



Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

ORIGINAL ARTICLE

PERCEPTION OF QUALITY OF LIFE COLLECTORS OF RECYCLABLE MATERIALS PERCEPÇÃO DE QUALIDADE DE VIDA DE CATADORES DE MATERIAIS RECICLÁVEIS PERCEPCIÓN DE CALIDAD DE VIDA DE RECOLECTORES DE MATERIALES RECICLABLES

Larissa Martins Nogueira¹, Cristiane Aparecida Silveira², Karina Sobral Fernandes³

ABSTRACT

Objective: to investigate the perception of the quality of life of the collectors of recyclable materials, correlating it to their living and working conditions. **Method:** a descriptive, quantitative approach, carried out with 37 recyclable waste pickers. Two instruments, were used: one for characterization of the sample and another for quality of life evaluation (WHOQOL-Bref) and the data analyzed in SPSS software. **Results:** 37 scavengers aged 20 to 71 years (mean 44.16 and dp 13.45); were interviewed, 24 (64.86%) had comrades and 14 (37.84%) had pains on a regular basis. As for the perception of the quality of life, those with comrades had superior average in the psychological domain in relation to those without companions and blacks had higher averages in the psychological and social domains in relation to whites and browns respectively. **Conclusion:** Preventive and interventional actions are necessary in the work and life contexts of the collectors.

Descriptors: Solid Waste Segregators. Occupational Health. Health Promotion.

RESUMO

Objetivo: investigar a percepção da qualidade de vida dos catadores de materiais recicláveis, correlacionando-a às condições de vida e trabalho dos mesmos. **Método:** estudo descritivo, de abordagem quantitativa, realizado com 37 catadores de recicláveis. Utilizaram-se dois instrumentos, um para a caracterização da amostra e outro para a avaliação da qualidade de vida (WHOQOL-Bref), e os dados foram analisados no software SPSS. **Resultados:** foram entrevistados 37 catadores de 20 a 71 anos (média 44,16 e dp 13,45); 24 (64,86%) tinham companheiros e 14 (37,84%) sentiam dores regularmente. Quanto à percepção da qualidade de vida, os com companheiros tiveram média superior no domínio psicológico em relação aos sem companheiros e negros tiveram médias superiores nos domínios psicológico e social em relação aos brancos e pardos, respectivamente. **Conclusão:** são necessárias ações preventivas e intervencionistas nos contextos laborais e de vida dos catadores. **Descritores:** Catadores; Saúde do Trabalhador; Promoção da Saúde.

RESUMEN

Objetivo: investigar la percepción de calidad de vida de los recolectores de materiales reciclables, correlacionándolos a las condiciones de vida y trabajo. **Método:** estudio descriptivo de un enfoque cuantitativo, realizado con 37 recolectores de materiales reciclables. Se utilizaron dos instrumentos: una caracterización de la muestra y evaluación de calidad de vida (WHOQOL-Bref) y los datos analizados en el software SPSS. **Resultados:** fueron entrevistados 37 recolectores de 20 a 71 años (media 44.16 y dp 13.45), 24 (64,86%) tenían compañeros y 14 (37,84%) sentían dolor regularmente. En cuanto a la percepción de la calidad de vida: los con compañeros tuvieron media superior en el dominio psicológico en relación a los sin compañeros y negros tuvieron promedios más altos en dominios psicológicos y social en relación a los blancos y marrones, respectivamente. **Conclusión:** son necesarias acciones preventivas e intervencionista en contextos laborales y de vida de los recolectores. **Descritores:** Segregadores de Residuos Sólidos. Salud Laboral. Promoción de la Salud.

¹Graduate student in Nursing, Brotherhood of Santa Casa de Poços de Caldas (MG), Brazil. E-mail: larissanogueira@hotmail.com; ²Nurse, Adjunct Professor IV, Graduation / Post-Graduation in Nursing / EERP / USP, Pontifícia Universidade Católica de Minas Gerais. Poços de Caldas (MG), Brazil. E-mail: casilve@yahoo.com.br; ³Nurse, Pontifical Catholic University of Minas Gerais. Poços de Caldas (MG), Brazil. E-mail: karinasobralfernandes@hotmail.com

INTRODUCTION

Garbage is now a major public health problem, since its increase, due to the high consumption of modern society, is inversely proportional to the existing resources to eliminate it. Its repercussions in the environmental, economic and sanitary sphere are crucial factors in the health and quality of life of a society.¹

Problems related to garbage have mobilized the population to develop technologies and propose alternatives to minimize them. One of the most encouraged is recycling, avoiding the depletion of raw materials and doing waste management. However, all waste management activities involve different risks to public health, whether due to the composition or nature of the waste or to the way waste is managed. Understanding the risks involved in each stage of solid waste management, the exposed population, as well as the types of environmental and sanitary control become central to any management system committed to public health.²

It is in this ambit that a new work arises, the Collector of Recyclable Material. This occupation experiences several risks to the health of the worker, since these are exposed to several obstacles such as: physical agents, chemical agents, biological agents and work accidents.³

Although most act informally, the practice of picking solid waste is a work characterized as a regulated occupation and included, since 2001, in the Brazilian Occupational Catalog (CBO). In this classification, garbage collectors are registered under number 5192-05 and their occupation, described in summary form: garbage collectors cull, select and sell recyclable materials such as paper, cardboard and glass, as well as ferrous and non-ferrous materials and other reusable materials.⁴ In this context, these workers are part of a recognized form of occupation, but are already born without minimum social and labor guarantees, that is, they arise in a precarious condition.

The Regulatory Norms (NR) qualify the activity that handles garbage as being unhealthy to a maximum degree, because this modality requires permanent contact with agents harmful to health, being one of the most risky and unhealthy professional activities⁽⁵⁾. Therefore, it must have labor protection, Personal Protective Equipment (PPE) and additional.

Although scavengers are exposed to several factors, they do not always use PPE. Another

unhealthy situation is the reuse of food, jewelry, toys, clothes, shoes, containers, among others. The condition of poverty, low level of schooling and social exclusion are evident in these workers.¹

Waste pickers, are often, low-educated people with the ability to perform manual jobs, and techniques that have lost their jobs in sectors of the capitalist economy, rural or urban, and garbage as an alternative to survival. Their dwellings, generally rustic, are transformed into places of separation and storage of garbage for resale, susceptible to the attraction and reproduction of vectors of diseases and propagation of fires. The increase in the number of waste pickers in the streets, dumps or landfills may be related to capitalist economic activity, which in times of crisis, reduces jobs, especially for individuals with the profile of these workers.³

The major health problems associated with hazardous waste disposal sites include: immunological abnormalities, cancer, reproductive harm and birth defects, respiratory and lung diseases, liver deficiencies, neurological and renal problems.⁵

Inadequate disposal of solid waste is involved in determining the onset of infectious diseases. It is also known, that man can be affected by the undesirable effects of the garbage by several forms, either by direct or indirect contact. The vectors found, in the areas of urban waste disposal, are animals that find food and shelter in the garbage, that is, favorable conditions for its proliferation. Many of these vectors are responsible for transmitting numerous diseases to humans, such as: typhoid, salmonellosis and dysentery, transmitted by flies and cockroaches; filariasis, malaria, dengue and yellow fever, caused by mosquitoes; rabies, bubonic plague, leptospirosis and certain verminoses caused by rodents.⁶

The degradation of the natural environment and the generation of waste cause physical health compromises, psychological and psychiatric disorders, and social disintegration. Thus, pathologies such as infectious, degenerative, cardiovascular, anxiety and depression attacks, panic syndrome, chemical dependence and exacerbation of violence, among others, are the constitutional components of the same phenomenon.⁶

Most scavengers handle substances that are considered dangerous without any protection. Work accidents, in this type of environment, usually occur due to the precariousness and lack of adequate working conditions, resulting

Nogueira LM, Silveira CA, Fernandes KS.

Perception of quality of life collectors of...

in injuries and loss of limbs due to run over and pressing in compaction equipment and automotive vehicles, in addition to animal bites and insect bites.⁷

Another relevant factor, considering the risk to health and quality of life of these collectors, refers to psychosocial issues. The life history of collectors of recyclable materials is marked by shame, humiliation and social exclusion; their occupation is felt to be disqualified and devoid of recognition by society.³

Social representations reflect the psychosocial impact suffered by waste pickers. In this everyday life, the scavengers bring with them the marks of a reality that shows itself alive in perverse scenes, feeling helpless. Marked by the image of dirty, with a foul smell in their bodies and clothes, impregnated with their own product of the restless hours of their work, they are subject to prejudice and exclusion from society, stigmatized as trash that they revolve and handle daily.

Several labor and extra-labor factors end up influencing the way these collectors live and their quality of life (QoL), which can be defined in different ways by different authors, although their context can be interpreted as an adequate living condition in Which the individual is in perfect physical, emotional and social state. For the present study, he adopted the concept of the World Health Organization (WHO), that defined QOL as "the individual's perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards and concerns".⁸ Specifically in the area of health, the improvement of the quality of life came to be considered as a result to be obtained after care practices, as well as in public policies in actions to promote health and to prevent diseases.

Health is also directly related to QoL because it includes an adequate standard of nutrition and nutrition, housing, sanitation, good working conditions, lifelong education opportunities, a clean physical environment, social support for families and individuals, Responsible lifestyle and adequate spectrum of health care.

One of the fundamental elements in the quality of life that has been pointed out, among the factors that constitute, it is being and being healthy. Satisfaction with life is related to the process of being healthy and having quality of life.⁹ Becoming healthy is having hope, transcending worries, making choices, advocating and evaluating resources.

Being and becoming healthy incorporates awareness, resources, opportunity, development, access, empowerment, empowerment and advocacy.

In view of the above, considering that almost always the work of catapults is harmful to the worker, who is exposed to health risks, social prejudices and the lack of regulation of labor rights and also by the condition of life outside work, the objective of this study is to investigate the quality of life perception of recyclable material collectors, correlating it to their living and working conditions, as well as to identify socio-demographic variables that potentially influence the quality of life of waste pickers.

MÉTHOD

This study was extracted from the Final Report of the Scientific Initiation Research Project / FIP / PUC Minas, titled 'Recyclable Material Collectors: quality of life and work'. This is a quantitative epidemiological study, carried out in a recycling association in Poços de Caldas (MG), Brazil. This association has the support of the City Hall, in the infrastructure and the availability of trucks to collect the material, and the population, that separates the recyclable material itself.

The study was approved by the Research Ethics Committee of the Pontifical Catholic University of Minas Gerais (CAAE: 35703314.7.0000.5137), obeying the ethical guidelines.

The interviews were carried out with the collectors in the association itself. Included, in the survey, were all registered collectors who agreed to participate in the research and signed the Free and Informed Consent Term. Those under 18 years of age, those who were not exercising the treatment, and those who did not consent to participate in the study were excluded.

Two instruments were used: the first one, built by the authors and validated by specialists, was used to characterize the health practices and living and working conditions of recyclable waste pickers and the second one, to assess the quality of life, was the WHOQOL -Bref, instrument developed by WHO, a questionnaire with 26 questions that addresses four domains of QOL - physical, psychological, environmental and social relationships. For each domain the subject has the option of answer scores ranging from one to five.

Data were analyzed from descriptive and analytical statistics, using the Statistical Package for Social Sciences (SPSS15.0). The

inclusion of sociodemographic variables - sex, age, schooling, other occupation, marital status and number of children - allowed to evaluate how much they influenced the WHOQOL-bref scores, through the statistical ANOVA test, within the sample. Significance was assessed at $\alpha = 0.05$. The Pearson correlation coefficient was evaluated between the variables age, diseases and pain, with the

WHOQOL domains. Pearson's correlation coefficient was considered $0.1 < r < 0.3$ = small effect; $0.3 < r < 0.5$ = mean effect and $0.5 < r < 1$ = large effect.

RESULTS

We interviewed 37 waste pickers whose socio-demographic data are presented in table 1:

Table 1. Distribution of recyclable waste pickers according to socio-demographic data. Poços de Caldas, MG, Brazil, 2015. (n = 37)

Variables		Total	
		n	%
Sex	Females	19	51.35
	Male	18	48.65
	Total	37	100.00
Marital Status	With partnet	24	64.86
	Without partner	13	35.14
	Total	37	100.00
Race/Ethnicity	Black or Brown	28	75.78
	White	9	24.32
	Total	37	100.00
Education	Incomplete basic education	17	45.95
	Complete basic education or more	20	54.05
	Total	37	100.00
Family income	1 to 2 minimum wages	35	94.59
	3 to 4 minimum wages	2	5.41
	Total	37	100.00
Primary breadwinner	Yes	10	27.03
	No	6	16.22
	Equal	21	56.76
	Total	37	100.00
Children	Does not have children	9	24.32
	1 or 2 children	12	32.43
	3 or more children	16	43.24
	Total	37	100.00

The ages of the scavengers ranged from 20 to 71 years (mean: 44.16 and dp 13.45); 19 (51.35%) were women and 18 (48.65%); men; 24 (64.83%) had companions; 28 (75.78%) were black or brown; 20 (54.05%) had completed

primary education or more; 35 (94.59%) of them reported receiving between one and two minimum wages and 16 (43.24%) had three or more children.

Table 2. Distribution of recyclable waste pickers according to health data. Poços de Caldas, MG, Brazil, 2015. (n = 37)

Variables		Total	
		n	%
Comorbidities*	Hypertension	16	35.56
	RSI/WRMOD	1	2.22
	Diabetes	4	8.89
	Bone diseases	3	6.67
	Others	4	8.89
	Did not say	17	37.78
	More than one pathology	7	18.91
	TOTAL	37	100
Regularly feel body pain	Yes	14	37.84
	No	23	62.16
Location of pain:	Lumbar region	16	36.37
	Upper limbs	5	11.36
	More than one region	4	10.81
	Does not apply	23	52.27
Vaccination in the last five years:	Yes	27	72.97
	No/ Does not remember	10	27.03
	Total	37	100

Note: * Question with more than one alternative

Regarding health conditions: 16 (36.56%) reported having hypertension; 14 (37.84%) reported having pains regularly and 27

(72.97%) said they had been vaccinated in the last five years.

Table 3. Distribution of recyclable waste pickers according to work data. Poços de Caldas, MG, Brazil, 2015. (n = 37)

Variables		Total	
		n	%
Other occupation	Yes	6	16.22
	No	31	83.78
	TOTAL	37	100
IPE Used	Trousers	37	100
	Latex gloves	29	78.38
	Closed shoes	34	91.89
	Protection goggles	6	16.22
Already suffered an accident at work:	Yes	13	35.14
	No	24	64.86
	TOTAL	37	100
Type of accident	Cuts	10	27.02
	Falls	4	10.81
	More than one accident	1	2.7
	Does not apply	24	66.67
	TOTAL	37	100
Diseases that believe they can contract during work	RSI/WRMOD	31	83.78
	Leptospirosis	17	14.17
	Intoxication	16	13.33
	Leprosy	10	8.33
	Heart disease	6	5
	Tuberculosis	6	5
	AIDS	5	4.17
	Yellow fever	5	4.17
	Psychic diseases	2	1.67
	Arterial hypertension	1	0.83
	No Disease	2	1.67

Note: * Question with more than one alternative

Only six (16.22%) have another occupation, besides the tasting. Regarding the workload of the interviewers: 36 (97.3%) reported working between seven and eight hours a day, and only one (2.7%) said they worked between nine and 12 hours a day.

As for work accidents, 13 (35.14%) have already suffered some type. All respondents reported using PPE, 29 (78.38%) reported using latex gloves; all said they wore long trousers, 34 (91.89%) used closed shoes; six (16.22%), reported wearing glasses, mask and apron.

When questioned about which illnesses they might get in the workplace, many find themselves confused: there is a lack of knowledge about the transmission of diseases and even how they might acquire these diseases in the workplace. Of the total, 28

(23.33%) reported that RSI/WRMOD could be acquired in the work environment, 17 (14.17%) believed they could contract leptospirosis, 16 (13.33%) said they could present intoxication; ten (8.33%) said they were able to contract leprosy, six (5%), believed to have heart disease, six (5%) believed to be able to contract tuberculosis; five (4.17%) five (4.17%) reported believing that they could contract yellow fever; two (1.67%) believed to be able to contract psychic diseases; two (1.67%) believed that in the work environment they had no risk of contracting none of the diseases and one (0.83%), believed to be able to present the symptoms of hypertension.

Table 4. Distribution of socio-demographic variables and their influence on quality of life of scavengers. Poços de Caldas, MG, Brazil, 2015. (n = 37)

		Average Domains (Standard Deviation)					
		Physical	Psycholo gical	Social	Environ mental	Qol Percepti on	Satisfact ion with Health
Sex	Female	3.56 (0.43)	3.61 (0.72)	4.03 (1.00)	3.34 (0.52)	4.05 (0.84)	4.05 (1.17)
	Male	3.49 (0.33)	3.72 (0.35)	4.03 (0.60)	3.41 (0.42)	3.94 (0.53)	4.05 (0.80)
	P	0.579	0.571	0.994	0.675	0.645	0.993
Age	Up to 40 years	3.46 (0.35)	3.84 (0.47)	3.95 (0.71)	3.34(0.4 8)	4.14(0.7 7)	4.14 (0.77)
	years	3.56 (0.40)	3.55 (0.60)	4.08 (0.89)	3.40(0.4 8)	3.91(0.6 6)	4.00 (1.12)
	P	0.472	0.14	0.637	0.722	0.345	0.679
Marital Status	Single	3.18 (0.32)	3.42 (0.82)	3.71 (0.65)	3.48(0.4 2)	3.85(0.6 9)	3.85 (1.06)
	Married	3.66 (0.35)	3.90 (0.29)	4.27 (0.58)	3.41(0.4 3)	4.16(0.7 0)	4.12 (0.99)
	Widow	3.32 (0.35)	3.12 (0.49)	4.16 (0.69)	3.44(0.6 4)	3.50(0.5 7)	4.50 (0.57)
	P	0.006	0.004	0.116	0.932	0.17	0.579
Ethnicity/ race	White	3.36 (0.41)	3.38 (0.62)	3.94 (0.82)	3.41(0.4 5)	4.11(0.6 0)	4.22 (0.97)
	Black	3.65 (0.37)	3.96 (0.34)	4.47 (0.36)	3.52(0.3 1)	4.21(0.6 9)	4.07 (0.99)
	Brown	3.51 (0.36)	3.55 (0.60)	3.65 (0.97)	3.71(0.7 2)	3.72(0.7 2)	3.92 (1.07)
	P	0.217	0.031	0.024	0.223	0.151	0.796
Education	Incomplete Basic Education	3.55 (0.43)	3.50 (0.67)	3.88 (0.95)	3.23(0.5 4)	4.00(0.7 9)	4.00 (1.11)
	Complete Basic Education	3.28 (0.34)	3.88 (0.52)	3.55 (0.58)	3.25(0.4 4)	4.16(0.4 0)	3.66 (1.03)
	Incomplete Highschool	3.64 (0.35)	3.66 (0.22)	4.27 (0.53)	3.66(0.3 3)	3.50(0.5 4)	4.16 (0.75)
	Complete Highschool	3.50 (0.30)	3.80 (0.54)	4.50 (0.69)	3.54(0.3 4)	4.16(0.7 5)	4.16 (0.98)
Breadwin ner	P	0.427	0.479	0.182	0.206	0.316	0.816
	Yes	3.52 (0.43)	3.49 (0.64)	3.90 (1.20)	3.35(0.5 8)	3.90(0.7 3)	4.00 (0.94)
	No	3.57 (0.34)	3.91 (0.53)	4.38 (0.49)	3.66(0.1 7)	4.16(0.7 5)	4.66 (0.51)
	Equal	3.51 (0.38)	3.68 (0.53)	4.00 (0.67)	3.31(0.4 6)	4.00(0.7 0)	3.90 (1.09)
Number of children	P	0.957	0.352	0.506	0.28	0.776	0.258
	2 children	3.48 (0.42)	3.70 (0.53)	4.43 (0.44)	3.37(0.3 1)	3.80(0.7 8)	3.90 (0.99)
	3 or more children	3.53 (0.41)	3.53 (0.60)	3.87 (1.01)	3.30(0.5 5)	3.87(0.6 1)	3.93 (1.18)
	Does not have children	3.52 (0.360)	3.83 (0.60)	3.87 (0.77)	3.48(0.5 0)	4.33(0.7 0)	4.33 (0.70)
	P	0.954	0.461	0.21	0.679	0.201	0.59

Regarding the variables: gender, age, schooling levels, whether or not the main cause of income and number of children, there was no significant relationship with the indicators of physical, psychological, social, environmental, quality of life and satisfaction with health.

Regarding the marital status, the married had higher psychological averages than the

single and middle averages than the widows. But, no difference in average between the civil states was observed in relation to the indicators of social, environmental quality of life, perception of QoL and Satisfaction ($p < 0.5$).

In relation to the ethnicity variable, a difference of averages was observed in relation to the indicators of psychological and

social quality of life, and people who considered themselves black had higher psychological means than those considered white, and higher social means than brown. No difference in mean between ethnicities

was observed in relation to indicators of physical, environmental, quality of life, perception of quality of life and satisfaction with Health.

Table 5. Correlation between the variables age, diseases and pain with the WHOQOL domains. Poços de Caldas, MG, Brazil, 2015. (n = 37)

Correlation		Age	Diseases	Pain	Physical	Psychological	Social	Environmental	QoL perception	Satisfaction with Health
Idade	R	1	0.401	0.428	0.088	-0.253	0.007	-0.007	-0.178	-0.143
	p		0.014	0.008	0.606	0.131	0.965	0.969	0.291	0.397
Doenças	R	0.401	1	0.211	0.005	-0.121	0.007	-0.215	-0.163	-0.212
	p	0.014		0.209	0.978	0.475	0.966	0.202	0.335	0.207
Dores	R	0.428	0.211	1	-0.086	-0.47	-0.39	-0.312	-0.338	-0.393
	p	0.008	0.209		0.614	0.003	0.017	0.06	0.041	0.016
Físico	R	0.088	0.005	-0.086	1	0.549	0.32	0.41	0.552	0.428
	p	0.606	0.978	0.614		0	0.053	0.012	0	0.008
Psicológico	R	-0.253	-0.121	-0.47	0.549	1	0.4	0.42	0.586	0.367
	p	0.131	0.475	0.003	0		0.014	0.01	0	0.025
Social	R	0.007	0.007	-0.39	0.32	0.4	1	0.498	0.294	0.504
	p	0.965	0.966	0.017	0.053	0.014		0.002	0.077	0.001
Ambiental	R	-0.007	-0.215	-0.312	0.41	0.42	0.498	1	0.394	0.386
	p	0.969	0.202	0.06	0.012	0.01	0.002		0.016	0.018
Percepção de QV	R	-0.178	-0.163	-0.338	0.552	0.586	0.294	0.394	1	0.433
	p	0.291	0.335	0.041	0	0	0.077	0.016		0.007
Satisfação com a Saúde	R	-0.143	-0.212	-0.393	0.428	0.367	0.504	0.386	0.433	1
	p	0.397	0.207	0.016	0.008	0.025	0.001	0.018	0.007	

Key: p = significance level
R = Pearson correlation coefficient 0.1 <r <0.3 = small effect; 0.3 <r <0.5 = mean effect and 0.5 <r <1 = large effect

In the evaluation of the presence of pain and the psychological domain of the WHOQOL, a negative correlation of moderate size (N = 37; r = -0.470; p = 0.003) was observed, and the higher the number of pain, the lower the quality of life score, in the psychological dimension.

In the correlation of the environmental domain with the number of pains, the degree of significance was 0.060, statistically significant. There was also significance in the social domain in relation to the physical one with 0.053, corresponding to an average effect statistically, and in the domain perception of the social-related quality of life, with 0.077, having significant effect.

DISCUSSION

Studies show that the largest age group is concentrated between the fourth and sixth decade of life (10,11). Age is an important factor in the perception of quality of life in this occupational category: younger scavengers have low personal satisfaction, while older people demonstrate a higher degree of satisfaction for life.¹²

The most evident demonstrations of dissatisfaction in young scavengers probably occur because they present a higher level of schooling, since education induces a higher requirement for quality of life and salary.¹²

There is a significant negative relationship between age and schooling and a lack of association between the presence or absence of pain with the worker's age, and pain is frequent in all age groups. Collectors, older than thirty years of age, have experienced at least one type of pain, with the highest incidence of pain in the head, leg and spine.¹² In most surveys,

In other researches, most are single^{10,14}, black and brown.³ Unlike other surveys, where most of the collectors have incomplete elementary education¹¹, this study showed schooling that is relatively superior to what is expected in the taster. The household income of the scavengers is low. In 2008, the estimate was that a scavenger in the South and Southeast regions, obtained, the activity, a minimum wage and a half.¹¹

Hypertension is the most reported comorbidity among collectors, followed by diabetes.¹⁵ In this research, hypertension predominated, but, diabetes was only reported by for interviewees (8.89%).

The presence of pain directly affects the quality of life. So, the higher the level of pain, the lower the quality of life. In one study, 37.5% of the scavengers reported feeling pain regularly and another 21.87% said they felt pain almost every day. When correlated with age, 86.2% of older people reported feeling pain in one part of their body

often.¹² The common low back pain, in the collectors is explained by the physical effort they make in the scavenging.¹³

Work as a scavenger consumes a lot of time, causing the majority to have no other link (9). However, in general, the garbage collectors work from 8am to 5pm, which in total corresponds to eight hours per day, and the cooperative does not influence their schedule and may exceed this timetable.¹³

Most waste pickers do not care about prevention and maintenance of health: not all are vaccinated and most do not use PPE (¹²), as in the present study. In addition, the use of PPE is a problem in this category because they work in slippers without having any protection.¹⁰ Although they have PPE, most of them do not they want to make use.¹² Others, reported using PPE during the field work, but it was observed that they did not use them¹¹, a fact also observed in this study.

Because they do not protect themselves and work in an unsafe and unhealthy environment, many are injured. In a study, 35% of the scavengers had suffered some kind of accident in the work environment, and most accidents were caused by sharps, a common fact of the occurrence of other TA in the studies, 55.5% 16, 43.9%.¹²

The most common accidents are cuts and punctures. The scavengers relate the diseases to the environment in where they work. Were mentioned several diseases that they can present as: skin ringworm, ergonomic risks; risk of accidents due to truck moving. Although they are aware of the risks of sewage work, knowledge is still flawed.¹⁷

In addition to the difficulty of interpreting WA, the perception that the collectors present about the risks they are exposed in the work environment, as well as the diseases that may arise due to work, is also limited. Workers, often, disregard the risks they face in the workplace, making it even easier for accidents to occur because they are not being prevented, because if they do not identify the risk, they are not being warned correctly. The scavengers relate the visible risks they are exposed to, but disregard the "invisible" ones. Many of them quoted to present hypertension, respiratory allergies, spine pain, RSI, and also have reported having already crashed with objects. The most common and with sharps objects. They also reported that respiratory diseases may arise due to the amount of powders disposed in these worksites.¹⁸

The presence or absence of pain is not linked to the age of the collector, and it reaches all regardless of age, frequent in all age groups. In this present study, the number

of pains compared to the psychological domain presented a negative correlation of moderate size, and the higher the number of pain the lower the quality score of life.

Household or solo household collectors, who are over 40 years of age and have a lower level of schooling, have a better quality of life and the overall evaluation of the household showed that the collectors are satisfied with their lives, their health and the quality of life.¹⁹

The high percentage of workers over the age of 40 may be related to the difficulty these people encounter in (re)entering the labor market, and young people are already well accepted in the labor market. Although the work in the sampling was a work that requires great physical effort and entails problems related to the musculoskeletal apparatus, there was no significance in the physical domain score.⁹

In the gender variable and overall assessment the scores were the same in all domains. The age group identified a higher score for the elders in the overall assessment and in the social relationships, having no significance in the other domains.⁹

The scout who had a partner presented, in the overall evaluation had a higher mean score than those who did not have companions.⁹ In another study, the scout with companion scored higher on the overall evaluation of those who did not have a partner, and the number of children interfered for the best Perception of quality of life. Marital status had significance, showing that those who had companions had scores higher than those who did not have (⁹).

The score that most stood out in the quality of life was the physical domain, with a mean of 81 and a standard deviation of 13.1, and the psychological domain with 71, social with 70.1. The lowest was the environmental 51.2, which is related to physical security, protection, among others. In the physical domain, none of the representative variables produced a significant difference. In social relationships, age was significant, with younger children having lower scores than older ones.⁹

It was evident that workers are dissatisfied with the work they do and the unhealthy environment that performs their activities. This fact can be explained that this job was not what they were looking for, just what they got. Most still say that they would like to change something in appearance, manner or purchasing power.²⁰

The result of the perception of QoL includes a complexity of economic factors, socio-cultural, life styles, life experiences, among others, personal. Thus, its interdisciplinary character implies the contribution of different areas of knowledge to the improvement of the concept, and its use can favor the improvement of the quality and integrality of health care as a right of citizenship.⁹

CONCLUSION

There was a difference of averages in relation to the marital status, related to the physical and psychological QoL indicators, and the interviewees who had companions presented higher averages in the physical domain, compared to those who had no partners. In relation to the psychological domain, those with comrades presented higher averages in relation to the widows. There was also a difference in ethnicity in relation to psychological and social QoL. People who consider themselves black had a higher average in the psychological domain. In the social domain, those considered to be black had a higher average than browns.

With this research, it was verified that the first information passed by the collectors of recyclable materials, of which they made use of PPE, were not completely true. With the accomplishment of the research in field it was observed that they made use of some PPE, although they did not use all, which Leaving them exposed to possible accidents such as cuts, falls, contamination. The research provided a return to recyclable waste pickers in relation to the importance of using PPE, showing them the use of PPE, which does not exempt them from accidents, but protects them so that damages are lower in the event of an accident.

FUNDING

Research Incentive Fund of the Pontifical Catholic University of Minas Gerais.

REFERENCES

1. Dall'Agnol CM, Fernandes FS. Health and self-care among garbage collectors: work experiences in a recyclable garbage cooperative. *Rev Latino-Am Enfermagem* [Internet]. 2007 Sept/Oct [cited 2016 Mar 15];15(Spe):729-35. Available from: <http://www.scielo.br/pdf/rlae/v15nspe/02.pdf>
2. Lazzari MA, Reis CB. The perception of urban garbage collectors of Dourados, in the state of Mato Grosso do Sul, regarding the biological risks involved in their work routine. *Ciênc Saúde Coletiva* [Internet]. 2011 Aug [cited 2016 Mar 15];16(8):3437-42. Available from: <http://www.scielo.br/pdf/csc/v16n8/a11v16n8.pdf>
3. Pereira ER, Silva RMCRA, Mello FP, Oliveira DC, Silva MA. Representações sociais dos catadores de um aterro sanitário: o convívio com o lixo. *Psicol teor práct* [Internet]. 2012 Dec [cited 2016 Mar 15];14(3):34-47. Available from: <http://editorarevistas.mackenzie.br/index.php/ptp/article/view/4165/3850>
4. Ministério do Trabalho (BR). Classificação Brasileira de Ocupações [Internet]. Brasília: Ministério do Trabalho; 2014 [cited 2016 Mar 15]. Available from: <http://www.mtecbo.gov.br/cbosite/pages/home.jsf>
5. Gama CAP, Koda MY. Cooperativismo e reciclagem de resíduos sólidos: uma reflexão a partir da psicanálise de grupos. *Cad Psicol Soc Trab* [Internet]. 2010 Sept [cited 2016 Mar 15];13(2):209-24. Available from: <http://webcache.googleusercontent.com/search?q=cache:O8Ou5pbzPUgJ:www.revistas.usp.br/cpst/article/view/25726+&cd=1&hl=pt-BR&ct=clnk&gl=br>
6. Siqueira MM, Moraes MS. Urban solid residues, garbage collectors and public health. *Ciênc Saúde Coletiva* [Internet]. 2009 Dec [cited 2016 Mar 15];14(6):2115-22. Available from: <http://www.scielo.br/pdf/csc/v14n6/18.pdf>
7. Santos GO, Silva LFF. What garbage represents for municipal collectors and recyclers in Fortaleza, State of Ceará (Brazil). *Ciênc Saúde Coletiva* [Internet]. 2011 Aug [cited 2016 Mar 15];16(8):3413-9. Available from: <http://www.scielo.br/pdf/csc/v16n8/a08v16n8.pdf>
8. Kluthcovsky ACGC, Kluthcovsky FA. WHOQOL-bref, an instrument for quality of life assessment: a systematic review. *Rev Psiquiatr Rio Gd Sul* [Internet]. 2009 [cited 2016 Mar 15];31(Suppl. 3):1-12. Available from: <http://www.scielo.br/pdf/rprs/v31n3s0/v31n3a07s1.pdf>
9. Jesus MCP, Santos SMR, Abdalla JGF, Jesus PBR, Alves MJM, Teixeira N, et al. An assessment of the quality of life of recyclable material collectors. *Rev Eletrônica Enferm* [Internet]. 2012 June [cited 2016 Mar 15];14(2). Available from: http://www.fen.ufg.br/fen_revista/v14/n2/v14n2a07.htm

Nogueira LM, Silveira CA, Fernandes KS.

Perception of quality of life collectors of...

10. Kirchner RM, Saidelles APF, Stumm EMF. Percepções e perfil dos catadores de materiais recicláveis de uma cidade do RS. G&DR [Internet]. 2009 Sept/Dec [cited 2016 Mar 15];5(3):[about 5 p.]. Available from: <http://rbgdr.net/revista/index.php/rbgdr/article/view/257/165>

11. Ribeiro LCS, Freitas LFS, Carvalho JTA, Oliveira Filho JD. Aspectos econômicos e ambientais da reciclagem: um estudo exploratório nas cooperativas de catadores de material reciclável do Estado do Rio de Janeiro. Nova Econ [Internet]. 2014 Jan/Apr [cited 2016 Mar 15];24(1):191-214. Available from:

<http://www.scielo.br/pdf/neco/v24n1/0103-6351-neco-24-01-0191.pdf>

12. Almeida JR, Elias ET, Magalhães MA, Vieira AJD. Age effect on the life quality and health of garbage collectors of an association in Governador Valadares, Minas Gerais State, Brazil. Ciênc Saúde Coletiva [Internet]. 2009 Dec [cited 2016 Mar 15];14(6):2169-79. Available from:

<http://www.scielo.br/pdf/csc/v14n6/24.pdf>

13. Alencar MDCB, Cardoso CCO, Antunes MC. Condições de trabalho e sintomas relacionados à saúde de catadores de materiais recicláveis em Curitiba. Rev Ter Ocup Univ São Paulo [Internet]. 2009 Apr [cited 2016 Mar 15];20(1):[about 5 p.]. Available from: <http://www.revistas.usp.br/rto/article/view/14054>

14. Arantes BO, Borges LO. Recyclable Materials Collector: productive chain and precarious conditions. Arq Bras Psicol [Internet]. 2013 [cited 2016 Mar 15];65(3):[about 5 p.]. Available from: <http://seer.psicologia.ufrj.br/index.php/abp/article/view/807>

15. Bittencourt DC, Muttoni SP. Perfil nutricional dos trabalhadores de cooperativas de reciclagem de resíduos sólidos da região metropolitana de Porto Alegre. Cippus [Internet]. 2014 May [cited 2016 Mar 15];3(1):149-65. Available from: <http://www.revistas.unilasalle.edu.br/index.php/Cippus/article/view/1470/1076>

16. Hoefel MG, Carneiro FF, Santos LMP, Gubert MB, Amate EM, Santos W. Accidents at work and living conditions among solid waste segregators in the open dump of Distrito Federal. Rev Bras Epidemiol [Internet]. 2013 Sept [cited 2016 Mar 15];16(3):774-85. Available from: http://www.scielo.br/pdf/rbepid/v16n3/pt_1415-790X-rbepid-16-03-00774.pdf

17. Cavalcante S, Franco MFA. Profissão perigo: percepção de risco à saúde entre os

catadores do Lixão do Jangurussu. Rev Mal-Estar Subj [Internet]. 2007 Mar [cited 2016 Mar 15];7(1):211-31. Available from: <http://pepsic.bvsalud.org/pdf/malestar/v7n1/12.pdf>

18. Oliveira DAM. Percepção de riscos ocupacionais em catadores de materiais recicláveis: estudo em uma Cooperativa em Salvador-Bahia [dissertação] [Internet]. Salvador: Universidade Federal da Bahia; 2011 [cited 2016 Mar 15]. Available from: <http://xa.yimg.com/kq/groups/20469685/1464368500/name/852012095416.pdf>

19. Mattos LR, Vilela MMP, Jesus RR, Pereira CV, Teixeira N, Jesus PBR, et al. Qualidade de vida de catadores de materiais recicláveis em Juiz de Fora, Minas Gerais. Rev Ext Soc [Internet]. 2012 May [cited 2016 Mar 15];4(3):[about 5 p.]. Available from: <http://www.periodicos.ufrn.br/extensaoesociidade/article/view/1880>

20. Teixeira KMD. Work and perspectives according to the perception of recycled garbage pickers. Psicol Soc [Internet]. 2015 [cited 2016 Mar 15];27(1):98-105. Available from:

<http://www.scielo.br/pdf/psoc/v27n1/1807-0310-psoc-27-01-00098.pdf>

21. Oliveira RA, Silveira CA, Vasconcelos MV. Profile of labor and accidents in the occupational activity of motorcyclist workers. J Nurs UFPE on line [Internet]. 2015 Jan [cited 2016 Mar 15];9(2):692-700. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/5884/pdf_7187

Submission: 2016/04/06

Accepted: 2017/04/29

Publishing: 2017/07/01

Corresponding Address

Larissa Martins Nogueira

Av. Padre Francis Cletus Cox, 1661

CEP: 37701-355 – Poços de Caldas (MG), Brazil