QUALITY OF LIFE OF BASIC EDUCATION TEACHERS OF PUBLIC SCHOOLS

Qualidade de vida de professoras do ensino básico da rede pública

Calidad de vida de profesoras de la enseñanza básica de la red pública

ABSTRACT

Objective: To evaluate the aspects associated with the quality of life (QoL) of basic education teachers of public schools of Viçosa, MG, checking for relationships to the economic class. **Methods:** This is a descriptive cross-sectional study conducted between March and October 2013 with 156 teachers of the city of Viçosa, MG. We applied the World Health Organization Quality of Life/BREF and the Criterion of Economic Classification questionnaires. We also used a questionnaire on the length of employment and the weekly workload. To compare the QoL domains between economic classes, we used the one-way ANOVA with post-hoc Tukey. For all treatments, significance level was set at $p<0.05$. **Results:** The participants had a mean age of 43.88 ($\pm$10.61) years, weekly workload of 29.00 ($\pm$10.35) hours and length of employment of 16.17 ($\pm$8.91) years. The majority of participants belonged to economic class B1/B2, accounting for 60.3%. The mean score of overall QoL was 68.43 ($\pm$11.69) points, with higher values for the "social relationships" and "physical" domains. There was a reduction in the mean for the "environment" domain in relation to the lower economic class ($p=0.011$) was found. There was a weak and inverse correlation between "social relationships" domain and the weekly workload ($r=-0.16$; $p=0.031$). **Conclusion:** The QoL of the study population was considered between regular and good, taking into account the protocol scale. There was an association only between the "environment" domain and the economic class.

Descriptors: Health Promotion; Quality of Life; Education; Faculty.

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RESUMO

Objetivo: *Avaliar os aspectos associados à qualidade de vida (QV) de professoras do ensino básico da rede pública de Viçosa-MG, buscando relações com a classe econômica.* **Métodos:** *Trata-se de um estudo descritivo transversal, desenvolvido entre março e outubro de 2013, realizado com 156 professoras da cidade de Viçosa-MG. Foram aplicados os questionários World Health Organization Quality of Life/BREF e o Critério de Classificação Econômica. Utilizou-se também um questionário contendo tempo de atuação e carga horária semanal de trabalho. Para comparação dos domínios da QV entre as classes econômicas, utilizou-se o teste ANOVA one way, com post hoc de Tukey. Para todos os tratamentos, adotou-se um nível de significância de p<0,05.* **Resultados:** *As avaliadas apresentaram idade média de 43,88 ($\pm$ 10,61) anos, carga horária de trabalho semanal de 29,00 ($\pm$ 10,35) horas e tempo de atuação profissional de 16,17 ($\pm$ 8,91) anos. A maioria das avaliadas se encontrava na classe econômica B1/B2, com 60,3%. O escore médio da QV geral foi de 68,43 ($\pm$ 11,69) pontos, com maiores valores para os domínios "relações sociais" e "físico". Foi encontrada uma redução na média do domínio "meio ambiente" em relação à menor classe econômica (p=0,011). Houve correlação fraca e inversa entre o domínio "relações sociais" e a carga horária semanal de trabalho (r=-0,16; p=0,031).* **Conclusão:** *A QV da população estudada foi considerada entre regular e boa, levando-se em conta a escala do protocolo. Houve associação somente entre o domínio "meio ambiente" e a classe econômica.*

Descritores: *Promoção da Saúde; Qualidade de Vida; Educação; Docentes.*

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RESUMEN

Objetivo: *Evaluar los aspectos asociados a la calidad de vida (CV) de profesoras de la enseñanza básica de la red pública de Viçosa-MG y su relación con la clase económica.* **Métodos:** *Se trata de un estudio descriptivo transversal desarrollado entre marzo y octubre de 2013 con 156 profesoras de la ciudad de Viçosa-MG. Fueron aplicados los cuestionarios World Health Organization Quality of Life/BREF y el Criterio de Clasificación Económica. Se utilizo también un cuestionario sobre el tiempo de actuación y la carga horaria semanal de trabajo. Se utilizó la ANOVA one way con el post hoc de Tukey para la comparación de los dominios de la CV entre las clases económicas. Se adoptó el nivel de significación de p<0,05 para todos los análisis.* **Resultados:** *Las participantes presentaron la edad media de 43,88 (± 10,61) años, carga horaria de trabajo semanal de 29,00 (± 10,35) horas y el tiempo de actuación profesional de 16,17 (± 8,91) años. La mayoría de las participantes era de la clase económica B1/B2 con el 60,3%. La puntuación media de la CV general fue de 68,43 (± 11,69) puntos con mayores valores para los dominios "relaciones sociales" y "físico". Fue encontrada una reducción de la media del dominio "medio ambiente" respecto la más baja clase económica (p=0,011). Hubo correlación débil y inversa del dominio "relaciones sociales" y la carga horaria semanal de trabajo (r=-0,16; p=0,031).* **Conclusión:** *La CV de la población investigada fue clasificada entre regular y buena, considerándose la escala del protocolo. Hubo asociación solamente entre el dominio "medio ambiente" y la clase económica.*

Descriptores: *Promoción de la Salud; Calidad de Vida; Educación; Docentes.*

INTRODUCTION

Throughout history, economic, social, political, and cultural transformations have shaped the workplace. This labor reorganization has directly influenced professionals' health, not being different in schools[1,2].

Teaching is an occupation exposed to high physical and mental risks[3,4], mainly because of the poor conditions of the physical working environment, the conflicting relations with students, and low remuneration, which intensifies the labor pace and requirements, thus reflecting on the quality of life (QoL) and health of this population[3,5].

Quality of life is defined by the World Health Organization (WHO)[6] as the self-perception of one's position in life in the context of culture and value systems in which one lives, and in relation to their goals, expectations, standards, and concerns. It has been recognized as an important multidimensional issue, consisting of positive and negative elements associated with multiple dimensions of human relationships[7].

Though there are studies on the health and QoL of teachers, only few studies have evaluated QoL aspects in relation to the economic class and the working conditions, outside the major urban centers. The most detailed knowledge of the influence of different aspects related to teachers' QoL is thus relevant, since the living conditions in small cities and in the Brazilian hinterlands may influence differently from big cities. Once the working conditions of basic education teachers in many Brazilian contexts are still unknown, and health promotion actions in this population are still scarce, it is necessary to consider the multidimensionality of the assessed individuals[5,8]. This study aimed to evaluate the aspects related to the quality of life of teachers of basic education in public schools of Viçosa, MG, checking for relationships to the economic class.

METHODS

This is a descriptive study with a cross-sectional design, in the city of Viçosa, MG. Data collection took place from March to October 2013 in eight public schools, with participation of 156 female elementary and high school teachers, this number corresponding to 21.4% of the population of teachers registered with the municipal Department of Education by time of the study. The selection of the participants occurred by random sampling and, as inclusion criterion, the teacher should have at least three years of continuous employment in this occupation in the city, regardless of age.

The sample size was calculated according to the equation: $n = P \times Q / (E / 1.96)^2$, where *n* is the minimum sample size required; *P* is the prevalence rate in the population; $Q = 100 - P$; and *E* is the margin of tolerated sampling error[9]. Thus, with P = 10%, a standard deviation of 5%, and a 95% confidence interval, the value of 138 was calculated, which is equivalent to the minimum of teachers needed. The study used *p*=10%, given that studies performed in Rio Claro, SP[8] and Florianópolis, SC[10] found values of 4.7% and 7.5%, respectively, of teachers who rated their quality of life as "bad" or "very bad".

The data collection procedure was performed via a computer-based campaign aimed at the principal, pedagogic coordinators, and teachers of the eight selected schools, presenting all the objectives and procedures of the research. After initial contact and authorization of the intervention, the registration of volunteers who agreed to participate was carried out.

The standard questionnaire of the Human Performance Laboratory (*LAPEH - Laboratório de Performance Humana*) of the Federal University of Viçosa (*UFV- Universidade*

Federal de Viçosa), which comprises personal data, length of employment, and weekly workload, was applied and stored in the physical evaluation software Avaesporte®. After obtaining signed consent forms, the study applied the Brazilian Economic Classification Criterion 2013 (*CCEB - Critério de Classificação Econômica*)[11], a questionnaire that classifies the population according to household characteristics into the following classes: A1, A2, B1, B2, C1, C2, D, and E. The World Health Organization Quality of Life/BREF questionnaire (WHOQOL/ BREF)[12], which is a self-administered instrument based on self-perception, was delivered thereafter. Immediately upon receipt, any doubts relating to the completion of the questionnaires were clarified.

The WHOQOL/BREF has 26 questions individually presented on a scale of increasing scores ranging from one to five, representing the QoL conditions. The questions involve many aspects of daily life and cover four domains of QoL: physical, psychological, environmental and social relationships. Results are expressed between 0 and 100 - the closer to 100, the better the quality. Thus, a subject presenting a score of 50 for a given domain is regarded on the average. All calculations were performed as established by the questionnaire[12].

The Kolmogorov-Smirnov test was performed to verify the normality of the data. Numerical data is presented as mean, and standard deviation and categorical variables as percentages. One-way ANOVA was used with Tukey post-hoc test for comparison of domains between the economic classes. The relationship between age, length of employment, weekly working hours and QoL domains was assessed using Pearson's correlation coefficient. For all treatments, a 5% significance level was adopted. Data was analyzed using SPSS statistical software, version 17.

All ethical aspects of this research comply with the requirements of the National Health Council (Resolution 466/12), getting approval by the Ethics Committee of the Federal University of Viçosa, No. 070/2012/CEPH.

RESULTS

The mean age of the 156 female teachers was 43.88 ($\pm$10.61) years, 56.4% of them being aged 45 years or more. The weekly workload was 29.00 (+10.35) hours on average, and 48.1% worked more than 24 hours weekly. The teachers had length of employment of 16.17 (+8.91) years, with 44.2% of the teachers in this occupation for 20 years or more. Most of the evaluated teachers were in economic classes B1/B2, accounting for 60.3%, followed by classes A1/A2 (17.9%), and C1/C2 (14.7%).

The mean score of the QoL evaluation questionnaire was 68.43 ($\pm$11.69) points, with higher values for the domains "social relationships" and "physical". The most affected ones were "environment" and "psychological", with the lowest scores (Table I).

Figure 1 depicts the percentage distribution of responses for the two general questions in its five categories of classification proposed by the WHOQOL/BREF. "Very bad" and "bad" represented 7.7% of the answers in relation to the perception of QoL, while 10.9% reported being "very dissatisfied and unhappy" regarding their satisfaction with health.

Considering the other questions in the WHOQOL/ BREF questionnaire, the results that had the most negative impacts, with a considerable percentage of "bad and very bad" or "dissatisfied and very dissatisfied" were opportunity to leisure activities, access to health services, satisfaction with sleep, and financial resources to meet the needs. On the other hand, the results that had positive impacts, with high prevalence of "good or very good" or "satisfied and very satisfied", were related to mobility, meaning of life, satisfaction with personal relationships, and home environment (Figure 2).

Table II shows the QoL domains in relation to the economic class. It was found a reduction in the mean score registered in the "environment" domain in relation to the lowest economic class (p=0.011).

When the correlation was performed between the QoL domains and age, length of employment, and weekly workload, there was significant correlation only between the domain of social relationships and the weekly workload (r=-0.16; p=0.031), which, however, is considered weak.

Table I - Mean and standard deviation of the scores of quality of life domains (WHOQOL-BREF) of basic education teachers from public schools. Viçosa, MG, 2013.

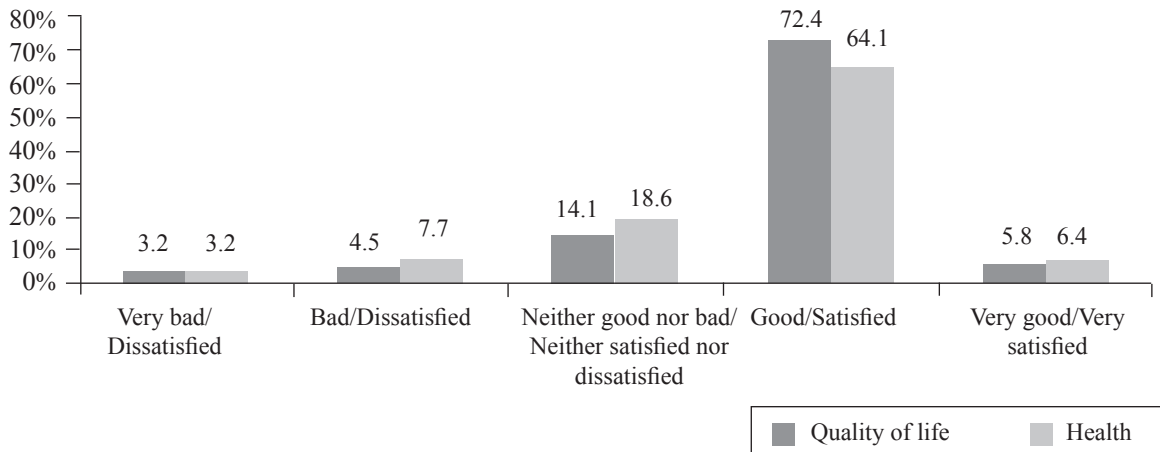| Quality of life domains	Mean ($\pm$ SD)
Physical	70.95 ($\pm$ 14.49)
Psychological	68.27 ($\pm$ 13.10)
Social Relationships	73.18 ($\pm$ 15.15)
Environment	61.36 ($\pm$ 12.55)

SD: standard deviation

Figure 1 - Self-evaluation of quality of life and health of basic education teachers from public schools. Viçosa, MG, 2013.
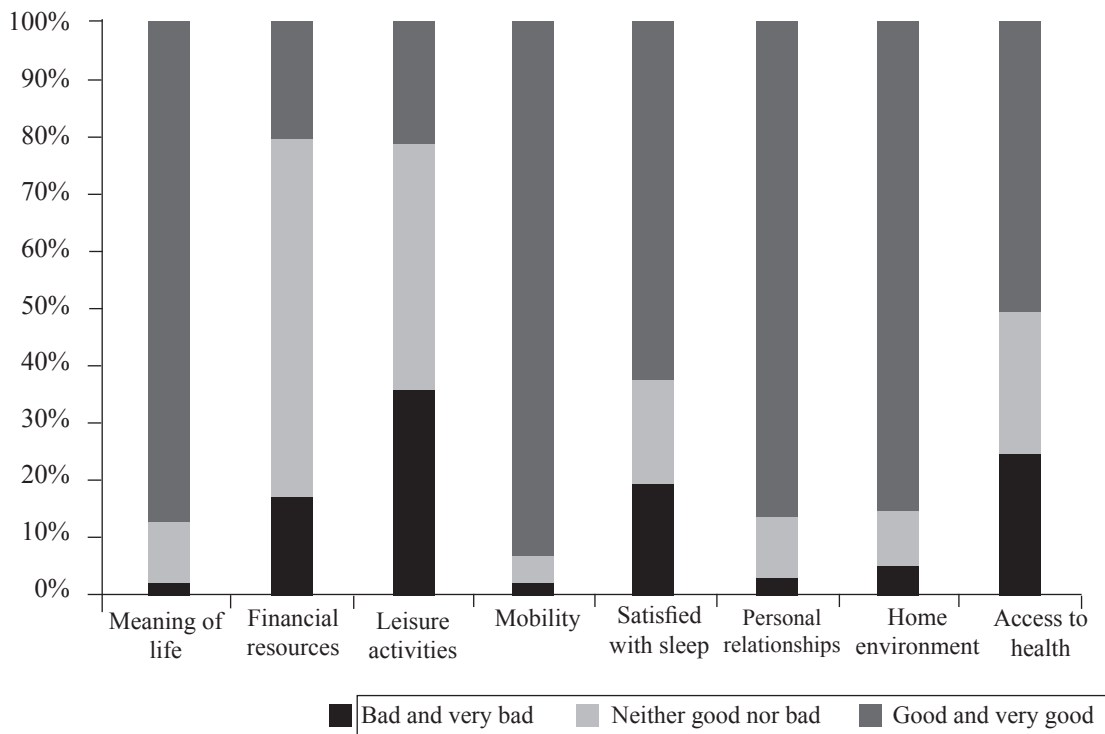

Figure 2 - Frequency of questions in the questionnaire on quality of life (WHOQOL-BREF) of basic education teachers from public schools. Viçosa, MG, 2013.

Table II - Mean and standard deviation of the scores of quality of life domains (WHOQOL-BREF) of basic education teachers from public schools, according to the economic class. Viçosa, MG, 2013.

Economic class	Quality of life domains			
	Physical	Psychological	Social Relationships	Environment
A1 and A2 (n=28)	74.99 ± 14.25	70.24 ± 15.27	76.79 ± 14.05	65.29 ± 13.35
B1 and B2 (n=105)	70.24 ± 14.21	67.94 ± 12.79	72.62 ± 14.69	61.73 ± 11.45
C1 and C2 (n=23)	69.25 ± 15.78	67.39 ± 11.83	71.38 ± 18.26	54.89 ± 14.44*‡
p value	0.253	0.672	0.360	0.011

* $p < 0.05$ compared to the economic class A1 and A2 (*Tukey post-hoc test*); ‡ $p < 0.05$ compared to the economic class B1 and B2 (*Tukey post-hoc test*).

DISCUSSION

The sample had a mean score of 68.43 (±11.69) points in the overall evaluation of their QoL, which can be regarded between regular and good, considering the WHOQOL/BREF scale from zero to one hundred. This score was slightly higher than the ones found in another studies with teachers[3,10]. Features such as shorter weekly working hours, the characteristics of a country town, in which the journeys between home and the workplace are performed on short trips and the period of the study may have influenced towards the greater mean QoL in this sample.

The workload of the evaluated teachers can be considered good, allowing, in theory, a time in activities that give them pleasure, thus improving their QoL. This, in turn, tends to result in a lower level of stress among the teachers, also keeping in mind that there is already a labor stability.

The QoL domains in the WHOQOL/BREF help establish the understanding of which aspects in the subject's life positively or negatively influence the perception of their own QoL. In the present study, teachers obtained the highest scores in the domain "social relationships", with 73.18 (±15.15pontos), and the lowest scores in "environment", with 61.36 (±12.55) points. Similar scores were found in a study with teachers of Florianópolis, SC. The domains with lowest and highest score in that study were, respectively, the "environment", with 53.93 points, and "social relationships", with 73.10 points[10].

Studies show the importance of having a network of social relationships as a protective factor against the effects of mental workload and stress[3,13,14]. The results of this study indicate that the sample is composed of teachers who have social support, thus reflecting the influence and/or effect of the work on their QoL.

The "physical" and "psychological" domains adversely affect the assessment of teachers' QoL. Similar results were found in teachers of higher education institutions of Rio Grande do Sul[13]. Such similarity is possibly due to the samples presenting similar characteristics, such as the mean age, weekly working hours, and length of employment. The "psychological" domain is a point of attention, given that some studies have found a high level of mental health problems among these professionals[15,16].

Most of the interviewed teachers revealed themselves satisfied with their health status (Figure 1), a result that is in line with a study of high school teachers of public schools, where 60.2% reported being satisfied with their health[7].

These aspects should be focus of attention, as they are factors involved in social issues. Attention should be paid to the wage improvement for this group of workers, with a view to a higher QoL and, consequently, a better professional performance[17]. Moreover, the creation of public policies aimed at a greater access to health services and leisure opportunities is interesting and contributes to health promotion for the overall society.

When comparing the QoL domains in relation to the economic classification, a reduction was found in the mean scores for "environment" in relation to the lowest economic class. In the literature, a significant relationship was also found between the "environment" domain and "income", indicating that lower income resulted in a low score in this domain[18]. However, differently from the present study, there are also findings that reveal a relationship between the "social" domain and the remuneration[3]. Those with fewer

resources tend to have a lower QoL; however, the data of the current study does not prove such claims.

The QoL domains can relate to specific characteristics of teaching[3,7]. This study, however, only found a weak relationship between the domain "social relationships" and weekly working hours. A similar study with 203 teachers of higher education institutions of Rio Grande do Sul[13] found a weak positive correlation between the length of employment and the QoL score for the "psychological" domain, and a weak and negative correlation between workload and the "social" domain.

Despite that weak correlation found between the domain "social relationships" and weekly working hours, it is important to highlight that a heavy workload and a long time of employment lead to the increase in cases of Burnout syndrome and impaired mental and physical health, due to labor overload[3,15,16], restricting the establishment of more effective social relationships, with consequent decrease in QoL.

A smaller workload implies a longer time available for self-care and access to cultural goods. However, there is still a tendency to occupy this time performing activities that supplement the family income, thus contributing to the work overload, with negative implications for the professional life[14,18,19].

It is worth mentioning that, nowadays, the multiplicity of women's obligations is present in the home environment, either in taking care of the children or performing the daily household chores[2,5]. In addition, the amount of new burdens to the teacher is growing and going beyond the duties inherent in traditional activities of education[20], which can become a harmful factor to the QoL of teachers.

The absence of correlation between age, length of employment, and the domains of QoL can be explained by the direct association with the individual responsibilities for their own health and QoL, without direct interference from the workplace.

As the study limitation, there is the low prevalence of men in the population, which prevented the inclusion of gender analysis; it is interesting that further studies on this particular group be carried out. The cross-sectional design of this study is another limitation, which prevents the analysis of the school year temporality and its implications on teachers' health and QoL. Another interesting approach would be the analysis of work shifts, different levels of education and, finally, the participation of all the employees of the school environment.

CONCLUSION

Given the results presented, it is concluded that the teachers of basic education of Viçosa, MG had "regular" to "good" scores in the QoL evaluation. The domains "environment" and "psychological" were the aspects that negatively affected the QoL. The study found a reduction in the mean value of the domain "environment" in relation to the lowest economic class, and a weak and inverse correlation between the domain "social relationships" and the weekly working hours.

Thus, there is the need for planning and implementing actions to promote mental health, and the development of an appropriate working environment, which can positively affect the QoL of teachers.

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