34 - ACCESSION TO THE PRACTICE OF PHYSICAL ACTIVITY IN WOMEN PARTICIPATING PROGRAMS FOR PREVENTION AND TREATMENT OF OSTEOPOROSIS

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INTRODUCTION

Regular exercise provides a myriad of health benefits in older adults, including improvements in blood pressure, diabetes, lipid profile, in osteoarthritis, osteoporosis, and neurocognitive function. Regular physical activity is also associated with decreased morbidity and mortality in older adults. Few contraindications to exercise exist and almost all older people can benefit from additional physical activity (NIED; FRANKLIN, 2002). A sedentary lifestyle is a major risk factor and may be classified as modifiable. Many elderly people suffer difficulty with activities of daily living by reduced muscle strength which can get a15% between 60 and 70 years and 30% after 80 years (Aveiro, 2006). The exercise becomes important in the maintenance of functional independence in the elderly because it improves muscle strength, coordination, balance and reducing the risk of falls and fractures. Its importance is such that, in all treatment regimens for osteoporosis should be included an exercise program. Bones are more susceptible to bone loss than by inactivity ability to win it with increased physical activity. The loss of 1% of bone mass that occurs after a week of restriction takes about a year to be recovered by increased physical activity (CAMPOS et al., 2003).The current trend of conceptualization and classification of osteoporosis relies on the effect of producing muscle modulators of bone remodeling and expansion of the concept of osteoporosis.Physical activity has been implicated as a contributing factor to the increase in bone mass, thus reducing the risk of fractures. The benefits can be obtained through a regular exercise program, which should include the control of obesity, increased blood lipid profile and optimizing micronutrient intake (FROES et al., 2002). According Sarkisian et al. (2005) new strategies are needed to increase the level of physical activity among sedentary older adults. Through study that aimed to lower life expectancies relate to the level of physical activity of elderly belonging to senior centers, the authors could conclude that this acts as a barrier to physical activity among older adults. Factors associated with low physical activity accounted areas that can improve with practice: general, functional independence, pain, fatigue, suggesting interventions in specific areas that may lead to increased physical activity among sedentary eld.

ADHERENCE TO PHYSICAL ACTIVITY

Understanding the variables influencing adherence to physical activity may help in establishing strategies for behavior change. Andreotti and Okuma (2003), showed that the main reasons for the elderly to engage in a physical activity program were an indication of friends, improves health and quest for social interaction. Thus, knowledge and belief in the many benefits of physical activity on health may motivate the adoption of a program of physical activity, but it is not clear to reinforce adherence. Carvalho et al. (2004) showed in a program of health education on osteoporosis that in relation to physical activity that all components have been encouraged to practice, most (90%) have adopted this practice regularly, especially the activities such as water aerobics and walking. The benefits of exercise careful and focused are indisputable and participants began to realize the need for physical activity with lectures and began to practice it.Physicians play a key role for the motivation of older patients as well as advise them about their physical limitations. The motivation of patients to begin exercise is best achieved by focusing on your goals, interests, and individual barriers to exercise. To increase the long-term practice, exercise prescription should be straightforward, entertaining and associated needs, beliefs, and goals of the individual health of a patient (NIED; FRANKLIN, 2002).According to Ferreira and Najar (2005), the question of motivation and adherence to exercise is therefore becoming multidimensional and complex study aimed at establishing guidelines for membership. Importantly, the relative importance of adherence to the practice of exercise on factors such as previous experience in sports and exercise, medical advice, convenience of the location of drilling, biological-physiological aspects, self-motivation to practice exercise, time availability , socioeconomic status, knowledge about and access to exercise facilities and adequate spaces for physical exercises support of spouse and family, may vary according to the local population or the time period studied. Regarding the physical environment, some studies suggest a correlation between proximity and frequency of private premises in strenuous exercise. Access to facilities is probably an environmental variable that affects the choice of the person exercising is that the proximity of drilling decreases the travel time of the person contributing the adherence to exercise (Ferreira; NAJAR, 2005).

METHODOLOGY

One phase of the study was conducted at the General Hospital of Fortaleza. Another step occurred on the premises of the Faculty of Integrated Ceará (FIC). The Programme for Prevention and Treatment of Osteoporosis developed in Fortaleza General Hospital has 2179 registered patients, with 2142 women and 37 men. In the age group above 65 years are 1,632 patients, including 21 men and 1611 mulheres.O attending the clinic in 2006 totaled 398 women aged over 65 who were following the treatment, which contiuíram population this estudo.Para calculating the sample was used probabilistic sampling plan with proportional stratification. In this case, the total population was N = 398 women, aged 65 years, who were registered and attended the outpatient treatment of osteoporosis in the General Hospital of Fortaleza (HGF) EC, in 2006. It was divided into strata obeying the prevalence of low bone density by age group corresponds to 50% for women aged between 65 and 69 years, 75% for women aged 70 to 79 years and 87% for women aged above 80 years. Thus, the layers were: Stratum 1 = Women 65 to 69 years = 169; Stratum 2 = Females 70 to 79 years = 190 Stratum 3 = Women aged 80 years or more = 39 The formula for calculating the sample size is is given by:

$$n = \frac{N\sum NhPhQh}{\left(N^2\right)Y + \sum NhPhQh}$$

(*) Where:
N = population size = 398
V = d2/t2
d = sampling error fixed in 2%
t = value of Student distribution table with a confidence level of 95% = 1.96
Nh - size stratum h = 1, 2, 3
Qh = proportion of women without the disease in the stratum h = 1, 2, 3
Ph = ratio of prevalence of the disease in the stratum h = 1, 2, 3
nh = Wh x n = (Nh/N) x n

Calculating the formula n (*) met n = 192 results:

$$n = \frac{398x104{,}22}{398x398x0{,}0007+104{,}22} = 192$$

n1 = 81; n2= 92; n3 = 19

Thus, the calculated sample consisted of 81 women aged between 65 and 69 years, 92 women aged between 70 and 79 years and 19 women over 80 anos.As patients enrolled in the program are required to conduct a re-registration every 3 months which allows receiving medication for use during this period. Additionally, the program provides medical consultations for annual reavaliação.A sample was collected between January and July 2007, the time of the outpatient consultation osteopose, which occurred on Monday morning, and in time of relisting patients from HGF, EC, on Fridays from 13h to 15h. There were no more openings for new patients in the program. Thus, from the month of July the sample was exhausted, because the data collected during the census taking began to repeat in consultations due to scheduling. We collected a total of 173 samples. The sample, a total of 173 women was collected between January and July 2007. After applying a standardized form women were referred to the Senior Institute, the ICF premises so they could practice activities related to water aerobics, walking, weight training, swimming, dancing or gymnastics. To obtain data post-accession questionnaire was administered via telephone contact and checking documents for registration of the Senior Institute. The data collected were analyzed by using the SPSS (Statistical Package for the Social Sciences) version 15.0 for questions of multiple choices. The analytical treatment of the concepts was made from the reading of each of the responses, which were organized into thematic categories and classified as percentage frequency, in order to guide the discussions. Because it is a research involving humans, this study was submitted to the Ethics Committee in Research of UECE, according to Resolution 196 of 10 October 1996, the National Health Council (CNS, 1996), obtaining assent. (Annex B). The Instrument of Consent was read and explained to all women attending, and who agreed to participate signed in two identical copies, one of which was delivered to the patient and the other remained with the researcher responsible.

RESULTS

Almost 50% (49.7%) of respondents reported performing activities in the home and as domestic, whereas, 20.2% did not define their occupation (retired). The average age of women was approximately 71.34 years with a standard deviation of 5.36 years (table 2). According to Table 2, the continuous distribution of the data showed the majority, 96 (55%) patients aged between 65 and 70 years. Regarding physical activity, Table 1 shows that 53.17% of women practice, while 13.04% do aerobics 2-4 times a week, 40-60 minutes per session, 21.74% to Gymnastics (table 2) from 3 to 5 times per week, 30 to 60 minutes per session and make the walk 65.22% (Table 2) 3-7 times per week, 10 to 90 minutes daily. The practitioners reported exercise participation in gymnastics program the fire department (100%). Patients who do not participate in hiking physical activity program receiving no professional guidance (100%).

TABLE 1 – Characteristics of physical activity of patients in outpatient osteoporosis in patients from HGF, 2007.

	N = 173	%
Ativ practiced. childhood physical	15	8,7
Practice ativ. physical	92	53,17
Practice Walk	60	65,22
Gymnastics Practice	20	21,74
Practice Hydro	12	13,04

The walk is practiced by 65.22% of the women who do physical activity, which may be related to ease of access to local practice. Important fact is there is not any kind of guidance and monitoring of this practice which may influence the effectiveness of exercise. According Jovine et al. (2006) not only adherence to an exercise program is sufficient to produce positive effects on bone mineral density (BMD), but also the frequency, type of exercise, duration and intensity of each session of exercise, number of weekly sessions (1 to 5) and duration of exercise programs in months (2-60). The volume ratio was satisfactory, since 86.6% of women practicing walking over 3 to 7 times per week and 98.3% with a practical time per session between 30 and 90 minutes. The intensity was not controlled. Gymnastics was the second type of practice exercises greater among women who do physical activity. All reported being enrolled in the free program offered near his residence. These facts may be influencing adherence to practice. The gymnastics had the lowest prevalence among the methods applied by patients. When we consider the results of adherence to physical activity, this modadlidade accounted for 58.3% of the membership. This may be related to difficulties of access and insight into fitness exercises. Devereux et al. (2005) reported that aquatic exercises produce significant changes in quality of life, contributing to possible membership.

TABLE 2 - type of physical activity in childhood and why no physical exercise of currently outpatients from osteoporosis in patients from HGF, 2007.

Type ativ. physical practiced in childhood	N=9	%
Dance	1	11,1
School physical education	4	44,44
Football	1	11,1
Swimming	2	22,2
Volley	1	11,1

Reason for not practicing physical activity (categories)	N=81	%
Tiredness	18	19,9
Domestic occupations	18	19,9
Limitation physical	21	23,0
No access	10	11,0
Lack of guidance	14	26,2

Only 8.7% of women practiced some physical activity in childhood or adolescence. The activities described were dancing, physical education, soccer, swimming and volleyball (table 2).The reasons given for not practicing physical activity were categorized and found 81 responses, of which 19.9% related to fatigue, the 19.9% domestic occupations, 23.1% to some physical limitation, not access to 11% and 26 2% for lack of guidance. The answers on the practice time physical activity and weekly frequency related show good volume level of exercises adopted by patients. We can not do the same relation to the intensity of training. Regarding adherence to physical activity, whereas 53.17% of the women have practiced some form of physical activity, has intervened after only 6.9% who did not practice joined the practice (Table 3). Could not get a response from 13.3% of patients. The activity was greater adherence to water aerobics (58.3%) (table 4). The biggest reason for noncompliance was the distance of residence and place of physical activity offered (table 5).

TABLE 3 - Adherence to physical activity of patients in outpatient osteoporosis HGF, 2007

Joined physical activity	N	%
Yes	12	6,9
No	46	26,6
Não se aplica	92	53,17
Not applicable	23	13,33
Total	173	100,0

Analyzing the factors that interfered with physical activity came to the following results: fatigue (19.9%), physical limitations (23%) and lack of guidance (26.2%). Thus, one might suspect that the perceived physical limitation as a reason for not exercising would be more related to lack of clarification activity more appropriate than a lack of autonomy. The same happens when observing the results of why the group of outpatients from osteoporosis HGF in 2007, did not adhere to physical activity. After referral of patients to practice exercises under appropriate guidance that was conducted after data collection showed that pain during activity was not a significant variable for adherence to physical activity. The modalities of exercises practiced cited by only 3 patients were: walking, gymnastics and water aerobics. Regarding adherence to physical activity after offering exercise program is important to note the low percentage found (6.9%). This result was also found in recent studies showing that although all participants in the educational program for patients with osteoporosis had a higher level of knowledge of the disease, after three weeks they did not adopt preventive behaviors (Carvalho et al., 2004). The distance from the location of the program offered to patients was essential for adherence to physical activity. The distance of the residence was cited by 73.9% of women, which shows the difficulty of access despite not prove dissatisfied with the means of transport. The interest in the practice of water aerobics and walking (83.3%) was presented agreeing with the findings in other studies. Data obtained by Cavalho et al. (2004) showed that when participants in an education program for patients with osteoporosis were encouraged to exercise, the majority (90%) began to adopt this practice regularly, especially activities such as water aerobics and walking.

TABLE 4 - Group of outpatients from osteoporosis HGF, 2007 which acceded to physical activity

Tipo de atividade fisica	Respostas afirmativas	
	N	%
Hidro	7	58,3
Caminhada	3	25,0
Natação	1	8,3
Outra	1	8,3

TABLE 5- Reason for the group of patients in the outpatient osteoporosis HGF, 2007 did not adhere to physical activity

Type of physical activity	affirmative answers	
	N	%
distance of residence	34	73,9
Lack of time	7	15,2
Company	2	4,3
Laziness	1	2,2
medical recommendation	1	2,2

CONCLUSION

The data showed the great importance of studies on osteoporosis and the care that must be taken to improve and control the progression of bone loss. Adopting healthy lifestyle habits, especially in relation to physical activity is critical to maintaining quality of life in osteoporotic women. The study aims to contribute to the understanding of the impact of adherence to physical activity considering it is a complex phenomenon, and it should be understood as a process of creating favorable conditions through programs or other initiatives of government. It is important to identify and assess the factors discussed here as the distance of suitable sites and place of residence of patients to understand the prevalence of physical inactivity in the population studied. Thus, the creation of public resources that can enable the structuring of physical activity programs is critical. Access to facilities is an environmental variable that affects the choice of the person exercising contributing adherence to exercise. It is important to include a reflection on the monitoring of activities for physical education professionals in the dynamics of educational and correct sizing of the volume and intensity of training that produce efficient results, as well as the inclusion of this work in interdisciplinary teams to prevent and treat osteoporosis . The social aspects, ie personal relationships that can be established in the programs should also be considered to justify the creation of conditions close to the places where they live, since they are significantlyrelated to quality of life and the presence of negative feelings.

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ACCESSION TO THE PRACTICE OF PHYSICAL ACTIVITY IN WOMEN PARTICIPATING PROGRAMS FOR PREVENTION AND TREATMENT OF OSTEOPOROSIS

ABSTRACT

The physical activity is an important factor in the prevention and treatment of the osteoporosis. The aging, relentless process to the alive beings, leads to a progressive loss of the bone mineral density (DMO) of the organism, increasing the risk of falls and fractures. The maintenance of DMO is very important for the prevention of the osteoporosis. The practice of physical exercise, besides combatting the sedentarismo, contributed in a significant way to the maintenance of the senior's DMO. Some educational programs have been appearing in the sense of to guide the participants in relation to the level of physical activity for prevention and to aid them in the treatment of the osteoporosis, what is not almost always included in the public health politics. Although they are already very established the benefits of the changes in the life habits as an important soft factor related to the bone health, his/her importance, the improvement of the quality of life and the knowledge that the prevention of loss of bone mass can be made with the regular practice of physical exercise not always it is of the knowledge of the population. In this study it was aimed at to determine the changes in relation to adhesion the physical activity in participant women of prevention programs and osteoporosis treatment in hospital public exercises. They participated in the study 173 women registered in the Program of Osteoporosis of public hospital of Fortaleza-CE, above 65 years that answered 2 forms. A program of physical activities was offered to evaluate the level of the studied women's adhesion. The results presented a low adhesion due to the distance of the residence place. The patients presented interest in practice of exercises once, all that submitted to the evaluation did her with interest in the program of exercises. Is Important the creation of public politics that offer programs of exercises of easy access and that you/they contain well evaluations physical sitemáticas besides a training dimensionado in volume and intensity.

KEYWORDS: Osteoporosis. Physical Activity. Adhesion

RÉSUMÉ

L'activité physique est un facteur important dans la prévention et le traitement de l'ostéoporose. Vieillissement conduit à une perte progressive de la densité minérale osseuse (DMO) du corps, ce qui augmente le risque de chutes et de fractures. Le maintien de la DMO est très important pour la prévention de l'ostéoporose. L'exercice physique en plus de lutter contre la sédentarité, contribue de manière significative au maintien de la DMO chez les personnes âgées. Certains programmes de formation ont vu le jour afin de guider les participants en ce qui concerne le niveau d'activité physique pour empêcher et de les aider dans le traitement de l'ostéoporose, qui, souvent, ne sont pas inclus dans les politiques de santé publique. Bien que déjà

bien établis avantages des changements de mode de vie comme un facteur important modifiables liés à la santé des os, de son importance, l'amélioration de la qualité de vie et la connaissance que la prévention de la perte osseuse peut être fait avec la pratique L'activité physique régulière n'est pas toujours connue de la population. Cette étude visait à déterminer les changements par rapport à l'adhésion à l'activité physique chez les femmes participant à des programmes de prévention et de traitement de l'ostéoporose dans un hôpital public. L'étude a inclus 173 femmes inscrits dans le Programme pour l'hôpital public dans l'ostéoporose Fortaleza, plus de 65 ans qui ont répondu à deux formes. On lui a offert un programme d'activité physique pour évaluer le niveau de conformité des femmes étudiées. Les résultats ont montré un faible taux d'observation en raison de la distance entre le lieu de résidence. Les patients ont exprimé leur intérêt dans l'exercice puisque tous les cours de l'évaluation faite avec intérêt dans le programme d'exercice. Ë important de créer des politiques publiques qui offrent des programmes d'exercices accessibles et contenant systématiques des évaluations physiques et un volume de formation de bonne taille et en intensité.

MOTS-CLÉS: ostéoporose. L'activité physique. Accession

RESUMEN

La actividad física es un factor importante en la prevención y tratamiento de la osteoporosis. El envejecimiento conduce a una pérdida progresiva de la densidad mineral ósea (DMO) del cuerpo, aumentando el riesgo de caídas y fracturas. El mantenimiento de la DMO es muy importante para la prevención de la osteoporosis. El ejercicio físico, además de combatir el sedentarismo, contribuye de manera significativa al mantenimiento de la densidad mineral ósea en los ancianos. Algunos programas educativos han surgido con el fin de guiar a los participantes en relación con el nivel de actividad física para prevenir y que les apoyen en el tratamiento de la osteoporosis, que a menudo no se incluyen en las políticas de salud pública. Aunque ya bien establecidos los beneficios de los cambios de estilo de vida como un importante factor modificable relacionado con la salud ósea, su importancia, la mejora de la calidad de vida y el conocimiento de que la prevención de la pérdida ósea se puede hacer con la práctica La actividad física regular no siempre se conoce a la población. Este estudio tuvo como objetivo determinar los cambios en relación a la adherencia a la actividad física en las mujeres que participan en programas de prevención y tratamiento de la osteoporosis en un hospital público. El estudio incluyó a 173 mujeres inscritas en el Programa para el hospital público en Fortaleza Osteoporosis, más de 65 años que respondieron a dos formas. Se le ofreció un programa de actividad física para evaluar el nivel de cumplimiento de las mujeres estudiadas. Los resultados mostraron un bajo cumplimiento debido a la distancia del lugar de residencia. Los pacientes que han expresado su interés en el ejercicio ya que todos sometidos a evaluación hace con interés en el programa de ejercicios. Ë importante crear políticas públicas que ofrecen programas de ejercicio accesibles y contiene evaluaciones sistemáticas físicas y un volumen de entrenamiento de buen tamaño e intensidad.

PALABRAS CLAVE: Osteoporosis. La actividad física. Adhesión.

ADESÃO À PRÁTICA DE ATIVIDADE FÍSICA EM MULHERES PARTICIPANTES DE PROGRAMAS DE PREVENÇÃO E TRATAMENTO DE OSTEOPOROSE

RESUMO

A atividade física é um importante fator na prevenção e tratamento da osteoporose. O envelhecimento conduz a uma perda progressiva da densidade mineral óssea (DMO) do organismo, aumentando o risco de quedas e fraturas. A manutenção da DMO é muito importante para a prevenção da osteoporose. A prática de exercício físico, além de combater o sedentarismo, contribui de maneira significativa para a manutenção da DMO do idoso. Alguns programas educativos têm surgido no sentido de orientar os participantes em relação ao nível de atividade física para prevenção e auxiliá-los no tratamento da osteoporose, o que quase sempre não estão incluídos nas políticas de saúde pública. Embora já estejam bem estabelecidos os benefícios das mudanças nos hábitos de vida como um importante fator modificável relacionado à saúde óssea, a sua importância, a melhora da qualidade de vida e o conhecimento de que a prevenção de perda de massa óssea pode ser feita com a prática regular de exercício físico nem sempre é do conhecimento da população. Neste estudo objetivou-se determinar as mudanças em relação a adesão a atividade física em mulheres participantes de programas de prevenção e tratamento de osteoporose em hospital público. Participaram do estudo 173 mulheres cadastradas no Programa de Osteoporose de hospital público de Fortaleza-CE, acima de 65 anos que responderam dois formulários. Foi oferecido um programa de atividades físicas para avaliar o nível de adesão das mulheres estudadas. Os resultados apresentaram uma baixa adesão devido à distância do local de residência. As pacientes demonstraram interesse na prática de exercícios uma vez que, todas que se submeteram à avaliação o fizeram com interesse no programa de exercícios. Ë importante a criação de políticas públicas que ofereçam programas de exercícios de fácil acesso e que contenham avaliações físicas sistemáticas além de um treinamento bem dimensionado em volume e intensidade.

PALAVRAS-CHAVE: Osteoporose. Atividade física. Adesão.