

# Application of the WHOQOL-BREF in a community segment as a subsidy for health promotion actions

## *Aplicação do WHOQOL-BREF em segmento da comunidade como subsídio para ações de promoção da saúde*

Jacqueline Ramos de Andrade Antunes Gomes<sup>1</sup>, Edgar Merchan Hamann<sup>1</sup>,  
Maria Margarita Urdaneta Gutierrez<sup>1</sup>

**ABSTRACT:** *Introduction:* This article presents the results of a research whose objective was to verify the prevalence of the perception reports regarding quality of life of library attendees in the public libraries in the Brazilian capital Federal District (FD) and the surrounding region and to analyse the factors related to dissatisfaction. *Methods:* An epidemiological transversal study was conducted in 592 individuals aged above 12 years old through the application of the WHOQOL-BREF/WHO questionnaire. *Results:* Higher frequencies of dissatisfaction were observed among women with ages above 25, with lower personal income and lower educational level. Dissatisfaction regarding the physical domain was more prevalent in the surrounding region than in the FD. Under the psychological domain, dissatisfaction predominated in people in the FD. Negative feelings, concentration difficulties and dissatisfaction regarding personal safety were referred by more than 25% of participants in both regions. Regarding the environment domain, lack of money and of leisure opportunities were the main complaints. In spite of these findings, interviewees referred being very satisfied with their health and quality of life. *Conclusions:* The results can be a sign that the quality of life in the study region is in alert level. A careful look at these data is needed to identify alternatives to change this situation, with effective actions for Health Promotion and development strategies for the study area. A planning and an intervention in the area of health education in public libraries is recommended, since these are very important social *loci*, that can be engaged in health promotion and disease prevention actions in the communities.

**Keywords:** Quality of life. Health promotion. Library services. Power. City planning. Health education.

<sup>1</sup>School of Health Sciences, *Universidade de Brasília* – Brasília (DF), Brasil.

**Corresponding author:** Jacqueline Ramos de Andrade Antunes Gomes. Caixa Postal 58, Altiplano Leste/Lago Sul, CEP: 71617-991, Brasília, DF, Brasil. E-mail: jraagdoutoradofsunb@gmail.com

**Conflict of interests:** nothing to declare – **Financing source:** none.

**RESUMO: Introdução:** Este artigo apresenta os resultados de uma pesquisa cujo objetivo foi verificar a prevalência de relatos de percepções quanto à qualidade de vida dos usuários das bibliotecas públicas do Distrito Federal e Entorno e analisar os fatores associados à insatisfação. **Métodos:** Foi realizado estudo epidemiológico transversal em 592 indivíduos acima de 12 anos, por meio da aplicação do questionário WHOQOL-BREF/OMS. **Resultados:** Foi verificado que as mulheres com idade acima de 25 anos, com menor renda pessoal mensal e menor escolaridade apresentaram insatisfações com maior frequência. Além disso, foi verificada maior insatisfação quanto ao aspecto físico na região do Entorno do Distrito Federal. Sob o aspecto psicológico, predominaram insatisfações em pessoas do DF. Sentimentos negativos, dificuldades para se concentrar e insatisfações relativas à segurança foram referidos por mais de 25% dos participantes nas duas regiões. Com relação ao meio ambiente, destacaram-se insatisfações relativas à falta de dinheiro e de oportunidades de lazer. Apesar desses dados, as pessoas relataram muita satisfação com a própria saúde e com a qualidade de vida. **Conclusões:** Os resultados podem ser um sinal de que a qualidade de vida no DF e Entorno está em grau de alerta, ou seja, é preciso um olhar atento a esses dados para buscar alternativas que revertam esse quadro, com ações efetivas de promoção da saúde e estratégias de desenvolvimento dessas regiões. Foram sugeridos um planejamento e uma intervenção na área de educação em saúde nas bibliotecas públicas, por serem nichos sociais importantíssimos, que devem ser preenchidos e ocupados com ações que auxiliem na promoção da saúde e prevenção de doenças nas comunidades.

**Palavras-chave:** Qualidade de vida. Promoção da saúde. Serviços de biblioteca. Desenvolvimento. Planejamento de cidades. Educação em saúde.

## INTRODUCTION

Quality of life (QoL) is a complex concept that has received increasing attention from the scientific literature, receiving many meanings and approaches that permeate various knowledge fields, such as sociology, education, medicine, nursing, psychology, among others.

As Minayo et al.<sup>1</sup> said, the minimum and universal level, speaking about QoL, is linked to the satisfaction of the most basic needs of human life: “food, access to clean water, housing, work, education, health and leisure; essential elements that are referenced as relative notions of comfort well-being and individual and collective fulfillment”.

The concern with QoL strengthens with the increment of the frequency of chronic diseases and the technological advances that increase patient survival without necessarily lead them to healing. More recently, can be seen the importance of the perception of population segments's QoL, such as the elderly, adolescents, alcoholics and people with spinal cord injury to discover what are the felt needs, with the goal of guiding interventions, especially in the context of health promotion<sup>2-6</sup>.

According to Campos Rodrigues and Neto<sup>7</sup>, the measurement of QoL has been held in care practices, public policy, prevention and health promotion. Thus, QoL and health promotion are directly related.

Buss<sup>8</sup> states that, globally, stand out the Canadian, North American and European studies, which are equanimous in demonstrating the relationship between health and quality/living conditions. The author reports that this debate is also traditional in Brazil and Latin America, having been established that “the bad distribution of income, illiteracy and low educational level, as well as poor housing conditions and environment play a significant role in conditions of life and health”<sup>8</sup>.

Different instruments for measuring QoL were analyzed by Carr et al.<sup>9</sup>, among which the *Quality of Well-being Scale*, the *European Quality of Life (EUROQoL)*, the *Sickness Impact Profile*, the *Nottingham Health Profile*, the *Rosser Index*, the *McMaster Health Index*, the *Functional Limitations Profile*, the *Medical Outcomes Study 36 – Item Short Form Health Survey (SF-36)* and the *Schedule for the Evaluation of Individualized Quality of Life (SEIQoL)*. The authors also made reference to an instrument that was being developed by the World Health Organization (WHO), which was later called *World Health Organization Quality of Life – 100 (WHOQOL-100)*, and its abbreviated version, WHOQOL-BREF<sup>10</sup>.

Regarding the advantages and disadvantages of the analyzed instruments, Carr et al.<sup>9</sup> observed that most instruments incorporated aspects of all levels of impact related to pathological conditions, a factor that made it difficult to see what these instruments were actually measuring. In the same article, the authors reiterated the view that QoL should be defined individually and not from health professionals, because the authors verified that these professionals were not successful when trying to identify aspects of the diseases and treatments that were important in the patients’ point of view. The biggest criticism detailed that the instruments for measuring QoL generally would cover areas that are not commonly discussed in medical interventions, such as personal relationships and social activities. Thus, these instruments omit aspects of QoL of great importance at the individual level<sup>9</sup>.

The most important observation in the Carr et al.<sup>9</sup> article is the one about all instruments for measuring QoL addressing only the negative aspects of health, except for the “new” instrument of WHO (WHOQOL), whereas is consensus that QoL is an analysis or a balance between positive and negative aspects. Thus, these instruments were not measuring the QoL itself, but the patients’ health through the lens of a negative impact on their QoL.

Coons et al.<sup>11</sup> also refer to these instruments for measuring QoL as generic or specific. The Generics are applied in all conditions, whether in individuals with diseases or not, under different medical interventions and in various populations. The Specifics would be applied in a particular state or condition, as in the presence of a particular disease. The authors examined the Generic QoL measurement instruments most commonly used to perform a comparative review. As review criteria, the authors listed eight attributes or characteristics developed by *Scientific Advisory Committee of the Medical Outcomes Trust*, which include: conceptual and measurement model, reliability, validity, responsiveness, interpretability, consistency, alternate forms and cultural and language adaptations.

According to Coons et al.<sup>11</sup>, there are no “better or worse” instruments for measuring QoL, and the decision to use one or the other, or a combination of any two or more, shall be taken in accordance with the purpose of the research to be developed. The choice will depend on a number of factors, including population characteristics and the context in which individuals are inserted, and elements under various circumstances. Moreover, the selection of these instruments should be based on decisions that consider which are the most relevant characteristics of individuals in the face of measurement needs.

Among the five central areas of action proposed in the Ottawa Charter for Health Promotion<sup>12</sup>, three draw attention to the fact that they allow actions for health promotion in new environments and contexts, creating supportive environments, strengthening community action and the development of skills and attitudes. Regarding the creation of supportive environments, it identifies “the conquest of environments that facilitates and promotes health as work, leisure, home, school and the cities themselves”, which we would add public libraries, that are existing community spaces in almost all Brazilian cities.

Regarding the strengthening of community action or community empowerment, we believe that the possibilities to access of information and learning opportunities for people’s health also find fertile ground in libraries. I would add that those in most municipalities already have the physical space as well as the potential to configure in community spaces of great use in the constant quest for information and knowledge in all areas, including health. Thus, there are many areas where health promotion activities can be developed, and it is possible to expand the physical universe available for the implementation of health education strategies in this universe to include public libraries.

There are several areas of health promotion, and second Gomes<sup>13</sup>, there is a consensus on the fact that the same extrapolate the “health sector” and it should be practiced in the community from other channels and other institutions such as schools, community associations, religious organizations, health clinics, libraries, among others. Among these places, as mentioned by Antunes et al.<sup>14</sup>, the library “is the most common cultural institution, in other words, that is present in most counties. The library serves as a place for the community to meet, talk, exchange information, discuss problems, satisfy their information needs, expand knowledge, read freely, create and recreate. The public library is public and should be freely attended by everyone”. Therefore, the library can be a privileged and potential *locus* not only to diagnose the profile of users who attend, but especially to check the health knowledge and perception of QoL, and could constitute a community core for learning, intervening and promoting health<sup>13</sup>.

The *locus* of health promotion goes beyond the extent of health, in other words, are often not institutional, but community organizations. Regarding Surrounding, spaces or living areas where people live and organize themselves, they need to be worked not only at home, but at work places and squares, because people also live there, It means that there were increased intervention opportunities, whose trajectory is no longer stagnant before the current constant development of human life.

Analyzing the above considerations, it appears that the WHO's instrument for measuring QoL, WHOQOL, would be consonant with the population characteristics among users of public libraries, because these are individuals who apparently are not carriers of diseases, in other words, represent a portion of the general population.

This article presents some results from a larger study<sup>13</sup>, in which was identified perceptions of study participants about self-care with the body and physical and mental health from the perspective of health promotion in public libraries of the Federal District, Brazil's capital, and the Surrounding municipalities that compose a region characterized by significant social inequalities and violence. The purpose of this article was to present the prevalence of reported perceptions of users of these libraries for the QoL and analyze the factors associated with dissatisfaction.

## METHODOLOGY

### STUDY TYPE AND PARTICIPANTS SELECTION

An epidemiological cross-sectional study in a sample of individuals using the public libraries of the administrative regions of the Federal District (DF) and the Surrounding municipalities that compose the *Região Integrada de Desenvolvimento do Distrito Federal e Entorno* (RIDE-DF) was held. The DF, with 2.8 million inhabitants, includes Brasilia and 19 administrative regions, and RIDE-DF, with 900,000 inhabitants, is composed of 22 municipalities, 19 from Goiás and three from Minas Gerais, besides the DF<sup>15</sup>.

The RIDE-DF has 46 public libraries. A library was selected for each administrative region or municipality of RIDE-DF. Four libraries were under renovation at the time of the collection period and were excluded from the study. Altogether, the study covered 85% of the existing libraries (39 libraries).

In the DF, two public libraries were selected in Brasilia and in each administrative region.

Frequenters and users individuals of public libraries over the age of 12 and living in selected communities were included in the study once agreed to participate after the objectives and procedures (interview) were explained and they signed the Statement of Informed and Free Consent, which characterized a convenient sample.

The sample size was calculated for other purposes, through analytical study to detect differences of 10% in the presence of a variable whose frequency in the least exposed group is 15% and in the treatment group is 25%<sup>16</sup>. The probability of Error Type I ( $\alpha$ )  $< 0.05$ , and the probability of Error Type II ( $\beta$ )  $< 0.20$  [power  $(1-\beta) > 0.80$ ] were defined. Under these conditions, the estimated size was 250 individuals in two exposure groups, totaling 500 individuals, adding 100 individuals, or 20%, for replacement of possible losses<sup>16</sup>. For the purpose of operationalization, a minimum quota of 15 individuals per library was established.

## INSTRUMENT AND DATA COLLECTION PROCEDURE

We obtained information about the QoL of users through the application of the evaluation instrument WHOQOL-BREF<sup>10</sup>. This tool gathers information in four areas or domains:

- physical domain – pain, discomfort, energy, fatigue, sleep, rest, activities of daily life, dependence on medication or treatments, mobility, ability to work;
- psychological domain – positive feelings, thought, learning, memory, concentration, self-esteem, body image, appearance, negative feelings, spirituality, religion, personal beliefs;
- social relations – personal relations, support/social support, sexual activity;
- environmental domain – physical security, protection, home environment, financial resources, care with health and social/availability and quality, opportunities for acquiring new information and skills, participation in recreation and leisure opportunities, physical environment (regarding pollution, noise, traffic, weather) and transportation.

Altogether, the WHOQOL-BREF<sup>10</sup> includes 26 questions. The answers to these questions generate scores ranging from 1 to 5 according to the degree of satisfaction, ranging from “not at all satisfied” to “very satisfied”. The instrument for data collection also included the following variables: socioeconomic and demographic (gender, age, personal income, family income, education, adequacy of schooling to the age group considering individuals of 20 years old having completed high school, place of residence, social participation). On initial contact with the libraries, was asked a reserved space for the conduct of the interviews to respect the privacy of each volunteer.

The collection period was from March to June 2008, in the daytime and in the nighttime periods. Those responsible for implementing the instruments were health professionals trained for this purpose. The questionnaires were examined for completeness and consistency of the data collected.

## DATA ANALYSIS

To analyze the Quality of Life through the WHOQOL-BREF, a Gross Score (EB) was initially calculated by summing the scores for each question and then generating a 4-20 Transformed Score (ET 4-20), whose values range from 4 to 20. Further, we calculated the 0-100 Transformed Score (ET 0-100), where the values range from 0 to 100. To analyze the data of the four QoL domains studied, we used an adapted scale<sup>17</sup>. This scale is categorized as follows: values between 0 and 40 are considered the dissatisfaction region; 41 to 69 correspond to the uncertainty region, and above 70 as having reached the region of success. For the present study, in order to facilitate the calculations, was considered

as the cutoff value below 70 and equal to or greater than 70, where levels below 70 are considered as dissatisfaction with QoL and levels above that as satisfaction. There was also calculated the absolute and relative frequencies for each variable. *Epi-Info* 6.0 and the *Statistical Package for the Social Sciences* (SPSS) 10.0 were used for creating the database and their analysis.

The prevalence of dissatisfaction with QoL among the various categories dichotomized of the related variables were calculated, being possible to calculate prevalence ratios and confidence intervals. Subsequently, they were tested by the Mantel-Haenszel  $\chi^2$ , being considered the significance level  $p < 0.05$ . Once obtained these results, the variables were entered into a multivariate Poisson Regression Model with Robust Variance to analyze the association between independent variables, and poor QoL.

Logistic regression has been widely used to perform the multivariate analysis of cross-sectional studies, however, in the analysis of common outcomes, ends up strongly underestimating the prevalence ratios. Thus, as an alternative, we sought the Poisson Regression Model with Robust Variance to analyze the factors associated with dissatisfaction<sup>18</sup>.

## ETHICAL CONSIDERATIONS

The project was approved by the Ethics in Research Committee of the Faculdade de Ciências da Saúde of the Universidade de Brasília, under the number 133/2007, on March 11, 2008. Participation in the study was voluntary, and individuals agreed to participate by signing the Statement of Informed and Free Consent, and when they were under eighteen, upon parental consent. It is noteworthy that this study did not receive funding for its implementation.

## RESULTS

Were interviewed 592 individuals, both men and women. The proportion of women was higher in the Surrounding region (71.2%), and in DF, men predominated (56.5%). The age in Federal District varied between 18 and 64 years. In the Surroundings, ages ranged between 12 and 68 years old. The proportion of individuals older than 24 years was higher in both the DF and the Surrounding region (~60%). Only 25 participants were under 18 years (Table 1).

Regarding the Quality of Life - Area 1 - Physical – of the WHOQOL-BREF (Table 2), it was found that 47.3% of respondents in the Federal District and Surroundings mentioned that physical pains do not impede them from their routine activities. In addition, Table 2 shows the significant variables in the multivariate analysis for  $p > 0.05$ , associated with

Table 1. Distribution of socio-economic and demographic variables among users of public libraries in the Federal District and Surrounding Region, 2008.

Variables	Categories					
	DF		Surrounding		Total	
	n	%	n	%	n	%
<b>Sex</b>						
Male	144	56.5	97	28.8	241	40.7
Female	111	43.5	240	71.2	351	59.3
<b>Age group (years old)</b>						
≤ 24	105	41.2	133	39.5	238	40.2
> 25	150	58.8	204	60.5	354	59.8
<b>Employment situation</b>						
Employed (steady)	94	37.0	189	56.1	283	47.8
Unemployed	46	18.0	17	5.0	63	10.6
Self-employment	10	3.9	22	6.5	32	5.4
Informal employment	12	4.7	8	2.4	20	3.4
Bolsa Familia <sup>#</sup>	7	2.7	8	2.4	15	2.5
Unemployment insurance/other/housewife	9	3.5	17	5.0	26	4.4
Student	70	27.5	72	21.4	142	24.0
Retired	7	2.7	4	1.2	11	1.9
<b>Personal income<sup>&amp;</sup></b>						
Up to 1.5 MW	46	18.0	137	40.6	183	30.9
Above 1.5 MW	82	32.2	99	29.4	181	30.6
Not applicable/did not answer	127	49.8	101	30.0	228	38.5
<b>Monthly family income<sup>&amp;</sup></b>						
Up to 3.5 minimum wages	72	28.3	175	51.9	247	41.7
Above 3.5 minimum wages	135	52.9	96	28.5	231	39.0
Not applicable/did not answer	48	18.8	66	9.6	114	19.3
<b>Still studying</b>						
Yes	190	74.5	216	64.1	406	68.6
No	65	25.5	121	35.9	186	31.4

Continue...



Tabela 1. Continuation.

Variables	Categories					
	DF		Surrounding		Total	
	n	%	n	%	n	%
Schooling						
Illiterate	0	0.0	0	0.0	0	0.0
Incomplet middle school	14	5.5	83	24.6	97	16.4
Complet middle school	8	3.2	9	2.7	17	2.9
Incomplet high school	40	15.7	72	21.4	112	18.9
Complet high school	100	39.2	64	19.0	164	27.7
Incomplet college education	47	18.4	47	13.9	94	15.9
Complet college education	45	17.6	61	18.1	106	17.9
Middle school GED	0	0.0	1	0.3	1	0.2
High school GED	0	0.0	0	0.0	0	0.0
Special learning	1	0.4	0	0.0	0	0.2
Kind of school						
Public school	41	16.1	133	39.5	174	29.4
Private school	7	2.7	4	1.2	11	1.9
Public university	8	3.1	13	3.9	21	3.5
Private university	33	13.0	45	13.4	78	13.2
Others	100	39.2	21	6.2	121	20.4
Not applicable/did not answer	66	25.9	121	35.8	187	31.6
Adequacy of schooling						
Completed high school and 20 years old	208	81.6	224	66.5	432	73.0
Up to high school and > 20 years old	47	18.4	113	33.5	160	27.0
Total	255	100.0	337	100.0	592	100.0

\*Minimum Wage (MW) amount in Brazil at the time of data collection: R\$ 415.00; in Dollars: US\$ 355.00.

In 2008: US\$ 1.00 = R\$ 1.168.

#Bolsa Família: Government Assistance Program.

DF: Federal District; GED: xxxxx.

Table 2. Association between predictive variables and dissatisfaction with the quality of life in the physical aspect among users of public libraries in the Federal District and Surrounding region, 2008.

Variables / categories	n	% Dissatisfaction	Not adjusted			
			PR	95%CI	$\chi^2$	p-value*
<b>Sex</b>						
Male	80	33.19	0.65	0.53 – 0.80	1.895	0.0000
Female	180	51.28				
<b>Age group (years old)</b>						
≤ 24	91	38.2	0.80	0.66 – 0.97	0.521	0.0224
> 25	169	47.7				
<b>Personal income<sup>§</sup></b>						
Up to 1.5 MW	99	54.1	1.26	1.01 – 1.56	0.440	0.0359
Above 1.5 MW	78	43.1				
<b>Family income<sup>§</sup></b>						
Up to 3.5 MW	115	46.6	1.06	0.87 – 1.30	0.039	0.5340
Above 3.5 MW	101	43.7				
<b>Schooling</b>						
≤ Incomplet middle school	49	49.5	1.16	0.92 – 1.45	0.150	0.2209
≥ Complet middle school	211	42.8				
<b>Adequacy of schooling</b>						
No	76	47.5	1.12	0.92 – 1.36	0.114	0.2857
Yes	184	42.6				
<b>Region</b>						
Federal District	105	41.2	0.90	0.74 – 1.08	0.137	0.2425
Surrounding	155	46.0				
<b>Social Participation</b>						
No	131	39.3	0.79	0.66 – 0.95	0.647	0.0109
Yes	129	49.8				

Continue...

Table 2. Continuation.

Variables / categories	n	% Dissatisfaction	Adjusted <sup>#</sup>			
			PR	95%CI	$\chi^2$	p-value*
Sex						
Male	80	33.19	0.96	0.86 – 1.08	0.029	0.5873
Female	180	51.28				
Age group (years old)						
≤ 24	91	38.2	1.02	0.90 – 1.15	0.010	0.7556
> 25	169	47.7				
Personal income <sup>§</sup>						
Up to 1.5 MW	99	54.1	1.09	0.95 – 1.26	0.181	0.1780
Above 1.5 MW	78	43.1				
Family income <sup>§</sup>						
Up to 3.5 MW	115	46.6	0.95	0.82 – 1.10	0.041	0.5241
Above 3.5 MW	101	43.7				
Schooling						
≤ Incomplet middle school	49	49.5	1.06	0.88 – 1.27	0.039	0.5340
≥ Complet middle school	211	42.8				
Adequacy of schooling						
No	76	47.5	1.01	0.87 – 1.17	0.004	0.8438
Yes	184	42.6				
Region						
Federal District	105	41.2	1.20	1.07 – 1.36	0.965	0.0019
Surrounding	155	46.0				
Social Participation						
No	131	39.3	0.97	0.86 – 1.09	0.019	0.6627
Yes	129	49.8				

Domain 1 - Physics - Dissatisfaction rate is equal to transformed score 0-100 below 70; Satisfaction rate is equal to transformed score 0-100 equal or greater than 70.

\*Mantel-Hänszel/Exact Fisher test when recommended.

<sup>#</sup>Poisson Regression model with robust variance.

<sup>§</sup>Minimum Wage (MW) amount in Brazil at the time of data collection: R\$ 415.00; in Dollars: US\$ 355.00. In 2008: US\$ 1.00 = R\$ 1.168.

dissatisfaction in QoL in physical aspect. In the multivariate model, is associated with the outcome variable region only, that is, individuals who live in the Surrounding areas showed higher dissatisfaction in physical aspect in relation to DF residents.

In the aspect of the psychological domain of the WHOQOL-BREF (Table 3), about 48% of the interviewees declared that they quite enjoy life, that life has a lot of sense and is able to concentrate enough. With regard to the frequency of negative feelings, 61.5% of users of public libraries in the DF and Surrounding stated they feel bad mood, despair, anxiety and depression sometimes. Among the significant variables in the multivariate analysis for  $p > 0.05$ , dissatisfactions associated with QoL in the psychological aspect, met only the gender variable, in other words, female subjects showed higher dissatisfaction in the psychological aspect in relation to males.

Regarding Social Relations - Domain 3 of the WHOQOL-BREF (Table 4), about 48% of the interviewees said that they were satisfied with their personal relations. In multivariate analysis for  $p > 0.05$ , significant variables associated with dissatisfaction in QoL in the aspect of social relations variables were gender, family income, and region. That is, female subjects with lower income families and living in the surrounding areas showed higher dissatisfaction concerning social relations.

Regarding the Environment - Domain 4 of the WHOQOL-BREF (Table 5), the majority of responses were at the level of somewhere in between dissatisfaction and satisfaction, and the proportions were evaluated for size and between the DF and the surrounding areas. In multivariate analysis for  $p > 0.05$ , the significant variable associated with dissatisfaction in QoL in the aspect of the environment was the gender variable, so that female subjects showed higher dissatisfaction as to the environment.

## DISCUSSION

The QoL goes through complex processes of mediation and determination which make several variables being probably associated with their perception. According to WHO<sup>10</sup>, QoL has two important aspects, which are subjectivity and multidimensionality, where on the first sphere is considered the individual's perception of how you evaluate your personal situation in several dimensions. In addition, QoL can be assessed only by that person, and not through the vision of scientists and healthcare professionals. When it comes to multidimensionality, QoL has an intrinsic relationship with the many facets of human life, contextualized in each environment, situation, value system, culture, expectations, standards and concerns where individuals are inserted.

Frequenters and users individuals of libraries belong to the general population. Therefore, according to a quote from Minayo et al.<sup>1</sup> as the application area, it would be appropriate to investigate aspects of QoL at a generic level in such individuals. Campos and Rodrigues Neto<sup>7</sup> also mentioned the application of QoL instruments at a generic level in the general

Table 3. Association between predictive variables and dissatisfaction with the quality of life in the psychological aspect among users of public libraries in the Federal District and Surrounding region, 2008.

Variables / categories	n	% Dissatisfaction	Not adjusted			
			PR	95%CI	$\chi^2$	p - value*
Sex						
Male	89	36.9	0.69	0.57 – 0.83	1.639	0.0000
Female	189	53.8				
Age group (years old)						
≤ 24	105	44.1	0.90	0.76 – 1.08	0.129	0.2563
> 25	173	48.9				
Personal income <sup>§</sup>						
Up to 1.5 MW	99	54.1	1.36	1.09 – 1.70	0.747	0.0062
Above 1.5 MW	72	39.8				
Family income <sup>§</sup>						
Up to 3.5 MW	125	50.6	1.17	0.96 – 1.42	0.256	0.1096
Above 3.5 MW	100	43.3				
Schooling						
≤ Incomplet middle school	59	59.6	1.34	1.11 – 1.62	0.761	0.0058
≥ Complet middle school	219	44.4				
Adequacy of schooling						
No	86	53.8	1.12	1.01 – 1.45	0.405	0.0441
Yes	192	44.4				
Region						
Federal District	119	46.7	0.99	0.83 – 0.18	0.002	0.9012
Surrounding	159	47.2				
Social Participation						
No	164	49.2	1.12	0.94 – 1.33	0.160	0.2059
Yes	114	44.0				

Continue...

Tabela 3. Continuation.

Variables / categories	n	% Dissatisfaction	Adjusted*			
			PR	95%CI	$\chi^2$	p-value*
Sex						
Male	89	36.9	0.78	0.62 – 0.98	0.423	0.0397
Female	189	53.8				
Age group (years old)						
≤ 24	105	44.1	0.82	0.63 – 1.08	0.188	0.1699
> 25	173	48.9				
Personal income <sup>‡</sup>						
Up to 1.5 MW	99	54.1	1.18	0.93 – 1.51	0.196	0.1615
Above 1.5 MW	72	39.8				
Family income <sup>‡</sup>						
Up to 3.5 MW	125	50.6	0.88	0.69 – 1.12	0.099	0.3203
Above 3.5 MW	100	43.3				
Schooling						
≤ Incomplet middle school	59	59.6	0.98	0.70 – 1.37	0.001	0.9242
≥ Complet middle school	219	44.4				
Adequacy of schooling						
No	86	53.8	1.15	0.87 – 1.52	0.103	0.3097
Yes	192	44.4				
Region						
Federal District	119	46.7	1.02	0.82 – 1.29	0.006	0.8046
Surrounding	159	47.2				
Social Participation						
No	164	49.2	1.05	0.86 – 1.28	0.029	0.5914
Yes	114	44.0				

Domain 2 - Psychological - Dissatisfaction rate is equal to transformed score 0-100 below 70; Satisfaction rate is equal to transformed score 0-100 equal or greater than 70.

\*Mantel-Hänszel/Exact Fisher test when recommended.

†Poisson Regression model with robust variance.

‡Minimum Wage (MW) amount in Brazil at the time of data collection: R\$ 415.00; in Dollars: US\$ 355.00.

In 2008: US\$ 1.00 = R\$ 1.168.

Table 4. Association between predictive variables and dissatisfaction with the quality of life in the aspect of the social relations among users of public libraries in the Federal District and Surrounding region, 2008.

Variables / categories	n	% Dissatisfaction	Not adjusted			
			PR	95%CI	$\chi^2$	p-value*
<b>Sex</b>						
Male	88	36.5	0.76	0.62 – 0.93	0.786	0.0050
Female	169	48.1				
<b>Age group (years old)</b>						
≤ 24	96	40.3	0.89	0.73 – 1.07	0.153	0.2160
> 25	161	45.5				
<b>Personal income<sup>§</sup></b>						
Up to 1.5 MW	87	47.5	1.18	0.93 – 1.49	0.191	0.1664
Above 1.5 MW	73	40.3				
<b>Family income<sup>§</sup></b>						
Up to 3.5 MW	119	48.2	1.21	0.99 – 1.48	0.337	0.0664
Above 3.5 MW	92	39.8				
<b>Schooling</b>						
≤ Incomplet middle school	50	50.5	1.20	0.96 – 0.50	0.243	0.1189
≥ Complet middle school	207	42.0				
<b>Adequacy of schooling</b>						
No	85	53.1	1.33	1.11 – 1.61	0.841	0.0037
Yes	172	39.8				
<b>Region</b>						
Federal District	125	49.0	1.25	1.04 – 1.50	0.572	0.0167
Surrounding	132	39.2				
<b>Social Participation</b>						
No	149	44.7	1.07	0.89 – 1.29	0.055	0.4586
Yes	108	41.7				

Continue...

Tabela 4. Continuation.

Variables / categories	n	% Dissatisfaction	Adjusted*			
			PR	95%CI	$\chi^2$	p-value*
Sex						
Male	88	36.5	0.55	0.41 – 0.75	1.478	0.0001
Female	169	48.1				
Age group (years old)						
≤ 24	96	40.3	1.08	0.79 – 1.46	0.027	0.6063
> 25	161	45.5				
Personal income <sup>§</sup>						
Up to 1.5 MW	87	47.5	0.96	0.71 – 1.30	0.007	0.7981
Above 1.5 MW	73	40.3				
Family income <sup>§</sup>						
Up to 3.5 MW	119	48.2	1.41	1.03 – 1.92	0.480	0.0285
Above 3.5 MW	92	39.8				
Schooling						
≤ Incomplet middle school	50	50.5	1.31	0.89 – 1.91	0.194	0.1636
≥ Complet middle school	207	42.0				
Adequacy of schooling						
No	85	53.1	1.15	0.83 – 1.59	0.077	0.3799
Yes	172	39.8				
Region						
Federal District	125	49.0	1.48	1.12 – 1.95	0.770	0.0055
Surrounding	132	39.2				
Social Participation						
No	149	44.7	0.97	0.75 – 1.25	0.004	0.8329
Yes	108	41.7				

Domain 3 - Social relations - Dissatisfaction rate is equal to transformed score 0-100 below 70; Satisfaction rate is equal to transformed score 0-100 equal or greater than 70.

\*Mantel-Hänszel/Exact Fisher test when recommended.

#Poisson Regression model with robust variance.

§Minimum Wage (MW) amount in Brazil at the time of data collection: R\$ 415.00; in Dollars: US\$ 355.00. In 2008: US\$ 1.00 = R\$ 1.168.



Table 5. Association between predictive variables and dissatisfaction with the quality of life in the aspect of the environment among users of public libraries in the Federal District and Surrounding region, 2008.

Variables / categories	n	% Dissatisfaction	Not adjusted			
			PR	95%CI	$\chi^2$	p-value*
Sex						
Male	193	80.0	0.91	0.84 – 0.98	0.700	0.0081
Female	309	88.3				
Age group (years old)						
≤ 24	197	82.8	1.96	0.89 – 1.03	0.126	0.2611
> 25	305	86.2				
Personal income <sup>§</sup>						
Up to 1.5 MW	157	85.8	1.05	0.96 – 1.15	0.108	0.2982
Above 1.5 MW	148	81.8				
Family income <sup>§</sup>						
Up to 3.5 MW	211	85.4	1.01	0.94 – 1.09	0.009	0.7580
Above 3.5 MW	195	84.4				
Schooling						
≤ Incomplet middle school	90	90.9	1.09	1.01 – 1.17	0.344	0.0636
≥ Complet middle school	412	83.6				
Adequacy of schooling						
No	144	90.0	1.09	1.02 – 1.16	0.460	0.0320
Yes	358	82.9				
Region						
Federal District	224	87.8	1.06	1.00 – 1.14	0.322	0.0728
Surrounding	278	82.5				
Social Participation						
No	286	85.9	1.03	0.96 – 1.10	0.070	0.4032
Yes	216	83.4				

Continue...

Tabela 5. Continuation.

Variables / categories	n	% Dissatisfaction	Adjusted*			
			PR	95%CI	$\chi^2$	p-value*
Sex						
Male	193	80.0	0.86	0.77 – 0.97	060.6	0.0139
Female	309	88.3				
Age group (years old)						
≤ 24	197	82.8	1.03	0.92 – 1.16	003.6	0.5497
> 25	305	86.2				
Personal income <sup>§</sup>						
Up to 1.5 MW	157	85.8	0.98	0.87 – 1.09	001.0	0.7530
Above 1.5 MW	148	81.8				
Family income <sup>§</sup>						
Up to 3.5 MW	211	85.4	0.96	0.85 – 1.08	003.4	0.5575
Above 3.5 MW	195	84.4				
Schooling						
≤ Incomplet middle school	90	90.9	1.03	0.89 – 1.21	002.3	0.6287
≥ Complet middle school	412	83.6				
Adequacy of schooling						
No	144	90.0	1.06	0.94 – 1.20	010.7	0.3013
Yes	358	82.9				
Region						
Federal District	224	87.8	1.04	0.93 – 1.16	004.8	0.4866
Surrounding	278	82.5				
Social Participation						
No	286	85.9	0.99	0.90 – 1.10	000.0	0.9674
Yes	216	83.4				

Domain 4 - Environment - Dissatisfaction rate is equal to transformed score 0-100 below 70; Satisfaction rate is equal to transformed score 0-100 equal or greater than 70.

\*Mantel-Hänszel/Exact Fisher test when recommended.

#Poisson Regression model with robust variance.

<sup>§</sup>Minimum Wage (MW) amount in Brazil at the time of data collection: R\$ 415.00; in Dollars: US\$ 355.00.

In 2008: US\$ 1.00 = R\$ 1.168.

population. Therefore, it was deemed important to choose a suitable sample, which was already validated in our country, the WHOQOL-BREF.

The evaluation of Quality of Life with the WHO instruments WHOQOL-100 and WHOQOL-BREF have been applied in our country in people with depression<sup>2</sup>, elderly<sup>3</sup>, adolescents<sup>4</sup>, alcohol-dependent individuals<sup>5</sup> and in patients with spinal cord injury<sup>6</sup>. However, previous studies where these instruments have been applied in the general population, specifically in the Federal District and Surrounding Region, were not found and thus the possibility of comparisons is limited.

Find information from the general population in different places enrich the knowledge about Brazilian people. While determining aspects of QoL in hospitals or health centers, certainly we faced with the bias of the disease. Search the QoL in places related to a spontaneous social interaction, such as in libraries, can enrich the analysis and broaden horizons of action to promote health.

Fields of action proposed in the Ottawa Charter<sup>12</sup> include other social environments such as workplaces, schools, clubs, associations, churches, who, like libraries, are also places frequented by individuals. One of the main features of the libraries is the fact that they exist in almost all municipalities and hardly fail to be frequented by people. Thus, research on QoL among users can also help us to know important aspects of communities, enabling the planning of public policies in a more contextualized manner more in line with the real needs of each place.

The survey showed the highest percentages of dissatisfaction among individuals of the Surroundings, which may indicate that regional inequalities have not yet been dealt with in the RIDE-DF. The country is full of good proposals, but a good proposal should be reviewed constantly in order to be in tune with the real needs of individuals in context.

The results of this study showed significant degrees of satisfaction in several areas that the WHOQOL-BREF<sup>10</sup> covers. However, it is important to read the varying degrees of dissatisfaction and satisfaction evidenced in this study, therefore, though often do not add most of the percentages, they should be considered to serve as a framework for planning of public policies that focus on promoting health, reducing inequalities and improving sanitation, leisure, culture and education, among others.

In most cases, governments propose and execute improvements in cities, communities or regions. However, to know at what level this is reflected in the QoL of people may mean that, before doing any work, people will be able to be heard. In other words, the communities themselves, in a democratic and participatory manner, could give their opinion and choose what they want to improve their QoL.

Carr et al.<sup>9</sup> showed that QoL instruments have many uses, among which serve as tools in identifying the needs of the population. Individuals frequenting libraries generally seek these places looking for information, including about health. The libraries are also important places of social references that should be included in the enrichment of data about populations. The same authors reported various instruments for measuring QoL, but, mostly, addressed only negative aspects of health, except for the WHOQOL.

Coons et al.<sup>11</sup> reported that there are no “better or worse” instruments for measuring QoL, and that your choice should be according to the purpose of the research. This work covered individuals in the general population and aimed to analyze factors associated with dissatisfaction reported by individuals. There was a large proportion of women aged over 25 years old with personal and family monthly lower incomes, less schooling, without adequacy of schooling age who had dissatisfaction in the Quality of Life in all areas. In matters related to their health and Quality of Life were those that showed more dissatisfaction.

Factors related to the uneven distribution of income, low education and lack of equity in gender issues are reported almost daily in newscasts and news as well as population censuses carried out already in our country. It is observed that the greatest dissatisfaction reported in this study also include these factors and, despite many public policies in progress, many complaints persist. Search on QoL in general populations may demonstrate more effectively the aspects that should be prioritized, so that we have satisfied individuals in full exercise of their citizenship.

Buss<sup>8</sup> places strong influence of the quality and living conditions on health. Therefore, measuring the QoL is an important parameter in the design of policies that include the participation of the population in the planning of health promotion and promoting improvements in QoL of the communities, with a view to the solution of real problems that have long remained unresolved in our country.

The sample population was of convenience, that is, not all individuals attending libraries. So, due to the fact that have not been chosen by probabilistic procedure, under any circumstances would be representative of the population, which constitutes a limitation. However, the study was comprehensive because the sample has been collected in most public libraries in the area surveyed.

The results of this study show significant differences among individuals residing in the Federal District and in the Surroundings, high levels of dissatisfaction among women on issues of income distribution and levels of satisfaction and dissatisfaction that indicate an important diagnosis of Quality of Life of these people. In this context, the library can contribute as a community hub for learning, interventions and health promotion, where goes individuals and users can even serve as multipliers for promotion of information about health in communities, because libraries, as cited by Gomes<sup>13</sup> and by Antunes et al.<sup>14</sup>, are meeting places for the communities, where everyone can participate and grow together.

## CONCLUSION

QoL studies are important because they bring cultural, socioeconomic and psychological aspects so that, in a multidisciplinary context, can contribute to the implementation and

evaluation of intersectoral interventions, as well as to verify the magnitude of the impact of public policies on health conditions of communities.

The results of this study points to significant gaps in the matters related QoL of users of public libraries in the regions studied, constituting a contribution to the diagnosis of the needs of this specific population.

This study has limitations, which have been linked, contributing particularly to alert on gender issues and can assist in the planning of actions in the libraries areas, where women have greater opportunities for growth and improvement in their life conditions.

The vast majority of the complaints verified punctuate economic, social, environmental and psychological aspects that relate to the lack of evidence relating to basic sanitation, health resources, culture, education, leisure, among others, which directly affect the people's QoL.

The planning and the implementation of interventions that include the direct participation of individuals at all stages of the process is a priority and demonstrates how the libraries spaces are very important social niches, which can and should be filled with actions that could help to promote health and preventive actions in communities, aiming to improve the QoL of the collective population.

## REFERENCES

1. Minayo MCS, Hartz ZMA, Buss PM. Qualidade de vida e saúde: um debate necessário. *Ciênc Saúde Colet* 2000; 5(1): 7-18.
2. Fleck MPA et al. Associação entre sintomas depressivos e funcionamento social em cuidados primários de saúde. *Rev Saúde Pública* 2002; 36(4): 431-8.
3. Pereira RJ et al. Contribuição dos domínios físico, social, psicológico e ambiental para a qualidade de vida global de idosos. *Rev Psiq* 2006; 28(1): 27-38.
4. Gordia AP, Quadros TMB, Campos W, Petroski EL. Domínio físico da qualidade de vida entre adolescentes: associação com atividade física e sexo. *Rev Salud Pub* 2009; 11(1): 50-61.
5. Lima AFBS. Qualidade de vida em pacientes do sexo masculino dependentes de álcool. [dissertação de mestrado] Porto Alegre: Universidade Federal do Rio Grande do Sul; 2001.
6. Bampi LNS, Guilhem D, Lima DD. Qualidade de vida em pessoas com lesão medular traumática: um estudo com o WHOQOL-BRIEF *Rev Bras Epidemiol* 2008; 11(1): 67-77.
7. Campos MO, Rodrigues Neto JF. Qualidade de vida: um instrumento para promoção de saúde. *Rev Baiana Saúde Pública* 2008; 32(2): 232-40.
8. Buss PM. Promoção da saúde e qualidade de vida. *Ciênc Saúde Colet* 2000; 5(1): 163-77.
9. Carr AJ, Thompson PW, Kirwan JR. Quality of life measures. *Br J Rheumatol* 1996; 35(3): 275-81.
10. The WHOQOL Group. The World Health Organization quality of life assessment: position paper from the World Health Organization. *Soc Sci Med* 1995; 41: 1403-9.
11. Coons SJ, Rao S, Keininger DL, Hays RD. A comparative review of generic quality-of-life instruments. *Pharmacoeconomics* 2000; 17(1): 13-35.
12. Brasil. Ministério da Saúde/FIOCRUZ. Promoção da saúde: Cartas de Ottawa, Adelaide, Sundsvall e Santa Fé de Bogotá. Brasília: Ministério da Saúde/IEC; 1992.
13. Gomes JRAA. Percepção de autocuidado, saúde e qualidade de vida em usuários das bibliotecas públicas do Distrito Federal e região do Entorno em 2008: estudo transversal. [dissertação de mestrado] Brasília: Universidade de Brasília; 2008.
14. Antunes W, Cavalcante GA, Gomes JRAA, Carneiro MA. Curso de capacitação para dinamização e uso da biblioteca pública. São Paulo: Global; 2012.

15. Instituto Brasileiro de Geografia e Estatística. Dados sobre cidades. Disponível em: <http://www.ibge.gov.br/cidades>. (Acessado em 07 de julho de 2011).
16. Hulley SB, Cummings SR. Designing clinical research. Baltimore: Willians & Wilkins; 1988.
17. Saupé R, Nietche EA, Cestari ME, Giorgi MDM, Krahl M. Qualidade de vida dos acadêmicos de enfermagem. Rev Latinoam Enferm 2004; 12(4): 636-42.
18. Von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzscheef PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement. Guidelines for reporting observational studies. J Clin Epidemiol 2008; 61(4): 344-9.

Received on: 11/18/2011

Final version presented on: 02/09/2011

Accepted on: 03/07/2013