Style and quality of life of waste collectors

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ABSTRACT

The study aimed to analyze the style and quality of life of waste collectors and, to compare its respective domains. A cross-sectional and analytical study, conducted with 43 waste collectors of an inner city in Minas Gerais state. We used a form containing socio-economical and demographic data, WHOQOL-Bref and the *Estilo de Vida Fantástico – EVF* (FANTASTIC Lifestyle Assessment - Brazilian version). The results showed that there was a significant association between the results from the WHOQOL-Bref and EVF (p<0.05), indicating that higher quality of life scores are associated with better lifestyles. Despite the adverse conditions inherent from work executed by the collectors and its external causes, like the weather, odor, weight, physical effort, and low salaries, there was a satisfactory assessment for questions composing quality of life and lifestyle. From the exposed, it was evident that the work, health, quality of life and lifestyle are related and determine the worker's profile in their subjective life, as well as, in their work life

Descriptors: Life Style; Quality of Life; Sewers Collectors; Garbage; Occupational Health Nursing.

INTRODUCTION

Nowadays, it can be said that work directly and significantly influences the quality of life and lifestyle of workers and, it occupies a considerable parcel in people's lives[1]. Satisfaction with quality of life (QoL) is related to the adequate labor environment for the conduction of activities. Moments of leisure are necessary, but in the actual scenario, most companies have only the employment bond[2].

Lifestyle is understood as a cultural and social way of living. It can include habits and conducts that are capable to positively or negatively contribute to health, besides reflecting the increase in morbidity and mortality rates. Sedentarism, alcohol consumption, smoking and, inadequate diet are examples of habits that

can increase mortality risk and harm health. On the other hand, healthy habits, a balanced diet, and regular physical activity are considered protective[3].

The concepts to assess the QoL are many in their definitions, as they have diverse meanings. The QoL is relatively related to many factors as education, activity, longevity, health, satisfaction, socioeconomic condition, productivity, continuity of family and occupational roles. It is also noted by the maintenance of friendship networks besides macro-structural objective conditions[4].

The increase in the production of industrialized products collaborates to increase of residuals, becoming a source of problems for society. The main issues resulting from this consumption is the inadequate disposal of residuals, and they relate to aggravations in public health and environmental degradation[5].

The waste collection aims to bring well-being to all inhabitants. Workers responsible for public cleaning contemplates the functions of sweeping the streets, weeding and, waste collection. Besides dealing with waste daily, which is a source of social exclusion, there is also the instability in the work process, as most enjoy elitists jobs, subject to considerable organizational and employment changes, which conduct to discomfort and daily tension when executing their functions[6].

Due to inadequate work conditions, waste collectors can contract diseases and aggravations, which can reduce their levels of lifestyle and quality of life of these collectors.

Waste collection is a dynamic process, and it includes many aspects that should be analyzed and intervened, once during the work day, workers walk, run, go up and down the streets, carry different weights, bear the sun, rain, cold and sudden temperature changes. With this panorama, occupational health, that is, the relations between the work process and the health/disease process of this professional class, present aspects to be studied and public health intervention[7].

Environmental factors influence the individual's performance in a significant way, in the productivity, as well as, in the quality, as they act directly on one's psychic state and behavior[8].

The waste collector has an exhausting, unhealthy and dangerous work journey. When addressing their job, lifestyle, and quality of life simultaneously, we perceive a lack of studies. Consequently, to investigate this worker, who are many times discriminated, will bring aids to know about the job of this professional, which is indispensable to society, the waste collector. Facing the exposed, this study objective was to analyze the lifestyle and quality of life of waste collectors and, to compare their respective domains.

METHODS

Our investigation is a quantitative, cross-sectional, analytical, correlational study conducted with solid waste residual collectors in the city of Divinópolis, Minas Gerais. The Ethics in Reseach with Human Beings Committee from the Universidade Federal São João Del Rei, Campus Centro Oeste – Dona Lindu, approved the study (CEPES/CCO), under the Protocol nº 846.156, obeying the resolution nº 466/12 of the National Health Council.

The targeted population was all waste collectors (47 workers). However, two workers could not

participate as they were on leave and two were on vacation. Therefore, 43 workers composed the final sample.

We used three questionnaires in this study: the first one verified their socioeconomic and demographic characteristics. The second was the WHOQOL-Bref, created by the World Health Organization (WHO) in 1998[9], translated and validated to the Brazilian reality[10], and it is based on the assumptions that the QoL is a subjective construct (individual perception), multidimensional and composed by positive and negative dimensions. The WHOQOL-Bref was originated from the WHOQOL-100, that had 100 pooled questions, forming six dimensions or domains: Physical Health, Psychological, Level of Independence, Social Relations, Environment and Spirituality/Religiosity/Personal Beliefs. The abbreviated instrument, used in our study, is composed of 26 questions, being two of them general questions about the quality of life and satisfaction with health. All other questions (24) represent one of the 24 facets that compose the original instrument, which is assessed by four questions. Therefore, in the WHOQOL-Bref, each facet is assessed for only one question, and there are four domains: physical health (seven facets), psychological (six facets), social relations (three facets) and environment (eight facets) [10].

The 26 questions composing the WHOQOL-Bref are formed by five answers Likert-type scales, containing an intensity scale (none to extremely), frequency (never and always), capacity (nothing and completely) and assessment (very dissatisfied to very satisfied; very bad to very good) [10]. To calculate the domain scores, we used the method proposed by the WHOQOL Group[9, validated in Brazil[10].

The third questionnaire used was the Fantastic Lifestyle, in the translated and validated version in Brazil[11]. It is a self-reported tool, and it considers the behavior of the individuals in the past month. The result allows us to determine the association between the lifestyle and health. It has 25 questions, divided into nine domains: 1) family and friends; 2) physical activity; 3) nutrition; 4) smoking and drugs; 5) alcohol; 6) sleep, seat belt, stress, and safe sex; 7) type of behavior; 8) introspection; and 9) work. The questions are presented on a Likert-type scale. The total score classifies individuals in five categories: "Excellent" (85 to 100 points), "Very good" (70 to 84 points), "Good" (55 to 69 points), "Regular" (35 to 54 points) and "Needs improvement" (zero to 34 points) [11]. We used the Cronbach's alpha to verify the internal consistency coefficient of the two instruments.

Data were electronically double entered into a Microsoft Excel spreadsheet version 2013. In all analyses, we considered 5% of significance level, and we used the software Statistical Package for the Social Sciences SPSS version 20.0. We descriptively analyzed the results of the fantastic lifestyle scale (EVF) and the WHOQOL-Bref. We conducted univariate analysis to assess factors associated with results from the WHOQOL-Bref and EVF using Fisher's Exact test to analyze categorical variables.

The multivariate analysis to assess factors associated with the results of the WHOQOL-Bref and EVF used the binary logistic regression model. To enter predicting variables in the model, we considered a p-value lower than 0.20 for the univariate analysis. We used the forward criteria to enter the variables in the model and, for variables to stay in the final model, we adopted a significance level of 5%. After adjusting the final

model, we assessed the Odds Ratio (OR) estimative, adjusted with a respective 95% Confidence Interval.

RESULTS

According to socioeconomic and demographic data, 100% of workers were males, of age 33.6 years (SD±9.2), 69.8% were married or were in a non-official stable relationship, 79.1% had children, only 9.3% finished middle school, and 34.9% owned their homes.

In the Fantastic Lifestyle, the Cronbach's alpha was 0.717. In the WHOQOL-Bref, the Cronbach's alpha was 0.719.

Table 1 presents the results of the Fantastic Lifestyle questionnaire.

Table 1: Descriptive analysis of the results from the Fantastic Lifestyle scale for
solid waste collectors (n=43). Divinópolis, MG, Brazil. 2015.

Fantastic Lifestyle	F	%
Excellent	06	14.0
Very Good	12	27.9
Good	19	44.2
Regular	06	14.0

Following, about collector's Quality of Life (QoL), Table 2 presents the mean, standard deviation, minimum and maximum value for each QoL domains and the general index for General Quality of Life (GQoL).

Table 2: Mean, median, standard deviation (SD), minimum and maximum of the quality of life domains from solid waste collectors
(n=43). Divinópolis, MG, Brazil. 2015.

	Physical domains	Psychological domain	Social Relations	Environment	General quality of life index
Mean	63.0	68.7	81.8	61.1	81.7
Median	60.7	66.7	83.3	59.4	87.5
Standard Deviation	10.3	11.1	16.4	13.4	13.2
Minimum	42.9	50.0	41.7	34.4	50.0
Maximum	96.4	100.0	100.0	90.6	100.0

WHOQOL-Bref: World Health Organization Quality of Life-Bref Questionnaire.

In sequence, Table 3 presents the results from the univariate analysis that compared the General Quality of Life (GQoL) from the WHOQOL-Bref questionnaire, categorized in a binary variable, using the median as a cut-point with the results from the scale Fantastic Lifestyle, dichotomized in "excellent" and "very good" *versus* "good" and "regular".

Table 3: Univariate analysis comparing the Fantastic Lifestyle scale with the results from
the WHOQOL scale (n=43). Divinópolis, MG, Brazil. 2015.

General Scale –WHOQOL-Bref	Fantastic Lifestyle		p-value
	Good or regular	Excellent or very good	
Low QoL ($\leq$ 87.5)	23 67.6%	11 32.4%	
High QoL (> 87.5)	2 22.2%	7 77.8%	0.023*

* Fisher's exact test.

On Table 4, we used multivariate analysis to associate, within all studied variables, which one of them

presented factors significantly associated (p<0.05) with the GQoL result with the binary logistic regression model, the normality test.

Table 4: Multivariate analysis assessing the factors associated with high general quality of life in the WHOQOL global scale (n=43). Divinópolis, MG, Brazil. 2015.

		p-value	OR	CI 95% for OR	
				Inferior limit	Superior limit
	Religion				
	Catholic	-	1.00	-	-
High General Quality	Evangelical	0.038	12.23	1.15	130.13
of Life (GQoL)	**Fantastic Lifestyle**				
	Good and regular	-	1.00	-	-
	Excellent and very good	0.002	16.18	2.68	97.52

OR = *Odds Ratio;* CI = Confidence Interval.

On Table 5, we used multivariate analysis to associate within all, the studied variables that presented significantly associated factors (p<0.05) with the results from the Fantastic Lifestyle scale, "Excellent" or "Very Good," through the binary logistic regression model (we conducted the normality test).

Table 5: Multivariate analysis assessing factors associated to "excellent and very good" from the Fantastic Lifestyle scale applied to solid waste collectors (n=43). Divinópolis, MG, Brazil. 2015.

		p-value	OR	CI 95% for OR	
				Inferior limit	Superior limit
	Age (in years)	0.027	1.11	1.01	1.21
"Excellent" and "Very good" lifestyle	**Global scale -WHOQOL**				
	Low QoL				
	High QoL	0.029	9.03	1.28	63.50

OR = *Odds Ratio;* CI = Confidence Interval.

DISCUSSION

All workers from our study were male, as found in other studies with collectors[12-13]. The mean age was 33.6 years (SD±9.2), a result similar to what was found in other studies[1,12] affirming the relatively young profile of this category.

According to the Fantastic Lifestyle, 44.2% presented scores classified as "good", and 27.9% as "very good".

Corroborating, an investigation conducted in Paraíba aimed to assess the stress level and its correlation with quality of life of street-sweepers found that they were satisfied with their job. Maybe it results from the lack of opportunities in the job market, where there is growing unemployment and to be working is viewed as something positive, creating personal satisfaction, besides enjoying their job[13] and feeling happy in their profession.

The lifestyle refers to those standards adopted by individuals that are part of their daily activities and positively or negatively influence their health.

About the QoL, the study results showed that collectors presented good QoL scores in almost all domains, totalizing a mean for the general QoL of 81.7±13.2. The social relations domain obtained the highest

mean score 81.8±16.4.

The result agrees with an investigation that aimed to assess occupational stress and the level of quality of life of 45 urban cleaning professionals from a city in the inner state of Paraíba. The quality of life presented a general positivity with a mean score of 75.83 points. Within the domains, the one that presented the highest score was physical (78.57 points) and the environment presented the lowest (62.36 points) [13].

Corroborating, a study conducted with 125 nursing professionals from a private hospital institution in Salvador/BA aimed to analyze their quality of life in their work environment in emergency units and ICU, found that general QoL of nursing professionals was in 72% considered good. Regarding the domains, the social was the one with higher scores, 76%, highlighting that this level of satisfaction is related to the social environment where the individual coexists [2].

The environment domain presented the lowest score 61.1±13.4. These findings are in accordance with an investigation conducted with 96 recyclable waste collectors in Minas Gerais, where the worse scores were in the psychological (14), social relations (12) and, environment domains (10.7) [14], and, the environment domain also had the lowest score, 62.36, therefore having a negative influence on the street-sweeper quality of life [13].

The lowest value in this domain did not cause surprises, once the environment of waste collectors is considered of risk, as they are in daily contact with biological, physical, ergonomic, mechanical, and chemical agents in the domestic or hospital waste that is collected. These can harm their health and cause work accidents. The collector's work still presents fragilities, as the low income and the lack of specific knowledge, reflecting daily in their quality of life [15].

There are other noted studies conducted with distinct professional categories, where results are in agreement with our study [16-17]. Research conducted with 71 firefighters, nine nurses, seven physicians and three flight crew members obtained as mean in the WHOQOL-Bref domains: social relations (76.5); physical (74.6); psychological (75.2); social relations (76.5) and environmental (58.7) [16].

An investigation conducted with 349 basic education teachers in the municipal and state networks of Florianópolis/SC aimed to investigate factors related to the quality of life. It was seen that the mean general quality of life was 63.7, and the mean scores for the domains were: physical domain 65.7, psychological domain 68.6, social relations domain 73.1, and environment 53.9 [17].

In contrast, a study aimed to investigate retirement planning and the prioritized aspects for wellbeing of street-sweepers who worked in an urban cleaning company in Rio de Janeiro, found that the quality of life was not well assessed by workers, especially in consequence of the physical work environment considered unhealthy, indicating fragility in the environmental domain [18].

The environmental factors significantly influence the individual's performance related to productivity, as well as, work quality. This is explained because these factors directly act on the psychic state and behavior [8].

The results from Table 3 show that higher QoL scores are associated with better lifestyles. Habits

adopted by the individuals that are part of their daily lives positively or negatively influence their health.

The health condition is a fundamental aspect of the quality of life, as well as, of the work capacity. The relations between the health condition and work have been investigated and reveal a concern from researchers regarding the mutual influence of these factors[19].

Therefore, the balance between the individual, the environment and the satisfaction at work is needed, as the negative interaction of the subject and the environmental conditions with their work can cause anxiety and dissatisfaction, and it can even lead to diseases[20].

A relevant data presented in Table 4 shows that factors associated with a high general quality of life are related to an evangelical religion. Religiosity is a part, and it is present in the life of the modern man. Religion influence health and it is understood not only as psychosocial well-being but also spiritual.

About the routine, studies show that about religiosity, in the United States of America, 89% of the population has a religion and 31% goes to church at least once a week. In Europe, the average population that goes to religious cults is 31.6%, and it varies between countries[21]. In Brazil, a study conducted with a sample of 3,007 people (2,346 adults and 661 adolescents) in 143 cities, found that 95% declare to have a religion, 83% consider religion as very important, and 37% goes to a religious service at least once a week[22].

Original and review studies present evidence of how religion is related to health, satisfaction with life, how it decreases delinquent behavior, increases immunity, decreases cortisol levels, decrease interleukin levels, increase longevity, lower rates of stroke, hypertension, and, it increases the likelihood of people adhering to physical exercise practices[23].

According to results presented in Table 5, with the increase of age, the chance of collectors to present a very good or excellent lifestyle increased in 1.11. That is, the age and life experience can positively influence how the individual lives their days and the life habits that they choose to practice.

Quality of life and longevity largely depends on everyday life habits, highlighting eating habits, chronic diseases, psychosocial factors as solitude, lack of resources or, the low availability of resources[24].

Therefore, when analyzing the relationship between work, health, quality of life and lifestyle, we need also to base ourselves in the subject's experience. All these factors can influence the worker's personal and labor life.

Thus, to present suggestions for a balance between work and healthy life became an important way to propitiate improvements in the preventive culture for labor-related diseases[25]. The healthy worker is productive, happy and satisfied professionally, as well as, personally, influencing the quality of life and lifestyle, and hindering the appearance of diseases.

CONCLUSION

The quality of life assessment of waste collectors showed that the domains with worse scores were psychological, physical and environment. About their lifestyle, most collectors reported it as good or very good. It is noteworthy that collectors with the high quality of life presented an excellent lifestyle, that is, the

results were significant and influenced their lives. It is important to note that the majority of collectors studied until middle school and, this fact can be associated with available job options for these workers. However, this type of job did not influence the good scores presented by collectors in the general quality of life, as well as, in the lifestyle.

From the exposed, it was evident that work, health, quality of life and lifestyle are related and they determine the worker's profile in their subjective and labor lives.

Although the results of our study are limited to a city in the state of Minas Gerais, these constitute aids to review and to strengthen public policies destined to waste collection workers.

Thus, the result of this investigation can contribute to the increase of the existing knowledge about the theme, to propitiate advances in the knowledge about the theme for the health and nursing academic communities, besides the general population. Research about lifestyle and quality of life of waste collectors are still lacking, although being essential to adopt preventive measures about this worker's health. Therefore, it is preponderant for new studies and interventions to be conducted with this worker and to propitiate better environmental work conditions and, consequently, promotion of health, lifestyle, and quality of life.

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