

Quality of life and voluntary work among the elderly*

QUALIDADE DE VIDA E TRABALHO VOLUNTÁRIO EM IDOSOS

CALIDAD DE VIDA Y TRABAJO VOLUNTARIO EN ANCIANOS

Luccas Melo de Souza¹, Liana Lautert², Eunice Fabiani Hilleshein³

ABSTRACT

This cross-sectional, comparative study was performed with the objective to evaluate the quality of life of elderly individuals who perform volunteer work, compared to those who do not. The WHO Quality of Life questionnaire was applied in a group of 166 elderly individuals who performed volunteer work and to another 33 who did not. Results show most are women, single and with high-level education. Compared to No statistically significant difference was found between the groups for the quality of life scores in the physical and environmental domains ($p>0.05$). In the psychological and social relations domains, and in the global evaluation, it was observed that volunteers had higher scores ($p<0.05$). In the linear regression model, performing volunteer work appeared as a determinant for better quality of life in the psychological domain and global evaluation. It is suggested that volunteer work is a mechanism to promote quality of life among the elderly, and can be encouraged by health professionals.

DESCRIPTORS

Aged
Aging
Voluntary workers
Quality of life
Nursing

RESUMO

Estudo transversal, comparativo que objetiva avaliar a qualidade de vida de idosos que realizam trabalho voluntário, comparando a idosos que não o realizam. Aplicou-se o questionário de Qualidade de Vida da Organização Mundial de Saúde a um grupo de 166 idosos que realizavam trabalho voluntário e a outros 33 que não realizavam. Os resultados revelam a predominância de mulheres, sem companheiro e com alta escolaridade. Quando comparados os escores de qualidade de vida entre os grupos, não houve diferença estatística nos domínios físico e meio ambiente ($p>0,05$). Nos domínios psicológico, relações sociais e na avaliação global, os idosos voluntários apresentaram escores superiores ($p<0,05$). No modelo de regressão linear, realizar trabalho voluntário mostrou-se como determinante para melhor qualidade de vida no domínio psicológico e na avaliação global. Sugere-se o trabalho voluntário como mecanismo de promoção da qualidade de vida em idosos, e que pode ser estimulado pelos profissionais de saúde.

DESCRIPTORIOS

Idoso
Envelhecimento
Trabalhadores voluntários
Qualidade de vida
Enfermagem

RESUMEN

Estudio transversal, comparativo, que objetiva evaluar calidad de vida de ancianos que realizan trabajo voluntario, comparándolos con ancianos que no lo realizan. Se aplicó cuestionario de Calidad de Vida de la OMS a grupo de 166 ancianos que realizaban trabajo voluntario y a 33 que no lo realizaban. Los resultados revelan la predominancia de mujeres, sin compañero y con alta escolaridad. En la comparación de puntajes de calidad de vida entre grupos, no hubo diferencia estadística en los dominios físico y medio ambiente ($p>0,05$). En los dominios psicológico, relaciones sociales y en evaluación global, los ancianos voluntarios presentaron puntajes superiores ($p<0,05$). En modelo de regresión linear, realizar trabajo voluntario se mostró como determinante para mejorar la calidad de vida en el dominio psicológico y en evaluación global. Se sugiere trabajo voluntario como mecanismo promotor de calidad de vida en ancianos, esto puede ser estimulado por profesionales de salud.

DESCRIPTORIOS

Anciano
Envejecimiento
Trabajadores voluntarios
Calidad de vida
Enfermería

* Taken from the thesis "Trabalho voluntário, saúde e qualidade de vida em idosos", School of Nursing, Universidade Federal do Rio Grande do Sul, 2006. ¹ RN. M.Sc. in Nursing. Ph.D. student in Nursing, Universidade Federal do Rio Grande do Sul. Researcher, Interdisciplinary Group on Occupational Health and Clinical Research (GISO). Adjunct Professor, Nursing Program, Universidade Luterana do Brasil Campus Gravataí. Gravataí, RS, Brazil. luccasms@gmail.com ² RN. Ph.D. in Psychology, Universidade Pontifícia de Salamanca. Associate Professor, Graduate Nursing Program, Universidade Federal do Rio Grande do Sul. Coordinator of the Interdisciplinary Group on Occupational Health and Clinical Research (GISO). Porto Alegre, RS, Brazil. lila@enf.ufrgs.br ³ RN. M.Sc. student in Nursing, Universidade Federal do Rio Grande do Sul. Researcher, Interdisciplinary Group on Occupational Health and Clinical Research (GISO). Porto Alegre, RS, Brazil. nicefill@yahoo.com.br

INTRODUCTION

Aging entails a range of biopsychic transformations in human beings, as people's health, lifestyle and perspectives are modified and require attention over the years. These modifications, in combination with the global population's demographic transition, have created demands for social security, health and social work services⁽¹⁾. In this context, the elderly face new needs, which requires adaptation and room in contemporary society for them to live longer and with quality of life. This search for quality of life has received increasing interest from society and especially from health workers, in view of their responsibility to promote health for the population to extend its longevity with quality of life.

Therefore, research on the conditions that permit quality of life in old age are of great scientific and social relevance. Seeking answers to the apparent contradiction that exists between old age and wellbeing can guide the understanding of old age and the limits and possibilities of human development and indicate alternative means that enhance elderly people's quality of life as a target for the next years⁽²⁾. Among these means, WHO appoints voluntary work as an alternative to promote active aging. The organization also highlights that measures that help the elderly to stay healthy and active (such as voluntary work) need to be put in practice and encouraged, not as a luxury, but as an emerging need to increase expectations for a healthy and high-quality life⁽³⁾.

In Brazil, however, little has been investigated on the influence of voluntary work on elderly people's quality of life, considered as the accomplishment of any activity in which the person freely offers his/her time to benefit other people, groups or organizations, without receiving any financial compensation⁽¹⁾. This aroused inquiries on the influence of this activity on the elderly's health and quality of life, so as to contribute to public policies that offer an alternative for nurses to work with the elderly, proposing voluntary work as a health and quality of life promotion mechanism.

OBJECTIVE

The general aim of this paper is to assess the quality of life of people active in voluntary work. Specific aims are: to compare the quality of life scores in a group of elderly active in voluntary work with those of a group that does not, as well as to analyze the influence of independent variables on quality of life scores in these elderly.

METHOD

This cross-sectional, comparative, ex post facto study involved elderly people from a non-governmental organi-

zation (NGO) in Porto Alegre, Brazil. The origins of the NGO under analysis are linked with large companies from the State of Rio Grande do Sul. Today, it organizes voluntary work in different social entities.

The sample comprised two groups. The first included elderly active in voluntary work in Porto Alegre (Voluntary Elderly) and affiliated with the NGO under analysis. The second contained elderly people who do not practice voluntary work (Non-Voluntary Elderly).

The population of Voluntary Elderly (VEs) was interviewed who were registered and active at the NGO where the study was carried out and who accepted to participate, totaling 174 interviewees. Eight of them did not answer the quality of life questionnaire and were excluded. People aged 60 years or older were considered elderly, according to WHO criteria. People who had not practiced voluntary work for more than 30 days were excluded. Out of 166 elderly, 33 served as a reference (randomly chosen) for the selection of Non-Voluntary Elderly (NVE) to constitute the control group. Hence, the final sample included 199 elderly.

...measures that help the elderly to stay healthy and active (such as voluntary work) need to be put in practice and encouraged, not as a luxury, but as an emerging need to increase expectations for a healthy and high-quality life.

The NVEs sample size estimate was based on the study that validated the Whoqol-bref in Brazil⁽⁴⁾, which used the proportion of five cases for one control. To reach the NVEs, each of the 33 VEs from the reference group were asked to indicate an elderly person living nearby to be part of the comparison group. Both groups were paired in terms of gender, socioeconomic level, paid work situation and health conditions for voluntary work. These measures are detailed in the thesis report that originated this paper⁽⁵⁾. The following criteria were adopted for the inclusion of NVEs: being an elderly person of the same gender and same paid work situation as the reference VE,

considering oneself physically apt for voluntary work practice and not being practicing voluntary work. Data collection from the VEs and NVEs covered the period from July 2006 to January 2007, and involved the author and four previously trained scientific initiation students. A pilot test was also applied to check the adequacy of the study instruments and protocol.

The interview with each elderly was held at one single time, using two questionnaires. The first aimed to collect identification data and information on the subjects' health. The second instrument was the Whoqol-bref, a quality of life instrument created by WHO and translated and validated for use in Brazil, with satisfactory internal validity (Cronbach's $\alpha=0.91$) and discriminant validity characteristics⁽⁴⁾.

The Whoqol-bref contains 26 questions, grouped in four domains: physical, psychological, social relations and environment, covering questions with Likert-style answers, ranging from zero to five. Besides the four domains, a global quality of life assessment is also included⁽⁴⁾.

The score for each domain and for the global assessment ranges from zero to 100 (the higher the score, the better the supposed quality of life). Due to difficulties to distinguish between good and bad quality of life, no cut-off point is established for this classification, and domain scores tend to be used for intergroup comparisons.

In this research, the Whoqol-bref was used due to the instrument's satisfactory response to Brazilian elderly's quality of life^(4,6-7) and due to the fact that, by the start of data collection, no other instrument translated to Portuguese existed to assess elderly people's quality of life.

The following independent variables were considered: age, gender, years of education, income, religion, physical exercise, group, self-referred diseases and the physical and environment domains of the Whoqol-bref. The physical and environment domains of the Whoqol-bref were included as independent variables because they refer to physical pain, medication, locomotion, safety, pollution, climate, income, housing and access to health services, among others. Good quality of life for these variables is considered independent from the accomplishment of voluntary work. The dependent variables were the psychological and social domains of voluntary work and the global quality of life assessment.

Statistical Package for the Social Sciences software, version 10.01, was used for data analysis. Data with two-tailed p-values equaling 0.05 or less were considered statistically significant. To characterize the subjects, descriptive statistics were used. Fisher's Exact test or the Chi-Square test (categorical variables), and Student's t-test or Mann-Whitney's test (continuing variables) were used for intergroup associations, according to parametric premises.

To analyze the independent variables' influence, multiple linear regression was accomplished. Therefore, the independent variable should display $p < 0.20$ when associated with the dependent variable. According to this criterion, the age variable was not used in the regression models. The income variable was not included due to a larger number of missing data.

Ethical standards were complied with in accordance with Brazilian National Health Council orientations. Approval for the research project was obtained from the Institutional Review Board at Universidade Federal do Rio Grande do Sul (number 2.006.554) and from the persons in charge of the NGO where the study was carried out.

RESULTS

The VEs' mean age was 68.2 ± 5.8 years. Women (87.3%), without a partner (59.4%) and with a mean education of 11.6 ± 5.4 years predominated (equivalent to secondary education in Brazil). Half of the volunteers gained its own income of three minimum wages or more (US\$ 165), 82%

were retired and 97% religious, 85% of whom considered themselves churchgoers. A majority (73%) reported regular physical exercise and mentioned some disease (85.5%). The group pairing technique showed to be efficient, as the socio-demographic and disease self-perception variables showed no statistical difference between both groups. One exception was age, in which the average age for NVEs was higher ($p=0.02$). This variable showed no correlation with the dependent study variables though ($p > 0.20$), not interfering in quality of life scores. Further data are shown in Table 1.

Table 1 - Characterization of sample with elderly volunteers and non-volunteers - Porto Alegre - 2007

Variables	Volunteers (n=166)	Non-volunteers (n=33)	p
Age*	68.2±5.8	70.8±6.5	0.02
Female gender**	145(87.3)	26(78.8)	0.27
With partner**,***	67(40.6)	16(48.5)	0.40
Years of education*	11.6±5.4	11.8±4.4	0.90
Own income***,****	3(1-7)	5(2-9)	0.09
Retired*	136(82)	23(69.7)	0.10
Religious**,***	160(97)	33(100)	0.59
Practices religion**,***	136(85)	24(72.7)	0.08
Performs regular physical exercise**	121(73)	22(66.7)	0.46
Presence of self-referred disease**	142(85.5)	31(93.9)	0.26
Number of self-referred diseases****	2(1-3)	2(1-3)	0.532

*mean±standard deviation; **absolute frequency (percentage); ***n≠199; ****median (25 and 75 percentile). Own income in minimum wages, equivalent to US\$ 165.

The comparison between quality of life scores in the two groups revealed a statistically significant difference ($p < 0.05$) in the psychological, social relations and global assessment domains (dependent study variables), with VEs showing higher mean scores. In the other two domains (physical and environment), no statistically significant difference was found between VEs and NVEs. Scores are displayed in Table 2.

Table 2 - Distribution of elderly volunteers and non-volunteers' mean scores according to Whoqol-bref domains and global assessment - Porto Alegre - 2007

Whoqol-bref domains	Volunteers (n=166)	Non-volunteers (n=33)	P
Physical*	78.3±14.4	75.0±13.1	0.22
Psychological*	77.7±12.4	72.6±09.6	0.02
Social relations*	81.4±14.1	75.6±14.1	0.03
Environment*	75.9±13.5	76.6±13.6	0.78
Global assessment*	81.1±14.7	75.0±14.9	0.03

*Mean±standard deviation

Based on these data, multiple linear regression was accomplished between the independent variables and the psychological, social relations and global assessment domains, shown in Table 3.

Table 3 - Multiple linear regression of selected variables for the domains: psychological, social relations and global assessment of Whoqol-bref - Porto Alegre - 2007

Variables	r ²	B	P
Psychological	0.53		<0.01
Group – VEs		3.69	0.02
Female gender		-3.75	0.05
Years of education		0.02	0.82
Practices religion		4.06	0.01
Number of illnesses		-0.54	0.32
Physical domain		0.38	<0.01
Environment domain		0.26	<0.01
Social relations	0.31		<0.01
Group – VEs		3.76	0.10
Female gender		4.13	0.12
Years of education		0.02	0.90
Practices religion		6.20	<0.01
Physical domain		0.19	<0.01
Environment domain		0.37	<0.01
Global Assessment	0.45		<0.01
Group – VEs		3.91	0.07
Years of education		0.19	0.23
Number of illnesses		-1.55	0.03
Physical domain		0.54	<0.01
Environment domain		0.11	0.12

R²= Determination coefficient; B= Linear coefficient.

Except for years of education and number of illnesses, the set of other independent variables explains 53% of variance in the psychological domain. Thus, male VEs who were churchgoers and scored high on the physical and environment domains showed higher scores in the psychological domain. According to linear coefficient calculations, it was verified that being a churchgoer showed to be the main determinant for the psychological domain (B=4.06), followed by the group variable, favoring VEs (B=3.69).

Thirty-one percent of variance in the social relations domain is explained by the variables under analysis, except for group, gender and years of education ($p>0.05$). Thus, one may say that churchgoers with higher scores in the physical and environment domains showed the highest mean scores in the social relations domain. Going to church showed to be the main determinant (B=6.200).

Except for years of education and the environment domain, all other variables under analysis explain 45% of variance in the global assessment, with the group variable determining the trend. According to this association, elderly people with higher scores on the global assessment are volunteers, self-referred few diseases and score higher in the physical domain of the Whoqol bref. The fact of being a volunteer showed to be the main determinant for global assessment scores (B=3.91).

DISCUSSION

Based on the results, the socioeconomic and demographic profile of the interviewed VEs can be characterized as women, between 60 and 69 years old, without a partner, with a secondary education degree or higher, retired, with a monthly income that grants them financial stability, religious and practicing physical exercise regularly.

The prevalence of women involved in voluntary work is considered related with the gender culture present in the Brazilian society. Thus, for them, doing good can represent occupying themselves with something beyond the private world, of public utility and socially legitimate: an opportunity for them to feel useful and have a good quality of life. Besides, this gender difference and high education and income level can be attributed to the origin of voluntary work in Brazil – which started and was consolidated through the activities of meritorious and wealthy religious women -, and to the fact that they are linked with feelings of charity and love for fellow human beings⁽⁵⁾.

As for the quality of life dimension, in this research, high scores were found among VEs – mainly regarding social relations – in line with international studies that associate voluntary work with psychological and social wellbeing and satisfaction with life among elderly people⁽⁸⁻⁹⁾. According to some authors⁽¹⁰⁾, leisure and social groups are behaviors to enhance health and quality of life among the elderly: these are opportunities that make them feel happier and healthier.

It should be highlighted that no correlation was found between the Whoqol bref scores and the elderly's age, similar to another study that used this scale in the elderly⁽⁷⁾. Therefore, age was not used in the multiple linear regression model. One possible explanation for the lack of correlation between age and the Whoqol bref domains may be related to the homogeneity of this variable, as most elderly were between 60 and 69 years old (63.2%).

In the comparison between VEs and NVEs, no statistically significant difference was evidenced between the group regarding the physical (78.3 ± 14.4 points for VEs and 75.0 ± 13.1 points for NVEs) and environment (75.9 ± 13.5 for VEs and 76.6 ± 13.6 for NVEs) domains of the Whoqol-bref. This similarity is attributed to the pairing measures adopted to decreased intergroup bias, when attempting to interview NVEs and VEs with similar socioeconomic characteristics and physical health conditions.

Although there was no significant difference, the elderly's high scores on these two domains should be taken into account, mainly in comparison with the results of other studies that used the Whoqol-bref among sick and healthy adults^(4,6) and Brazilian elderly^(7,11).

A quality of life assessment study among Canadian and Brazilian elderly found a mean score of 68.6 ± 18.3 on the

physical and 65.1 ± 16.2 on the environment domain among Brazilian elderly and 75.6 ± 18.7 and 80.2 ± 16.2 , respectively, among Canadian elderly⁽¹¹⁾.

The VEs in this study showed higher scores in the physical domain (78.3 ± 14.4) in comparison with the Canadian elderly. Thus, the VEs' mean score was 2.7 points higher than the Canadians on the physical domain, but 3.6 points lower on the environment domain⁽¹¹⁾.

The reason for this lower score⁽¹¹⁾ on the environment domain can be explained by specific questions in this domain, which cover aspects related to safety, access to health services, transportation means and housing conditions. In Brazil, the population's aging process is accelerated, affecting public services that are unprepared to attend to this demographic profile's demands, differently from Canada, which developed and solve many social difficulties before population aging occurred. Thus, in Brazil, problems like insufficient transportation, lack of safety and difficulties to access health services, among others, are issues that negatively affect the population's quality of life and, therefore, need attention from public management.

The VE group's high scores in the physical and environment domains can entail the hypothesis that, in these two domains, elderly with a good quality of life tend to seek voluntary work precisely due to these characteristics. It should be reminded though, that the control group also reached high scores on these two domains without practicing voluntary work.

In the psychological and social relations domains and on the global assessment, the VEs showed higher scores than the NVEs ($p < 0.05$). The means for these two domains and the global assessment were also higher than in other studies that applied the Whoqol-bref in adults and elderly^(4,6-7,11-12). Hence, it is supposed that VEs go through the psychosocial alterations of aging (mainly losses and role changes) in a smoother way, as voluntary work mitigates the negative feelings deriving from retirement and/or solitude, which would contribute to these quality of life scores.

When verifying the group variable's (VEs and NVEs) contribution to the set of other independent variables, multiple linear regression analysis demonstrated that the fact of doing voluntary work showed to be statistically significant in the psychological domain and in global assessment (trend), but this was not the case in the social relations domain, where religious practice was significant, as well as the environment and physical domains, in this order.

In the psychological domain, men who do voluntary work, are churchgoers and score high on the physical and environment domains obtained the highest score in the psychological domain, independently of the number of diseases and years of study.

These data partially support findings by experts on the theme, who affirm that women tend to suffer more from psychological stressors (depression, mourning, anxiety, sad-

ness, among others) and that religiosity is essentially useful to deal with traumas and exhausting events in life⁽¹³⁻¹⁴⁾. They also reveal that education is associated with mental health protection, diverging from what was revealed in the present study, where this variable was not significant.

It is highlighted that the association between voluntary elderly and quality of life in the psychological domain can lie in the variable itself. According to this hypothesis, people with a low psychological quality of life may not be practicing voluntary work exactly because they are feeling depressed, limited and/or incapable to do this.

It can also be inferred that high scores on the physical and environment domains are related with psychological quality of life, i.e. that good physical health and an adequate social environment decrease concerns with disease treatment and safety. Besides, these involve good work and housing conditions, good sleep and access to transportation means and health services, situations that cover questions in both domains and which affect psychological health.

A study of Chinese retired elderly found a relation between psychological health and voluntary work, education, independence and physical health. No significant relation was found, however, between gender and the psychological domain, differently from the present study⁽⁹⁾. It is presupposed that the association between voluntary work and high scores in the Psychological domain is related with social support and the feelings deriving from the accomplishment of voluntary work (joy, peace, gratification, utility). Other variables are involved in good quality of life in old age though, such as education, family support, health, social role, feeling of utility and leisure⁽¹⁵⁻¹⁶⁾.

The result that evidences churchgoing and voluntary work as determinants of high scores in the psychological domain converges with the premises of Activity Theory, in which wellbeing in old age is linked with activities and with the roles elderly people play in the community. People who do not replace social roles lost during aging by new roles tend to suffer due to this process⁽¹⁷⁾. In this sense, voluntary activity is supposed to be associated with Activity Theory because it improves the elderly's quality of life through the accomplishment of different social involvement and autonomy maintenance actions, permitting the elderly to preserve the feelings of being useful and active⁽⁸⁾.

In the social relations domain, the two groups showed mean scores with a statistically significant difference ($p = 0.034$), with a higher score for VEs (81.4 ± 14.1). In the linear regression model, however, the group variable (VEs and NVEs) showed no significant association ($p > 0.05$) in the set of independent variables under analysis. According to the data, it can be affirmed that the elderly churchgoers with higher scores in the physical and environment domains displayed the best score in the social relations domain. In this respect, elderly people are physically and socially active if they can reach their destination safely, independently and with access to qualified transportation. Elderly people

living in unsafe environments are less prone to going out alone and, therefore, become dependent on other people. Thus, they get susceptible to isolation and depression, and also present mobility problems and worse physical conditions, influencing their global and social quality of life, which would hamper the accomplishment of voluntary work⁽⁷⁾.

Although it does not significantly influence the social relations domain – when analyzed with other independent variables –, voluntary work has been associated with a larger network of social interactions, and a promoter of these relationships^(5,16,18-19). The opportunity to have contact and establish new friendships is one of the stimuli and a consequence of voluntary work, as it enhances more objective coping with the frustrating conditions many elderly are exposed to, mainly after retirement⁽¹⁵⁾.

In the global quality of life assessment, besides the statistically significant difference ($p=0.03$) between NVEs and VEs (81.1), a higher mean score was found than in other studies that used the Whoqol-bref^(4,7,11,20).

International studies have reported that voluntary work is directly associated with satisfaction with life and wellbeing and that greater involvement (in hours) with voluntary work is also related with these feelings^(9,21).

In the regression model, when controlling for independent variables, it was observed that the physical domain and number of disease variables exerted a statistically significant contribution, with the latter as the main determinant. The group variable showed a trend ($p=0.07$). Thus, voluntary elderly with few illness and higher scores in the physical domain presented the highest scores on the global Whoqol-bref assessment, whose questions are health-related. These data support other studies that appoint health and independence as one of the main determinants of satisfaction with life⁽²²⁾. The influence of the physical

domain on VEs' global quality of life highlights the importance of functional capacity as a determinant of elderly people's quality of life⁽⁷⁾.

CONCLUSION

The results suggest that voluntary work acts as a protective mechanism for these elderly volunteers quality of life. Due to the limitations of a cross-sectional design, however, results need to be interpreted cautiously, as no causes/effects of voluntary work can be found in these studies. Thus, research with other methods is recommended, following volunteers over time to test/assess this hypothesis. Other limitations are related to the generalization of results, as a group of elderly was investigated from an NGO affiliated with companies in the State of Rio Grande do Sul, which may have influenced the socio-demographic characteristics of the VEs in this study.

Despite these limitations, in view of people's heterogeneity and personal motivations, health professionals can encourage voluntary work among elderly people, with a view to promoting their quality of life. WHO itself ratifies this assertion by highlighting that attitudes to create supportive environments that promote healthy options are fundamental for policies aimed at granting health and quality of life to the elderly⁽³⁾.

It is known that investing in voluntary work represents a challenge for health professionals, who are often overloaded because they have to face health systems' precariousness. It is fundamental, however, to overcome these problems, investing in creative, innovative and distinguished postures, with a view to finding new horizons for care delivery to the population, offering care that outdoes care delivery to diseases and their problems⁽¹⁾.

REFERENCES

1. Souza LM, Lautert L. Trabalho voluntário: uma alternativa para a promoção da saúde de idosos. *Rev Esc Enferm USP*. 2008;42(2):371-6.
2. Fleck MPA, Chachamovich E, Trentini CM. Projeto WHOQOL-OLD: métodos e resultados de grupos focais no Brasil. *Rev Saúde Pública*. 2003;37(6):793-9.
3. Organização Mundial de Saúde (OMS). Envelhecimento ativo: uma política de saúde. Brasília: OPAS; 2005.
4. Fleck M PA, Louzada S, Xavier M, Chachamovich E, Vieira G, Santos L, et al. Aplicação da versão em português do instrumento abreviado de avaliação da qualidade de vida "WHOQOL-bref". *Rev Saúde Pública*. 2000;34(2):178-83.
5. Souza LM. Trabalho voluntário, saúde e qualidade de vida em idosos [dissertação]. Porto Alegre: Escola de Enfermagem, Universidade Federal do Rio Grande do Sul; 2007.
6. Chachamovich E. Qualidade de vida em idosos: desenvolvimento e aplicação do módulo Whoqol-old e teste do desempenho do instrumento Whoqol-bref em uma amostra de idosos brasileiros [dissertação]. Porto Alegre: Faculdade de Medicina, Universidade Federal do Rio Grande do Sul; 2005.
7. Pereira RJ, Cotta R MM, Franceschini SCC, Ribeiro RCL, Sampaio RF, Priore SE et al. Contribuição dos domínios físico, social, psicológico e ambiental para a qualidade de vida global de idosos. *Rev Psiquiatr Rio Gd Sul*. 2006;28(1):27-38.
8. Shmotkin D, Blumstein T, Modan B. Beyond keeping active: concomitants of being a volunteer in old-old age. *Psychol Aging*. 2003;18(3):602-7.
9. Wu AMS, Tang CSK, Yan ECW. Post-retirement voluntary work and psychological functioning among older Chinese in Hong Kong. *J Cross Cult Gerontol*. 2005;20(1):27-45.

10. Borini MLO, Cintra FA. Representações sociais da participação em atividades de lazer em grupos de terceira idade. *Rev Bras Enferm.* 2002;55(5):568-74.
11. Paskulin LMG, Molzahn A. Quality of life of older adults in Canada and Brazil. *West J Nurs Res.* 2007;29(1):10-26.
12. Saube R, Nietche EA, Cestari ME, Giorgi MDM, Krahl M. Qualidade de vida dos acadêmicos de enfermagem. *Rev Lat Am Enferm.* 2004;12(4):636-42.
13. Frank MH, Rodrigues NL. Depressão, ansiedade, outros distúrbios afetivos e suicídio. In: Freitas EV, Py L, Cançado FAX, Doll J, Gorzoni ML, organizadores. *Tratado de geriatria e gerontologia.* 2ª ed. Rio de Janeiro: Guanabara Koogan; 2006. p. 376-87.
14. Sommerhalder C, Goldstein LL. O papel da espiritualidade e da religiosidade na vida adulta e na velhice. In: Freitas EV, Py L, Cançado FAX, Doll J, Gorzoni ML, organizadores. *Tratado de geriatria e gerontologia.* 2ª ed. Rio de Janeiro: Guanabara Koogan; 2006. p.1307-15.
15. Alvarenga LR, Kiyam L, Bitencourt B, Wanderley KS. The impact of retirement on the quality of life of the elderly. *Rev Esc Enferm USP [Internet].* 2009 [cited 2010 May 15];43(4):796-802. Available from: http://www.scielo.br/pdf/reeusp/v43n4/en_a09v43n4.pdf
16. Okum MA. The relation between motives for organizational volunteering and frequency of volunteering by elders. *J Appl Gerontol.* 1994;13(2):115-26.
17. Siqueira MEC. Teorias sociológicas do envelhecimento. In: Freitas EV, Py L, Neri AL, FAX Cançado, Gorzoni ML, Rocha SM, organizadores. *Tratado de geriatria e gerontologia.* 10ª ed. Rio de Janeiro: Guanabara Koogan; 2002. p. 47-57.
18. Clary EG, Snyder M. The motivations to volunteer: theoretical and practical considerations. *Curr Dir Psychol Sci.* 1999;8(5): 156-9.
19. Okum MA, Schultz A. Age and motives for volunteering: testing hypotheses derived from Socioemotional Selectivity Theory. *Psychol Aging.* 2003;18(2):231-9.
20. Trentini CM. Qualidade de vida em idosos [tese doutorado]. Porto Alegre: Faculdade de Medicina, Universidade Federal do Rio Grande do Sul; 2004.
21. Morrow-Howell N, Hinterlong J, Rozario PA, Tang F. Effects of volunteering on the well-being of older adults. *J Gerontol Soc Sci.* 2003;58B(3):137-45.
22. Joia LC, Ruiz T, Donalísio MR. Condições associadas ao grau de satisfação entre a população de idosos. *Rev Saúde Pública.* 2007;41(1):131-8.