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QUALITY OF WORKING LIFE OF MOBILE EMERGENCY CARE SERVICE SERVERS

QUALIDADE DE VIDA NO TRABALHO DE SERVIDORES DO SERVIÇO DE ATENDIMENTO MÓVEL DE URGÊNCIA

Vitória Vasconcelos Logullo[1*], Jonas Henrique Dias Vasconcelos Lopes de Oliveira[2], Beatriz Jorge Oliveira Gomes[3], Gláucia Maria Canato Garcia[4]; Mariana Enumo Balestre[5], Maria Eduarda Pascoaloto da Silva[6], Ana Flávia da Silva Izepato[7], Sonia Silva Marcon[8]

[1]Nurse. Master student at the State University of Maringá (UEM), Maringá (PR), Brazil; [2]Nurse graduated from the State University of Maringá (UEM), Maringá (PR), Brazil; [3]Nurse. Master student at the State University of Maringá (UEM), Maringá (PR), Brazil; [4]Nurse. Master student at the State University of Maringá (UEM), Maringá (PR), Brazil; [5]Nurse. Master student at the State University of Maringá (UEM), Maringá (PR), Brazil; [6]Nurse. PhD student in Nursing at the State University of Maringá (UEM), Maringá (PR), Brazil [7]Nurse. Master student at the State University of Maringá (UEM), Maringá (PR), Brazil; [8]PhD in Nursing. Professor at the Department of Nursing at the State University of Maringá (UEM), Maringá (PR), Brazil.

***Corresponding author**: Vitória Vasconcelos Logullo – **Email:** vitorialogullo@gmail.com

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ABSTRACT: Objective: To evaluate the quality of life at work of SAMU professionals in a municipality in the state of Paraná. **Methodology:** A descriptive and exploratory study was conducted with 60 workers from a SAMU regulation center in Paraná. Data were collected using the validated QWLQ-brief questionnaire. A Microsoft Excel for Windows® tool was used to tabulate quantitative data. **Results:** Of the 60 participants in the study, 16 were Auxiliary Tele attendants in Medical Regulation (TARM), nine were Radio Operators (RO), eight were nurses, and 27 were doctors. The quality of life at work index was 57.6% and was classified as satisfactory. The only domain with an unsatisfactory result was Physical/Health, with 34.8%. **Conclusion:** The quality of life at work at SAMU reached adequate levels. However, it is still necessary to create measures to promote the health of these professionals within their work environment.

KEYWORDS: Prehospital Care. Quality of Life. Occupational Health. Work.

RESUMO: Objetivo: Avaliar a qualidade de vida no trabalho dos profissionais do SAMU de um município do Paraná. **Metodologia:** Estudo descritivo e exploratório realizado com 60 trabalhadores de um centro de regulação do SAMU do Paraná. Os dados foram coletados mediante aplicação do questionário validado QWLQ-brief. Para tabulação dos dados quantitativos, foi utilizada uma ferramenta elaborada no *Microsoft Excel for Windows®.* **Resultados:** Dos 60 participantes do estudo, 16 eram Teleatendentes Auxiliares em Regulação Médica (TARM), nove eram Radioperadores (RO), oito enfermeiros e 27 médicos. A qualidade de vida no trabalho apresentou índice de 57,6%, sendo classificada como satisfatória. O único domínio com resultado insatisfatório foi o Físico/Saúde, com 34,8%. **Conclusão:** A qualidade de vida no trabalho existente no SAMU alcançou índices satisfatórios. No entanto, ainda se faz necessário a criação de medidas para promoção da saúde destes profissionais dentro do seu ambiente de trabalho.

PALAVRAS-CHAVE: Assistência Pré-Hospitalar. Qualidade de Vida. Saúde Ocupacional. Trabalho.

INTRODUCTION

The working environment of health professionals, especially in emergency services, has high levels of stress related to the high complexity of care and the high risk of death for patients, requiring professionals to make quick decisions and speed up the care and management of the case.[1,2] Constant exposure to this scenario contributes to workers' physical, mental, and emotional exhaustion.[1,2] In addition, the lack of human and material resources, inadequate structures, work overload, and loss of sleep are also factors that influence workers' quality of life.[2]

Quality of life at work (QWL) is related to a set of organizational actions and practices aimed at improvements and innovations capable of transforming workers' quality of life and, consequently, the service provided at a structural, operational, and technological level.[3] Poor quality of work makes it exhausting, causing damage to the performance of the job and wear and tear on workers' health, which can be reflected in all sectors of an institution. In more serious cases, this can lead to mental disorders such as burnout, depression, and suicide.[1]

In addition to people's physical health, QWL also involves mental health in the workplace, where there are challenges related to objects, technologies, and interpersonal relationships.[3] National[3,4,5] and international[1,6,7] studies have been concerned with demonstrating the prevalence of mental disorders such as burnout in healthcare workers, as well as their relationship with QWL. Internationally, research has made efforts to recognize the determining factors for a good quality of life at work in the health sector[7], especially after the COVID-19 pandemic, which opened new perspectives on health workers' health.[4,6]

Workers' health is one of the global concerns listed in the World Agenda for Sustainable Development Goals (SDGs), determined by the United Nations summit, advocating the value of work and economic growth in a way that does not harm workers' health.[8,9]

According to the *Umbrella Review* study (which proposes a synthesis of the findings of several systematic research studies), it is essential to have support in the workplace from management and leaders for the development of prevention and health promotion strategies at different levels, from more comprehensive actions (primary level), such as encouraging a healthy environment and relationships among professionals, for example, to complex interventions (tertiary level), with support and monitoring of the worker by a multidisciplinary health team.[9]

The mobile pre-hospital service is considered emergency care and is the first response to a victim after a clinical, surgical, traumatic, or psychiatric injury. It comprises an uninterrupted multi-professional team of attendants, radio operators, nursing technicians, nurses, and doctors.[10,11] The assistance team is subdivided into Basic Life Support, a first-aid driver and a nursing technician, Advanced Life Support, a first-aid driver, a doctor, and a nurse. Resources are allocated according to the severity of the incident.[8]

Thus, the Mobile Emergency Care Service (SAMU) is responsible for providing care in extreme situations where time and professionalism are decisive for the patient's clinical outcome. In addition, the Regional Centers direct resources in aggravating situations according to the information and technical expertise of the professionals, exposing these professionals to stressful and exhausting situations frequently.[10,11]

The Emergency Care Network is structured and organized following Ordinance 2.048 of the Ministry of Health (MS) of 2003[10] and complementary ordinances. SAMU workers are classified as belonging to the health area. The former service coordinators, technical managers (doctors), nursing managers, regulatory doctors, interventionist doctors, nurses, nursing assistants, and technicians. The team of non-healthcare professionals comprises a regulation operator, a radio operator, an emergency

vehicle driver, professionals responsible for security (Military Police, Highway Police, Municipal Guard, and others), and military firefighters.[11]

Considering this, we can see how fundamental the role of these professionals is for the population. However, few studies address the quality of life and work of professionals in the pre-hospital setting, especially regarding workers in the regulation center (Auxiliary Medical Regulation Tele attendants and Radio Operators). Intending to evaluate the quality of life at work of SAMU professionals in a municipality in Paraná, this study looks at the QWL of both pre-hospital care and telecare professionals.

METHODOLOGY

This is a descriptive, cross-sectional study of the staff of SAMU Norte Novo, which serves the 15th Health Region in the state of Paraná. In preparing the research report, criteria established in *Strengthening the Reporting of Observational Studies in Epidemiology* (STROBE)[12] were used as a support tool.

At the time of the study, SAMU Norte Novo had 13 ambulances, 11 for essentials life support and two for advanced life support, two rapid intervention vehicles (VIR) for advanced life support (driver, doctor, and nurse),) and rotary-wing rescue and secondary care aircraft based in Maringá - PR. It was staffed by 76 doctors, 27 nurses, 16 tele-attendants, nine radio operators, nursing technicians, and first-aid drivers, working 12x36-hour shifts, except the doctors. [10,11]

SAMU Norte Novo has a Regional Emergency Center (CRE, in Portuguese) responsible for organizing the flow of vacancies in the Emergency Care Network of the 15th Health Region of the State of Paraná. It treats clinical, traumatic, and psychiatric injuries that are referred to primary, secondary, or tertiary units according to the severity of the cases, specialty and, as far as possible, respecting an agreement between the municipality's health department and hospital institutions, whose distribution considers the last number of the victim's year of birth. One of their specific duties is to inform the receiving medical units/teams of the clinical conditions of the patients being referred to, as well as possible resources needed for care.[10,11]

Data were collected from October to November 2021 from workers working at the Regional Emergency Center in the municipality of Maringá - Paraná: Auxiliary Medical Regulation Tele attendant (TARM); Radio Operators (RO); Nurses and Regulatory Doctors.[10,11]

The only inclusion criterion previously established was working at the CRE. Employees on vacation, on leave, or not on the premises at any of the 20 visits made for data collection were not included.

During data collection, a self-administered instrument consisting of two parts was used. The first contained questions about the sociodemographic characteristics of the workers (age, gender, length of service, workload, training, employment relationships and area of work) and the second consisted of the *Quality of Working Life Questionnaire* (QWLQ-brief) made up of 20 questions divided into four domains: Physical/Health (four questions), Psychological (three questions), Social (four questions) and professional (nine questions). [13] The answers are presented on a five-point Likert scale ranging from “very unsatisfactory” (1) to “very satisfactory” (5), except for the eighth question, whose score is inverted. Scores below 22.5 indicate a very unsatisfactory quality of life; between 22.5 and 45, unsatisfactory; 45 and 55, neutral; between 55 and 77.5, satisfactory; and above 77.5, very satisfactory.[13]

The data were recorded in a *Microsoft Excel® for Windows* spreadsheet and analyzed using descriptive and inferential statistics, using simple arithmetic mean, standard deviation, coefficient of variation, minimum value, maximum value, and range.

The Municipal Health Department authorized the study, which was approved by the signatory institution's Ethics Committee for Research with Human Beings (Opinion No. 4.948.112). All participants agreed to participate by signing the Informed Consent Form (ICF).

RESULTS

Of the 60 participants in the study, 35 (58.3%) were health professionals, eight of whom were nurses (13.3%) and 27 doctors (45%). The other participants were 16 TARMs (26.6%) and nine radiographers (15%). The majority (65%) were female, and more than half (51.6%) were aged between 30 and 40. They all worked 40 hours a week, and 83.3% (mostly health professionals) had another job. Most had worked there for less than 10 years (Table 1).

Table 1. Sociodemographic, occupational, and lifestyle characteristics of the professionals surveyed at SAMU Norte Novo, Maringá, PR

Variables	Health area		Non-originating		Total	
	N	%	N	%	N	%
Age						
<30 years old	6	17.1	5	20.0	11	18.3
30 to 40 years old	17	48.6	14	56.0	31	51.6
40 to 50 years old	9	25.7	4	16.0	13	21.6
>50 years old	3	8.6	2	8.0	5	8.3
Gender						
Female	23	65.7	16	64.0	39	65.0
Male	12	34.3	9	36.0	21	35.0
Marital status						
With a partner	28	80.0	19	76.0	37	61.6
Without a partner	7	20.0	6	24.0	13	21.6
Education						
Complete high school	-	-	7	28.0	7	11.6
Graduation	7	20.0	16	64.0	23	38.3
Postgraduate studies	28	80.0	2	8.0	30	50.0
Time working in the area						
<10 years	27	77.1	15	60.0	42	70.0
10 to 20 years	8	22.9	10	40.0	18	30.0
Weekly working hours						
≥ 40 hours	35	100	25	100	60	100
Other employment relationship						
Yes	26	74.3	3	12.0	29	48.3
No	9	25.7	22	88.0	31	51.6
Physical activity						
Yes	18	51.4	10	40.0	28	46.6
No	17	48.6	15	60.0	32	53.3

Variables	Health area		Non-originating		Total	
	N	%	N	%	N	%
Leisure activities						
Yes	29	82.9	22	88.0	51	85.0
No	6	17.1	3	12.0	9	15.0

Source: Research data (2021)

The average score (57.6) from applying the QWLQ-brief scale was considered satisfactory. Table 2 shows the score obtained for each question that constitutes the QWLQ brief and the average score for their respective domains. The physical/health domain had the lowest average score (34.8) and was considered "unsatisfactory," with the perception of sleep quality contributing to this result. The Psychological, Personal, and Professional domains had an average score of 63.5, 70, and 63, respectively, and were considered "satisfactory".

In the psychological and personal domains, the high scores given to pride in one's profession and relationships with superiors stand out, respectively. In the Professional domain, the highlights were the low score for freedom to create new things at work and the high scores for satisfaction with one's responsibilities (much higher among health professionals) and quality of life at work (higher among non-health professionals).

Table 2. The average score per QWLQ-brief question is in the respective domains. Maringá, PR, 2021

Questions per area	Health area	Non-originating	Average Overall
Physical / Health	32.8	37.3	34.8
Q4-How do you rate your sleep?	56	54	55
Q8-To what extent do sleep problems affect your work?	59.4	60.3	60.6
Q17-Are your basic physiological needs adequately met?	68.2	66.5	67
Q19-How comfortable do you feel in your work environment?	74.3	70.5	73.3
Psychological	62.8	60.4	63.5
Q2-How do you rate your motivation to work?	58.4	60.3	59.3
Q5-How do you rate your freedom of expression at work?	63.3	54.5	61.3
Q9-How proud are you of your profession?	80	56.3	74.6
Personal	74.5	70	70
Q6-Do you feel fulfilled by the work you do?	73.5	57.3	68.3
Q10-How do you rate the quality of the relationship with your superiors?	79.2	75.3	79.3
Q11-How does your family rate your work?	76.3	65.3	74.6
Q15-To what extent do your colleagues and superiors respect you?	71.3	70	71.3
Professional	65.5	57.2	63
Q1-How do you rate your freedom to create new things at work?	57.3	53.2	54.3
Q3-How do you rate the equal treatment of employees?	60	56.3	58.3
Q7-How proud are you of the organization you work for?	65.3	62.5	63.3
Q12-How satisfied are you with your level of responsibility at work?	59.5	56.3	58.6
Q13-Are you satisfied with your level of responsibility at work?	80	60.3	72

Questions per area	Health area	Non-originating	Average Overall
Q14-Are you satisfied with the training provided by the organization?	62.3	59.6	62
Q16-Are you satisfied with the variety of tasks you perform?	67	64.5	66
Q18-How do you rate the spirit of camaraderie in your work?	70	69.3	69.3
Q20-How satisfied are you with your quality of life at work?	70.4	73.3	71.6

Source: Research data (2021)

DISCUSSION

There were slight differences in the scores between health professionals and non-health professionals; generally, the average QWL was satisfactory for both. However, there was a more significant discrepancy in the scores relating to pride in one's profession and fulfillment in one's work, which were better among health professionals.

These scores suggest that professionals who work directly with victims, helping with care and procedures to maintain life and improve the patient's clinical condition, have a more positive perception of their role, perceiving the irreplaceability of their services more clearly. On the other hand, professionals who work mainly remotely, without direct contact with the situation, may not realize that they are also a fundamental part of the whole care process.

The profile of pre-hospital care workers in this study is similar to that found in other national studies with these professionals. The length of time they have worked in the area is also in line with the literature, as other studies have also found a predominance of professionals with up to 10 years' experience in the service[2,5], which in this study did not compromise their quality of life at work, as most of the participants were satisfied with the training they had received.

On the one hand, working longer in the same place helps professionals adapt to the environment, reducing feelings of stress. Still, on the other hand, it allows the work process and some other activities to become trivialized. This is a negative aspect of working for a long time in the same service/place.[14] However, although some protocols are frequently updated in the SAMU services, professional experience, and the calm and security to act in emergencies can only be acquired over time.

The physical/health domain had the highest percentage of dissatisfaction, especially regarding sleep. A study carried out in emergency services showed that 72.2% of workers had poor sleep quality and that 67.6% had a high need for rest. Those with the worst sleep quality also had the lowest quality of life scores.[2]

Discussions about sleep quality among health professionals in general have intensified worldwide. Poor sleep quality can have several repercussions on the work and routine of professionals, such as lower productivity and a greater risk of care-related accidents. Poor sleep quality can also be associated with disorders in people's mental health, resulting in depression and anxiety.[1] A study in a hospital in the south of Brazil found that the main factors hindering sleep among professionals were tension, pain related to joint or autoimmune diseases, and working nights. It also showed positive results from Reiki as an intervention to improve sleep quality.[15]

Another factor that can interfere with quality of life at work is a workload of more than eight hours a day / 40 hours a week, especially for health professionals, since almost half of them have another job. The COVID-19 pandemic can be a classic example of a context characterized by long working hours,

overload, and stress among health professionals.[4,16-18] A study carried out in 2020 in northeastern Brazil (RN) with 490 nursing professionals working in medium and high complexity services showed that 62.4% of the participants had symptoms of Burnout Syndrome.[17] On the other hand, a study carried out in a hospital in the state of Goiás with 156 health professionals two years after the critical phase of the pandemic showed a low/reduced perception of stress among the professionals, possibly related to adaptation to the pandemic context.[4]

In addition to long working hours, the COVID-19 pandemic has also been marked by uncertainties regarding the risk of contagion, social isolation, and fear among health professionals, which may be related to reduced QWL[19]. It should also be noted that high-stress levels can result in more significant risks of accidents during care.[4]

The personal domain - with questions related to the accomplishment and pride of the civil servant and their family in their role in society - had the highest score, which allows us to infer that the family support network reflects the professional's positive perception of their QWL. In addition, there is compassionate satisfaction (CS) among the professionals in the study. This type of satisfaction refers to the positive feelings arising from helping and the reward for the efforts to provide care. It is strongly related to the well-being of the professional.[20,21]

Other studies show results that go in the same direction. In Goiânia, for example, it was found that 97.9% of the participants with high CS worked in direct patient care.[4] In Portugal, a study of 84 nurses who worked in the hospital urgent and emergency care sector found that 50.6% of the professionals had a high level of CS, and almost 30% had moderate CS.[20] Conversely, compassion fatigue (CF) is shown to be directly related to reduced CS, associated with high levels of burnout and secondary traumatic stress.[20,21,22]

On the other hand, the data from this study corroborates that of a study carried out with 67 health professionals working in the ICU or oncology sector of a hospital in the interior of the state of São Paulo, which found that the absence or limitation of social support is associated with the development of Compassion Fatigue. In other words, professionals who receive support from other people develop less CF.[22]

This study discusses the quality of life of professionals working in the pre-hospital environment, a complex and potentially stressful environment, thus revealing factors associated with workers' physical and mental health, such as excessive workload or lack of emotional support, for example. From this, it is possible to develop and implement strategies that promote well-being at work, such as psychological support and better working conditions. In addition to job satisfaction and motivation, these improvements can contribute to the efficiency and quality of care, making professionals more prepared and engaged in performing their duties.

Possible limitations of the study may be related to the small size of the sample studied, the fact that it investigated professionals working in only one SAMU regulation post, and the fact that it did not include all the professional categories working in these services, such as nursing technicians, who are the lowest paid among the health professionals working in them, which may compromise QWL. In any case, the results allow us to identify the areas of most significant fragility, and it is recommended that more comprehensive investigations be carried out to elucidate better how professionals working in the emergency/SAMU context perceive QWL.

CONCLUSION

The overall average score obtained by applying the Quality of Life at Work scale to the Mobile Emergency Care Service-SAMU Norte Novo employees was classified as “satisfactory.” The domains with the lowest scores were physical/health and professional, while the personal domain had the highest score.

The factors with the worst scores were sleep quality and freedom to create new things at work, mainly related to professional autonomy. The best scores were those related to pride in one's work, family members' view of the professional's role, and the relationship with superiors.

Given the results, it can be inferred that good quality sleep and rest, respect for and appreciation of the profession, feeling satisfied with the work they do, adequate team staffing, and a good relationship with superiors is fundamental to achieving a proper quality of life at work.

Thus, measures involving health promotion and the development of organizational strategies that value and benefit workers favor the perception of QWL, with repercussions for professional performance and the results obtained, and should, therefore, be a purpose to be implemented in the various work environments.

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