter, began therapeutic circuit comprises five stations, which will be explained below. Each elderly performed once the circuit individually, while the other expected.

-First station: Station Balance - composed of a straight line on the floor with adhesive tape and a wooden bench on the side bar that served as support for parallel limbs.

-Second season: Flexion of elbows - a series of 20 repetitions of elbow flexion exercises alternately (with dumbbells crafts made with plastic bottle of 600ml and sand).

-Third Station: Sitting and rising from a chair - 10 repetitions.

-Fourth season: shoulder flexion using bat, repeated 10 times.

-Fifth Station: Exercises coordination - bringing the right knee and touching it with his left hand and bringing the left knee, touching him with his right hand, alternately, totaling 10 reps.

After completion of the circuit, all the participants were sent to the last moment: Relaxation exercises, where the participants remained seated and were instructed to close their eyes and make moves cervical spine associated with respiratory

exercise listening to classical music on low volume for 10 minutes.

All exercises were based study by Ferreira (2003), totaling 12 meetings lasting 30 minutes each.

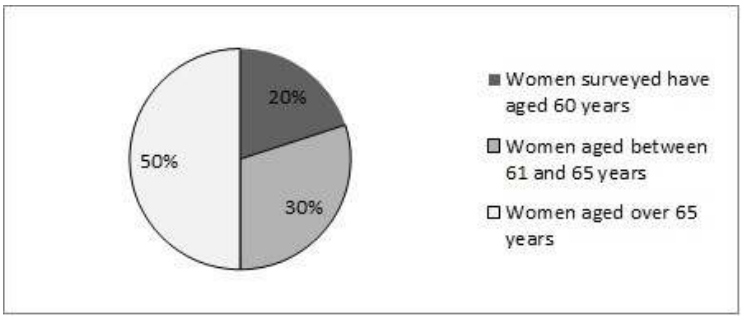
On the last day, it was explained again why reapplying the questionnaire.

All quantitative data were analyzed with the support of the scientific literature and pertinent to the topic.

The results of this study were expressed in the form of graphs developed by Microsoft Excel for Windows 2007.

Were preserved the principles of respect for the individual, where each participant signed a consent form, based on Resolution 466/12 of the Ministry of Health, giving the right to disseminate the research, maintaining, however, the secret identity of each participant and respecting all bioethical aspects of human beings. The study was approved by the ethics committee of the hospital Dr. Carlos Alberto Studart under Protocol No. 767/10.

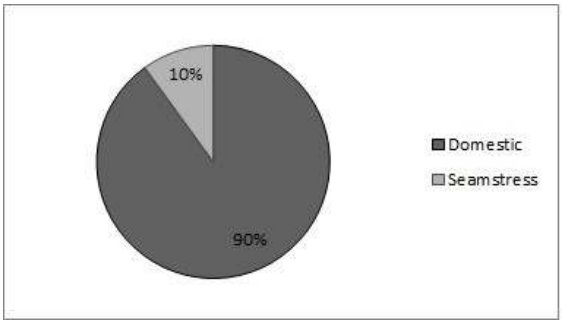
RESULTS AND DISCUSSION



Graph 1: Age of the elderly.
Source: Research data.

According to Figure 1, it appears that 20 % of the women surveyed have aged 60 years , 50 % aged between 61 and 65 years and 30 % aged over 65 years .

Age is a key factor when it comes to health in old age, because health problems usually increase and often worsen with advancing age (ALVES, MILK , MACHADO , 2008) .

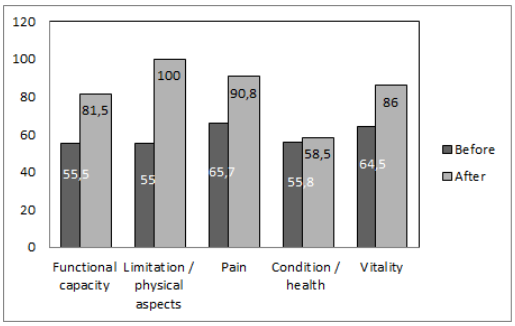


Graph 2: Job of the elderly.
Source: Research data.

In relation to the profession of the elderly, can be seen in Chart 2, the predominance of elderly who exercise the function of domestic (90 %), and only 10 % reported exercising the function of a seamstress.

Household activities can be considered medium intensity, there are tasks that are energy intensive and require a high energy expenditure. For this reason, the housewives need a preventive action to prevent musculoskeletal disorders and improve adaptation and achievement in their work (MENDES et al., 2006).

The SF -36 is divided into eight areas, the results were made the medium, and then were divided into three graphs separating the physical , social and emotional domain , which cover all items of the questionnaire . The quality of life can be a harmonious satisfactions to the individual, divided into physical, social and psychological (SHEIKH et al., 2003).



Graph 3: Physical Domain.
Source: Research data .

In Figure 3, there is the physical domain, which is divided into functional capacity (performance of daily activities), which before exercise score was 55.5 points and after intervention scores rose to 81.5 points. Limitation / physical aspects (which relates the physical performance of daily activities and or professional), the score before exercise were 55 points, and after

exercise there was a maximum score of 100 points. Pain (pain level and their interference in the performance of daily activities or professional) who once was scored 65.7 points and also had a significant improvement resulting in 90.8 points after exercise. In general condition / health (subjective perception of general health) than before exercise score was 55.8 points and 58.5 points after exercise. And Vitality (subjective perception of health status), that before the intervention score was 64.5 points and after 86 points.

The inactivity of the human being, which is common in the population, leads the individual to physical dependence and the inability to perform activities of daily living (AVEIRO et al., 2004).

Exercise increases the confidence of the elderly, the functional capabilities and mobility. Therefore, the elderly practicing physical activity, has a better performance in their activities of daily living (COSTA et al., 2009).

The limitations on the achievements of daily activities may be related to fear of falling and balance difficulties, thus performing an exercise program, the individual may feel more secure and confident in their tasks. These exercises are very important for maintaining functional independence in the elderly, maintaining and improving muscle strength, coordination, balance and therefore reducing the risk of falls and fractures (AVEIRO et al., 2004).

To Umains (2006) aerobic exercises a strong influence on pain reduction, the reduction of tender points and improved quality of life. The stretching and strengthening exercises also have therapeutic effects. Scientific studies show results of women practicing physical exercises and refer pain relief and the ability to perform activities of daily living more effectively. In stretching exercises are included which probably contributed greatly to diminish muscle tension and promote pain relief.

As for Tumelero and Takahashi (2004) exercise increases endurance , flexibility in some cases can provide decreased body weight and to reduce the use of drugs favoring improves the welfare of the individual . The decrease in muscle tension can be the result of physiological effects of exercise, which also decreases the fatigue improves mood states. (PORTO et al. 2004).

The elderly practicing physical activity feels more useful, independent , self esteem, more will to live and greater vitality / energy becoming more sociable and happy (TAKAHASHI, TUMELERO, 2004) .

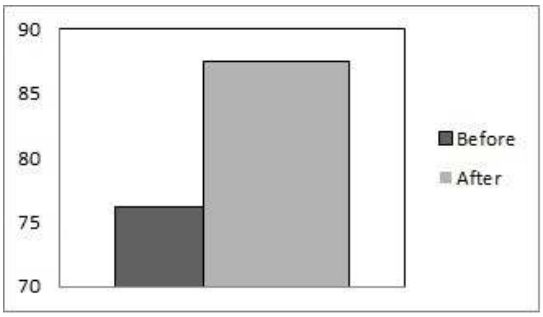


Chart 4 : Social Domain.
Source : Research data.

In Figure 4, we observe the social field composed of the social aspects (reflection of the condition of physical social activities), before that the exercises were punctuated by 76.25 points and after exercise score rose to 87.5 points.

One of the goals of physical exercise in the elderly life is to make it have more contact with society, and this interaction improve your social life is often affected as a consequence of the very old (SANTOS JR AND SANTOS, 2006)

Exercise causes an individual to social participation, acting as a catalyst for stimulating interpersonal and overcoming small challenges, this interaction results in an excellent degree of social welfare, improving their quality of life (SHEIKH, et al. 2003)

It is important to interact with the elderly society, participating in a group and can perform physical activities and having companions to talk to, bonding forming important and feel a social being who still has a lot to do and provide for themselves and others (SANTOS JR and SANTOS, 2006).

The elderly presents social isolation and depression, and is likely to participate in group activities, will act as positive psychological reinforcement, arousing feelings of value and improve the socialization of them (SHEIKH et al., 2003)

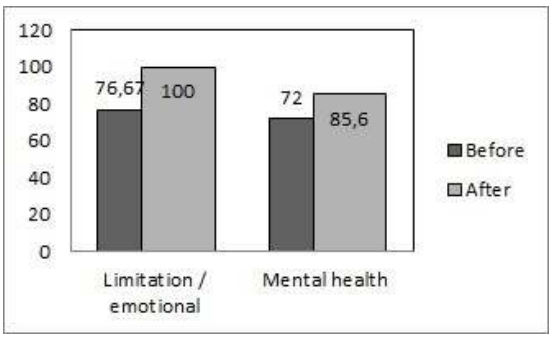


Figure 5: Domain emotional.
Source: Research data.

In Figure 5, we see the emotional domain, divided by limitation / emotional (emotional reflection of the conditions in the performance of daily activities or professional) in which pre-intervention score was 76.67 points and after the score went up to maximum number 100. And mental health (range of mood and well -being) that was 72 points before going to 85.6 points after exercise.

A regular exercise causes both physiological and psychological benefits, improving the sense of well being, mood and

self-esteem, reducing anxiety and tension of the individual thereby preventing depression (SANTOS JR and SANTOS, 2006).

During the practical exercise, the body releases endorphins and dopamine, these substances provide the individual with an analgesic effect in regular practitioner, who enjoys a relaxing effect, and generally manages to remain in a state psychosocial balanced , more stable front the threats of the external environment (SHEIKH et al., 2003).

Depression is characterized by sadness, reduced self-esteem and despair, whether or not associated with symptoms such as fatigue, irritability and thoughts of suicide. Can be a emotional loss, retirement, social activities. This all may lead the elderly to have mental health problems. The depression can be lessened when we enable the elderly something he would do, how to start some regular physical activity. These exercises improve the general welfare, thus improving the social and mental health of the elderly (SANTOS JR and SANTOS, 2006).

However, in general, regular exercise helps with health, maintains an independent lifestyle, improves functional capacity and quality of life improves (SHEIKH et al., 2003).

CONCLUSION

The elderly population is growing more each day, which reminds us of the importance of alternatives we plan to improve the health and quality of life of these people. A much desired improvement in quality of life, constantly mentioned in our society, must be sought in each area according to performance of their professionals.

Before application of the exercises in circuit, the main problems identified by the elderly during the performance of activities of daily living were pain, functional capacity, vitality and limitations for social and emotional aspects. After performing the exercises in the circuit, there was a significant improvement on these problems, where ma pain scores before the exercises was 65.7 and after exercise score rose to 90.8, with respect to vitality before were scored 64, 5 and then 86; functional capacity of 55.5 to 81.5; social aspects of 87.5 to 76.25 and 76.67 to the emotional aspects of a maximum score of 100 points. Offering the elderly a better quality of life.

Thus, we conclude that the action developed, was effectively acting as an agent in the lives of elderly benefactor investigated.

REFERENCES

ALVES , L. C. ; MILK , L. of C. ; MACHADO , C. J. Profiles of the elderly in Brazil : analysis of the National Household Sample Survey 2003 using the Grade of Membership method . Notebook Public Health, v.3, n.24, p . 535-546, sea, 2008 .

AVEIRO et al., Effects of a physical activity program on balance and quadriceps muscle strength in osteoporotic women seeking an improvement in quality of life . Rev. Bras . Ci and Mov. Brasilia, vol.12, n.3 , Sept. pag :33 -38 , 2004.

SHEIKH, N. C. et al . , Effects of exercise and physical activity in depression and anxiety in the elderly. Rev. bras. Ci and Mov. Brasilia, v . 11, n.3 , July / SET button. pag. 45-52, 2003.

COSTA, J. N. A. et al. Multisensory exercises in balance and preventing falls in the elderly . Efdeportes, Buenos Aires, n.135, August, 2009.

FREITAS , V. E. et al. Treaty of Geriatrics and Gerontology . 2 . ed. Rio de Janeiro : Guanabara Koogan , 2006.

GERHARDT, E. T.; MORAL, P. E. ; RODRIGUES , A. P. R. The older subjects in rural areas: the reality of life and health of a population of the gaucho . Nursing : Text and Context , Florianópolis , v.17 , n.2 , April / June pag . 375 , 2008 .

MACIEL, Marcos Gonçalves. Activity and functionality of the elderly. Journal of physical education. v.16, n.4, p.1024 - 1032, 2010, accessed on: Nov. 2011.

MAZO, Giovana Zarpellon ; LOPES , Marize Amorim ; BENEDETTI , Tania Bertoldo . Physical activity in the elderly: designing gerontology. 2nd ed. Porto Alegre: Sulina, 2004.

A. MENDES P. et al. Ergonomic analysis in a domestic environment . Journal of Physical Education EMU. v. 17, n.1 , 2006.

ROSE, M.; SILVA , J. D. Entering Professional Physiotherapy staff in family health and Health System : Challenges in training . Science & Public Health, vol. 12, n.6, p.1674, 2007.

SAFONS, M. P., PEREIRA, M. M. Circuit fitness training for seniors: An experience report. Efedeportes Digital Magazine, n.74, 2004.

SANTOS JR, M. F., Santos, R. A. M. Design quality of life of institutionalized elderly Penápolis - SP. Efdeportes , Buenos Aires , v.11, n.97, jun. 2006.

TAKAHASHI, S.R.S.; Tumelero, S.Benefits of physical activity in the elderly. Efdeportes. Buenos Aires, n.74, July 2004.

Santos Dumont Avenue , 7800 - Dunes
Fortaleza - Ceará - CEP : 60191-156
E- mail: fabiasalviano@hotmail.com

EXERCISES IN CIRCUIT AND ITS IMPACT ON THE QUALITY OF LIFE OF ELDERLY

ABSTRACT

Aging in the individual passes through several phases where changes occur both in the biological , psychological and social . Therapeutic exercise at this time of life have effects in improving muscle strength , endurance , coordination, self -esteem , and optimize quality of life . The study aimed to analyze the influence of therapeutic exercises in circuit the quality of life of the elderly through the application of the SF - 36 and specific objectives describe the application of therapeutic exercises in circuit for elderly and compare the quality of life before and after application of the exercises . The research was the type analytical , quantitative and intervention . Data collection began with the assent given by the Ethics Committee of the Hospital Dr. Carlos Alberto Studart held in three phases : in the first questionnaire was applied to assess the quality of life Short Form - SF -36 , in the second stage exercises were performed on the circuit , and in the last phase the reapplication of the questionnaire . A total of 10 elderly females aged between 60 and 70 years. The exercises were held two days a week in a church hall in the city of Fortaleza - Ceará , between July and August 2010 . The results focus on the improvement of the physical aspects to rise from 55 to 100 ; emotional : 76.67 to 100 ; social : 76.25 to 87.5 , and general condition / health : 55.8 to 58.5 points . Thus we can see the benefits of exercise for improving quality of life in elderly women . It is concluded that through therapeutic exercises were benefits in quality of life of the group investigated .

KEYWORDS: Elderly . Quality of life. Exercise .

DES EXERCICES EM CIRCUIT ET LEUR IMPACT SUR LA QUALITÉ DE VIE DES PERSONNES ÂGÉES
RÉSUMÉ

Au cours de le vieillissement les gens passent par plusieurs moments de transaction, autant dans l'aspect biologique que dans l'aspect psychique sociale. l'exercice thérapeutique dans ce moment de la vie a des effets positifs sur la force des muscles, la résistance, la coordination, l'estime de soi, et optimise également la qualité de vie. L'étude vise à analyser l'influence des exercices thérapeutiques en circuit dans la qualité de vie des personnes âgées grâce à l'application du questionnaire SF-36 et vise spécifiquement décrire l'application des exercices thérapeutiques en circuit pour les personnes âgées et comparer à qualité de vie avant e après l'application des exercices. La recherche est allée du type analytique, quantitative et d'intervention. La collecte de données a commencé après avis favorable a été accordé par le Comité de L'éthique en Recherche de l'Hôpital Dr. Carlos Alberto Studart, a été opérée en trois étapes: Au cours de la première étape, a été appliqué le questionnaire d'évaluation de la qualité de vie Short Form – SF - 36; dans la deuxième étape, ont été effectué les exercices en circuit; et pendant la dernière étape, le questionnaire a été appliqué une fois de plus. Um total de 10 personnes âgées entre l'âge de 60 et 70, du sexe féminin, ont participé à la recherche. Les exercices ont eu lieu deux jours au cours de la semaine, dans une salle de l'église à la ville de Fortaleza – Ceará, pour la période allant de Juillet et Août 2010. Les résultats obtenus concentrent améliore dans aspects physiques avec l'ascension de 50 pour 100; émotionnels: 76,67 pour 100; sociales: 76,25 pour 87,5; et situation générale/santé: 55,8 pour 58,5 points. En entendant cela, on peut observer les avantages de l'exercice physique pour améliorer la qualité de vie des personnes âgées. Il est conclu que à travers des exercices thérapeutiques, Il y avait des avantages de la qualité de vie du groupe examinée.

MOTS-CLÉS: Personnes âgées. Qualité de vie. Exercice.

EJERCICIO EM CIRCUITO Y SU IMPACTO EN LA CAULIDAD DE VIDA DE MUJERES MAYORES
RESUMEN

En el envejecimiento, el individuo pasa por varias fases en las que ocurren cambios tanto en el biológico, psicológico y social. El ejercicio terapéutico en este momento de la vida tiene efectos en la mejora de la fuerza muscular, la resistencia, la coordinación, el autoestima, y optimizar la calidad de vida. El estudio tuve como objetivo general el análisis de la influencia de los ejercicios terapéuticos en el circuito de la calidad de vida de personas mayores a través de la aplicación del cuestionario SF-36 y como objetivos específicos describir la aplicación de ejercicios terapéuticos en circuito para personas mayores y comparar la calidad de vida antes y después de la aplicación de los ejercicios. La investigación fue de tipo analítico, cuantitativo y de intervención. La recolección de datos se inició con la aprobación dada por el Comité de Ética del Hospital Dr. Carlos Alberto Studart conducida en tres fases: en la primera se aplicó una encuesta para evaluar la calidad de vida Short Form - SF-36, en la segunda etapa ejercicios se realizaron en el circuito, y en la última fase de una nueva aplicación del cuestionario. Un total de 10 mujeres mayores de edades comprendidas entre 60 y 70 años. Los ejercicios se llevaron a cabo dos días a la semana en un salón de la iglesia en la ciudad de Fortaleza - Ceará, entre julio y agosto de 2010. Los resultados se centran en la mejora de los aspectos físicos de subir 55-100; emocional: 76,67 a 100; sociales: 76,25 a 87,5, y el estado general / de salud: 55,8 a 58,5 puntos. Así, podemos ver los beneficios del ejercicio para mejorar la calidad de vida en mujeres de edad avanzada. Se llegó a la conclusión de que a través de ejercicios terapéuticos hubo beneficios en la calidad de vida del grupo investigado.

PALABRA CLAVE: Murejes mayores. Cualidad de vida. Ejercicio.

EXERCÍCIOS EM CIRCUITO E SEU IMPACTO NA QUALIDADE DE VIDA DE IDOSAS
RESUMO

No envelhecimento o indivíduo passa por diversas fases onde ocorrem transformações tanto no aspecto biológico, como psíquico social. O exercício terapêutico neste momento da vida tem efeitos na melhora da força muscular, resistência, coordenação motora, auto-estima, além de otimizar a qualidade de vida. O estudo teve como objetivo geral analisar a influência de exercícios terapêuticos em circuito na qualidade de vida da idosa através da aplicação do questionário SF-36 e como objetivos específicos descrever a aplicação de exercícios terapêuticos em circuito para idosas e comparar a qualidade de vida antes e após a aplicação dos exercícios. A pesquisa foi do tipo analítica, quantitativa e de intervenção. A coleta de dados iniciou após parecer favorável concedido pelo Comitê de Ética em Pesquisa do Hospital Dr. Carlos Alberto Studart, realizada em três fases: na primeira foi aplicado o questionário de avaliação da qualidade de vida Short Form - SF-36, na segunda etapa foram efetuados os exercícios em circuito; e na última fase a reaplicação do questionário. Participaram 10 idosas do gênero feminino com idade entre 60 e 70 anos. Os exercícios foram realizados dois dias na semana no salão de uma Igreja na cidade de Fortaleza - Ceará, no período de julho e agosto de 2010. Os resultados obtidos enfocam a melhora de aspectos físicos com ascensão de 55 para 100; emocionais: 76,67 para 100; sociais: 76,25 para 87,5; e estado geral/saúde: 55,8 para 58,5 pontos. Diante disso podemos observar benefícios do exercício físico para melhora da qualidade de vida em idosas. Conclui-se que através dos exercícios terapêuticos houve benefícios na qualidade de vida do grupo investigado.

PALAVRAS - CHAVE: Idoso. Qualidade de vida. Exercício.