



Online Brazilian Journal of Nursing

E-ISSN: 1676-4285

objn@enf.uff.br

Universidade Federal Fluminense  
Brasil

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Online Brazilian Journal of Nursing, vol. 11, núm. 1, 2012, pp. 116-126

Universidade Federal Fluminense

Rio de Janeiro, Brasil

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**OBJN**  
Online Brazilian Journal of Nursing

**ENGLISH**

Universidade Federal Fluminense

ESCOLA DE ENFERMAGEM  
AURORA DE AFONSO COSTA

v.11, n.1 (2012)  
ISSN 1676-4285



Received: 11/09/2011  
Approved: 03/16/2012



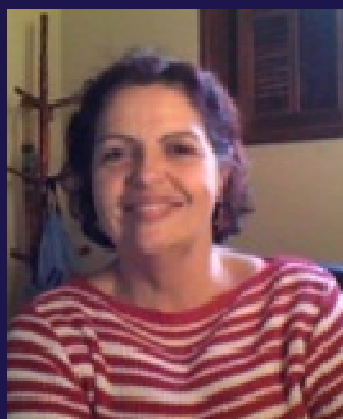
## SPIRITUALITY IN THE ASSESSMENT OF QUALITY OF LIFE OF RECYCLABLE MATERIAL COLLECTORS: CROSS-SECTIONAL STUDY

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### ABSTRACT

**Objective:** To assess the spirituality in quality of life of collectors of recyclable materials and to investigate the influence of associated factors. **Method:** observational study conducted in 2010 with 96 people, aged 18-74 years. It was applied the Portuguese version of the questionnaire of the World Health Organization: Quality of Life Assessment (WHOQOL-100), Statistical test of analysis of variance ANOVA. Significance evaluated at level alpha = 0.05. **Results:** In the field of spirituality, only the variable number of children showed any significance ( $p = 0.018$ ), and the best assessments were those with more than three children. The external comparison with a similar study found similarities between the scores. It was evident that the collectors express perceptions in the field of spirituality, similar to the comparison group. **Conclusion:** it is necessary to examine the question further through additional investigations, considering the



ORIGINAL ARTICLES

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## INTRODUCTION

Recyclable material collectors are people who live and work, individually or collectively, of the activity of collecting, sorting and marketing of recyclable materials<sup>(1)</sup>. These play an important role in urban sanitation and therefore, contribute to the environmental balance from their activity, which reverts to a better urban atmosphere.

In Brazil, it is estimated that the number of collectors of recyclable materials is approximately 500,000, with two thirds of them in the State of Sao Paulo<sup>(1)</sup>.

The socio-economic situation in which the collectors live puts them at possible risk of needlestick accidents and occupational diseases peculiar to the scavenging activity<sup>(2,3)</sup>.

The diagnosis of health conditions of the collectors of recyclable materials in the study revealed that in addition to hypertension, they have other health problems such as: mental disorders, heart and kidney problems, skin diseases, chemical dependency and transmissible diseases<sup>(4)</sup>.

The reflection on the situation of life, work and risks of recyclable material collectors refers to the assessment of quality of life in this population. The term quality of life is being increasingly used in health area, from the new paradigms that arise in relation to a broader concept of health-disease process. A person's perception of risk and quality of life depends on a complexity of factors that are interrelated, from economic, social, socio-cultural, lifestyles and even personal experience. In this perspective, subjectivity must be considered when seeking to understand the coping or not of situations of risk and quality of life<sup>(3)</sup>.

When evaluating the quality of life, we highlight six areas: physical, psychological, level of independence, social relationships, environment and spirituality and/or personal beliefs. The field spirituality is very broad and includes questions about the meaning of life and reason to live, not limited to certain types of beliefs or practices. It can be understood as the subjective perception of well-being of the person in relation to his belief, involving a religious component and a component existence - purpose and life satisfaction, or meaning of life and reason to live<sup>(5)</sup>. It differs from

religiosity, which is an extension in which a person follows a religion or practice, adopting a specific doctrine shared in a group. Personal beliefs can be considered values that the person supports and based on them their lifestyle and behavior<sup>(6)</sup>.

In the context of assessing the quality of life of recyclable material collectors, it was asked: what is the position of the domain spirituality, religiousness and personal beliefs in assessing the quality of life of these workers? What influence would possible individual, social or cultural factors have in the perception of the aspect of quality of life in this population?

The objectives of this study were to evaluate the spirituality in quality of life of collectors of recyclable materials in a city of medium size, in the countryside of Minas Gerais, using the WHOQOL-100 and investigate the influence of possible associated factors.

## METHOD

Cross-sectional observational study, conducted in a medium-sized municipality in Minas Gerais, with 96 recyclable material collectors, men and women, aged 18-74 years, of a total of approximately 400 people comprising the population scavenger of this city.

We included those who were active scavengers on the streets, free markets and deposits in the period of data collection, and formally accepted to participate. It may be presumed that this sample is representative of the population of recyclable material collectors in the county where the study was conducted, since deposits were investigated in various regions of the city - places where we expect to find this population. Furthermore, a sample size ( $n = 96$ ) was obtained, which allowed estimated prevalence with a maximum error of 10%.

The assessment of quality of life of the collectors of recyclable materials was carried out from the application of the Portuguese version of the questionnaire of the World Health Organization for the Assessment of Quality of Life (WHOQOL-100), which consists of an instrument composed of one hundred questions divided into six areas: physical, psychological, level of independence, social relationships, environment and spirituality and/or personal beliefs. Each domain is made up of 24 facets, consisting of four questions, and a general aspect, which includes issues of global assessment

of quality of life. The answers to the questions of the WHOQOL 100 are given in a Likert scale (intensity, capacity, frequency and evaluation)<sup>(7)</sup>.

ata collection was conducted from March to September 2010, by seven students in the health area, previously trained to administer the instrument and with field supervision of the researchers. Before being interviewed, the collector was informed of his rights regarding participation in the study and gave his formal consent by signing the consent or by means of digital printing. Considering the low education level of the collectors, students evaluated the need to read the questions in the questionnaire to the respondent to remedy their doubts. The average time for each interview was 30 minutes.

The data were entered into a spreadsheet and analyzed using the software Statistical Package for Social Sciences (SPSS 15.0). The scores of WHOQOL 100 were calculated according to the program prepared by the group of the World Health Organization<sup>(10)</sup>, providing numerical values (facets and domains) in a range 4-20. These scores were presented by the average, standard deviation and confidence interval of 95%. The categorical data were tabulated using absolute and relative frequencies. The inclusion of socio-demographic variables – living situation, gender, age, education, profession/occupation, marital status and number of children - allowed us to assess how much these issues affected the scores of WHOQOL-100, by means of ANOVA statistical test. Significance was assessed at the level  $\alpha = 0.05$ .

We evaluated the quality of life for collectors of recyclable materials by means of two parameters: a general one (the global assessment) and another specific (the spirituality domain), considering the socio-demographic variables.

We carried out a more qualified discussion, comparing the results of this survey with a similar study that also used the WHOQOL-100: with a population of a more affluent class. The comparison between the averages and standard deviations concerning the scores of the domain spirituality was done through the construction of confidence intervals of 95% of the sample averages, and having overlapping of the ranges we considered similarity between the two populations in that dimension of WHOQOL.

The project was approved by the Ethics Committee in Research of the University Hospital of Federal University of Juiz de Fora: under the Protocol CEP-UFJF 002/2010: Opinion No. 006/2010.

## RESULTS

Of the 96 collectors interviewed, the majority, 71.9% are male, 66.7% are over 40 years, 79.2% live alone or with family, that is, are not homeless, 58, 3% live without a partner, 75% are illiterate or have incomplete primary education, 57.3% work only with the scavenging of recyclable materials and 49% have up to three children. The Table 1 shows the comparison between the global assessment and domain spirituality, considering the socio-demographic variables.

The global evaluation of quality of life for collectors of recyclable materials was influenced by the variable housing situation. The homeless had a lower global assessment, punctuating an average score of 11.6 (SD 3.8) compared to those who had a home, which received 14.5 (SD 3.5), and this difference was highly significant ( $p = 0.002$ ).

**Table 1** – Comparison between the global assessment and spirituality domain, considering the socio-demographic variables; a Municipality in Minas Gerais, 2011.

Variables	Facets of the Global Spirituality Domains Assessment Average (SD)		
Housing	Homeless	11,6 (3,8)	16,5 (3,4)
	Not homeless	14,5 (3,5)	17,1 (3,0)
	p-valor	<b>0,002</b>	0,456
Gender	Male	14,0 (3,6)	16,8 (3,1)
	Female	13,8 (3,9)	17,4 (2,9)
	p-valor	0,839	0,365
Age	15 to 39 years	12,5 (3,7)	15,7
	Over 40 years	14,6 (3,5)	16,3
	p-valor	<b>0,007</b>	0,497
Education	incomplete primary	14,4 (3,5)	17,0 (3,0)

	education or illiterate		
	complete      primary	12,3 (4,0)	17,0 (2,7)
	education or higher		
	p-valor	<b>0,020</b>	0,971
Profession/Occupation	Only collector	14,4 (3,7)	16,6 (3,2)
	Owns or have owned	13,8 (3,2)	17,8 (2,4)
	some other profession		
	p-valor	0,476	0,075
Marital Status	With a partner	15,2 (3,1)	17,6 (2,9)
	Without a partner	13,5 (3,8)	16,8 (3,1)
	p-valor	<b>0,035</b>	0,216
Number of children	Up to 3 children	13,3 (3,7)	16,2 (3,3)
	Over 3 children	14,8 (3,1)	17,8 (2,6)
	p-valor	0,062	<b>0,018</b>

**Source:** Research Data

The younger ones on average punctuated significantly lower scores in the global dimension ( $p=0.007$ ). For the education variable, we could demonstrate that in the global assessment, the collectors with incomplete primary education or illiterate had an average score of 14.4 (SD 3.5), ie, greater than that studied the complete elementary school or more 12.3 (SD 4.0), and this difference is statistically significant ( $p=0.020$ ).

The collector with a partner had an evaluation with an average score of 15.2 (SD 3.1), that is, greater if compared to those who did not have a partner, 13.5 (SD 3.8), and this difference is statistically significant ( $p=0.035$ ).

In the field of spirituality, only the variable number of children had any significance ( $p = 0.018$ ), and the best assessments were those who have more than three children.

A comparison of scores on the Domain Spirituality evidenced in this study with collectors and a study with a group of workers at a Brazilian university<sup>(8)</sup> can be viewed in Table 2.

**Table 2** - Comparison between the scores related to the domain spirituality in the study with the collectors of material and other study<sup>8</sup>; a municipality in Minas Gerais, 2011.

Domain Spirituality				Deviation	Interval	Trust
				Average	95%	
					Lower	Upper
					Limit	Limit
Research Group with collectors (n=96)				17,0	3,1	16,38 17,62
Study Group <sup>8</sup> (n=50)				16,3	2,8	15,52 17,08

**Source:** Research Data

The comparison between the two studies showed similarities amid their average scores. It is noteworthy that the participants of study group that served as parameter for comparison were employees of a Brazilian public university, and yet, the average score in the domain spirituality was located at the lower limit of the confidence interval of the group of collectors participating in this research.

## DISCUSSION

The greater number of men among the collectors of recyclable materials was also found in two studies conducted in the city of Santos, Sao Paulo, however the proportion of women in those studies was lower, respectively, 17.8% 9 and 14% (10), than that found in this research. The fact that this research has identified a significant number of female collectors may be related to the increasing inclusion of women in the labor market, although this inclusion is not equal, for women are still segregated in occupations with lower incomes, as in the case of the profession of scavenging<sup>(11)</sup>.

The high percentage of collectors over the age of 40 years is also a social fact that can be related to difficulty in entering this age group in the labor market, which is more favorable to young people. Similar result was observed in another study that found 70% of collectors over the age of 35 years<sup>(10)</sup>.

Santos S.Jesus M.Mattos L.Alves M.Vicente E.Jesus P. Spirituality in assessing the quality of life of the collectors of recyclable materials: cross sectional study **Online Brazilian Journal of Nursing** [serial on the Internet]. 2012 April 18; [Cited 2012 May 14]; 11(1):[about ## p.]. Available from: <http://www.objnursing.uff.br/index.php/nursing/article/view/3661>.



Being a collector of recyclable materials and have a home, either living alone or with the family, gives the employee greater quality of life in all areas. The collectors, in general, have a residence; a very small percentage lives in the streets or resides in deposits of recyclable materials<sup>(9)</sup>.

The large percentage of collectors with low education and with the best scores in the global assessment of quality of life is supported by other studies that combined low education to poor living conditions of these people<sup>(1.9)</sup>.

The lack of housing has influenced the decline in quality of life of the collectors. Housing, which is related to the issue of security, nutrition and protection of the family, contributes to the perception of identity and influence the imagination of collectors regarding their views of life and cultural relations<sup>(12)</sup>.

The domain spirituality was not influenced by the condition of having or not a partner, although the number of children has interfered for a better perception of quality of life. Spirituality and/or personal beliefs provide a feeling of warmth and interpersonal trust, making it easier to cope with everyday difficulties associated<sup>(13)</sup>.

An ethnographic study that examined the relationship of educational level, occupation and marital status with religiosity also revealed no significant differences<sup>(14)</sup>. Spirituality includes religion and personal beliefs and may be useful to assess the quality of life in situations other than the health-disease<sup>(15)</sup>.

Rituals, beliefs and symbols are systematized and organized, characterizing religion. Religious practices approach the person of spirituality, as well as the understanding about the meaning of life and assist in the pursuit of personal strategies to achieve one's existential goal<sup>(16)</sup>. The religion allows the person greater acceptance, security and adaptation to difficult situations, bringing peace, self-confidence and forgiveness. Religious beliefs influence how a person handles stress, suffering and vital problems as well as corroborate to build a positive image of himself<sup>(5)</sup>.

It is worth making reference to "coping", which can be defined as the set of strategies used for adapting to different situations even those stressful ones, which can be positive or negative. The first is more common, working in health improvement, reducing the possibility of depression and generating a better quality of life. Within this question, "coping" is of central importance in religiosity, spirituality and health<sup>(5)</sup>.

Thinking about the dimension of spirituality leads to values, principles and beliefs, since it guides the existence of man and involves all aspects of human life<sup>(17)</sup>.

Spirituality and religiosity are important factors in people's lives, motivating them to recognize the essential objectives of man and the aspects of religiousness in a positive way, associating it with the meaning of life<sup>(16)</sup>.

The similarities between the scores in relation to the spirituality domain of this study and the other<sup>(7)</sup>, may mean that recyclable material collectors expressed perceptions of the domain of spirituality similar to the comparison group.

Although restricted to a group of collectors of a municipality within the State of Minas Gerais, the results of this study allude to important reflections and stimulate the conduction of further researches involving quality of life and spirituality of workers.

## CONCLUSION

Only the variable number of children had any significance ( $p = 0.018$ ) in the domain spirituality, meaning that the best assessments were of those who have more than three children. The fact that spirituality has not been influenced of most of the socio-demographic variables leads us to infer that spirituality in the context of the collectors of recyclable materials is similar to that of workers in the wealthier classes.

Placing spirituality into focus by associating it with the quality of life of a group of collectors of recyclable materials from the use of the WHOQOL constitutes a first initiative. It is necessary to develop the issue for further investigation, considering the complexity of factors involved not only in assessing the quality of life, but also, and especially, in the field of spirituality.

## ACKNOWLEDGMENTS

To the National Research Council (CNPq), financier of the research project that led to this article (557269/2009-1).

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