

# Assessment of the quality of life of prehospital care nursing professionals

Avaliação da qualidade de vida dos profissionais de enfermagem do atendimento pré-hospitalar

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**ABSTRACT | Background:** Nursing professionals play an active role in Mobile Urgent Care Services (Serviço de Atendimento Móvel de Urgência–SAMU). Together with other staff members they are responsible for providing high-quality care to patients. However, they are exposed to extreme pressure and emotional overload, which might impair their biopsychological balance and quality of life. **Objective:** To investigate the quality of life of prehospital care nursing professionals. **Method:** Cross-sectional descriptive study with quantitative approach conducted from April through June 2017 at a SAMU in the northwestern area of the state of Ceara, Brazil. The target population was SAMU nursing professionals, namely, 8 nurses and 11 nursing technicians. Data collection was performed by means of an instrument which contained two quality of life assessment scales, the Flanagan scale and World Health Organization Quality of Life (WHOQOL-bref). **Results:** The domains with the poorest scores on the Flanagan scale were physical and material well-being and social activities. On WHOQOL-bref, the domains with the lowest mean scores were physical health, environment and self-assessed quality of life. **Conclusion:** The SAMU nursing professionals were predominantly female and married, their average age was 37 years old, had attended undergraduate education at least, and worked 71.88 ( $\pm 17.50$ ) hours per week. The results point to the need to implement actions to improve the quality of life of this population of workers.

**Keywords |** quality of life; health; prehospital care.

**RESUMO | Introdução:** A Enfermagem tem participação ativa no Serviço de Atendimento Móvel de Urgência (SAMU), assumindo, em conjunto com a equipe multiprofissional, a responsabilidade em prestar assistência qualificada às vítimas. Porém, os profissionais que atuam nesse serviço vivem em extrema pressão e são submetidos a uma carga emocional que pode afetar o seu equilíbrio biopsicológico e sua qualidade de vida. **Objetivo:** Avaliar a qualidade de vida da equipe de Enfermagem do atendimento pré-hospitalar. **Método:** Estudo descritivo e transversal com abordagem quantitativa realizado no período de abril a junho de 2017 no SAMU, localizado na região Noroeste do estado do Ceará, no Brasil. A população-alvo foi representada pelos profissionais da equipe de enfermagem do SAMU, que é composta de oito enfermeiros e 11 técnicos de enfermagem. Para coleta de dados, foi utilizado instrumento contendo duas escalas de avaliação da qualidade de vida, a escala Flanagan e o The World Health Organization Quality of Life (WHOQOL-bref). **Resultados:** Pela escala de Flanagan, os piores domínios estão relacionados ao bem-estar físico e material e as atividades sociais. Pelo WHOQOL-bref, os domínios que apresentaram menores médias de escores foram o físico, o meio ambiente e a autoavaliação da qualidade de vida. **Conclusão:** Foi possível identificar que, na equipe de enfermagem atuante no SAMU, há predomínio de mulheres, casadas e com idade média de 37 anos, as quais possuíam titulação mínima de graduação e carga horária semanal de trabalho de 71,88 horas ( $\pm 17,50$ ), possibilitando reflexões para a necessidade de implementação de ações que possibilitem uma melhor qualidade de vida para esses profissionais.

**Palavras-chave |** qualidade de vida; saúde; assistência pré-hospitalar.

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## INTRODUCTION

Health problems related to accidents, violence, or acute flares of chronic diseases outside the hospital environment are currently considered a public health concern in Brazil and worldwide<sup>1</sup>. To improve urgent care delivery, the Brazilian Ministry of Health created the Mobile Urgent Care Service (Serviço de Atendimento Móvel de Urgência–SAMU) through Administrative Ruling no 1,846/GM, from 29 September 2003<sup>2</sup>. SAMU is charged of providing high-quality urgent care to trauma, clinical, pediatric, surgical, obstetric-gynecologic and psychiatric cases. Efficacious prehospital care is crucial to the health system, as it reduces the risk of death of patients and possible complications at the very beginning of the care delivery chain before admission to hospital<sup>3</sup>.

SAMU comprises multi-professional teams composed of physicians, nurses, nursing technicians and ambulance drivers. According to the Ministry of Health Administrative Rulings no. 814/GM, from 1 June 2001, and no. 2,048/GM, from 5 November 2012, to provide prehospital care health professionals should exhibit emotional self-control and availability to act within the established boundaries<sup>1</sup>. The reason is that these professionals are exposed to extreme levels of pressure and emotional overload at work, which might impair their biopsychological balance and quality of life<sup>4</sup>.

Quality of life is a broad-scope notion, and corresponds to an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns<sup>5</sup>. It encompasses physical, psychological, social, intellectual and economic aspects, based on fundamental principles among which functional capacity, socioeconomic level and satisfaction stand out<sup>6</sup>.

According to several studies, healthcare professionals rank third in stress overload, following police officers and private security guards, and flight controllers and bus drivers, who rank first and second, respectively<sup>7</sup>.

Analyzing quality of life demands consideration of variables such as living conditions and lifestyle<sup>8</sup>. Investigating the quality of life of prehospital care nursing professionals is relevant, as they are subjected to extreme psychological pressure and a heavy and dynamic workload, and daily meet unexpected situations at work.

Detecting impairment of the quality of life according to professional category among SAMU workers is relevant for the implementation of strategies by prehospital care managers and healthcare professionals to preserve the well-being and health of this population, with consequent impact on the quality of the care they provide.

The results of the present study allowed us establish a diagnosis of the quality of life of nursing professionals and sensitize them to the need to implement strategies in their everyday routine to improve their quality of life, and thus their well-being and performance at work, and also reduce the rates of absenteeism and job dissatisfaction. The aim of the present study was to investigate the quality of life of prehospital care nursing professionals.

## METHOD

The present cross-sectional descriptive study with quantitative approach was performed from April through June 2017 at a SAMU in the northwestern area of the state of Ceara, Brazil. The SAMU personnel consists of 56 professionals, including 13 drivers, 11 nursing technicians, 8 nurses, 13 medical priority dispatch assistant technicians (MPDATs) and 11 physicians.

The target population were the SAMU nursing professionals, i.e., 8 nurses and 11 nursing technicians. The inclusion criterion was at least 6 months in the job. Professionals on maternity or sick leave or on vacation were excluded. As a result, the sample comprised 17 participants.

For data collection we used an instrument with two quality of life assessment scales, one targeting personal aspects and the other general quality of life. The Flanagan scale comprises 16 questions responded on a Likert scale ranging from 1 to 7 to analyze the following quality of life domains: physical and material well-being; relationships with other people; social, community and civic activities; personal development and fulfillment; and recreation<sup>8</sup>.

WHOQOL is an instrument developed to measure quality of life which comprises 26 questions on the following domains: physical health, psychological, social relationships and environment<sup>9</sup>. Questions are responded on a Likert scale (ranging from 1 to 5, the higher the score the better the quality of life)<sup>10</sup>.

The data were tabulated using Microsoft Excel 2010. Statistical analysis was performed with Statistical Package for the Social Sciences (SPSS) version 20.0. The data on occupational and sociodemographic variables were subjected to descriptive statistics, including uni- and bivariate frequency distribution and descriptive measures (mean and standard deviation).

The study was approved by the research ethics committee of Acarau Valley University in June 2017, Certificate of Presentation for Ethical Appraisal (Certificado de Apresentação para Apreciação Ética–CAAE– no. 67821217.1.0000.5053, in compliance with Resolution no. 466/2012/CNS/MS/ CONEP, which deals with research involving human beings.

## RESULTS

Of the 17 participants, 52.9% (9) were female; the average age of the sample was 37 ( $\pm 10.22$ ) years old. The largest proportion of participants were married (58.8%) and had children (64.7%). Most had attended graduate (52.9%) or undergraduate (29.4%) education. A large part of the participants had two (76.5%) or three (11.8%) jobs, with consequent impact on their weekly working time, 71.88 ( $\pm 17.50$ ) hours, on average, and average income, BRL 3,338.46 ( $\pm 1,797.47$ ).

Tables 1, 2 and 3 describe the mean quality of life scores.

On the Flanagan scale, Table 1, the domains with the poorest scores were physical and material well-being (10.35 $\pm$ 1.61) and social activities (9.59 $\pm$ 1.27); the mean total score was 82.29 ( $\pm 12.63$ ).

On WHOQOL-bref, the domains with the poorest scores were physical health (10.35 $\pm$ 1.61), environment (13.62 $\pm$ 1.82) and self-assessed quality of life (14.12 $\pm$ 3.04); the mean total score was 14.65 $\pm$ 1.59 (Table 2).

Table 3 shows that the facets with the lowest mean scores were pain and discomfort (32.35), sleep and rest (44.12), social support (63.24), financial resources (54.41), health and social care (57.35), recreation and leisure activities (39.71) and physical environment (52.94).

## DISCUSSION

The sample of nursing professionals who participated in the present study was predominantly composed of

women, which agrees with the profile of nurses in Brazil. According to the Federal Nursing Council (Conselho Federal de Enfermagem–COFEN) about 87.2% of nurses in the country are female<sup>11</sup>. Most participants reported to be married, which agrees with the finding of a study conducted with SAMU nursing professionals at Teresina, Piauí, Brazil, in which most participants were married<sup>12</sup>.

Most participants had attended higher education and worked at two jobs. Having more than one job might favor physical and mental exhaustion, especially among professionals working in critical areas<sup>13</sup>. These findings, however, disagree from the ones reported in an in-hospital quantitative study performed in Alagoas, Brazil, in which most participants had attended technical courses (51.1%) and worked at one single job (51%)<sup>14</sup>.

The domain with the poorest score was social activities, therefore, similarly to a study conducted in Palmas, Tocantins, Brazil, on the quality of life of nursing technicians

**Table 1.** Distribution of mean scores on Flanagan scale domains corresponding to SAMU nursing staff (n=17), Sobral (CE), Brazil, 2017.

Domains	Mean (SD)
Physical and material well-being	10.35 ( $\pm 1.61$ )
Relationships with other people	22.47 ( $\pm 3.10$ )
Social activities	9.59 ( $\pm 1.27$ )
Personal development and fulfillment	21.35 ( $\pm 3.77$ )
Recreation	18.53 ( $\pm 5.13$ )
Total score	82.29 ( $\pm 12.63$ )

SD: standard deviation.

**Table 2.** Distribution of mean scores on WHOQOL-bref (n=17), Sobral (CE), Brazil, 2017.

Domains	Mean (SD)
Physical health	10.35 ( $\pm 1.61$ )
Psychological	15.49 ( $\pm 2.21$ )
Social relationships	14.98 ( $\pm 2.65$ )
Environment	13.62 ( $\pm 1.82$ )
Self-assessed quality of life	14.12 ( $\pm 3.04$ )
Total score	14.65 ( $\pm 1.59$ )

SD: standard deviation.

**Table 3.** Comparison of WHOQOL-bref domain corresponding to SAMU nursing staff (n=17). Sobral (CE), Brazil, 2017.

Facets	Mean (SD)
Physical domain	
Pain and discomfort	32.35 ( $\pm$ 26.16)
Energy and fatigue	67.65 ( $\pm$ 14.69)
Sleep and rest	44.12 ( $\pm$ 27.28)
Mobility	79.41 ( $\pm$ 15.89)
Activities of daily living	70.59 ( $\pm$ 20.22)
Dependence on medicinal substances and medical aids	19.12 ( $\pm$ 20.78)
Work capacity	76.47 ( $\pm$ 18.68)
Psychological domain	
Positive feelings	33.82 ( $\pm$ 21.54)
Thinking, learning, memory and concentration	58.82 ( $\pm$ 19.64)
Self-esteem	82.35 ( $\pm$ 19.29)
Bodily image and appearance	82.35 ( $\pm$ 21.22)
Negative feelings	27.94 ( $\pm$ 17.41)
Spirituality, religion, personal beliefs	76.47 ( $\pm$ 20.67)
Social relationships	
Personal relationships	72.05 ( $\pm$ 21.43)
Social support	63.24 ( $\pm$ 23.58)
Sexual activity	70.59 ( $\pm$ 25.36)
Environment	
Freedom, physical safety and security	67.65 ( $\pm$ 17.14)
Home environment	75.00 ( $\pm$ 23.38)
Financial resources	54.41 ( $\pm$ 25.36)
Health and social care	57.35 ( $\pm$ 22.98)
Opportunities for acquiring new information and skills	63.24 ( $\pm$ 17.93)
Recreation and leisure activities	39.71 ( $\pm$ 17.80)
Physical environment	52.94 ( $\pm$ 12.12)
Transport	70.59 ( $\pm$ 22.07)
Self-assessed quality of life	61.76 ( $\pm$ 21.86)

SAMU: Serviço de Atendimento Móvel de Urgência (Mobile Urgent Care Service).

and assistants, in which the poorest score corresponded to social relationships<sup>15</sup>. However, an exploratory and descriptive study found that the professionals' satisfaction with their social relationships was adequate<sup>16</sup>. Long working hours are associated with high levels of stress and emotional exhaustion, which directly influence the interpersonal relationships of professionals, with negative impact on their quality of life<sup>15</sup>.

In regard to quality of life as assessed by WHOQOL-bref, the domains with the lowest mean scores were physical health and environment. In an exploratory study conducted with SAMU professionals in Sobral county, Ceara, Brazil, the poorest scores corresponded to global quality of life. Almost half of the participants reported to be dissatisfied with their quality of life. Concerning domain environment, the opinions were equally divided into satisfaction and dissatisfaction, and the participants described the hazards to which they are exposed at work<sup>16</sup>.

These results evidence the repercussion of the physical demands at work on the nurses' health given the specificities of care delivery to critical and potentially critical patients, in addition to the demands associated with mobilization of patients and equipment, transportation and maneuvers inherent to care delivery to unstable patients<sup>17</sup>. Activities which demand physical strength, resistance, active movements, coordination and flexibility interfere with the state of health of workers, with consequent reduction of their productivity.

Facet pain and discomfort exhibited low mean score, 32.35% ( $\pm$ 26.16), and negative correlation with quality of life. The reason is that these symptoms have direct influence on work, by causing temporary or transient disability to perform tasks<sup>18</sup>.

Also facet sleep and rest exhibited low mean score, which is a cause of concern, because abnormal sleep patterns cause irritability, impatience, unavailability and discouragement, with direct impact on the quality of life, and association with disorders such as stress, anxiety and depression<sup>19</sup>.

Further facets with low mean scores were recreation and leisure (39.71 $\pm$ 17.80) and social support (63.24 $\pm$ 23.58). Work in 12-hour shifts interferes with the activities of daily life of nursing professionals, mainly the ones allocated to the night shift. They often miss special events with friends and family, which impairs their leisure activities and the strength of the relationships involved in social support. All these factors have impact on the quality of life and mental health of this population of workers<sup>20</sup>, as social relationships

are the source of support to cope with daily difficulties in personal or work life.

Salary is one of the factors which directly interfere with job satisfaction and quality of life. When workers earn adequate salaries, they are more motivated to work and do not need to look for other sources of income. In the present study, the mean score for facet financial resources was 54.41 ( $\pm 25.36$ ), which agrees with the results of a study conducted in Londrina, Parana, Brazil in 2015, in which nursing professionals reported that low salary interferes with the quality of life as it does not suffice to meet the basic needs<sup>21</sup>.

Health care is one further factor which directly interferes with the quality of life of professionals, as neglect results in severe diseases, physical and mental exhaustion, with negative impact on the care provided to patients. In the present study, the mean score was 57.35 ( $\pm 22.98$ ). In a study conducted in 2014 in João Pessoa, Paraíba, Brazil, the mean score was 25, and one among the three most impaired aspects<sup>22</sup>.

Health and quality of life are not only associated biological, but also to social factors relating to the environment where people live<sup>23</sup>. In this regard, the physical environment of SAMU professionals is another cause of concern, as the mean score was 52.94 ( $\pm 12.12$ ).

## CONCLUSION

The SAMU nursing professionals were predominantly female and married, their average age was 37 years old, had attended undergraduate education at least, and worked 71.88 ( $\pm 17.50$ ) hours per week. The results evidenced poor quality of life in the physical health and environment domains. Women are considered to be most affected in this regard, as a function to the double burden to which they are subjected, i.e., house work and paid job, resulting in excessive working time beyond the one recommended by COFEN.

For this reason, health managers and organizations representing nursing professionals should permanently seek to assess the impact of quality of life and stress on these workers' satisfaction to formulate measures to solve the aforementioned problems.

As limitations, the present study only included the nursing staff, resulting in a small sample size. Then, it was conducted at one single prehospital care service, which prevents generalizing the information resulting from the scales used. We thus suggest for future studies to analyze the satisfaction of prehospital care nursing staff in all the Brazilian states to provide a broad-scope and trustworthy picture of the poor quality of life of prehospital care professionals in each Brazilian region.

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