

Influential factors in the old-aged people dropout from a physical exercise program

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Abstract: This study aimed at investigating the factors that influence the adherence to and dropout from a physical exercise program for old-aged people implemented at the Local Health Units (“ULS”) of Florianópolis, SC. Therefore, 13 old-aged people, with average age of 71.08 (SD=5.75) years old, were interviewed through a semi-structured interview applied by telephone. It was concluded that the main reason for adherence to the program was relationship aspect (friends and/or relatives invitation) and the most frequent reasons for dropouts were personal causes (spouse’s health

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problems, death of the spouse or other relatives).

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1 Introduction

Brazil passes through a population ageing process, like in all the places of the world. However, the increase in the Brazilian's average life expectancy has not brought along significant improvements and increments in the population's life quality, resulting in a life expectancy free of incapacities of only 54 years (IBGE, 2000). At this point, assuming an active life style is fundamental for the individual's life quality maintenance (MAZO, 2003).

The regular engagement in the practice of physical activities and exercises can delay the normal decline relate to age in the function of the different systems. It can also control and prevent chronic-degenerative diseases (cardiovascular, diabetes, cancer, hypertension, etc.) that may lead to debilities (SHEPHARD, 2003; BIRD, TARPENNING; MARINO, 2005). Warburton, Nicol and Bredin (2006), point that there is a linear relation between physical activity and health condition, where the increase in the physical activity levels may lead to increments and improvements in the individual's health condition.

However, although literature gives evidence of the importance and the benefits of physical exercises for an active and healthy ageing, the authorities' and researchers' efforts

seem to be insufficient to move the most part of the population to participate in such programs in a regular manner. According to a recent survey in the Brazilian capitals, the physical inactivity reaches a large portion of the old-aged population, represented in the 50.3% of women and 65.4% of men above 65 years old with no activity. (BRASIL..., 2007).

Within this context, it was detected high inactivity rates and, consequently, a low percentage of old-aged people inserted into systematized physical activity programs. The literature points the existence of factors that influence such practice both in a positive and negative manner. The factors that facilitate, give opportunity or make this practice feasible are called “facilitators”, and those that upset or make it difficult are called “obstacles”. The obstacles can be: internal: those related to the individual thought, the old-aged person’s feeling, the way how they read a phenomenon or fact; and external: those related to the environment, situations and the society as a whole (MICHELI, 2007).

Therefore, it was verified that there are several factors that help both the insertion and the adhesion of old-aged people to physical exercise programs, and it involves aspects related to education, family and social sphere, health and economy area, the break of several paradigms and, finally, the aspects that permeate the population’s life quality (MICHELI, 2007).

Hence, it’s necessary not only to emphasize the factors that facilitate the old-aged people insertion into the physical exercise program, but also know and try to attenuate the obstacles that have led such old-aged people to drop out from the program. Mazo (2003) says that the association of obstacles

with the physical activity is highly convenient for the interventions, once the recognition of them can guide the programs and their actions, so as to define more efficient methodologies and strategies. Cohen-Mansfield (2004) further emphasizes that the programs must take into account the subgroups' needs and desires, as well as explore the meaning old-aged people grant to the programs to fit their design for a more effective intervention.

Thus, this study had the purpose to investigate the factors that influence in the old-aged people's dropout from a physical exercise program implemented at the ULS of Florianópolis in the State of Santa Catarina.

2 Methodology

This research was submitted and approved by the Committee on Ethics of Human Beings of the Federal University of Santa Catarina, project no. 011/06, dated March 06, 2006. All the old-aged people were informed about the research and signed the Informed Consent – “TCLE” in two counterparts, where one of them remains under the old-aged people's possession and the other under the researchers' possession.

2.1 Population and Sample

The study's population was composed of 16 old-aged people that dropped out from the "Idoso Ativo" ["Active Elder"] program, between the months of July and December 2006.

The physical exercise program started in June 2006, by means of gymnastics classes performed three times a week, with a duration of 60 minutes/session, focusing on the different physical qualities, mainly strength, balance, flexibility, coordination and aerobic resistance; beside specific exercises for postural reeducation, strengthening of the pelvic muscles and muscle stretching through relaxation.

The sample inclusion criteria were: having over 15 consecutive absences (25% of the total classes given) between the months of July and December 2006 – criterion adopted by the researchers to characterize the dropout from the program – not having come back to the program activities until this study's data collection; agreeing upon and being available to participate in the research, answering individually to the interview by telephone.

16 old-aged people aged between 60 and 82 years old met the inclusion criteria. Three elders were excluded: one for mental disorders and two for not having been localized, what made the interview impossible to be carried out. Thus, this study's sample was composed of 13 old-aged people (11 women and two men), with an average age of 71.08 years (SD=5.75), who answered the interview.

2.2 Instruments

In order to inquire into the factors that contribute to the dropout from the “Idoso Ativo” program, a semi-structured interview with eight questions related to the themes approached was created.

At first, the questions approached in the interview referred to the entry date memories, as well as the reasons that led to their participation in the program, and from that moment on, the interview approached questions related to dropouts and the possibility to return to the program. These latter questions were evaluated through the following questions: What is/are the reason(s) that made you drop out from the gymnastics?; How did you like the gymnastics classes (teacher, class, material, songs, time, place)?; Did you feel well when you participated in the gymnastics classes?; Would you like to take part again in the gymnastic classes?; What must occur to allow you to come back to the gymnastics classes? Do you think it is possible?

2.3 Data Collection

Data was collected by means of an individual interview by telephone, carried out in May 2007. At first, the researchers identified themselves and, next, they presented the purpose of the contact. The interviews lasted for between six to 13 minutes, where the interview's average time was 9 min 53 s.

2.4 Data Analysis

The collected data was organized, stored and treated aided by the *Microsoft Excel*[®] software. The analysis adopted for the treatment of the data was the descriptive statistics (percentage).

3 Results and discussion

With regard to the elders' socio-demographic profile, it was detected that 84.6% are women, where the average age found was 71.08 years old (SD=5.75). In relation to the marital status, 69.2% are married; 23.1% widowers and 7.7% are divorced or separated. Regarding education, 35.2% have between one and three years of formal study and the same percentage is found for those who have between four and eight years; 15.4% have studied for more than eight years and the percentage of illiterate people found was 7.7%.

The permanence time in the program was of 84.6% of the elders interviewed, provided that it ranged between one and six months, and the most common frequency was observed in the category between three to five months (38.5%), followed by the category up to two months (30.8%). However, only 69.2% affirmed to remember the date of entry in the program, what makes us question and rethink about the data found in relation to the permanence time. How can the elder remember the time for which he/she remained in the program if he/she cannot remember its entry date?

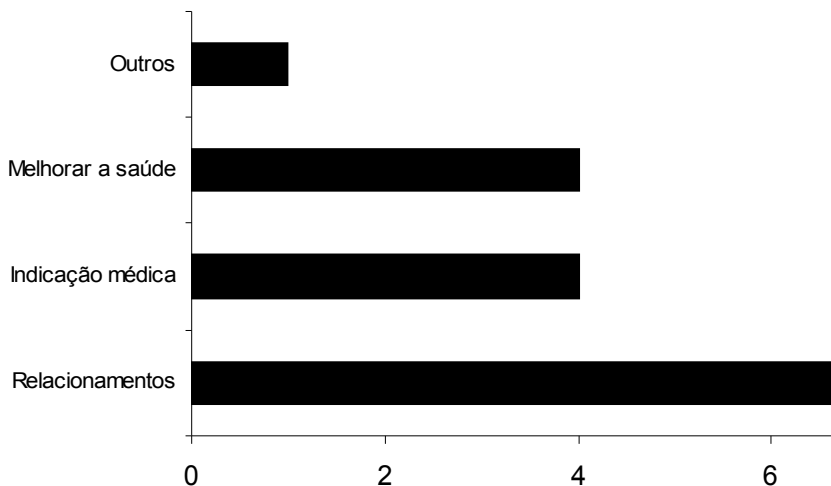
Among the reasons that led to the participation in the program, the relationship was the most frequent (Figure 1),

emphasizing that the other people's invitation (friends, neighbors, acquaintances and family), can be effective in engaging this population in physical exercise programs.

The result found collides with the results presented by Freitas *et al.* (2007), in a recent study that evaluated the reasons for adhesion and permanence of participants in two physical exercise programs carried out in Recife, where 120 old-aged people over 60 years who had remained for over six months in the programs were interviewed. In this study, the influence of relatives and friends was pointed by 28.3% as "not relevant", and 23.3% of the interviewees mentioned the colleagues company with the same rank. In the same study, the aspects related to health improvement, physical performance and adoption of a healthy life style, among others, were pointed as "extremely important" causes of adhesion by the elders interviewed (FREITAS *et al.*, 2007). Cohen-Mansfield *et al.* (2004) analyzed 324 elders aged between 74 and 85 years old and concluded that, for almost 70% of the participants, causes like: medical counseling for the physical exercise practice; being monitored by a health professional; the instructor's quality and the evaluation of the exercise effects by a professional were important for the elders to engage in the program. The authors also mention other causes as very important: easy access to the place of classes (preferentially near their houses), type of exercise performed, cost, social issues (group the same age range).

In this study, it was found that the answers about the adhesion to the program were connected to: 23.5% of health

improvement as the main cause, and also, 23.5% pointed the medical recommendation.



Graph 1: Aspects that led the elders to adhere to the gymnastics program. With regard to these aspects, one or more options were referred and, therefore, there is a divergence related to the total frequencies and sampling.

[Caption: Outros: Others; Melhorar a saúde: Improve health; Indicação médica: Medical recommendation; Relacionamentos: Relationships]

Motivation can be defined as any internal strength, impulse or an intention that leads a person to do something or act in a certain manner, that means, as the cause of a behavior (MAGILL, 1984). Schutzer and Graves (2004), in a revision

study, pointed as motivational aspects for elders to practice physical exercises: self-efficacy, the receipt of informative warnings, music in the environment and demographic issues. Mazo (2003) further emphasizes factors that may interfere in the practice of physical activities and exercises: history, socialization, age discrimination, social and environmental factors, benefits noted and result expectations, as well as attitudes and knowledge.

Self-efficacy– defined as a personal belief of the individual in his success when performing any task (BANDURA, 1977) – is consistently identified as a factor for adhesion and maintenance of the physical exercise practice in various populations, including old-aged people. Receiving informative contacts by telephone, mail or in person also seem to be motivating factors. Another factor that makes the exercise practice easier is to have in the environment a proper song, because it seems to attenuate the perception of difficulty, monotony and discomforts connected to physical exercise. The demographic characteristics most commonly associated with motivation to remain in physical exercise programs are related to fitter individuals at the beginning of the program, with less chronic diseases and pains, non-smoking people, among others (SCHUTZER; GRAVES, 2004).

It's worth emphasizing that the medical counseling for the physical exercise practice is pointed as a key-factor so that the elder assumes an active behavior (COHEN-MANSFIELD *et al.*, 2004), by virtue of the regard that old-aged people have for the advices given by their doctors (SCHUTZER; GRAVES, 2004). A study carried out in the city of Baltimore – USA, with

2507 elders who benefited from the health system for four years, pointed that among the 301 elders that started an active life style, during the study period, 40% pointed the doctor's influence as very important (BURTON; SHAPIRO; GERMAN, 1999). Calfas *et al.* (1996) also mentioned that the doctor's advice towards the adoption of an active life style is efficient for individuals who used to have a sedentary life.

However, the medical counseling can also be considered as an obstacle for the adoption of an active life style, provide that, as mentioned by Schutzer and Graves (2004), they may not provide the elders with a regular and accurate counseling for the practice of physical activities and exercises.

A factor that may contribute to the non-adhesion to or non-maintenance of an active lifestyle by old-aged people, which is considered as relevant, refers to the lack of knowledge or understanding about the relation between moderate physical exercise and health (MAZO, 2003; SCHUTZER; GRAVES, 2004). According to Schutzer and Graves (2004), this is an important obstacle, because many old-aged people lived in times where the practice of physical exercises was not related to health, was not valued nor considered as necessary and that's why they tend to see the physical exercise from a recreational standpoint (CHAO *et al.*, 2000).

Nevertheless, the relation among physical activity, exercise and health has already been corroborated by several studies (SHEPHARD, 2003; BIRD; TARPENNING; MARINO 2005; WARBURTON; NICOL; BREDIN, 2006), where the professionals that deal with such population shall be responsible for the transmission and the accurate counseling.

Unfortunately, as mentioned by Chao *et al.* (2000), a large number of professionals responsible for the elders' health quite often do not provide clear information about physical exercises. They got used to advise more active elders, but they don't provide information about specific behaviors and further elucidations. One of the possible causes for that is believed to be the non-recommendation of a Physical Education professional, who has among his/her professional intervention specificities the prescription, counseling and planning of the physical exercise program.

Other obstacles presented by elders for the practice of physical activities and exercises are quite often associated with a weak health condition, the physical environment where the activity is practiced (like sidewalks, parks, recreation centers and other existing facilitating factors, as well as calm neighborhoods) and besides, in spite of presenting a poor relation, the physical activity's influences during the elder's childhood and adolescence (SCHUTZER; GRAVES, 2004). Health problems are pointed by several authors (SANTARIANO *et al.*, 2000; DERGANCE *et al.*, 2003; MAZO, 2003) as one of the most common obstacles for the practice of physical activities or exercises by old-aged people. In a study with 199 elders, O'Neil and Reid (1991) pointed that 87% of the interviewees presented at least one obstacle to practice physical exercises.

Regarding the reasons for dropouts observed in this study, the main reasons reported by elders were grouped into three main categories, namely: 1) personal: health problems or death of the spouse or other relatives; 2) health: surgeries,

treatment of diseases like labyrinth disorders and hernia in the stomach; 3) physical exercise: joint pains felt after the classes with exercises performed in the sat-down and laid-down positions. Such results can be visualized in Figure 2.

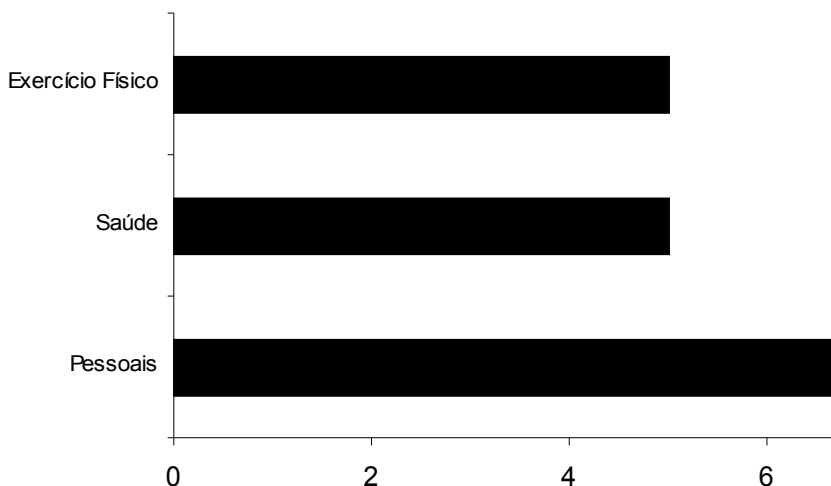


Figure 2. Aspects that led the elders to drop out from the gymnastics program. With regard to these aspects, one or more options were referred and, therefore, there is a divergence related to the total frequencies and sampling.

[Caption: Exercício Físico: Physical Exercise; Saúde: Health; Pessoais: Personal]

A study carried out by Santariano *et al.* (2000), with 2,046 people over 55 years old, verified that women expressed a larger number of obstacles than men. Among the obstacles

most commonly reported were: lack of company, lack of interest, fatigue and health problems. The same authors noted that the medical reasons increased with ageing, and that in older people (>75 years old), health problems and fear of falls were the obstacles most often reported. However, Mazo (2003) mentions: the health condition; the fear of falls and their consequences; the lack of motivation or "will power". In another study, Dergance *et al.* (2003), evaluated the perception of sedentary elders from different ethnic groups (Mexican-American and European-American), and found that the lack of interest, discipline, company, knowledge and the dislike to the practice of physical activities were the obstacles that presented a significant difference among the ethnic groups.

In this study, among the elders that were questioned about the classes (time, place, songs, material, teacher, exercises), 92.3% stated to enjoy very much the activities developed, provided that among this percentage, 30.8% stated enjoying them, although they could not perform some exercises, or the class was very exhaustive or the changes of teachers did not please them. Regarding this aspect, it's worth mentioning that the teacher's performance and the creation of bonds with the students is an essential aspect to maintain the elders in physical exercise programs. In the Freitas *et al.*'s study (2007), factors like being stimulated and receiving the teacher's attention were pointed by 62.5% and 57.5% respectively, as very important causes to remain in the program. Among the interviewees, in the present study, only one old woman stated not enjoying the classes, emphasizing that the class was slow for her rhythm.

In relation to the well-being sensation, 84.6% affirmed that they felt well when they practiced physical exercises, among which 15.4% felt well at first but later, they had pains. The sample remainder (15.4%) affirmed that they did not feel well with the gymnastics classes. The importance of the well-being sensation enabled by the physical exercise for the maintenance of elders in such programs was highlighted by Freitas *et al.* (2007), in a study where 74.2% of the elders interviewed pointed it as relevant.

However, in spite of verifying problems arising from the physical exercise itself and health problems, it was found that 84.6% of the people would like to come back to the group and believe that they will possibly do it, but, for such, some situations have to be changed and many of them do not depend exclusively on their actions like: their spouse's health improvement, reduction of the weekly attendance at the program and other aspects that depend on their own actions like: recovery from surgeries and acceptance of the spouse and/or children's finitude.

4 Final considerations and recommendations

It could be concluded that the main reasons of adhesion to the program were aspects connected to the social relationships, like for instance, invitation of friends and/or relatives, where this later is more significant than the medical recommendation, although it is a key-factor for the adhesion of old-aged people to physical exercise programs.

Among the reasons of dropouts, the main causes observed were related to personal reasons, mainly health problems and/or death of the spouse or other relatives. The other causes that led the elders to drop out of the program were health reasons and inadequacy of the physical exercise to their limitations and potentialities. Focusing on the physical exercise itself, this fact is worth the attention of the professionals involved, particularly the Physical Education professional, who is liable for the intervention through physical exercises and the due recognition of the activities to be developed as necessary with the population under consideration.

Researches that evaluated the factors of influence in the practice of regular physical activities, that means, the factors that may more expressively influence the option for a certain behavior, like the facilitators and obstacles, are fundamental, because such recognition allows establishing and proposing intervention programs as a means to promote the physical activity that detect, transpose the obstacles and provide maintenance at suitable levels.

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aged people, with average age of 71.08 (SD=5.75) years old, were interviewed through a semi-structured interview applied by telephone. It was concluded that the main reason for adhesion to the program was relationship aspect (friends and/or relatives invitation) and the most frequent reasons for dropouts were personal causes (spouse's health problems, death of the spouse or other relatives). **Key-words:** Exercise. Adhesion. Patient's dropouts. Old-aged people.

Factores que influyen en la renuncia de los ancianos a un programa de ejercicios físicos

Resumen: Este estudio busca investigar los factores influyentes en la adherencia y renuncia de ancianos a un programa de ejercicios físicos implantado en las Unidades del Local de Salud (ULS) de Florianópolis, SC. Para eso, se entrevistó a 13 ancianos, con edad promedio de 71,08 (DP=5,75), por medio de una entrevista semiestructurada aplicada vía teléfono. Se concluyó que el principal motivo de adherencia al programa fue el aspecto de las relaciones personales (invitaciones de amigos y/o familiares), y los motivos de renuncia más frecuentes fueran razones personales (problemas de salud del conyugue, muerte del mismo o de otros familiares). **Palabras-clave:** Ejercicio. Adherencia. Desistencia del paciente. Anciano.

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