
FREE EXERCISE PROGRAMS FOR THE ELDERLY: A SYSTEMATIC REVIEW ON ADHERENCE AND ABANDONMENT

PROGRAMAS GRATUITOS DE EXERCÍCIO FÍSICO PARA IDOSOS: UMA REVISÃO SISTEMÁTICA SOBRE ADESÃO E DESISTÊNCIA

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RESUMO

A população idosa cresce cada vez mais no Brasil. Como consequência, há um crescimento equivalente no número de programas públicos de exercícios físicos direcionados a esse grupo. Considerando os benefícios dos exercícios físicos e a importância de se aderir a esse comportamento para que os benefícios possam ser percebidos, foi realizada uma revisão sistemática da literatura existente sobre esse assunto com o objetivo de identificar os motivos que levam à adesão a programas gratuitos de exercícios, assim como aqueles que levam à desistência dos mesmos programas. Foram realizadas buscas nas bases de dados SciElo, SPORTdiscus e Pubmed, com frases de busca em português e em inglês. Após uma triagem, dez estudos foram analisados em relação às características das amostras, tipos de programas, método de coleta de dados e as razões por trás da adesão e da desistência dos sujeitos. Verificamos que as pessoas idosas tendem a entrar nos projetos por motivos relacionados à saúde, mas permanecem devido a outros fatores, como a socialização e a percepção dos benefícios provenientes da prática de exercícios. Quanto ao abandono, o mesmo ocorreu devido a problemas de saúde, dor muscular causada pelo exercício, o desgosto pelas aulas e questões relacionadas à família.

Palavras-chave: Exercício Físico. Idosos. Adesão. Desistência.

ABSTRACT

The elderly population in Brazil is on the rise. As a consequence, there is an equal growth in the number of free public exercise programs directed to this group. Considering the benefits of exercising and the importance of adherence to this behavior so that the benefits can be perceived, we conducted a systematic review of the existing literature on the topic, aiming to identify the reasons that lead to adherence to free public exercise programs, as well as those that lead to abandoning the same programs. Searches were conducted on SciElo, SPORTdiscus and Pubmed databases, with search phrases in Portuguese and in English. After a triage, ten studies were analyzed regarding sample characteristics, program type, data collection method and the reasons behind the subjects' adherence and abandonment. We verified that elderly people tend to enter the projects for health-related reasons, but they remain due to other factors, such as socialization and the perception of the benefits brought on by exercising. As for abandonment, it occurs due to health problems, muscle pain due to exercising, dislike for the classes and family business.

Keywords: Physical Exercise. Elderly. Adherence. Abandonment.

Introduction

The percentage of the world's population that is considered elderly is constantly growing, especially due to reduced birthrates and the increase in life expectancy in many countries¹. Around the world, this is the population group that increases the most. In 2015, estimates projected the existence of approximately 901 million people older than 60 years of age, something that corresponded to about 12% of the world population. For the year of 2050, the projection for most countries (except those located in Africa) is for the over-60 age-group to represent 25% or more of the entire population².

Considering the growth of the elderly population, there is justification for the increase of the number of research and assistance programs, as well as public policies, directed

towards this age group, such as the Elderly Persons' Statute, the Brazilian National Plan for the Elderly and, in a more general matter, the Organic Social Aid Law³. Among these programs, our attention is called by the 'Academias da Saúde' (Health Gyms), a program created by the Brazil's Ministry of Health in 2011 with the objective of acting as a vehicle for health promotion, making physical exercise and other practices possible, as well as those of healthy eating and health education⁴. These gyms are located in public areas and have adequate infrastructure for their purpose, as well as the presence of qualified professionals in order to achieve the project's goals⁴.

The national 'Academias da Saúde' program gave rise to many projects, aiming to offer physical exercise to elderly people in different cities around the country, such as the 'Rio Ar Livre' (RAL) program in the city of Rio de Janeiro⁵. Projects of this nature represent a great opportunity for their target age group as they improve access to regular exercise, allowing the older adults to participate in preventative activities that will maintain or improve their health condition and autonomy, as well as facilitate the formation of social support groups, thus contributing for an improvement in this group's quality of life⁶.

However, in order for its participants to obtain the benefits that are commonly associated with physical exercise, they must adhere to the program, as it seems to be public knowledge already that the biological and psychosocial benefits associated with exercise only occur when it happens regularly and systematically. Moreover, any gains obtained through exercise may reverse after up to two years, no matter how intensely a person was exercising before stopping⁷. It is known that adherence to regular physical exercise is more difficult for the elderly since, for them, there is a series of barriers, such as fear of exercising, physical and environmental limitations and even family pressure⁸, which lead to high dropout rates in this type of program⁹. Some free and public programs may facilitate adherence for older people, though little is known about it.

Many studies explore the effects that physical exercise has on the elderly population¹⁰⁻¹², but not many about the reasons why they join, remain and dropout from exercise programs. Compiling their reasons for adhering to and abandoning such programs may be interesting to help improve ingress and adherence strategies for this age group, strengthening them as public health policy programs. Although there is a systematic review from 2013 regarding the entrance and maintenance of the elderly in physical activity programs¹³, the study did not focus on free public programs, making our study relevant and necessary, as little is known about the people who frequent this type of program and their motivations, as well as for the purpose of nurturing public policies with this information, contributing to a better quality of the programs.

Thus, this study aimed to compile elderly peoples' reasons for adherence and abandonment of free and public exercise programs that offer regular exercise practice. More specifically, the aims were: a) to investigate the nature of elderly peoples' reasons for remaining and abandoning free and public exercise programs; b) to discover what types of exercise are offered in the programs; and c) to examine the characteristics of the samples used in the studies. It is important to consider these variables because they may or may not influence the adherence and dropout rates in these programs, as well as show which groups tend to remain in each type of activity. No time-related or geographical barriers were determined when searching for studies to include in this review as our aim was to analyze adherence and abandonment in general.

Methods

Protocol

This systematic literature review was conducted according to the protocol in 'Preferred Reporting Items for Systematic Review' (PRISMA), respecting the limitations that

apply to studies conducted in the sociocultural area of knowledge regarding some of the items in the checklist¹⁴. As such, it was not possible to standardize the type of study that was analyzed or to register the review in the Cochrane database.

Elegibility Criteria

In order for a study to be included in this review, it had to obey the following criteria: a) to have been developed with humans of any sex and with ages greater than or equal to 60 years; b) be about the adherence or abandonment of elderly people in relation to a supervised free public exercise program; c) to be completely available through the databases; d) be written in English or Portuguese. There were no limitations imposed on the year of publication.

Information sources and search strategy

The revision was conducted with studies published until January 2019 in the Scielo, Pubmed and SPORTdiscus databases. These databases were selected due to their area of focus, considering that our focus was set on studies in the Physical Education field. No limitations were imposed on the years of publication included in the search.

The keywords used in the search were selected from the list of Health Sciences Descriptors (Descritores em Ciências da Saúde - DeCS) and also from Novo Aurélio Século XXI, a portuguese language dictionary¹⁵: adhesion / adherence / maintenance, elderly / old, desistance / dropout / abandonment, physical exercise / physical activity / physical training. The search terms were employed both in Portuguese and in English in all of the databases.

The following search phrase was used in Portuguese: adesão OR adesões OR aderência OR aderências OR manutenção OR manutenções AND idoso OR idosa OR idosos OR idosas OR terceira idade OR melhor idade AND desistência OR desistências OR abandono OR abandonos AND atividade física OR atividades físicas OR exercício físico OR exercícios físicos OR treinamento físico OR treinamentos físicos. In English, due to the difference in terminology, we did not use the literal translation of all terms, preferring the following search phrase instead: adhesion OR adherence OR maintenance AND elderly OR old AND desistance OR dropout OR dropouts OR abandonment AND physical activity OR physical activities OR exercise OR exercises OR physical training. The filters that were used were 'full-text, humans and title/abstract'. For every new search that was conducted, there were additions to the results. When the search phrases were inadequate for specific search forms in different databases, multiple searches were conducted with smaller versions of the search phrase until all the terms had been contemplated in combination with the others.

Study selection

The study selection was conducted by a single researcher. In the study identification phase, 6.574 studies were found in the aforementioned databases, aside from three previously identified studies. During the initial title and abstract triage, one article was discarded for being a duplicate and 6.555 were discarded for having been conducted with inadequate subjects for this review. The 21 studies that remained after the inclusion filter were submitted to the scanning and, afterwards, skimming reading techniques¹⁶, after which eleven studies were discarded for not obeying the study's inclusion criteria. In the end, ten studies were selected for analysis (Figure 1). Lastly, the final decision to include the 10 articles took into consideration their methodological quality, which was analyzed with the Joanna Briggs Institute (JBI) critical evaluation tool for use in Systematic Reviews, especially for qualitative research^{17,18} (Table 1). All of the studies that were included fulfilled a minimum of seven requirements out of ten. Question six of the evaluation instrument is not applicable to any of

the studies but Souza and Vendrusculo¹⁹. This demonstrates that the studies are of good methodological quality.

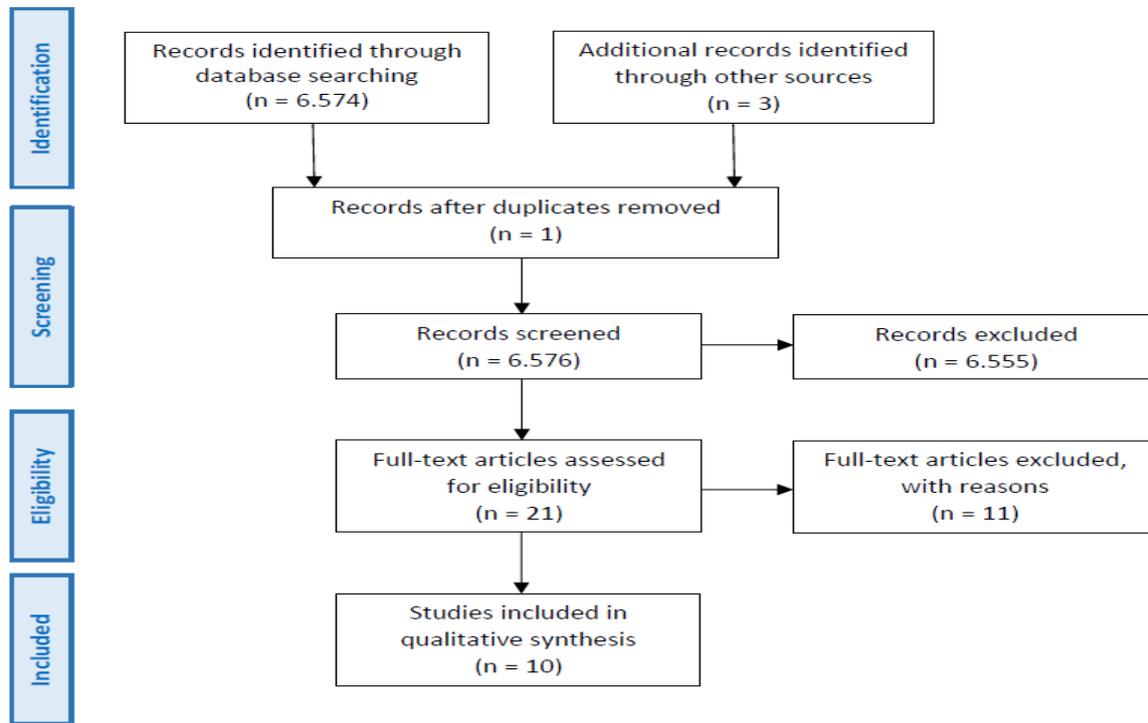


Figure 1. Article selection flow chart

Source: The authors

Table 1. Qualitative evaluation of the studies included in the review

Study	1	2	3	4	5	6	7	8	9	10	Include
Freitas et al., 2007 ²⁰	Yes	Yes	Yes	Yes	Yes	NA	Unclear	Yes	No	Yes	Yes
Pereira and Okuma, 2009 ²¹	Yes	Yes	Yes	Yes	Yes	NA	Unclear	Yes	No	Yes	Yes
Souza and Vendrusculo, 2010 ¹⁹	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	Yes	Yes	Yes
Meurer, Benedetti and Mazo, 2012 ²²	Yes	Yes	Yes	Yes	Yes	NA	Unclear	Yes	Yes	Yes	Yes
Ribeiro et al., 2012 ²³	Yes	Yes	Yes	Yes	Yes	NA	No	Yes	No	Yes	Yes
Manzano and Molina, 2012 ²⁴	Yes	Yes	Yes	Yes	Yes	NA	No	Yes	Unclear	Yes	Yes
Andreotti and Okuma, 2013 ²⁵	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Unclear	Yes	Yes
Salin et al., 2014 ²⁶	Yes	Yes	Yes	Yes	Yes	NA	Unclear	Yes	Yes	Yes	Yes
Medeiros et al., 2014 ²⁷	Yes	Yes	Yes	Yes	Yes	NA	NA	NA	Yes	Yes	Yes
Gillette et al., 2015 ²⁸	Yes	Yes	Yes	Yes	Yes	NA	No	Yes	Yes	Yes	Yes

Note: 1) Congruity between the philosophical perspective and the methodology; 2) Congruity between the methodology and question/objectives; 3) Congruity between the methodology and the methods of collect; 4) Congruity between the methodology and the representation and analysis of data; 5) Congruity between the methodology and the interpretation of results; 6) Statement locating the researcher culturally or theoretically; 7) Is the influence of the researcher on the research (vice- versa); 8) Participants adequately represented; 9) Is the research ethical according to current criteria; 10) Conclusions flow from the analysis the data

NA: not applicable

Source: The authors

Data collection process and data items

Data collection was conducted by a single researcher. The following data were collected from the studies and qualitatively analyzed: a) sample characteristics (sample size, sex, age and participants' sociodemographic data); b) analyzed program's characteristics (such as the types of exercise offered and the weekly frequency at which the programs took place); c) data collection instrument; d) results (main reasons for adherence or abandonment).

Results

Study Characteristics

Table 2 shows the studies that were included in this systematic review and the variables that were considered. Most of the selected studies are cross-sections, except for the one by Medeiros et al.²⁷, who collected data for their study both longitudinally and also cross-sectionally.

Of the ten included studies, seven are university extension projects and one of them is being conducted with help of the city where the project was developed. It should be noted that Freitas et al.²⁰ investigated two programs simultaneously: one of them is a university extension program and the other is municipally run.

The samples for most of the studies involve mostly female subjects. Medeiros et al.²⁷ worked only with male subjects, which were the focus of their investigation, but their sample represented only 15-29% of the total participants in the project they investigated. Also, although some studies do not show sociodemographic data, in those that show this kind of information, most of the samples are composed of married individuals that belong to the highest economic classification and who had a good education and good jobs throughout their lives.

Reasons for Adherence

Table 3 shows the main reasons that lead older people to enter and remain in public exercise programs. The most frequently mentioned reasons for entering the programs that were investigated by these studies has to do with health, such as medical orders and individual worries about health improvement^{20,21,25,27}. The most common reasons for staying in the programs, though, have more to do with enjoyment of the activities, although health-related reasons do not completely disappear^{19,20,22-24,26-28}.

Reasons for Abandonment

Table 4 shows the main reasons that cause older people to abandon public exercise programs. Only two studies investigated the reasons for abandoning said programs and among those, there were personal issues such as muscle pain and family situations, but also those issues related to class schedule and quality^{19,28}.

Table 2. Description of studies included in the systematic review

Study	Country	Type of study	Sample	Program characteristics	Data collection instrument
Freitas et al., 2007 ²⁰	Brazil	Cross-sections	n = 120 Age: 60-85 years Sex: 69,2% female Sociodemographic data not informed	Type: University extension program and municipal-run program Exercise type: hydrogymnastics, weight training, aerobic gymnastics, dance, swimming. Frequency: Not informed	Adapted questionnaire with Likert Scale on motivation for sports practice and structured interview.
Pereira and Okuma, 2009 ²¹	Brazil	Cross-sections	n = 54 Age: 67±5 years Sex: 74,1% female Occupation: 83% retired Schooling: 22,22% High School; 42,59% College Economic class: 43,14% Class A	Type: University extension program Exercise type: Not specified Frequency: 2x/week	Sociodemographic questionnaire Likert table and open-ended question.
Souza and Vendrusculo, 2010 ¹⁹	Brazil	Cross-sections	n = 10 Sample data not informed	Type: University extension program Exercise type: gymnastics, walking, games, sports, dancing, weight training, hydrogymnastics Frequency: 2x/week	Semi-structured interview with open-ended questions
Meurer, Benedetti and Mazo, 2012 ²²	Brazil	Cross-sections	n = 140 Age: 67,54±6,6 years Sex: 82% female Sociodemographic data not informed	Type: city-run program Exercise type: Gymnastics Frequency: 3x/week	IMPRAF-54 questionnaire and 2 attached questions.
Ribeiro et al., 2012 ²³	Brazil	Cross-sections	n = 199 Sex: 98% female Age: 70±6 years Economic class: 46,7% C Class	Type: University extension program Exercise type: Gymnastics and hydrogymnastics Frequency: 1-3x/ week	Semi-structured questionnaire with open-ended and multiple choice questions
Manzano and Molina, 2012 ²⁴	Spain	Cross-sections	n = 1605 Sex: 100% female Age: 71±5 years Sociodemographic data not informed	Type: city-run program Exercise type: Gymnastics Frequency: 5x/week	Multiple choice questionnaire. Satisfaction scale (Likert)

continuing Table 2...

Study	Country	Type of study	Sample	Program characteristics	Data collection instrument
Andreotti and Okuma, 2013 ²⁵	Brazil	Cross-sections	n = 44 Age: 70±5 years Sex: 72,7% female Marital Status: 56,8% married Occupation: 75% retired Schooling: 52,2% High School; 30% College Income: R\$ 0,00 a R\$ 8.500,00.	Type: University extension program Exercise type: Gymnastics and theory classes Frequency: 2x/week	Questionnaire with open-ended and multiple-choice questions
Salin et al., 2014 ²⁶	Brazil	Cross-sections	n = 163 Age: 67,2±6 years Sex: 71% female Marital Status: 58,5% married Occupation: 55,0% retired Income: 41,5% - 1 to 2x min. wage	Type: city-run program partnering with university Exercise type: Gymnastics Frequency: 5x/week	Interview with two semi-open ended questions and 2 multiple choice (Likert)
Medeiros et al., 2014 ²⁷	Brazil	Cross-sections and Longitudinally	Longitudinal: n = 163 Cross-sectional: n = 45 Sex: 100% male Age: 68±8 years Marital Status: 40% married Schooling: 19% High School; 14% College Income: 25% - more than 6x min. wage	Type: University extension program Exercise type: Swimming and hydrogymnastics Frequency: 2-3x/week	Program database and questionnaire
Gillette et al., 2015 ²⁸	United States	Cross-sections	n = 241 Sex: 89% female Age: 71.2±8.2 years Marital: 46% married Schooling: 57% College Income: 40.7% < \$25.000/year	Type: Community program Exercise type: Gymnastics Frequency: 3x/week	Questionnaire about motivation and barriers, sent by mail.

Source: The authors

Table 3. Description of the results of the studies included in the review of reasons for adherence

Study	Type of analysis	Quantitative result*	Reasons for adherence
Freitas et al., 2007 ²⁰	Descriptive statistics: percentage	Entry: Improving one's health: 84,2% Improving physical performance: 70,8% Adherence: Maintaining good health: 100% Improving posture: 75%	Entry: improving one's health, improving physical performance, adopting a health lifestyle, reducing stress, following doctor's orders etc. Adherence: maintaining good health, improving posture, feeling good, increasing physical well-being, staying in shape, incentives, friends.
Pereira and Okuma, 2009 ²¹	Descriptive statistics: percentage	Improving physical condition: 30% / Acquiring knowledge: 20% / Improving one's health: 19%	Entry: Improving physical condition, acquiring knowledge, improving health
Souza and Vendrusculo, 2010 ¹⁹	Qualitative analysis	Not applicable	Entry: Health-related reasons Adherence: health; well-being; friends; group activities.
Meurer, Benedetti and Mazo, 2012 ²²	Descriptive statistics: percentage	Entry: Doctor's orders: 48,6% / Health: 33,4% Adherence: Doctor's orders: 37,8 / Pleasure: 32,1%	Entry: Doctor's orders; health-related reasons. Adherence: Socialization, health and enjoyment.
Ribeiro et al., 2012 ²³	Descriptive statistics: percentage	Entry: To avoid or prevent health problems: 68,8% / Doctor's orders: 59,8% Adherence: Maintain flexibility/become more agile: 56,3% / Avoid health problems: 59,8%	Entry: Avoiding health problems; improving physical and mental conditions; doctor's orders. Adherence: avoiding health problems; improving physical and mental conditions; recovery injuries/illness; maintaining health; reducing stress.
Manzano and Molina, 2012 ²⁴	Descriptive statistics: percentage	Entry: Health: 94,5 % Adherence: Health: 93,4 %	Entry: health; recreation; personal relationships; preparation for sports activities; aesthetics. Adherence: health; recreation; personal relationships; preparation for sports activities.
Andreotti and Okuma, 2013 ²⁵	Descriptive statistics: frequency	Friends' advice: n = 17 Improving health and quality of life: n = 13	Entry: friends' advice, belief in benefits of exercise, improving one's health, doctor's orders and socialization. Entry: search for health; third-person encouragement.
Salin et al., 2014 ²⁶	Descriptive statistics: percentage	Entry: Pursuit of health: 90,8% Adherence: Socialization: 72,7%	Adherence: perception of benefits; sensation of well-being; enjoyment of physical exercise and socialization.
Medeiros et al., 2014 ²⁷	Descriptive statistics: percentage	Entry: Quality of life and health: 47% Leisure: 22% Adherence: Enjoying the activity: 29% Health: 14%	Entry: search for quality of life and health; leisure activity; third-party reference; treating health issues; company and doctor's orders. Adherence: enjoying the exercise; physical activity effects on health; better quality of life; socialization; staying active and program service.

Source: The authors / **Note:** *Only the most quantitatively relevant results were described

Table 4. Description of the results of the studies included in the revision of reasons for abandonment

Study	Type of analysis	Quantitative result*	Reasons for abandonment
Souza and Vendrusculo, 2010 ¹⁹	Qualitative analysis	Not applicable	Muscle pain, family-related issues.
Gillette et al., 2015 ²⁸	Chi-squared	Personal illness/ poor health: 0.25 / I don't like to exercise: 0.24 / Class was too easy: 0.23	Very difficult classes; inconvenient class times; classes that were too easy; not liking exercise; illness; muscle pain.

Source: The authors / **Note:** *Only the most quantitatively relevant results were described

Discussion

Most of the studies included in this systematic review investigated university extension programs and the sample tends to be smaller than in the studies that investigate publicly run programs. This difference between the sample dimensions can be explained by the fact that publicly run programs are usually conducted in open spaces such as public squares and tend to have greater visibility, as well as more available space than the programs that happen within universities, where elderly people traditionally don't have much access. Universities, even public ones, tend to have more reserved and limited space. However, they normally have better infrastructure than public spaces, which can influence the reasons for adherence to the exercise programs cited by the participants. This notwithstanding, it is important to realize that these observations are only suppositions that come from having practical knowledge on the matter, as no consistent information was found in literature to support this analysis. Considering this, the reasons for adherence found in these studies must be analyzed with caution since, as they show a reduced number of participants such as in Andreotti and Okuma²², Pereira and Okuma²¹ and Souza and Vendrusculo¹⁹, who each analyzed, respectively, the reasons given by 44, 54 and 10 subjects who benefited from a different kind of space and infrastructure than what normally occurs in public spaces.

Another aspect that is interesting to emphasize is the weekly frequency at which the activities are developed in the investigated programs, since this influences the programs' quality and, thus, the way the participants view the programs. Of the ten investigated programs, only four have sessions at least three times a week, although two^{23,27} do not define exactly what their frequency is, informing instead that classes happen, respectively, from one to three times a week and from two to three times a week. Freitas et al.²⁰ does not offer this information at all.

According to the recommendations made by the American College of Sports Medicine (ACSM)²⁹, the indication for elderly individuals is of about 150 minutes of moderate physical activity per week. The Center for Disease Control and Prevention³⁰ corroborates the ACSM's recommendations and indicates that elderly people should, unless they have any physical limitations, do 150 minutes of moderate aerobic and strength training activities for the main muscle groups, with a frequency of two or more times a week. They also give the possibility of doing 75 minutes of vigorous aerobic activity instead of 150 minutes of moderate activity³⁰; something which is only followed by part of the analyzed programs, more specifically by the four that offer physical exercise at least three times a week^{22,24,26,28}.

One issue to be considered when studying old people's adherence to exercise programs has to do with socioeconomic factors. Medeiros et al.²⁷, Ribeiro et al.²³ and Pereira and Okuma²¹ found a greater number of participants who belong to the middle and upper classes, possibly due to a connection existing between schooling, monthly income and regular physical activity, even in free programs, as Andreotti and Okuma²⁵ remind us in their study.

Another important point within the socioeconomic context that also tends to influence individuals' permanence in physical exercise programs has to do with the individual's previous life. Pereira and Okuma²¹ conducted their study in a university extension program called Physical Activity Autonomy Program for the Aged (Programa Autonomia para Atividade Física para Idosos) from São Paulo University (USP) - SP/Brazil, which offers practical classes of many types, such as gymnastics and relaxation, alongside theoretical lessons on health-related subjects. Through a socioeconomic questionnaire, the authors found out that most of the 54 interviewed participants entered the program with the objective of 'improving their physical condition', 'acquiring knowledge' and 'improving their health'. These objectives represent 69% of the participants' responses. Besides that, the study showed that most of the participants (81.5%) had already done at least one type of physical activity

before entering the program and had been gainfully employed throughout their adult life (83%), which shows that a productive and physically active way of life tends to make exercise adherence easier at advanced ages.

In an earlier study about the same program, Andreotti and Okuma²⁵ also investigated the sociodemographic profile and the reasons for entry given by program participants in 1999, with a sample of 44 old people (32 women and 12 men). It is important to note that the authors encountered very different results. Only 'improving their health' appeared as a reason in common between both studies, which shows a change in values between both sample groups. This difference can be explained by a movement that has been encouraging elderly people to take up physical activity, which is something that has been on the road to change since the end of the 1970s, when the Commerce Social Service (Serviço Social do Comércio - SESC in portuguese) started the whole process³¹. Initially, the idea was that this populational group should have access to activities that were less vigorous and more social³², while nowadays the recommendation is for activities that range from moderate to intense²⁹ that have more to do with physical conditioning, one of the reasons indicated in Pereira and Okuma's study²¹.

Another interesting angle on the study conducted by Pereira and Okuma²¹ has to do with schooling and the participants' professions. Most of the interviewees had at least a high school diploma, or even a college degree. This shows the influence of schooling on exercise adherence, something that was confirmed in the study conducted by Medeiros et al.²⁷. Most of the men and women were professionally active throughout their lives, mainly in liberal professions and teaching positions, while only 22% of the female interviewees were housewives. The authors inferred that women with a higher level of schooling that had some sort of employment away from home had a greater probability of looking for a physical activity group. Going along with this result, Mazo et al.³³ found in their study, which was about the activity level of elderly Brazilian women, that the lower their level of schooling was, the lower their level of physical activity tended to be.

The influence of social context should also be considered regarding the different participation levels of men and women. With the exception of Medeiros et al.²⁷, who only included men in their study, most samples from the remaining studies contained mainly women, something that can be considered a representation of exercise programs for the elderly in general. This can be explained due to the fact that the investigated programs are free and publicly-run and that most of them offer group gymnastics which, according to Barbosa³⁴, discourages male participation. For the author, the way men interact with their aging process is constructed from the representations of masculinity present in society, leading to a smaller male participation in elderly socialization groups. Reinforcing this thought, Mello and Votre³⁵ affirm that elderly men tend to be ashamed of working with women in exercise programs of this type due to their own representations of masculinity, as they consider gymnastics to be a typically female activity. Also, Goggin and Morrow Junior³⁶ state that women have a greater tendency to value group work and, as such, to join supervised exercise programs. It is also important to consider the phenomenon of old-age feminization, shown by Salgado³⁷, who mentions that women are the majority of elderly populations around the world, mostly due to gender inequality in life expectancy, with women living longer than men. There are, in fact, more women than men in these programs, which means that strategies must be constructed to increase male participation in physical activity programs.

Relating to the reasons given for entry and adherence to public exercise programs, Freitas et al.²⁰ conducted their study with two different programs. One of them was the City Gym (Academia da Cidade in Portuguese), run by the city of Recife - PE, Brazil. The other program was called Master Life (Master Vida in Portuguese), a university extension program run by Pernambuco University / Brazil, and had a more academic approach. Regarding

reasons for entry in these programs, most answers had to do with health, such as ‘to improve my health’, ‘to adopt a healthy lifestyle’, ‘to follow my doctor’s advice’ and ‘to recover from an injury’. As for ‘maintaining my health’ having been a reason given by all participants to justify remaining in the projects, other aspects also come to our attention such as ‘well-being’, ‘posture’, ‘increase in strength’, ‘staying in shape’ and ‘receiving encouragement’.

In general, health-related reasons are present in all of the analyzed studies and tend to dominate the list of reasons for entry in this type of project, which reasons related to socialization are most important among those given to justify remaining in a program. This change of spirit among informants can also be observed in the studies of Meurer, Benedette and Mazo²² and Souza and Vendrusculo¹⁹.

In the investigation conducted by Salin et al.²⁷, the indicators of entry and adherence were separated into intrinsic reasons (which stem from the person’s own interests and desires) and extrinsic ones (generated by environmental stimuli, situations and factors that are externally generated). The results of this study reveal that the main intrinsic reason to justify the elderly people’s entrance in the exercise program was the ‘search for health’, while ‘doctor’s orders’, ‘socialization’ and ‘incentive given by others’ were shown as the main extrinsic reasons that explained the participants’ adherence.

Another way of categorizing the factors that influence elderly people’s participation in physical exercise programs can be seen in Gilette et al.²⁸. The authors separated the reasons into the ‘Motivators’ and ‘Barriers’ groups and mailed questionnaires to participants and ex-participants of the Enhance Fitness project in the United States of America. By comparing the amount of times each reason was marked by the survey’s participants and ex-participants, they were able to verify that those who had adhered to the program tended to mark the motivators such as ‘I like physical activity’ and ‘belief in exercise’s health benefits’ more than they marked barriers such as ‘class difficulty’ and ‘illness’, which were more commonly marked by the program’s ex-participants.

Just as Gilette et al.²⁸, Souza and Vendrusculo¹⁹ also wanted to investigate the main reasons related to participant dropouts from the program they investigated. The authors found ‘illness’, ‘dislike for classes’ and ‘exercise-generated discomfort’ to be the main factors that led old people to abandon the project. Another barrier they found had to do with ‘family-related issues’ such as taking care of grandchildren.

In summation, the reasons for entry in physical exercise programs that were found by the studies that were analyzed here tend to be linked to health-related issues, but what determines participant adherence has more to do with pleasure, well-being and liking classes, something that has already been identified in other populations and types of programs^{38,39}. This result indicates that the teacher’s methodology as well as how well the participants are treated at the class location are fundamental for keeping them in the program.

The relevance of this result cannot be denied, as it shows that old people are very worried about their health, considering that the consensus in literature (which is amply divulged by the media and by health care professionals) is that regular exercising can contribute to a healthier lifestyle in old age²⁹. However, health-related reasons alone may not be enough to bring about project adherence^{38,39}. Thus, the quality of the exercise programs that are offered, as well as the actions of the Physical Education professionals, seem to be fundamental for this population's adherence to this type of activity.

As for the importance of these results, although the studies are of good methodological quality according to JBL, cautious interpretation is advised since the literature still leaves some important gaps, especially due to the small number of studies on the matter and the variety of non-validated instruments that were used for data collection. These factors can compromise the results’ reliability. Another aspect to be considered is that each study focuses on entry, adherence and abandonment through a different perspective. The data collection

instruments have not been tested for reliability. Also, the small samples are another limiting factor and we urge caution in considering that these results may be considered in other contexts.

Despite the limitations, the knowledge of these results has an important practical implication since, when the elderly population's characteristics are known, as well as the reasons for which they enter, remain and drop out of free exercise programs, it is possible to evaluate and adapt already existing programs, as well as direct the creation of new ones that fulfill the real demands of this population group, increasing adherence and reducing abandonment as much as possible.

Conclusion

The present study's results show that health-related reasons, be they physical or mental, tend to be the main encouragement for old people to enter free and public exercise programs, while reasons related to socialization and the perception of exercise's benefits are important as they help these people remain in the programs.

As for abandonment, it is important to emphasize the small number of studies about the reasons for abandoning regular physical exercise. This indicates the need for more studies that identify the barriers that stand in the way of maintaining this lifestyle. However, at least in the studies that are included in this revision, personal illness, dislike of the lessons and difficult classes, as well as muscle pain and family issues are all factors that greatly influence the decisions of the elderly population.

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