

Quality of Life in Elderly Assisted in the Primary Attention

Marcílio Santos¹, Celmo Celeno Porto²

¹Associate Professor at the Federal University of MatoGrosso, Brazil

²Guiding Emeritus Professor, Medical School, Federal University of Goiás, Brazil

Abstract: *The aim is to evaluate the understanding of the elderly regarding the pathology that affects them and its relation with the quality of life (L.Q). It is a study with primary data, prospective, transversal population-based, exploratory, quantitative character. The research universe is the elderly with some NCDs living in the city of Barra do Garças, state of MatoGrosso, from April to September 2017. For the analysis of L.Q, the WHOQOL-bref and WHOQOL-OLD instruments were applied. The comparison of the WHOQOL-bref, WHOQOL-old with the profile of the elderly was performed using the Mann-Whitney and / or Kruskal-Wallis tests. As results, it was found that the elderly had a good quality of life for the correlation between the two instruments that measure Q.V, with an average of 59%. It was concluded that correlations were especially strong for past, present and future activities, sensory ability and the social environment. The psychological is strongly linked to the past, the present and how one looks at the future. The educational level had a negative influence on the understanding of the pathology and could have an impact on the quality of life.*

Keywords: Elderly Health, Primary Health Care, Quality of Life, WHOQOL-OLD, WHOQOL-bref.

1. Introduction

It is in the primary attention that most of the needs in health of the population should be approached. The so-called primary health care are based on simple technologies and socially sound scientific practice and put to the people's reach.^[1] Starting from the primary attention a continuous and permanent flow of cares along a lifetime of the customer's must be established.

It is a universal right to dispose of the best health status possible and desirable. Thus, in the commitment of the Alma-Ata Declaration. It has been argued that the most effective, efficient and equitable approach to improving health is primary health care (PHC), which makes it a necessary foundation for achieving universal coverage.

From October 25 to 6, 2018 in Astana, Kazakhstan hosted the Global Conference on Primary Health Care, this conference declared that all human beings should have guaranteed access to health without fear of financial hardship. Primary Health Care (PHC) must be an integral part on a global scale to achieve health and well-being for all, at all ages.

It is within this context that the elderly and primary health care are inserted. The Astana statement serves as a guideline for comprehensive primary health care (PHC), health is understood as the duty of the state, not as a commodity.

The increase in the elderly' population is a reality in global scale, that new configuration demands a reorganization in the politics of attention to the health, social programs and in the family dynamics, especially in a context in which there is a considerable chronic non-communicable disease (CNCD).

One of the greatest challenges of contemporary public health is population aging. In the Brazilian epidemiological scenario it is evident the increase of chronic diseases, mainly

cardiovascular and cancer. According to the World Health Organization by the year 2020, chronic conditions will account for 60% of the global burden of disease in developing countries.^[2-4]

To understand the association between chronic non-communicable disease (CNCD) and the repercussion on quality of life (QoL), it is necessary to conceptualize quality of life. Quality of life is a broad and varied term that makes use of science and art and therefore it is not possible to make use of only measurable resources, but also of a wide variety of personal expressions associated with the feeling of being, belonging, becoming a member of a group, and thus most concepts share these characteristics in common: wellbeing, positive social involvement, and opportunities to reach personal potential.^[5-6]

In the context of this research highlighted is the concept that relates disease and quality of life, in other words, the quality of life related to health. It refers to the way, to the personal perception with the own physical and mental health as well as the capacity to react to environmental, physical and social factors. This concept is important because it is an indicator or predicts aspects of morbidity and mortality being recognized as an important indicator in public health, since it helps to know the disparities in the accessibility to health services.^[7-8]

The understanding of the pathology that afflicts the elderly can be influenced by the degree of schooling. The socio-demographic profile of the elderly that seeks professional help in basic health units has a low educational level. This lack of knowledge is a problem for the understanding and therapeutic follow-up. Can the quality of life be impacted due to the lack of knowledge / orientation regarding the underlying pathology?

It is sought to evaluate the quality of life of the elderly's in health follow-up in primary care. Is the quality of life

affected by the level of schooling? It is based on the premise that the elderly person do not have sufficient knowledge about the afflicting disease, this fact may have implications for the quality of life.

The city of Barra do Garças does not have any instrument that evaluates the quality of life of the elderly following the treatment of chronic non-communicable diseases in the units of family health strategy. It is not known how the lack of knowledge (orientations) regarding the underlying pathology can affect the quality of life. The present investigation is therefore justified.

In view of the foregoing, the objective of this study was to evaluate the elderly' understanding of the pathology that affects them and it's relation with the quality of life.

2. Literature Survey

With the aging of the population, infectious diseases have given way to chronic diseases over the last decades due to the combination of better living conditions, prevention and management of infectious diseases. Chronic disease is commonly associated with co-occurrence of two or more multiborbidities. Co-occurrence in the number of chronic conditions also leads to greater use of health spending and negatively affects mental and physical health, and has a poor impact on quality of life.^[9]

Chronic diseases and their comorbidities are, by definition, diseases that persist for a prolonged period, negatively affect the quality of life and well-being since it is associated with a series of adverse health outcomes. Elderly patients with non-communicable disease depend on caregivers and use multidrug care.

The understanding of the pathology, the way to deal with the limitations imposed by the disease is well related to the level of schooling. Quality of life generally decreases with increasing chronic conditions and is aggravated when the level of schooling impairs the understanding of therapy and self-care.^[10]

It is no longer enough to prolong life, the goal of any health system is to increase the life span with a focus on quality of life.

3. Methodology

It is a study with primary data collection, prospective, cross-sectional population-based, exploratory, of quantitative character. The research universe is composed of elderly people of both sexes, with some chronic non-transmissible disease, from April to September 2017, living in the city of Barra do Garças, state of MatoGrosso, Brazil. The city of Barra do Garças has 5,452 elderly people (research universe).^[11-12] The sample (N = 235) was consisted of elderly' followed up in fifteen (15) family health units. The identification of these people occurred through the medical records of the families enrolled in the health units. Once identified and in possession of their addresses, they were visited by the researcher and auxiliaries, accompanied by the community health agent of the area attached to the health

unit. The selection for home visits was randomized (randomization) in order to ensure the representativeness of the sample (N), thus it was ensured that each element of the population had exactly the same probability (p) of being selected.^[13] At least one home visit was performed so that the elderly could respond to (1) Free and Informed Consent Term; (2) - Identification of the Elderly in the Family Health Unit; (3) - Social and demographic assessment instrument; (4) - Economic profile; (5) -WHOQOL-bref; (6) - WHOQOL-OLD. The WHOQOL-bref and WHOQOL-OLD instruments were tested in previous studies and presented satisfactory psychometric properties in the investigation of Life Quality in Brazilian elderly. The instruments used did not need to be applied as a pilot test because they are already validated by the scientific community.^[14-16] The present investigation included all the elderly people who were monitored in the family health units that allowed the home visit and answered all the data collection instruments. All those who expressed an interest in not participating, those with difficulties in communication, and those who did not fill out the application form were not eligible for the present study. All were informed about the research objectives and confidentiality of the data, invited to sign the participation consent evaluated by the Research Ethics Committee. Approved by the Ethics Committee of the Federal University of MatoGrosso, CAAE number: 51585115.1.000.5587, and opinion no. 1387492.

Statistical analyzes

Data were analyzed with the aid of the statistical package SPSS version 23, adopting a level of significance of 5% ($p < 0.05$). The characterization of demographic, economic, social, and health - related aspects was performed by means of absolute (n) and relative (%) frequency. Qualitative variables were used for descriptive statistics. For the quantitative variables the median, average, standard deviation, minimum and maximum were calculated. The normality of the data was verified using the Shapiro-Wilk test. The comparison of the WHOQOL-bref, WHOQOL-old with the elderly' profile was accomplished through the tests of Mann-Whitney and / or Kruskal-Wallis. Spearman correlation was performed in order to assess the relationship between WHOQOL-bref and WHOQOL-old with age.

4. Results and Discussion

Table 1: Characterization of the social and demographic profile and lifestyle of the elderly (N = 235)

	n	%
Age group		
60 a 69	121	51,5
70 a 98	114	48,5
Gender		
Female	150	63,8
Male	85	36,2
Schooling		
Literate	160	68,1
Elementary School	40	17,0
High school	31	13,2
Higher education	4	1,7
Marital status		
Married / Gathered	123	52,3
Divorced	27	11,5
Not married	19	8,1

Widower	66	28,1
Family Composition		
Aggregates	7	3,0
Spouse	70	29,8
Spouse / Aggregates	146	62,1
Lives alone	12	5,1
Practice physical activity		
Not	135	57,4
Yes	100	42,6
Religion		
Not	17	7,2
Yes	218	92,8
Participate in some group		
Not	88	37,4
Yes	147	62,6
Leisure Activity		
Not	38	16,2
Yes	197	83,8

The elderly are economically responsible for the household, have an average income of US\$ dollar 175, 42 of retirement, live in the city, have the assistance of their children or stepchildren. The finding of this research reflects the article of Vagettig^[17] greater participation for the elderly (50.9%) in the age group of 60 to 69 years. Aiming to make a comparison with other researches, it was observed that the study of Salvador, Reis and Florindo^[18] with 385 Elderly presented a majority of females (60.5%), aged between 60 and 74 years (57.1%). Mantovani & Mendes^[19] also reached approximate results, 68.7% of the elderly were aged between 60 and 70 years. It can be seen that the average age is very close to 69.4 ± 8.4 years (60 to 98 years). In this research, 85.1% had less than 11 years of education, was female (63.8%) and married / joined (52.3%). It is also verified in an analysis with elderly people in the city of Florianópolis-SC, with a population of 1,705 elderly, mostly women (63.9%), white (86.0%), with low schooling (40.0 %), married or with partner (58.8%).^[17-18] In the screened study it is seen that 65.1% either live with the spouse or live with the spouse and aggregates.

Schooling is a variable that influences knowledge / understanding and attitudes towards diseases. Studies evidence that the higher the schooling the greater is the comprehension and adoption of self-care practices.^[20-22]

Quality of life and well-being involves aspects other than health as it is influenced by schooling and related factors. The understanding of the disease, the related comorbidities and self-care are related to the years of study, therefore there is a direct relationship between schooling and socio-economic level.

It was found during the information collection phase, during home visits, that many elderly, relatives and caregivers had difficulties regarding the underlying pathology and their comorbidities. They also did not understand the reason for multiple drugs. Nor did they feel enlightened when they visited the family health units.

It is highlighted the schooling as a relevant factor for the therapeutic continuation since people with more advanced education tend to assimilate the information better. It was observed that many interviewees never studied or did not

complete elementary school. There is a reduction in the quality of life in the elderly and family members with low level of education. In the screened study, it is seen that 65.1% either live with the spouse or live with the spouse more aggregates. Of the interviewed population (N = 235) 57.4% did not do physical activities.

Table 2: Characterization of the economic profile of the elderly (N = 235)

	n	%
Profession		
Agriculture	5	2,1
Does not work	182	77,4
Others	4	1,7
Trade professional	19	8,1
General Services	25	10,6
Is retired		
No	43	18,3
Yes	192	81,7
Income origin		
Retirement	186	79,1
Retirement of the spouse	4	1,7
Pension / family allowance	11	4,7
Job	26	11,1
No income	8	3,4
Family income		
1 minimum wage	125	53,2
From 1 to 2 wages	95	40,4
From 2 to 5 minimum wages	15	6,4
To whom do you turn to for help?		
Aggregates	165	70,2
Spouse	25	10,6
Spouse and Aggregates	32	13,6
Others	13	5,5

In the assessment of the profession of the elderly, those who do not work (77.4%) are highlighted because they are already retired (81.7%), consequently the main income comes from retirement (79.1%), income that is from a minimum wage (53.2%), and , therefore, almost always resorted to the help of some household to the family (70.2%). When considered the spouse and spouse / aggregates the percentage is 24.2%. Another 5.5% turn to neighbors, friends.

Table 3: Descriptive statistics of the WHOQOL-bref and WHOQOL-old of the elderly (N = 235)

	Medium	Average	Standard deviation	Minimum	Maximum
WHOQOL-bref					
Physical	50,00	50,70	18,14	0,00	100,00
Psychological	58,33	59,22	15,23	20,83	95,83
Social	50,00	51,81	18,65	0,00	100,00
Environment	43,75	45,56	16,49	3,13	90,63
Total score	50,78	51,82	14,36	19,05	86,79
WHOQOL-old					
Sensory Skills	65,00	67,94	17,56	25,00	100,00
Autonomy	65,00	63,55	12,59	25,00	95,00
Past, present and future activities	65,00	64,81	12,95	40,00	95,00
Social participation	60,00	61,49	14,08	30,00	100,00
Death die	80,00	71,60	24,61	-155,00	100,00
Intimacy	75,00	68,13	17,25	20,00	100,00

The WHOQOL-OLD and WHOQOL-Bref used in combination mode have been used to evaluate the quality of life of the elderly, present good internal consistency and construct validity.^[7, 23]

In tab-3 it is seen that 50% of the elderly do some physical activity, this is the desirable and expected. The correlation coefficients of the domains are presented, showing significant correlation coefficients. In other words, the physical, psychological and social and environmental domains are interrelated. It can be seen that the analyzed variables showed a significant relation with the quality of life (Me=51,82).

Active elderly have high average values in most of the domains of quality of life (QoL), which indicates a good perception of QoL in this population. The psychological, physical, and social domains are the highest among the WHOQOL-BREF components. Similar findings were found in the analysis of Vagetti^[17]

It can be observed in tab-3, WHOQOL-OLD, that the elderly have low autonomy since the standard deviation (SD = 12.59) is far from the expected minimum. The "Autonomy" facet refers to independence in old age and, therefore, describes the extent to which one is able to live autonomously and make their own decisions. In the intimacy domain the standard deviation (SD = 17.25) also signals difficulties in this area. Similar findings were found in the research of Scherrer, Okun, Passos et al.^[24]

The little independence felt and perceived in the decline of the life reflects the loss of autonomy because the senior do not have an adequate understanding of the problems that affect them (pathology and related morbidities), the quality of life declines progressively.

Regarding past, present and future activities, the difference between the median and the average is not significant. The standard deviation is low (12.95), indicating that the data points tend to be close to the average or expected value. In

another way of explaining, it is said that in the realm of past, present and future activities the elderly are well. In this domain there is a strong association with social activities, in which improves the quality of life.

As far as social participation is concerned, the average / median relationship is convergent. The low standard deviation indicates proximity to the expected value, that is, good quality of life. Living with people of the same age group allows the sharing of experiences, moments of reflection, potentiates future perspectives. The feeling of belonging to a social group, envisions the possibility of full social participation, increases self-esteem, confidence in one's potential.

As for the "death and dying" domain, a robust tendency (80.00) of the median is observed, indicating a convergence of opinions. The standard deviation shows a wide range of values, indicating that the quality of life in this social stratum in this issue "death and dying" is low.

The phenomenon of death exposes the strength of nature, human finitude, the boundaries of the human condition, against which there is nothing to be done. Death is often seen as something not spontaneous but as something imposed on existence. The avoidance of death seems to be a natural reaction not to accept or even to ignore it, a denial of the natural condition of being mortal.

There is an important distance (6.87) between the median and average in the item "intimacy". This correlation is indicative of the divergence of opinions. A high standard deviation (17.25) display a distancing from what one would wish for quality of life. That is, it points to a demotion of this domain and its correlation with the quality of life.

The prejudice, masked by what has been conventionally called "existing rules," prevents the spontaneity of affectivity and one can not, should not talk about sex in people of advanced age. Love and sex seem to be seen as opposites.

Table 4: Result of WHOQOL-bref correlation with WHOQOL-old

	Physical	Psychological	Social	Environment	Total score
Sensory Skills	r = 0,29; p < 0,001	r = 0,33; p < 0,001	r = 0,18; p < 0,001	r = 0,30; p < 0,001	r = 0,33; p < 0,001
Autonomy	r = 0,37; p < 0,001	r = 0,40; p < 0,001	r = 0,23; p < 0,001	r = 0,31; p < 0,001	r = 0,38; p < 0,001
Past, present and future activities	r = 0,45; p < 0,001	r = 0,54; p < 0,001	r = 0,42; p < 0,001	r = 0,51; p < 0,001	r = 0,57; p < 0,001
Social participation	r = 0,54; p < 0,001	r = 0,59; p < 0,001	r = 0,41; p < 0,001	r = 0,57; p < 0,001	r = 0,62; p < 0,001
Death die	r = 0,16; p = 0,01	r = 0,08; p = 0,21	r = 0,00; p = 0,99	r = 0,15; p = 0,03	r = 0,11; p = 0,09
Intimacy	r = 0,12; p = 0,06	r = 0,22; p = 0,001	r = 0,26; p < 0,001	r = 0,21; p = 0,001	r = 0,24; p < 0,001
r =Spearman Correlation					

When establishing a correspondence relationship between WHOQOL-Bref and WHOQOL-OLD (Table 04), it is noted that the value of "p" (<0.05%) is significant for all domains. However, when compared to the strength of this relationship (r) it is found that it is not strong for most. The "physical" conditions of the elderly are strong with "social

participation". It is ensured and it is evident that good physical conditions predispose to greater social participation. It is noteworthy that a psychological well-being favors positively in dealing with past events, present and future situations. The "environment", that is to say the social environment, the "dwelling" in which one lives has a

strong positive correlation, $p < 0.05\%$ with "past, present and future activities" and social participation. This shows that the environment in which the elderly live, having a consistent social / family support, helps them to cope better with the events of life. It is concluded that the environment in which the elderly live, their "habitat" being positive $p < 0.05\%$ favors participation in the community.

In the present research, there is a convergent correlation for the following facets / domains: present, past, and future activities related to mental and emotional state. In addition, it is convergent with the environment of the person and with social participation.

In the analysis of the convergent correlation between "Sperman" and " $p < 0.001$ ", the correlation strength is greater, it is said that the correlation between both is directly proportional, implying a higher quality of life. In terms of convergent validity, significant correlations were found between the overall WHOQOL-OLD scores with the WHOQOL-Bref domains, values are also high (ranging from $r = .60$ and $r = .74$).^[25] As expected, the correlation between WHOQOL-OLD and WHOQOL-Bref indicates that higher values are associated with a higher quality of life.

Table 4 shows a divergent correlation ("Sperman" and " $p < 0.001$ ") for the following situations: physical strength to deal with environmental and social contexts. It is inferred that autonomy to make decisions and the freedom to act according to personal desire is further diminished under conditions in which health is weakened. The perception of "death and dying" is related to the physical, social and environmental conditions which are not favorable to elderly. Lastly, the intimacy that involves physical or emotional privacy is lesser. A loss of quality of life is inferred between the WHOQOL-OLD and the WHOQOL-Bref domains.

5. Conclusions

It was found that many elderly were primarily responsible for the family's income and supplied the need for children and grandchildren. In the socio-demographic investigation it was noticed that the schooling is low, it interferes significantly in the knowledge and understanding of the chronic non-communicable disease (CNCD). This lack of understanding has repercussions on the quality of life and predisposes to risk behaviors that may aggravate the clinical state. This evidence should be taken into account by the basic health units for the definition of public policies that deal with the specificities of this target population. Thus, the development of strategies to approach the elderly, family and caregivers in order to inform and guide the pathology and care in the home is justified. It was found that few elders perform physical activities, that's not good because physical activities is related to social and leisure activities. There was a high prevalence of CNCD. In the analysis of quality of life, the WHOQOL-Bref had an average of 51.82% and the WHOQOL-OLD was 66.25%. In the correlation of the two instruments that measure the quality of life "past, present and future activities"; "Sensory abilities" and "social environment" were the strongest (Spearman correlation) indicative of good quality of life in these facets. There was a convergent correlation between "present, past and future

activities" with the psychological domains and the social environment. In the determination between the "social participation with the psychological domain and environment, there were also high correlations (ranging from $r = .57$ to $.54$), indicating that higher values are associated with a higher quality of life. The elderly have a good quality of life for the correlation between the two instruments that measure quality of life, with an average of 59%. Particularly strong were the correlations for past, present and future activities, sensory ability, and the social environment. The psychological is strongly linked to the past, the present and how one looks at the future. Our study made a further contribution by investigating the impacts of different multimorbidity patterns on QoL. Most frequently occurring multimorbidity patterns were identified and their association with QoL was estimated.

6. Difficulties and Limitations of the Study

Some addresses were outdated in the medical records of family health units, so in some cases it was impossible to find the elderly at the registered address because of change. There were also cases of the elderly not being at home at the time of the visit and refusals by the individual / relatives to participate in the study, other difficulties were death, cognitive and motor difficulties of the elderly, hospitalizations. It was evident from the family members' fear that they would be approached by marginals trying to be health professionals, a reflection of violence in urban centers, despite the interviewers being in uniform with a coat of arms of the Federal University of Mato Grosso, Health Nursing Course, present identification badge, personal identity card. It should be emphasized that the results obtained must be interpreted taking into account that the population studied is restricted to the basic health units in primary care attendees.

7. Conflict of interest

None to declare

8. Acknowledgements

I would like to thank Professor Eduardo Luzia França for his guidance.

References

- [1] Alma-Ata, D. (2002). International Conference on Primary Health Care; 6-12 September 1978; Alma-Ata; USSR. Ministry of Health (BR). Secretariat of Health Policies. Health Promotion Project. Alma-Ata Declaration. Available in <http://cmdss2011.org/site/wp-content/uploads/2011/07/Declaracao%20Alma-Ata.pdf>. Retrieved in: April 17, 2019.
- [2] Machado, A.M. (2006) Chronic diseases. Brazilian Journal of Pathology and Laboratory Medicine, 42 (1), 0-0. Available in <http://dx.doi.org/10.1590/S1676-24442006000100001> Retrieved in: April 17, 2019.
- [3] Shadmani, F. K., Farzadfar, F., Larijani, B., Mirzaei, M., & Haghdoost, A. A. (2019). Trend and projection of mortality rate due to non-communicable diseases in

- Iran: A modeling study. *PloS one*, 14(2), e0211622. Retrieved in: 21July, 2019.
- [4] Goch, A., Rosiek, A., Leksowski, K., & Mikołajewska, E. (2019) Interdisciplinary Approach to Cardiovascular Diseases for Research and Everyday Clinical Practice Purposes. In *Coronary and Cardiothoracic Critical Care: Breakthroughs in Research and Practice*. IGI Global. Retrieved in: 21July, 2019.
- [5] Robert, L., Schalock, I B., Roy, B., Robert, A. C., David, F., Leena, M., Kenneth, D. K., & Trevor Parmenter. (2002) Conceptualization, Measurement, and Application of Quality of Life for Persons with Intellectual Disabilities: Report of an International Panel of Experts Mental Retardation. 40(6) 457–470. Retrieved in: 21July, 2019.
- [6] Ribeiro, I. A., Lima, L. R. D., Volpe, C. R. G., Funghetto, S. S., Rehem, T. C. M. S. B., & Stival, M. M. (2019) Frailty syndrome in elderly with chronic diseases in Primary Care. *Journal of the University of São Paulo School of Nursing*, 53. Retrieved in: April 17, 2019.
- [7] Yongwen, J., Jana, E.H. (2008) Patterns of health-related quality of life and patterns associated with health risks among Rhode Island adults. *Health and Quality of Life Outcomes*. 6(49) Available in < <https://www.ncbi.nlm.nih.gov/pubmed/18620582>> Retrieved in: April 17, 2019.
- [8] da Silva Borges, J.E., Camelier, A.A., Oliveira, L.V.F., & Brandão, G. S. (2019) Quality of life of hypertensive and diabetic elderly community: an observational study. *Journal of Research in Physical Therapy*, 9 (1), 74-84. Doi: 10.17267/2238-2704rpf.v9i1.2249 Retrieved in: April 17, 2019.
- [9] Mullen, R. A., Tong, S., Sabo, R. T., Liaw, W. R., Marshall, J., Nease, D. E., & Frey, J. J. (2019) Loneliness in primary care patients: a prevalence study. *The Annals of Family Medicine*, 17(2), 108-115. Retrieved in: 21July, 2019.
- [10] Larsen FB., Pedersen MH., Friis K., Glümer C., Lasgaard M. A. (2017) Latent class analysis of multimorbidity and the relationship to socio-demographic factors and health-related quality of life. *A National Population-Based Study of 162,283 Danish adults*. *PLoS One*, 12(1). Retrieved in: 21July, 2019.
- [11] IBGE, Brazilian Institute of Geography and Statistics. (2011) Cities [Internet]. Brasília: IBGE. [Cited 2019 June 16] Available from <http://www.ibge.gov.br/citiesat/topwindow.htm?1/>. Retrieved in: April 17, 2019.
- [12] Municipal Government of Barra do Garças-MT. (2010) Statistics of the Municipality [Internet]. Barra do Garças: City Hall. [Cited 2019 June 16]. Available from <http://barradogarcas.com/2010/?Secao=Municipio&Pg=Estatisticas/> Retrieved in: April 17, 2019.
- [13] Kara-Junior, N. (2014) *Brazilian Journal of Ophthalmology*. 73(2)67-8. Available in <<http://www.scielo.br/pdf/rbof/v73n2/0034-7280-rbof-73-02-0067.pdf>>. Retrieved in: April 17, 2019.
- [14] Fleck, M. P. A., Leal, O. M. F., Louzada, S. N., Xavier, M. K., Chachamovich, E., Vieira, G. M., & Pinzon, V. (1999) Development of the Portuguese version of the WHOQOL-100 quality of life assessment tool. *Brazilian journal of psychiatry*. Sao Paulo-SP. 21 (1) (Jan./mar. 1999), 19-28. Available in <<http://dx.doi.org/10.1590/S1413-8123200000100004>>. Retrieved in: April 17, 2019.
- [15] Fleck, M. P. A. (2000) The World Health Organization quality of life assessment tool (WHOQOL-100): characteristics and perspectives. *Science & Collective Health [online]*. 5 (1), 33-38. Available in <http://dx.doi.org/10.1590/S1413-8123200000100004>. Retrieved in: April 17, 2019.
- [16] Fleck, Marcelo PA., Louzada, Sérgio., Xavier, Marta., Chachamovich, Eduardo., Vieira, Guilherme., Santos, Lyssandra., & Pinzon, Vanessa. (2000) Application of the Portuguese version of the abbreviated WHOQOL-bref quality of life assessment instrument. *Journal of Public Health*, 34 (2), 178-183. <https://dx.doi.org/10.1590/S0034-8910200000200012>. Retrieved in: April 17, 2019.
- [17] Vagetti, G. O., Barbosa Filho, V., Moreira, N., Campos, W. (2012) Prediction of the overall quality of life in active elderly women through the WHOQOL-BREF and WHOQOL-OLD domains. *Motricity*, 8(2), 709-718. Available in <<http://www.redalyc.org/pdf/2730/273023568084.pdf>>. Retrieved in: April 17, 2019.
- [18] Salvador, E.P., Reis, R.S., Florindo, A.A. (2010) Practice of walking and its association with perceived environment among elderly Brazilians living in a region of low socioeconomic level. *International Journal of Behavioral Nutrition and Physical Activity* 7(1).67, 2010. Available in < <https://doi.org/10.1186/1479-5868-7-67>> Retrieved in: April 17, 2019.
- [19] Mantovani, M. D. F., & Mendes, F. R. P. (2010) Quality of life of elderly patients with chronic disease: qualitative-quantitative research. *Online braz.j. nurs.* (Online), 9(1). Available in < <http://dx.doi.org/10.5935/1676-4285.20102835>>. Retrieved in: April 17, 2019.
- [20] Giehl, M.W.C., Schneider, I.J.C., Corseuil, H. X., Benedetti, T. R. B., & d'Orsi, E. (2012) Physical activity and environmental perception in the elderly: a population study in Florianópolis. *Journal of Public Health*, 46(3), 516-525. <https://dx.doi.org/10.1590/S0034-89102012005000026> Retrieved in: April 17, 2019.
- [21] Prazeres, J.F.C.P. (2018) MM-PT study: Multimorbidity in primary care. Thesis to obtain the Doctor of Medicine Degree. University of Beira Interior Health Sciences. Portugal, Covilhã. Retrieved in: April 17, 2019.
- [22] Chehuen Neto, J. A., Costa, L. A., Estevanin, G. M., Bignoto, T. C., Vieira, C. I. R., Pinto, F. A. R., & Ferreira, R. E. (2019) Functional Health Literacy in chronic cardiovascular patients. *Science and Collective Health*, 24(3), 1121-1132. Available in <http://dx.doi.org/10.1590/1413-81232018243.02212017>. Retrieved in: April 17, 2019.
- [23] Ramona Lucas-Carrasco., Ken, L., & Michael, J. P. (2011) Suitability of the WHOQOL-BREF and WHOQOL-OLD for Spanish older adults, *Aging & Mental Health*, 15(5)595-604. Available in DOI: <https://doi.org/10.1080/13607863.2010.548054>> Retrieved in: April 17, 2019.
- [24] Scherrer, J.G.; Okun, M.F.P.; Passos, K.G et al. (2018) Quality of Life of Elderly Residents in Private Institutions. *Nursing journal*. UFPE, “on line” v.12,

n.8.Available in: < <https://doi.org/10.5205/1981-8963-v12i8a234536p2113-2119-2018>> Retrieved in: April 17, 2019.

- [25] VILAR M.M.P. (2015) Quality of Life Assessment in Older Adults: Whoqol-Old Adaptation, Validation and Standardization Studies for the Portuguese Population. PhD Thesis in Psychology. Faculty of Psychology and Educational Sciences, University of Coimbra. Retrieved in: April 17, 2019.