

## Physical activity - the attitude of the institutionalised elderly

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### Abstract:

**Objective:** To explore the participation and attitude of institutionalised elderly towards Physical Activity.

**Method:** This study is cross-sectional in time with a quantitative paradigm approach. The sample consists of 113 institutionalised elderly people (mean  $82.96 \pm 7.03$  years of age). A questionnaire was used to collect data which was statistically analysed. This questionnaire was constructed by the researcher who used tests also validated by other authors.

**Results:** The participation of the elderly was higher than inactivity. The general attitude towards physical activity was found to be positive. The frequency of participation influenced the attitude towards physical activity (Kruskal-Wallis;  $p \geq 0.01$ ).

**Conclusion:** The elderly people in this study were found sedentary lifestyle, however they had a generally positive attitude towards Physical Exercise. The frequency of participation seems to influence the attitude towards Physical Activity.

**Key words:** physical activity; attitude; motivation; institutionalised elderly..

### Introduction

Physical Activity (PA) is generally defined as any bodily movement produced as a result of muscle contraction which results in caloric expenditure. Physical Exercise (PE) is defined as a subcategory of PA that is planned, structured and repetitive, resulting in improvement or maintenance of one or more physical components (Matsudo, et al., 2001).

Attitudes have been a subject of study marked by social psychology, since the knowledge of a person's attitude allows for inferences about their behaviour. Rodrigues (1992) developed a definition by analysing the various conceptualizations of different authors between 1928 and 1983. According to this author, attitude is then defined as an enduring organisation of beliefs and cognitions in general, endowed with emotional charge or against a defined social objective, which predisposes to a coherent action with cognitions and affects related to this subject. There is a strong relationship between PA and attitudes, because if the attitudes are manifested by behaviours, more positive beliefs about PA tend to become more evident with more active behaviour and adherence to PE practice. The inverse, negative attitudes tend to block adherence to practicing PE, since they also block older people from appreciating the benefits of exercising for health (Couto, 2003). Several authors of studies focusing on the topic of the attitude of the elderly towards PA reveal that they, in general, tend to have a positive attitude towards PA (Caetano & Raposo, 2005; Oliveira & Duarte 1999; Tavares, 2010). However, this positive attitude does not reflect the number of regular participants in Physical Activity Programmes (PAP) (Tavares, 2010). Attesting to this fact there are a number of factors that are perceived by the elderly as barriers that may prevent the practice of PA.

The main reason for the elderly practicing PA, as studies have come to report, is the pursuit of improving and maintaining physical health (Crombie, et al., 2004; Freitas, et al., 2007). The existence of several beneficial reasons for the elderly to start PA and its recognition are insufficient as the majority of elderly people continue to be sedentary (Gobbi et al., 2008). The barrier of PA, which is apparent across the vast majority of studies, is related to health problems or physical injuries (Gobbi et al., 2008; Nascimento, et al., 2008).

Having exposed the problems between physical activity and attitudes a population that is more vulnerable, namely the institutionalised elderly, the objective of this study was to explore their participation and attitude in relation to PE. Specifically, the study aimed to identify the main reasons and barriers of elderly people in adhering to PA; the assessment of attitudes towards PE and the frequency of participation in PA.

## Method

### Participants

The sample consisted of 113 elderly people. It was formed according to the following selection criteria: 65 years old and older; living in a Long-term care institution; participating in a physical activity programs (PAP) and having given voluntarily and informed consent to participate in the study. Of the 113 elderly people, 81 people are female. The maximum age of the total sample is 97 years old and the minimum age is 65 years old (mean age  $82.96 \pm 7.03$  years). With regard to marital status, 72.6% of all individuals in the sample are widowed. The educational level of the sample proved to be very low; most participants either did not attend school (46.0%) or did not complete primary education (36.3%). The data collection sites were long-term institutions that developed a PAP available to the population intended for the study. Were contacted 13 Long-term care institutions (public and private) in the district of Guarda, Portugal. Of the 13 institutions contacted, four institutions have not given consent and two did not meet one of the criterions established, develop a PAP.

### Instruments

The main instrument used for data collection was the questionnaire with closed and open questions. This questionnaire was administrated in a face-to-face interview and addressed to institutionalised elderly people. The questionnaire was organized into six different thematic categories; however for this particular study only the following three categories are of interest: "Socio-demographic identification"; "Perception of physical activity" and "Attitude towards exercise". With the exception of the last category, all of the others were created by the researcher. In the category for the understanding of the attitude towards PE the OPAPAEQ (Older Person Attitudes Toward Physical Activity and Physical Activity Questionnaire) was used. It is an instrument designed and validated by Terry et al (1997) and adapted for the Portuguese population by Oliveira & Duarte (1999). The OPAPAEQ has a total of 14 items of 4 different subcategories: tension relief (3, 6, 10, 12); promotion of health (2, 7, 11, 13); vigorous exercise: (5, 9, 14) and social benefits (1, 4, 8) (Terry, et al., 1997). The responses are scales according to the five-point Likert scale format, varying from "totally disagree" to "totally agree". This questionnaire was subject to a pilot test that consisted of surveying 4 individuals, with the same characteristics desired in the sample in order to test their understanding and logical reasoning.

The decision to willingly participate in the study was formalised through the completion of a consent form by each participant. The anonymity of participants and institutions was achieved by substituting names for codes. The data were handled only by the researcher and were used strictly for research purposes, thus ensuring confidentiality.

### Statistical analysis

The analysis of the data gathered was carried out with the support of the programme *Statistical Package for Social Sciences*, SPSS version 13.0. We used descriptive statistics (frequency, mean and standard deviation) for the overall analysis of data. The mean difference between the dependent variable "overall result of the Scale of Attitudes towards PE" and the independent variable "participation in PA" were studied. For independent samples with a maximum of two categories (fall), we proceeded to the analysis of the difference of means and medians using parametric and non parametric tests, T Test and Mann-Whitney U Test, respectively. For samples with more than two categories (participation in PA) the parametric test used was ANOVA and the non-parametric test used was the Kruskal-Wallis Test. The parametric tests were used only on the samples which met three requirements: numeric variables, normal distribution of data and homogeneity of variance. The Tukey Test was used when wanting to compare all of the paired means and when a null hypothesis was rejected for a minimum significance level of  $p \leq 0.05$ .

## Results

### Participation in Physical Activity Programmes

In the data summarised in Fig. 1, the regular participation (Always) exceeded the non-participation (Never). However, its variation was tenuous, with a percentage difference of 3.5. The regular attendance, i.e. those who attend the PA "almost always", "sometimes" or "rarely" show lower values and percentages closer together.

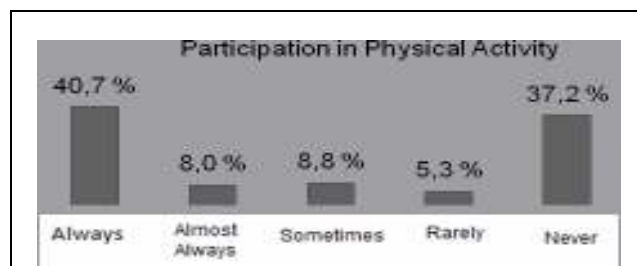


Fig. 1. Percentages of frequency of participation in Physical Activity.

### Motivations and Barriers to participating in physical activity

“Maintaining overall health” was the main reason marked for participating in PA by all of the individuals in the sample except for those who stated to never participating in PA (45.2%). “Physician’s recommendation” was not marked by any of the participants in the sample; however the influence of others represented 30.6 % of the participants in their motives for participating in PA. For those who marked the influence of others as the main reason for participating in PA, 82.4% were influenced by the instructor or promoter of the PA. The primary barrier to participating in PA marked by those who did not regularly participate was “physical disability” (64.6%) followed by “lack of interest” (27.7%). Other barriers such as the “need to rest” and “fear of falling” were less marked by the sample, at 4.6% and 3.1%, respectively.

*Attitude towards physical exercise*

The total average assessment of the "Attitudes towards exercise" on a scale of 1 to 5 was  $3.81 \pm 0.75$ , which is very close to the value of 4 indicating that the sample in general agree with all statements on attitudes towards exercise. Items with the highest score, were the items "a" (exercising with others is good for socialising) and "h" (practicing physical activity is a good way to spend free time) with an average score of  $3.90 \pm 0.7$ . These two items are related to the category of Social Benefits, (Table 1).

Table 1. Attitude towards physical exercise – mean and standard deviation.

Attitude towards exercise	
Categories	M ± SD
Promoting Health	$3.82 \pm 0.68$
Releasing Tension	$3.72 \pm 0.73$
Vigorous Exercise	$3.85 \pm 0.68$
Social Benefits	$3.90 \pm 0.71$
Total result	$3.81 \pm 0.75$

“Physical activity is in some regards an excellent remedy for someone who is tense, irritable and anxious” (item “j”) was the item which on average received the lowest score,  $3.62 \pm 0.87$ , and is the answer least agreed upon by individuals in the entire sample. This item belongs to the category of Tension Release which received the lowest scores in comparison with the remaining categories,  $3.72 \pm 0.73$ .

*Attitude towards physical exercise vs. Frequency of participation*

The purpose is to verify the existence of differences in means or medians between the dependent variable "Attitudes towards physical exercise" and the independent variables "Gender" and "Participation in PA." The average results from the "Attitudes towards exercise" showed no significant differences ( $p \geq 0.05$ ) between the variable "Gender" (Table 2).

Kruskal-Wallis, the non-parametric test, verified that there is at least one frequency of participation that leads to a different attitude than the others. The multiple comparisons by the Tukey method resulted in the identification of two frequencies different from the others. Respondents who participate "sometimes" and "rarely" positively and negatively influence the attitude towards PE, respectively.

Table 2. Attitude towards physical exercise – mean difference.

	N	Attitude towards exercise - Overall result		Statistical Test
		M ± SD	Test P	
<b>Gender</b>				
Male	32	$53,72 \pm 6,65$	t(df)= 0.69	Mann-Whitney U
Female	81	$53,25 \pm 9,50$		
<b>Participation in PA</b>				Kruskal - Wallis
Always	46	$56.35 \pm 6.26$	F(df1, df2)= 0.01*	
Almost always	9	$54.67 \pm 6.87$		
Sometimes	10	$58.10 \pm 7.34$		
Rarely	6	$47.17 \pm 11.46$		
Never	42	$49.62 \pm 9.68$		

\* Level of significance  $p \leq 0.01$

**Discussion**

The results about the frequency in PA showed that institutionalized elderly were highly inactive. Despite the inactive behaviour, it was not reflected in the general attitude towards PE, in fact the sample showed to have a positive attitude towards it. The positive attitude in all three categories assessed was not uniform; the category most valued was social benefits. The value attributed to social benefits, i.e. valuing socialising and having a good time, reinforces the results found on institutionalised elderly that “time” is hardly perceived as a barrier to participating in PA, as the elderly who live in long term institutions are lacking in activities (Gobbi et al., 2008). The main reason for participating in physical activities is to maintain overall health. This motive deviates from the social category which was most valued and approaches the category of health promotion which was the second most valued. However, it is the value attributed to social benefits that more easily explains such a

significant difference between the “attitude towards PE” and the “participation in PA”. This study found that those attending PA “sometimes” have a more positive attitude than those who attend “always.” According to Santos (2006), it is those who participate in PA who had the most positive attitude, as the greater the frequency the more positive the attitude (Santos, 2006). The valuing of social benefits can be enjoyed by both those who actively participate in PA and by those who participate more passively, as the latter can benefit from socialising and the dynamics of PA without direct interaction. This finding helps explain the more positive attitude of those who do not always participate in PA. According to the results, the more negative attitudes fit the group of participants who attend PAP “rarely” and not the group that “never” attends, as expected by inverse comparison of the same study by Santos (2006). The barrier most noted by participants in our sample who attend PAP “sometimes” is physical disability, compared to the remaining participants with other levels of participation. Physical disability may be the primary reason for which they may not be able to participate in PA more frequently, despite valuing it. Caetano and Raposo (2005) refute Santos (2006), in other words, they contest that participation influences the overall attitude towards PA criticising that both participants and non-participants of PA can equally have a positive attitude towards it (Caetano & Raposo, 2005).

This study acknowledges some limitations from the choices and options chosen. The questionnaire is a method of data collection that does not allow deepening of responses. The quantitative study based on the mathematics analysis that does not allow establishing relationships. The method of sample collection, for convenience, is a type of non-probability sample that does not allow a reliable generalization of results for the institutionalized elderly

### Conclusions

The elderly people in this study were found sedentary lifestyle, however they have a generally positive attitude towards PE. In addition to valuing the socialisation and excitement generated around PA, they also value the maintenance of general health, which is a major reason for their participation. What seems to hinder people to practice more PA is the physical disability. The frequency of participation seems to influence the attitude towards PE.

### References

- Body, R., & Stevens, J. (2009). Falls and fear of falling: burden, beliefs and behaviours. *Age and Ageing*, 38, 423-428.
- Caetano, L. M., & Raposo, J. V. (2005). Atitude dos Idosos Face à Actividade Física. *Cuadernos de Psicología del Deporte*, 5 (1 e 2), 143-155.
- Couto, L. (2003). *Actividade física no idoso - Estudo da influência dos factores demográficos e psicosociais*. Dissertação com vista à obtenção do Grau de Mestre em Ciências do Desporto, apresentada na Universidade do Porto (não publicada).
- Crombie, I., Irvine, L., Williams, B., McGinnis, A., Slane, P., Alder, E., et al. (2004). Why older people do not participate in leisure time physical activity: a survey of activity levels, beliefs and deterrents. *Age and Ageing*, 33 (3), 287-292.
- Matsudo, S., Matsudo, V., & Neto, T. (2001). Atividade física e envelhecimento: aspectos epidemiológicos. *Revista Brasileira Médica Esporte*, 7 (1), 1-12.
- Freitas, C., Santiago, M., Viana, A., Leão, A., & Freyre, C. (2007). Aspectos Motivacionais que Influenciam a Adesão e Manutenção de Idosos a Programas de Exercícios Físicos. *Revista Brasileira de Cineantropometria & Desempenho Humano*, 9 (1), 92 - 100.
- Gobbi, S., Caritá, L., Hirayama, M., Junior, A., Santos, R., & Gobbi, L. (2008). Comportamento e Barreiras: Atividade Física em Idosos Institucionalizados. *Psicologia: Teoria e Pesquisa*, 24 (4), 451 - 458.
- Nascimento, C., Gobbi, S., Hirayama, M., & Brazão, M. (2008). Nível de Atividade Física e as Principais Barreiras Percebidas por Idosos de Rio Claro. *R. da Educação Física/ UEM*, 19 (1), 109 - 118.
- Oliveira, S., & Duarte, A. M. (1999). As atitudes dos idosos face à actividade física In J. Mota & J. Carvalho (Eds.), *Actas do Seminário, A qualidade de vida no idoso: O papel da actividade física* (pp. 210 - 217). Porto: Gabinete de Desporto de recreação e tempos Livres. Faculdade de Ciências do Desporto e de Educação Física, Universidade do Porto.
- Rodrigues, A. (1992). *Psicologia social* (14ª ed ed.). Petrópolis: Vozes.
- Santos, S. (2006). *Motivação para a prática de Actividade Física em Mulheres Idosas*. Dissertação de Mestrado apresentado à Faculdade de Ciências do Desporto e Educação Física - Universidade do Porto (não publicado). Porto.
- Tavares, A. D. d. P. (2010). *Idosos e Actividade Física - programas, qualidade de vida e atitudes*. Dissertação de Mestrado apresentado à Secção Autónoma de Ciências da Saúde - Universidade de Aveiro (não publicado). Aveiro.
- Terry, P. C., Biddle, S. J. H., Chatzisarantis, N., & Bell, R. D. (1997). Development of a Test to Assess the Attitudes of Older Adults Toward Physical Activity and Exercise. *Journal of Aging Phys Activ*, 5, 111-125.