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Comparison of the quality of life of elderly people practicing physical activities and competitive sports games.

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ABSTRACT

Background: With increasing life expectancy and decreasing fertility rate the aging population is growing significantly, requiring actions that enable melhoraras health and quality of life of older people. **Objective:** This study aimed compare the perception of quality of life among elderly participants of a traditional exercise program performed in a Basic Health Units (EF-BHU) with practitioners of competitive sports that participate in the Senior Regional Games (JORI). **Methods:** The study involved 98 subjects of both sexes, aged over 60 years living in Votuporanga, SP, Brazil. Information have been raised as to the sociodemographic profile, health status, gender, age and quality of life through the WHOQOL-BREF questionnaire and WHOQOL-OLD. The numerical variables (age and education) were compared (inter-group) using the test Mann-Whitney. The chi-square test was used to analyze the associations in categorical variables. The "scores" of quality of life questionnaire (numerical) were classified, so that those subjects with levels located at quartile 4 (Q4) were designated "high" and peers located in other quartiles (Q1, Q2 and Q3) designated "low". For associations "2x2" (physical activity practiced x quality of life) was employed again the chi-square test. Variables with $P<0.2$ were subjected to the logistic regression model (Univariate) Poisson with robust adjustment of variance. Then, those variables that were statistically significant ($P<0.05$) in the univariate model, were subjected to the adjusted model. **Results:** The results indicate that the elderly have JORI median age less than EF-UBS elderly (64 *versus* 67 years, $p<0.01$) higher education (10 *versus* 02 years, $p<0.01$) and have more positive perceptions related to their housing, income and health. Regarding the quality of life of the JORI elderly have more positive perceptions in various dimensions in relation to EF-UBS elderly). **Conclusion:** We can conclude that elderly JORI, in general, have more positive perceptions of quality of life in relation to the EF-UBS elderly.

Keywords: Aging; Sport Games; Quality of life; Seniors; Physical Exercise.

INTRODUCTION

Quality of life (QOL) is considered a construct which addresses situations for different dimensions of life[1,2]. Each individual has a value system that mediate their desires and their concerns and cultural, economic and social conditions that make them evaluate the events and life situations differently from each other, such as por example, the aspects that determine the QOL. Thus, the assessment of QOL is very particulate and is essential to mark aspects involving health, percepção of and wellness para subsidize strategies para health promotion[3-6]. Although subjects of all ages tend to assess their QOL mediated by personal characteristics, particularmente seniors face more specific situations, as the biopsychosocial changes associated with paging rocess make the subjects in this stage of life experience episodes specific as reducing the physical and functional suitability, and cognitive changes in social relations[7]. These changes related to age can change their perception of well-being and the evaluation of their QOL[8,9]. Studies show that seniors who have social support and are engaged in activities of various orders, as group community and physical activity tend to evaluate more positively to their QOL[10,11]. Noting the aging process as a whole, there are several interventions that can produce effects on the health of the elderly and their percepwelfare tion, therefore, bids offering physical activities ingroup, are seen as positive in improving the QOL, and can point in this context, the engines games as a possibility. Games, for example, can help people acquire more confidence in carrying out their activities, which directly influences the self-esteem. Subjects who participate in games begin to develop feelings, express them, accept them and transform them, going to value the presence of others, respect differences and overcome difficulties by means of the various challenges imposed them, in addition, games can be seen as

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an excellent tool for the work of communication and conflict resolution within a group[4,12,13].

In São Paulo (Brazil), there is an important movement in relation to the participation of older people in sports activities, including the completion of the JORI- Regional Games the Elderly, which includes various sports and various stages of the competition, bringing together the most elderly various regions and cities in the state. This context mobilizes local governments, community groups, sports associations, professionals and seniors, both for the creation of structures for training and for the dedication and achievement of results, bringing a differential when compared to the activities normally offered to seniors. This differential, permeated by goals, discipline and challenges can attract seniors with distinct characteristics of the vast majority of the population, or modulate their behavior and how they evaluate their lives. It is well established a positive association of physical exercise with quality of life inelderly[5,14,15], but little is known about the different types of practice, especially in sports. Therefore, it is extremely important know the profile of older people who practice different types of exercise and how they evaluate their quality of life. The results generated in this study may support the work of professionals and intervention strategies directed to this population. Based on the considerations presented this study aimed to compare the perception of QOL of older adults participating in physical exercise programs offered by Basic Health Units (BHU) with seniors that participants of competitive engines games.

METHODS

Sample

From a cross-sectional were involved in the study, 98 individuals of both sexes, aged 60 years, living in Votuporanga, SP, Brazil. Of this total, 41 participating in a physical activity program offered by Basic Health Units (EF-BHU) the city and 57 participated in competitions during the Senior Regional Games (JORI) in the years 2015-2016 (JM-JORI). The following inclusion criteria were used: (1) the age of 60 years, (2) be resident of the city of Votuporanga (SP), Brazil, (3) be declared physically independent in relation to their Activities of Daily Living (ADL's) and (4) be participant of UBS or JORI groups for at least six months. EF-BHU group, was composed of physical activities practitioners elderly offered in the "Group of corporal practices", twice a week, lasting 60 minutes each session, in which plyometric exercises were offered, stretching, aerobics and dance. The JM-JORI group was composed of elderly practitioners of sports games and engines of the city of Votuporanga (SP), Brazil, and who participated in the Regional Games (JORI) the years 2015 and 2016, they met twice a week to practice games.

Ethics

Participants were informed about the questionnaires during the interview and gave written consent before participation. Given the requirements of Resolution 196/96 of the National Council on Health research involving human subjects, the elderly agreed to voluntarily participate in the research by signing for this, a Consent and Informed. The interview, the questionnaires and consent forms were previously approved by the Ethics and Research Committee Votuporanga University Center under No 1846876, CAAE: 607.555.16.0.0000.0078.

Procedures

Data collection consisted of an interview in which the identification data of the volunteers were collected, information on the sociodemographic profile and health status through questionnaires, as well as information related to gender and age, education and marital status. Then applied to the WHOQOL-BREF questionnaire and WHOQOL-OLD, elaborate link WHOQOL Group, both validated for the Brazilian population[16,14]. The two instruments were applied following the recommendations of the World Health Organization. The WHOQOL-Bref scores more general aspects related to qol and the WHOQOL-Old, more specific issues involving aging. The WHOQOL-Bref module consists of 26 questions (with question number 1 and 2 on the overall quality of life), with responses following a scale of Likert of 1-5 (the higher the score,better the quality of life). In addition these two questions, the instrument has over 24 facets which comprise four domains are: 1) Physical, which evaluates the perception of aspects of life involving pain/discomfort, energy/vitality, sleep quality, mobility, daily activities, dependence on medicines and treatments and work capacity; 2) Psychological, which considers self-esteem, positive feelings and religious beliefs and personal; 3) social relations, which evaluates the social and involvement; 4) Half ambiente evaluates the environment in which the subject is inserted, like home, financial, health care, opportunity to learn, participate in recreational activities, access to transportation and physical environment such as pollution, noise, traffic and climate. The WHOQOL-Old module consists of 24 questions and their responses follow a scale of Likert of 1-5 (the higher the more positive score evaluation) assigned to six areas, which are: 1) Sensory operation that evaluates the impact of loss of sensory abilities in quality of life; 2) Autonomy, which is related independencein old age, ability or freedom to live independently and make decisions; 3) past activities, present and future, which evaluates the satisfaction of achievements in life and the things that longs; 4) Social Participation, worth participation in every day activities, especially in the community; 5) Death and dying, which examines the concerns, worries and fears about death and dying and 6) Intimacy, which assesses the ability to have personal and intimate relationships. Each area has four questions, which can fluctuate from four to

20 points. The scores of the total score and each domain were converted into scores of 0 to 100 points, with higher scores represent a high QOL, low scores representing a lower QOL. The interview was conducted individually, insingle session by a single interviewer, inprivate place and no time limit for its completion. Any doubts expressed by respondents during the interview were promptly cleared by the interviewer.

Statistical analysis

The numeric data underwent the analysis of the data distribution by the test Kolmogorov-SmirnovThe numerical variables (age and education) were compared (inter-group) using the test Mann-Whitney. The chi-square test was used to analyze the associations in categorical variables. The "scores" of QOL questionnaire (numerical) were classified, so that those subjects with levels located at quartile 4 (Q4) were designated "high" and peers located in other quartiles (Q1, Q2 and Q3) designated "low". For associations "2x2" (physical activity practiced x quality of life) was employed again the chi-square test. Variables with P<0.2 were subjected to the logistic regression model (Univariate) Poisson with robust adjustment of variance. Then, those variables that were statistically significant (p<0.05) in the univariate model, were subjected to the adjusted model. All analyzes were performed using the software MicrosoftExcel, IBM SPSS (Statistical Package for the Social Sciences),version 22.0 and Stata Corporation, Stata/SE version 8.0.

RESULTS

The characterization of the according olds, years of study, sex, marital status, housing with satisfaction, satisfaction with income and perceived health, are shown in Table 1. The results indicated that JM-JORI the elderly have median age less than the elderly EF-BHU (64 *versus* 67 years, p<0.01), higher

Table1. Demographics data of the study participants groups.

Mann-Whitney		JM-JORI (mean±II)	AF-UBS (median±II)	Z	*P*
Age (years)		64±6	67±10	-3.390	0.001
Education (years)		10±2	4±7	-5.673	<0.001
Chi-Square					
variables		**JORI n (%)**	**AF-UBS n (%)**	**X^2**	*P*
Gender	Male	10 (62.5)	6 (37.5)	0.148	0.701
	Female	47 (57.3)	35 (42.7)		
Marital Status	Single	0 (0.0)	1 (100.0)	3.690	0.055
	Married	33 (63.5)	19 (36.5)		
	Separated	21 (77.8)	6 (22.2)		
	Widow	1 (6.7)	14 (93.3)		
	Domestic Partner	1 (50.0)	1 (50.0)		
	Other	0 (0.0)	1 (100.0)		
Residence	very dissatisfied	0 (0.0)	1 (100.0)	29.808	<0.001
	Dissatisfied	0 (0.0)	8 (100.0)		
	Neither satisfied nordissatisfied	3 (13.0)	20 (87.0)		
	satisfied	35 (87.5)	5 (12.5)		
	very satisfied	19 (73.1)	7 (26.9)		
Income	very dissatisfied	0 (0.0)	11 (100.0)	3.950	0.047
	Dissatisfied	14 (53.8)	12 (46.2)		
	Neither satisfied nordissatisfied	28 (82.4)	6 (17.6)		
	satisfied	15 (68.2)	7 (31.8)		
	very satisfied	0 (0.0)	5 (100.0)		
Health	Great	1 (50.0)	1 (50.0)	20.364	<0.001
	Very good	23 (85.2)	4 (14,8)		
	good	31 (62.0)	19 (38.0)		
	Bad	2 (11.8)	15 (88.2)		
	Too bad	0 (0.0)	2 (100.0)		

Note: AF_UBS = physically active basic health units; M = men; M = Women.

education (10 *versus* 02 years, p <0.01) and have more positive perceptions related to their housing, income and health

Table 2 presents the descriptive and comparative results regarding the perceived QOL of the elderly and JM-JORI EF-BHU groups. The results of the WHOQOL-BREF, show that the groups have different perceptions of the psychological and social domains and overall QOL. In Physical and Environment fields, the groups showed no significant differences. The results of the WHOQOL-OLD, show that the JM-JORI elderly have more positive perceptions than older EF-BHU in sensory areas, autonomy, past, present and future and intimacy. In the dimension death and dying, the elderly EF-BHU had more positive perceptions than older JM-JORI. The two groups did not differ significantly in their perceptions on the dimension social participation.

Figure 1 shows univariate model and adjusted associating the type of activity performed according the data obtained by the WHOQOL- BREF. In the univariate model and associated with the dependent variable (actual activity), domains Psychic, Social and Quality of Life General, appear significant, but when adjusted, only the psychic and social spheres appear significant.

Figure 2 shows univariate model and adjusted associating the type of activity practiced according to data obtained by the WHOQOL-Old. In the univariate model as associating the type of practice, Sensory areas, Autonomy, Death and Dying and Intimacy, appear significant, but when adjusted, only Death and Dying and Intimacy domains appear significant.

DISCUSSION

From a cross-sectional design, this study had the participation of 98 subjects which 57 practicing sports games and engines, and 41 practitioners of physical activities offered by the project "corporal practices" in Votuporanga (SP), Brazil. It was observed that the present study sample is predominantly female taking a percentage of 83.6% (n = 82), and only 16.4% (n = 16) men can be said that women are more compliant and assiduous in physical activity programs aimed at seniors[11,17,18]. Both groups showed no significant differences when comparing the figures for the perceived health, however

Table 2. Association between type of physical activity (practice engines games / physical activity in UBS) and domains of quality of life.

Domains Quality of Life - Bref WHOQOL *n* (%)		JM-JORI *n* (%)	AF-UBS	χ^2	*P*
Body	Low	44 (57.9)	32 (42.1)	0.01	*0.920*
	High	13 (59.1)	9 (40.9)		
Psychic	Low	33 (45.2)	40 (54.8)	19.745	*<0.001*
	High	24 (96.0)	1 (4.0)		
Social	Low	28 (43.1)	37 (56.9)	18.055	*<0.001*
	High	29 (87.9)	4 (12.1)		
Setting	Low	36 (52.9)	32 (47.1)	2.489	*0.115*
	High	21 (70.0)	9 (30.0)		
QV_Geral	Low	38 (51.4)	36 (48.6)	5.762	*0.016*
	High	19 (79.2)	5 (20.8)		
Fields of Quality of Life WHOQOL-Old *n* (%)		**Games engines *n* (%)**	**AF_UBS**	χ^2	*P*
Sensory	Low	33 (49.3)	34(50.7)	6.929	*0.009*
	High	24 (77.4)	7 (22.6)		
Battery	Low	30 (46.2)	35 (53.8)	11.441	*0.001*
	High	27 (81.8)	6 (18.2)		
Pas-Pre-Fut	Low	22 (43.1)	29 (56.9)	9.876	*0.002*
	High	35 (74.5)	12 (25.5)		
Part-Social	Low	32 (52.5)	29 (47.5)	2.160	*0.142*
	High	25 (67.6)	12 (32.4)		
Death / Die	Low	44 (74.6)	15 (25.4)	16.413	*<0.001*
	High	13 (33.3)	26 (66.7)		
Intimacy	Low	20 (34.5)	38 (65.5)	32.747	*<0.001*
	High	37 (92.5)	03 (07.5)		

Note: UBS primary care unit ; AF = physical activity; QOL = quality of life

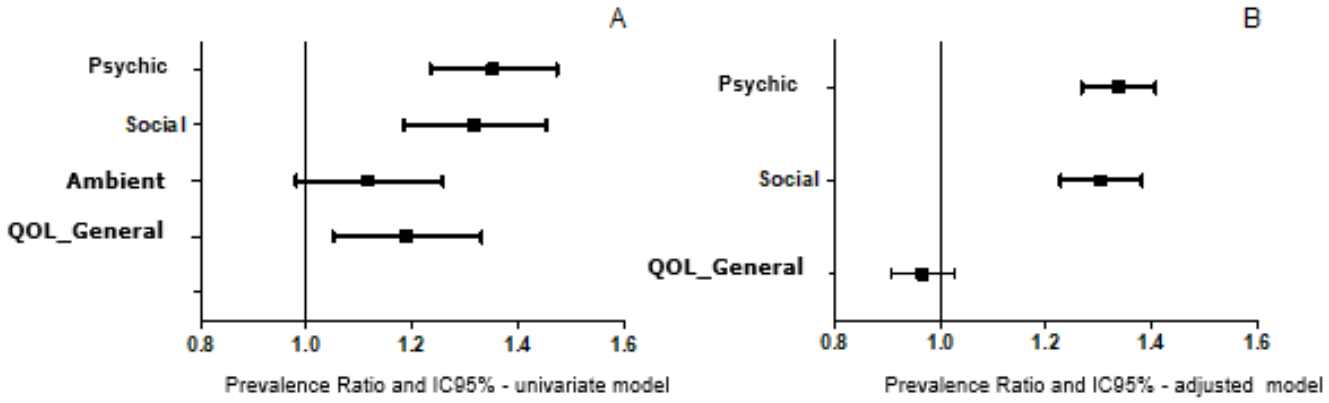

Figure 1. Univariate model (A) and set (B) for association between physical activity practiced type (dependent variable) and WHOQOL BREF.

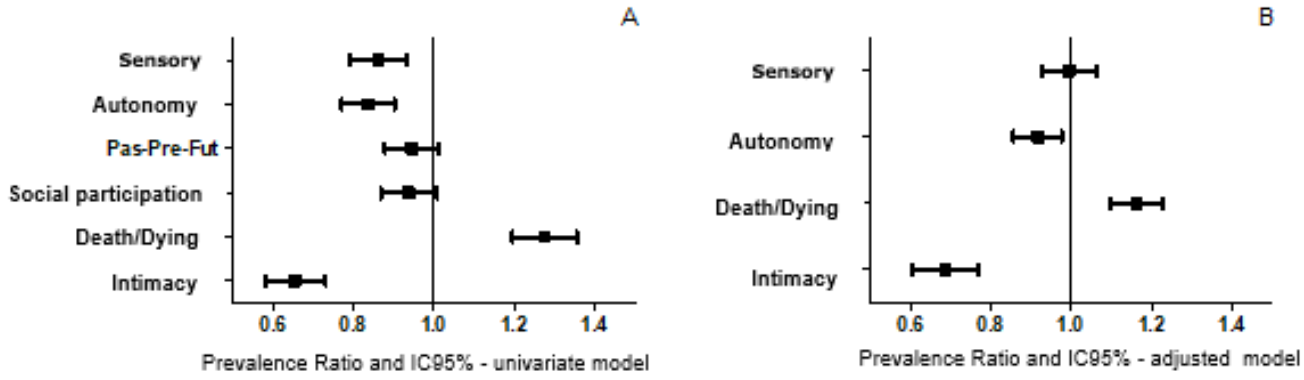

Figure 2. Univariate model (A) and set (B) for association between physical activity practiced type (dependent variable) and WHOQOL- OLD domains.

in the fields; marital status where wherenumber of individuals who declared widowers in AF-UBS group is much higher if the group purchased engines games; satisfaction with housing also had differences where the engines games group was more satisfied when compared to AF-UBS group; satisfaction with income also showed significant differences from the item "satisfied." The differences among the highlighted items, is based on a very common reality in relation to retirement in Brazil, the dream retirement is seen as a completed stage in everyone's life, but that, however, is marked as a step disadvantages of advantages which the individualneed a great adaptation will depend on its manageability and learn from the changes in this transition period[2,11,19,20]. The study is based on the assumption that practitioners of sports games, have a better QOL than practitioners of various physical activities. Considering the data found in the search through the WHOQOL-BREF, it could be seen that the significant differences appear only in the psychological domains (DOM2) and social (DOM3) compared the participating groups. This leads to suppose that in general the practice of physical activity as well as games can influence the quality, but in the case of these domains, the motor group games stand out because they have a more joint interaction with the group, and are exposed to competition. Competitiveness directly influences the self-esteem and social interaction, which explains some of the benefits that competition can promote the player. The group practice games enables provided with new people, making it possible to build new friendships and share experiences, as observed in some studies related to physical exercise and its benefits in QOL[11,20,21].

As for the data found by the WHOQOL-OLD, only the domains death and dying (DOM5), and intimacy (DOM6) had significant differences and considering the percentages the AF-UBS group has a perception of QOL in these areas better the group games engines. Although engines and competitive games can contribute to improving the quality of life in social aspects, the fact that the elderly belonging to AF-UBS group are inserted in a place where occur weekly guidance on the life and health-improvement style, could contribute along perception QOL of these subjects about these domains [11,20-22].

CONCLUSION

It is concluded that the elderly of JORI, in general, have more positive perceptions of QOL in relation to the EF-BHU elderly. These results indicate that while the two groups perform motor activities, games can bringmore challenging situations and motivating than physical exercise. Generally to be understood that the QOL can be positively affected both by physical activity, such as the practice games. It is suggested that more transverse studies may give further support to the information collected in this study.

AUTHORS' CONTRIBUTIONS

VMSJ contributed with the preparation of the study design and development, and the processes to obtain the Research Ethics Committee involving human beings. Acquisition and analysis of data, and approve the final version; MRS contributed with the preparation of the study design and development, acquisition and analysis of data, review critically the final content, and approve the final version; JC participated in the conception of the article, tabulation of the data collected, and approval of the final version; DCT contributed to the preparation of the study and its development, data acquisition and analysis, critical review of the final content, and approval of the final version.

CONFLICTS OF INTEREST: NOTHING TO DECLARE.

AUTHORS DETAILS

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