

BETTY NEUMAN'S SYSTEMS MODEL IN UNDERSTANDING THE QUALITY OF LIFE AND MENTAL HEALTH OF URGENCY NURSING TECHNICIANS IN THE SUS

O MODELO DE SISTEMAS DE BETTY NEUMAN NA COMPREENSÃO DA QUALIDADE DE VIDA E DA SAÚDE MENTAL DE TÉCNICOS DE ENFERMAGEM DE URGÊNCIA NO SUS

EL MODELO DE SISTEMAS DE BETTY NEUMAN EN LA COMPRESIÓN DE LA CALIDAD DE VIDA Y LA SALUD MENTAL DE TÉCNICOS DE ENFERMERÍA DE URGENCIAS EN EL SUS



<https://doi.org/10.56238/sevened2026.009-039>

Raue Ferreira Franco¹, Jefferson Martinelli², Luiz Otávio Maciel Lopes³, Sonia Maria Maciel Lopes⁴, Emerson Roberto dos Santos⁵, João Daniel de Souza Menezes⁶, Matheus Querino da Silva⁷, Ana Maria Rita Pedroso Vilela Torres de Carvalho Engel⁸, William Donegá Martinez⁹, Loiane Letícia dos Santos¹⁰, Júlio César André¹¹, Marielza Regina Ismael Martins¹²

ABSTRACT

Nursing technicians working in urgency and emergency services of the Brazilian Unified Health System (SUS) experience intense and recurrent stressors, with potential impacts on their quality of life and mental health. This study aimed to evaluate the quality of life and mental health indicators of these professionals in urgency settings in the interior of the state of São Paulo. This is a quantitative, descriptive, exploratory, and cross-sectional study conducted with 146 nursing technicians linked to urgency services in two municipalities. Data collection was performed through electronic forms and included sociodemographic and professional characterization, in addition to the application of the WHOQOL-BREF and the Hospital Anxiety and Depression Scale (HADS). The results showed a heterogeneous global perception of quality of life across domains, with greater uniformity in the environment domain, and relevant indicators of psychological distress, anxiety, and depressive symptoms in part of the sample. A consistent association was observed between poorer quality of life and greater psychological distress, with a strong negative correlation between psychological

¹ E-mail: Rauerf@hotmail.com

² E-mail: Jeffmartinelli@hotmail.com

³ E-mail: luiz_otavio.2@hotmail.com

⁴ E-mail: sonia.lopes@edu.famerp.br

⁵ E-mail: emerson.santos@edu.famerp.br

⁶ E-mail: joao.menezes@edu.famerp.br

⁷ E-mail: matheus.querino@edu.famerp.br

⁸ E-mail: ana.engel@edu.famerp.br

⁹ E-mail: william.martinez@edu.famerp.br

¹⁰ E-mail: loiane.psicologia@gmail.com

¹¹ E-mail: julio.andre@famerp.br

¹² E-mail: marielzamartins@famerp.br

distress and general quality of life, as well as a moderate correlation between depressive symptoms and the social relationships domain. Comparisons by income, sex, and workload did not show statistically significant differences in the evaluated outcomes, suggesting that the context and complexity of occupational stressors may play a central role in the experience of illness and well-being. It is concluded that psychological distress significantly compromises the quality of life of nursing technicians in SUS urgency services, reinforcing the need for institutional strategies for prevention, surveillance, and psychosocial support at work.

Keywords: Nursing Theory. Mental Health. Quality of Life. Nursing. Team.

RESUMO

Técnicos de enfermagem que atuam em serviços de urgência e emergência do Sistema Único de Saúde (SUS) vivenciam estressores intensos e recorrentes, com potenciais impactos sobre sua qualidade de vida e saúde mental. Este estudo teve como objetivo avaliar indicadores de qualidade de vida e saúde mental desses profissionais em serviços de urgência no interior do estado de São Paulo. Trata-se de um estudo quantitativo, descritivo, exploratório e transversal, realizado com 146 técnicos de enfermagem vinculados a serviços de urgência em dois municípios. A coleta de dados foi realizada por meio de formulários eletrônicos e incluiu caracterização sociodemográfica e profissional, além da aplicação do WHOQOL-BREF e da Escala Hospitalar de Ansiedade e Depressão (HADS). Os resultados evidenciaram uma percepção global heterogênea da qualidade de vida entre os domínios, com maior uniformidade no domínio meio ambiente, além de indicadores relevantes de sofrimento psicológico, ansiedade e sintomas depressivos em parte da amostra. Observou-se associação consistente entre pior qualidade de vida e maior sofrimento psicológico, com forte correlação negativa entre sofrimento psicológico e qualidade de vida geral, bem como correlação moderada entre sintomas depressivos e o domínio relações sociais. Comparações segundo renda, sexo e carga horária não apresentaram diferenças estatisticamente significativas nos desfechos avaliados, sugerindo que o contexto e a complexidade dos estressores ocupacionais podem desempenhar papel central na experiência de adoecimento e bem-estar. Conclui-se que o sofrimento psicológico compromete significativamente a qualidade de vida dos técnicos de enfermagem nos serviços de urgência do SUS, reforçando a necessidade de estratégias institucionais de prevenção, vigilância e apoio psicossocial no trabalho.

Palavras-chave: Teoria de Enfermagem. Saúde Mental. Qualidade de Vida. Enfermagem. Equipe.

RESUMEN

Los técnicos de enfermería que trabajan en servicios de urgencias y emergencias del Sistema Único de Salud (SUS) experimentan estresores intensos y recurrentes, con posibles impactos en su calidad de vida y salud mental. Este estudio tuvo como objetivo evaluar indicadores de calidad de vida y salud mental de estos profesionales en servicios de urgencias del interior del estado de São Paulo. Se trata de un estudio cuantitativo, descriptivo, exploratorio y transversal, realizado con 146 técnicos de enfermería vinculados a servicios de urgencias en dos municipios. La recolección de datos se llevó a cabo mediante formularios electrónicos e incluyó la caracterización sociodemográfica y profesional, además de la aplicación del WHOQOL-BREF y de la Escala Hospitalaria de Ansiedad y Depresión (HADS). Los resultados evidenciaron una percepción global heterogénea de la calidad de vida entre los dominios, con mayor uniformidad en el dominio ambiente, además de indicadores relevantes de sufrimiento psicológico, ansiedad y síntomas depresivos en parte de la muestra. Se observó una asociación consistente entre peor calidad de vida y mayor sufrimiento psicológico, con una fuerte correlación negativa

entre el sufrimiento psicológico y la calidad de vida general, así como una correlación moderada entre los síntomas depresivos y el dominio de relaciones sociales. Las comparaciones según ingresos, sexo y carga laboral no mostraron diferencias estadísticamente significativas en los resultados evaluados, lo que sugiere que el contexto y la complejidad de los estresores ocupacionales pueden desempeñar un papel central en la experiencia de enfermedad y bienestar. Se concluye que el sufrimiento psicológico compromete significativamente la calidad de vida de los técnicos de enfermería en los servicios de urgencias del SUS, reforzando la necesidad de estrategias institucionales de prevención, vigilancia y apoyo psicosocial en el trabajo.

Palabras clave: Teoría de Enfermería. Salud Mental. Calidad de Vida. Enfermería. Equipo.

1 INTRODUCTION

The urgency and emergency setting within the Brazilian Unified Health System (SUS) is one of the most challenging and dynamic areas in healthcare, both due to clinical complexity and the involved care and organizational pressures (BRASIL, 2011; BRASIL, 2013). In this context, nursing technicians play a central role, acting continuously in direct care and in the execution of fundamental interventions for patient stabilization and safety in critical situations (COFEN, 2017; BRASIL, 2017). The nature of the work, which involves dealing with pain, suffering, death, and episodes of violence, increases exposure to occupational stressors and can negatively impact quality of life (QoL) and mental health (MH), especially when combined with resource limitations, overload, and the unpredictability of the work environment (WHO, 2019; BRASIL, 2014).

Quality of Life (QoL), a multidimensional concept encompassing physical, psychological, social, and environmental aspects, is a crucial indicator of individual and collective well-being (THE WORLD HEALTH ORGANIZATION QUALITY OF LIFE ASSESSMENT, 1995; FLECK et al., 1999). In the professional context, compromised QoL can lead to negative outcomes such as absenteeism, presenteeism, professional burnout, and, consequently, impact the quality of care provided (OLIVEIRA et al., 2017; RODRIGUES et al., 2019; TEIXEIRA et al., 2019). Simultaneously, the mental health of these workers is frequently challenged, manifesting in symptoms of anxiety, depression, and psychological distress, which can be exacerbated by exhausting workloads, exposure to traumatic events, and a lack of adequate support (ZIGMOND; SNAITH, 1983; TRETTENE et al., 2016; LUZ et al., 2020).

Given this complex reality, it becomes imperative to seek theoretical models that allow for an in-depth understanding of the interactions between the work environment, stressors, and the individual's response. Betty Neuman's Systems Model, with its holistic approach and focus on prevention, emerges as a powerful conceptual tool for analyzing the dynamics of health and illness among emergency nursing technicians (NEUMAN; FAWCETT, 2011). By considering the individual as an open system in constant interaction with their environment, Neuman's model offers a framework to identify stressors, assess lines of defense and resistance, and plan interventions at the primary, secondary, and tertiary prevention levels (NEUMAN; FAWCETT, 2011; NEVES JÚNIOR et al., 2024).

This chapter aims to apply Betty Neuman's Systems Model to understand the stressors, system defenses, and the effects on the quality of life and mental health of nursing technicians working in SUS urgency services (NEUMAN; FAWCETT, 2011; THE WORLD HEALTH ORGANIZATION QUALITY OF LIFE ASSESSMENT, 1995; ZIGMOND; SNAITH,

1983). To this end, a synthesis of a previous study will be used as a basis, recontextualizing its findings in light of Neuman's theory and proposing practical implications for nursing management, education, and practice, aiming to promote the well-being of these essential professionals (NEUMAN; FAWCETT, 2011; MACHADO; XIMENES NETO, 2018; WORLD HEALTH ORGANIZATION, 2020).

2 THEORETICAL FRAMEWORK

Understanding the health and well-being of nursing professionals in high-complexity environments, such as urgency and emergency care, requires a robust theoretical lens. Betty Neuman's Systems Model offers this perspective by considering the individual as a holistic system in constant interaction with their environment.

2.1 BETTY NEUMAN'S SYSTEMS MODEL

Betty Neuman developed her model in the 1970s with the purpose of providing a framework for nursing practice that addressed the human being in a holistic manner (NEUMAN; FAWCETT, 2011). Neuman's theory is a systems model that focuses on the client's response (individual, family, group, or community) to stress and on the reconstitution of the system's stability (NEUMAN; FAWCETT, 2011; NEVES JÚNIOR et al., 2024). The client is viewed as an open, dynamic system in constant interaction with the environment, seeking to maintain stability or equilibrium (NEUMAN; FAWCETT, 2011). The central concepts of the model include:

2.1.1 Stressors

Neuman classifies them into three categories: intrapersonal, interpersonal, and extrapersonal (NEUMAN; FAWCETT, 2011).

- **Intrapersonal:** Forces occurring within the individual (e.g., thoughts, emotions, and physiological processes). In the context of nursing technicians, these may include feelings of guilt, fear, anxiety, and physical and mental fatigue, especially in high-demand care scenarios (NEUMAN; FAWCETT, 2011; OLIVEIRA et al., 2017; TEIXEIRA et al., 2019).
- **Interpersonal:** Forces occurring between individuals (e.g., conflicts with colleagues, supervisors, patients, or family members). These include communication problems, workplace bullying, and lack of recognition, with the potential to intensify stress and emotional exhaustion at work (NEUMAN; FAWCETT, 2011; TRETTENE et al., 2016).

- **Extrapersonal:** Forces occurring outside the individual (e.g., institutional policies, working conditions, financial issues, and the social environment). In urgency services, these may involve a lack of material resources, workload overload, workplace violence, and excessive bureaucracy, with repercussions for the worker's health and the organization of care (NEUMAN; FAWCETT, 2011; BRASIL, 2006; PAIXÃO et al., 2014; OLIVEIRA et al., 2017).

2.1.2 Lines of Defense and Resistance

The client system possesses protection mechanisms against stressors. In Neuman's Systems Model, these mechanisms include the flexible line of defense, the normal line of defense, and the lines of resistance, which act in a coordinated manner to maintain or restore the system's stability in the face of internal and external tensions (NEUMAN; FAWCETT, 2011; NEVES JÚNIOR et al., 2024).

- **The flexible line of defense** is the outermost and most dynamic barrier, associated with temporary well-being and susceptible to rapid variations according to environmental and personal conditions, such as sleep, nutritional status, and coping strategies (NEUMAN; FAWCETT, 2011).
- **The normal line of defense** corresponds to the individual's habitual pattern of equilibrium, resulting from the level of adaptation built over time and expressed as their usual state of health and well-being (NEUMAN; FAWCETT, 2011).
- **The lines of resistance** consist of internal mechanisms activated when stressors penetrate the normal line of defense, mobilizing physiological, psychological, and social resources to reconstitute stability, such as immune responses, coping, and social support (NEUMAN; FAWCETT, 2011; NEVES JÚNIOR et al., 2024).

2.1.3 Prevention Levels

Nursing, according to Neuman, operates at three levels of prevention to maintain or restore system stability (NEUMAN; FAWCETT, 2011).

- **Primary prevention** focuses on reducing the possibility of encountering stressors or strengthening the flexible line of defense before a reaction occurs, including health promotion activities and education for well-being, aligned with SUS management and labor policies (NEUMAN; FAWCETT, 2011; BRASIL, 2006; MACHADO; XIMENES NETO, 2018).
- **Secondary prevention** concentrates on the early detection and treatment of reactions to stressors, aiming to reduce the severity of symptoms and protect the lines

of resistance, as occurs in triage and risk classification within urgency services (NEUMAN; FAWCETT, 2011; ACOSTA; DURO; LIMA, 2012).

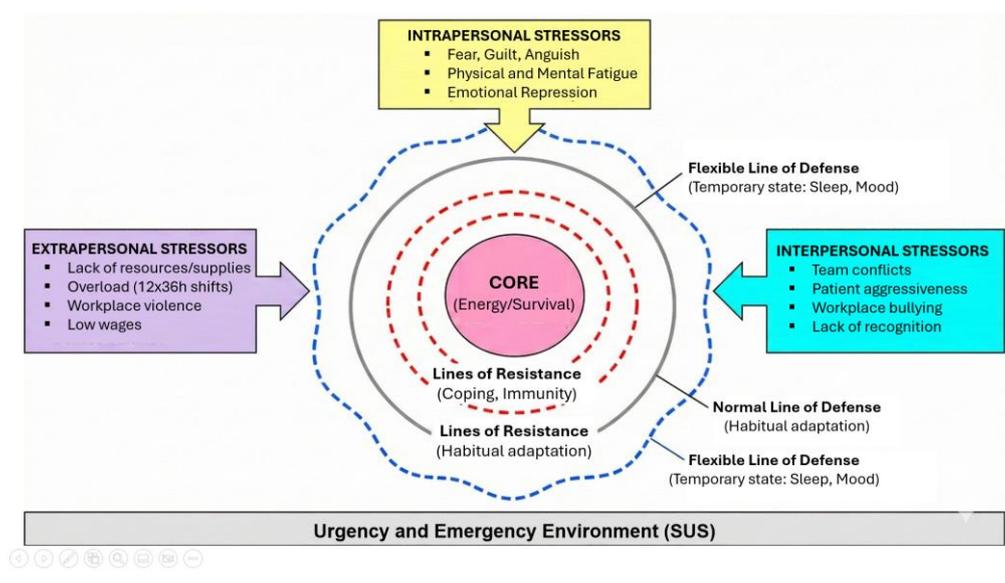
- **Tertiary prevention** aims at rehabilitation and the maintenance of system stability after treatment, seeking to prevent new reactions and promote readaptation, which may include strategies for dealing with established burnout and occupational stress (NEUMAN; FAWCETT, 2011; OLIVEIRA et al., 2017).

2.2 QUALITY OF LIFE AND MENTAL HEALTH IN THE NURSING CONTEXT

Quality of Life (QoL) is a subjective and multidimensional concept, frequently evaluated through domains such as physical, psychological, social relationships, and environment (THE WORLD HEALTH ORGANIZATION QUALITY OF LIFE ASSESSMENT, 1995; FLECK et al., 1999). For nursing technicians, QoL is intrinsically linked to working conditions, social support, and the ability to cope with daily stressors, with a direct impact on well-being and professional productivity (TEIXEIRA et al., 2019; FREIRE et al., 2020). Mental Health (MH) refers to the state of well-being in which the individual is able to use their own abilities, recover from routine stress, be productive, and contribute to their community (WORLD HEALTH ORGANIZATION, 2020). In urgency settings, continuous exposure to crisis situations can lead to the development of anxiety disorders, depression, post-traumatic stress, and professional burnout, compromising the health and performance of these workers (ZIGMOND; SNAITH, 1983; TRETTENE et al., 2016; LUZ et al., 2020). Understanding these concepts, combined with Neuman's Model, allows for a deeper analysis of the vulnerabilities and needs of these professionals, integrating the holistic view of open systems and environmental interactions (NEUMAN; FAWCETT, 2011; NEVES JÚNIOR et al., 2024).

Figure 1

Betty Neuman's Systems Model applied to the work of urgency nursing technicians



Source: Adapted from Neuman (1995) and Franco (2025).

3 SCENARIO AND CONTEXT OF URGENCY WORK WITHIN THE SUS

Work in urgency and emergency services within the SUS is characterized by a series of particularities that make it a high-risk environment for the health and well-being of nursing professionals.

3.1 CHARACTERISTICS OF URGENCY AND EMERGENCY SERVICES IN THE SUS

Urgency and emergency units (UPAs, hospital emergency rooms) constitute important gateways to the healthcare system, receiving patients with diverse conditions, ranging from low-complexity demands to life-threatening situations, which requires care organization and timely responses in treatment (BRASIL, 2006). This constant and unpredictable patient flow, added to the need for rapid and precise decision-making, contributes to a work environment of high cognitive and emotional demand (TEIXEIRA et al., 2019; OLIVEIRA et al., 2017). Workload overload is a frequent reality, driven by the scarcity of human and material resources, overcrowding, and the complexity of cases, with repercussions on occupational stress and quality of life at work (PAIXÃO et al., 2014; CASAROLLI; NICOLA; EBERHARDT, 2015; TEIXEIRA et al., 2019). The workdays, often involving prolonged shifts, can contribute to physical and mental fatigue, disruption of the circadian cycle, and difficulties in balancing professional and personal life, especially in nursing shift work contexts (SILVA et al., 2017; LI et al., 2022).

3.2 TYPICAL STRESSORS AND OCCUPATIONAL VULNERABILITIES

Nursing technicians in urgency care are exposed to a range of stressors that can be categorized according to Neuman's Model into intrapersonal, interpersonal, and extrapersonal (NEUMAN; FAWCETT, 2011). Among these stressors:

- **Intrapersonal:** Recurrent exposure to suffering, pain, and death can trigger feelings such as helplessness, guilt, fear, and anguish, intensifying stress and emotional exhaustion (TRETTENE et al., 2016; BORGES et al., 2019).
- **Interpersonal:** Team conflicts, difficult interactions with patients and family members, communication failures, and a lack of institutional recognition and support can amplify daily tension and foster occupational illness (TEIXEIRA et al., 2019; SALES et al., 2022).
- **Extrapersonal:** These include infrastructure and resource limitations, overload, workplace violence, and organizational factors that directly impact the care process and well-being, especially in SUS urgency services (BRASIL, 2006; PAIXÃO et al., 2014; OLIVEIRA et al., 2017).

These stressors, when persistent and without effective coping strategies, can penetrate the worker's lines of defense, leading to system imbalance and manifestations of psychological distress and compromised quality of life, according to the logic of Neuman's model (NEUMAN; FAWCETT, 2011; TEIXEIRA et al., 2019).

4 STUDY SYNTHESIS

To provide a foundation for the application of Neuman's Model, this chapter is based on a previous study that investigated the quality of life and mental health of nursing technicians working in SUS urgency and emergency services (FRANCO, 2025).

4.1 RESEARCH DESIGN AND CONTEXT

The baseline study was descriptive-exploratory in nature, with a cross-sectional design, conducted in urgency and emergency services in two municipalities in the interior of the state of São Paulo: Fernandópolis and Votuporanga. The target population consisted of nursing technicians working in these services, totaling a final sample of 146 professionals (FRANCO, 2025). The predominance of the female sex and the significant presence of participants on shift schedules (such as 12x36 hours) are characteristics frequently observed in the nursing workforce and may be associated with occupational stressors and impacts on health and well-being (WORLD HEALTH ORGANIZATION, 2020; MACHADO et al., 2016). Data collection was performed remotely using online questionnaires (FRANCO, 2025).

4.2 INSTRUMENTS USED

To evaluate the constructs of interest, two instruments validated for the Brazilian context were used:

- **WHOQOL-BREF:** The abbreviated version of the World Health Organization Quality of Life (WHOQOL) assessment instrument. It evaluates QoL across four main domains: physical, psychological, social relationships, and environment, in addition to two general questions regarding QoL and health satisfaction.
- **Hospital Anxiety and Depression Scale (HADS):** A screening instrument that assesses the presence and severity of anxiety and depression symptoms, widely used in clinical and research contexts.

4.3 MAIN FINDINGS

The results of the baseline study revealed an important overview of the quality of life and mental health of nursing technicians in urgency care:

- **A strong negative correlation** was observed between psychological distress and the overall quality of life of the professionals. This indicates that the higher the level of psychological distress, the lower the perception of quality of life.
- There was a **moderate correlation** between the presence of depressive symptoms and the Social Relationships domain of the WHOQOL-BREF. This finding suggests that depression may impact individuals' ability to engage in satisfactory social interactions or to perceive social support.
- Regarding the quality of life domains, the professionals presented a perception of QoL that can be considered **moderate**, with variations across domains.
- The analysis of anxiety and depression symptoms indicated that a portion of the nursing technicians showed indicators of mental distress, with scores suggesting the need for attention.
- Interestingly, variables such as **income, sex, and workload** did not prove to be factors with a significant impact on quality of life and mental health outcomes in the studied sample.

This finding, although it may seem counterintuitive, suggests that other stressors or coping mechanisms may play a more prominent role or that the specific sample did not capture these nuances in a statistically significant manner. These findings provide the **empirical basis** for the subsequent discussion, which will interpret these results in light of Betty Neuman's Systems Model, seeking to understand how stressors in the urgency environment affect the client system and how interventions can be planned.

5 DISCUSSION IN THE LIGHT OF NEUMAN'S MODEL

The interpretation of the baseline study findings through the lens of Betty Neuman's Systems Model allows for a deeper understanding of the interactions between the work environment, stressors, and the health of nursing technicians in urgency care.

5.1 STRESSORS AND SYSTEM RESPONSES

The stressors identified in the urgency environment—whether intrapersonal (e.g., emotional fatigue, fear), interpersonal (e.g., team conflicts, violence from patients/family members), or extrapersonal (e.g., workload overload, lack of resources)—constantly act upon the client system: the nursing technician.

The strong negative correlation between psychological distress and overall quality of life can be interpreted as evidence that these stressors are penetrating the professionals' flexible and normal lines of defense. When the client system is unable to effectively cope

with the stress load, its stability is compromised, resulting in a reduced perception of well-being and the emergence of psychological distress symptoms. The flexible line of defense, which should protect the system, may be weakened due to the chronicity of stressors, such as the 12x36-hour shift and continuous exposure to traumatic situations.

The moderate correlation between depressive symptoms and the Social Relationships domain suggests that depression, as a reaction to persistent stressors, affects the individual's ability to connect and interact socially. Social relationships are a vital component of the normal line of defense and the lines of resistance, providing support and resources for coping. When depression compromises this domain, the client system loses an important source of resilience, becoming even more vulnerable to new stressors or the exacerbation of existing ones.

The absence of a significant impact from variables such as income, sex, and workload on QoL and MH outcomes, although surprising, may indicate that the complexity of stressors in the urgency environment is so multifaceted that these isolated factors do not stand out as unique predictors. It is possible that the interaction of multiple stressors, added to the individual characteristics of each professional and their lines of defense, is more decisive for the health status of the system.

5.2 QUALITY OF LIFE AND MENTAL HEALTH AS INDICATORS OF SYSTEM BALANCE

In Neuman's Model, health is viewed as a continuum ranging from system stability to instability. The quality of life and mental health of nursing technicians can be considered direct indicators of the degree of balance or imbalance within the client system. Low QoL and the presence of anxiety and depression symptoms signal that the system is in a state of reaction or reconstitution, requiring interventions to restore its stability.

In this context, nursing has the role of identifying stressors, assessing the strength of the lines of defense and resistance, and implementing prevention actions. The understanding that psychological distress and QoL are interconnected reinforces the need for holistic approaches that consider not only the physical aspects of care but also the emotional, social, and spiritual dimensions of the professionals.

6 IMPLICATIONS FOR MANAGEMENT, EDUCATION, AND PRACTICE

The application of Betty Neuman's Systems Model to the findings of the baseline study provides a framework for developing intervention strategies aimed at protecting and promoting the quality of life and mental health of urgency nursing technicians. These strategies can be organized into the three levels of prevention proposed by Neuman.

6.1 PRIMARY PREVENTION: STRENGTHENING THE FLEXIBLE AND NORMAL LINES OF DEFENSE

Primary prevention seeks to reduce exposure to stressors or strengthen the client system's ability to resist them before a reaction occurs.

- **Management:** Implement adequate staffing policies to avoid workload overload. Ensure the availability of equipment and supplies. Create safe work environments with clear protocols for dealing with violence. Promote a culture of professional recognition and appreciation.
- **Education:** Offer regular training on stress management, communication skills, conflict resolution, and emotional intelligence. Enable professionals to identify early signs of burnout in themselves and their colleagues.
- **Practice:** Encourage the formation of peer support groups. Promote regular breaks and adequate rest environments. Stimulate the adoption of healthy lifestyle habits (nutrition, physical exercise, sleep).

6.2 SECONDARY PREVENTION: EARLY DETECTION AND INTERVENTION

Secondary prevention aims at the early detection of reactions to stressors and the implementation of interventions to reduce the severity of the impact.

- **Management:** Establish periodic mental health screening programs to identify professionals at risk for anxiety, depression, or burnout. Facilitate access to psychological and psychiatric support services, ensuring confidentiality and the absence of stigma.
- **Education:** Train leaders and supervisors to recognize signs of psychological distress within the team and to provide initial support. Develop continuing education programs focused on coping strategies and resilience.
- **Practice:** Create open communication channels so that professionals can express their difficulties and seek help. Implement debriefing sessions after traumatic events or situations involving a high emotional load.

6.3 TERTIARY PREVENTION: REHABILITATION AND MAINTENANCE OF STABILITY

Tertiary prevention focuses on the rehabilitation of the client system after a reaction to stressors, seeking to restore stability and prevent new occurrences.

- **Management:** Develop return-to-work programs for professionals who have been on leave due to mental health issues, including necessary monitoring and adaptations. Offer continuous support for reintegration.
- **Education:** Promote education on the importance of treatment adherence and the maintenance of long-term self-care strategies.
- **Practice:** Facilitate access to long-term therapies and support groups for professionals requiring continuous support. Encourage participation in activities that promote well-being and social reintegration.

6.4 TABLE: INTERVENTION PLAN BASED ON NEUMAN'S MODEL

Table 1

Intervention Plan for Urgency Nursing Technicians Based on Betty Neuman's Systems Model

| Prevention Level | Objective | Management Strategies | Education Strategies | Practice Strategies |
|------------------|--|---|---|---|
| Primary | Strengthen lines of defense; reduce exposure to stressors. | Adequate staffing; material resources; safe environment; professional appreciation. | Training in stress management, communication, and emotional intelligence. | Peer support groups; regular breaks; healthy habits. |
| Secondary | Early detection; intervention to reduce impact. | MH screening; access to psychological/psychiatric support. | Leadership training for support; resilience education. | Open communication channels; post-event debriefing. |
| Tertiary | Rehabilitation; maintenance of stability; prevention of new reactions. | Return-to-work programs; monitoring. | Education on treatment adherence and self-care. | Access to long-term therapies; continuous support groups. |

Source: Elaborated by the authors (2026).

7 LIMITATIONS AND FUTURE RESEARCH

Despite the contributions of the baseline study and the application of Neuman's Model, it is fundamental to acknowledge the inherent limitations and point out directions for future investigations.

7.1 STUDY LIMITATIONS

The baseline study for this chapter, due to its cross-sectional design, offers a snapshot of reality at a specific moment, not allowing for the establishment of cause-and-effect relationships between stressors and QoL and MH outcomes. Remote data collection, while practical, may have introduced selection or response biases, since participation was voluntary and dependent on internet access. Furthermore, the sample, although representative of the studied municipalities, may not be generalizable to all SUS urgency services in Brazil, due to regional and institutional particularities. The use of self-reporting instruments, although validated, is subject to the participants' subjective perception.

7.2 FUTURE RESEARCH SUGGESTIONS

To deepen the understanding of QoL and MH among urgency nursing technicians, the following are suggested:

- **Longitudinal studies:** Monitoring professionals over time to identify the trajectory of QoL and MH and the causal relationships between stressors and outcomes.
- **Intervention studies:** Evaluating the effectiveness of the proposed primary, secondary, and tertiary prevention strategies by implementing programs and measuring their impact.
- **Qualitative studies:** Exploring in depth the subjective experiences of nursing technicians, their perceptions of stressors, their coping strategies, and their support needs.
- **Multicenter studies:** Expanding the geographical scope to include different regions of the country, allowing for a more robust analysis of the SUS particularities.
- **Mixed-methods research:** Combining quantitative and qualitative approaches for a richer and more comprehensive understanding of the phenomenon.

8 FINAL CONSIDERATIONS

The work of nursing technicians in SUS urgency and emergency services is of inestimable value to society, yet it is also one of the most exhausting and challenging. The application of Betty Neuman's Systems Model has proven to be a powerful conceptual tool for uncovering the complex interaction between workplace stressors and the quality of life and mental health of these professionals.

The findings of the baseline study—indicating a strong negative correlation between psychological distress and quality of life, and a moderate correlation between depressive symptoms and social relationships—reinforce the vulnerability of these workers. Interpreting

these results through Neuman's model allows us to visualize the nursing technician as a client system that, under a constant bombardment of stressors, requires robust lines of defense and resistance, as well as nursing interventions across the three levels of prevention.

The implications for management, education, and practice are clear: it is urgent to implement strategies that strengthen the professionals' lines of defense, promote the early detection of mental health issues, and provide support for rehabilitation. Only through a holistic and preventive approach that values the nursing technician's well-being will it be possible to ensure the sustainability of high-quality care within SUS urgency services. This chapter hopes to contribute to the awareness of this theme and inspire concrete actions in favor of the health and quality of life of these essential professionals.

REFERENCES

- Acosta, A. M., Duro, C. O. M., & Lima, M. A. D. S. (2012). Atividades do enfermeiro nos sistemas de triagem/classificação de risco nos serviços de urgência: Revisão integrativa. *Revista Gaúcha de Enfermagem*, 33(4), 181–190. <https://doi.org/10.1590/S1983-14472012000400023>
- Borges, E. M. das N., Fonseca, C. I. N. da S., Baptista, P. C. P., Queirós, C. M. L., Baldonado-Mosteiro, M., & Mosteiro-Diaz, M. P. (2019). Fadiga por paixão em enfermeiros de urgência e emergência hospitalar de adultos. *Revista Latino-Americana de Enfermagem*, 27, Article e3181. <https://revistas.usp.br/rlae/article/view/183930>
- Brasil. Ministério da Saúde. (2006). *Política nacional de atenção às urgências (3ª ed. ampl.)*. Editora do Ministério da Saúde.
- Brasil. Ministério da Saúde. (2011a). Portaria nº 1.600, de 7 de julho de 2011. Reformula a Política Nacional de Atenção às Urgências e institui a Rede de Atenção às Urgências no Sistema Único de Saúde (SUS). https://bvsms.saude.gov.br/bvs/saudelegis/gm/2011/prt1600_07_07_2011.html
- Brasil. Ministério da Saúde. (2011b). Portaria nº 2.395, de 11 de outubro de 2011. Organiza o Componente Hospitalar da Rede de Atenção às Urgências (RUE) no âmbito do SUS. https://bvsms.saude.gov.br/bvs/saudelegis/gm/2011/prt2395_11_10_2011.html
- Brasil. Ministério da Saúde. (2013). Portaria nº 342, de 4 de março de 2013. Redefine as diretrizes para implantação do componente Unidade de Pronto Atendimento (UPA 24h) e do conjunto de serviços de urgência 24 horas da Rede de Atenção às Urgências, em conformidade com a Política Nacional de Atenção às Urgências. https://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt0342_04_03_2013.html
- Brasil. Ministério da Saúde. (2017). Portaria nº 10, de 3 de janeiro de 2017. Redefine as diretrizes de modelo assistencial e financiamento de custeio das Unidades de Pronto Atendimento (UPA 24h) como componente da Rede de Atenção às Urgências. https://bvsms.saude.gov.br/bvs/saudelegis/gm/2017/prt0010_03_01_2017.html

- Casarolli, A. C. G., Nicola, A. L., & Eberhardt, T. D. (2015). Nível de complexidade assistencial e dimensionamento de enfermagem no pronto-socorro de um hospital público. *Revista Enfermagem*, 5(2), 278–285. <https://doi.org/10.5902/2179769216811>
- Conselho Federal de Enfermagem. (2017). Resolução COFEN nº 543/2017. Atualiza e estabelece parâmetros para o dimensionamento do quadro de profissionais de enfermagem nos serviços/locais em que são realizadas atividades de enfermagem. <https://www.cofen.gov.br/resolucao-cofen-5432017/>
- Fleck, M. P. A., Louzada, S., Xavier, M., Chachamovich, E., Vieira, G., Santos, L., et al. (1999). Aplicação da versão em português do instrumento de avaliação de qualidade de vida da Organização Mundial da Saúde (WHOQOL-100). *Revista de Saúde Pública*, 33, 198–205.
- Franco, R. F. (2025). Qualidade de vida e saúde mental de técnicos de enfermagem em cenários de urgência do SUS [Dissertação de mestrado, Programa de Pós-Graduação Stricto Sensu em Enfermagem, FAMER].
- Freire, M. N., Costa, E. R., Alves, E. B., Santos, C. M. F., & Santos, C. O. (2020). Qualidade de vida dos profissionais de enfermagem no ambiente hospitalar. *Revista Enfermagem Contemporânea*, 5(1), 151–158.
- Li, Y., Wang, Y., Lv, X., Li, R., Guan, X., Li, L., Li, J., & Cao, Y. (2022). Efeitos de fatores relacionados ao trabalho por turnos na depressão e ansiedade em enfermeiros. *Frontiers in Public Health*, 10, Article 926988. <https://doi.org/10.3389/fpubh.2022.926988>
- Luz, E. M. F., Munhoz, O. L. L., Morais, B. X., Greco, P. B. B. T., Camponogara, S., & Magnago, T. S. B. de S. (2020). Repercussões da Covid-19 na saúde mental dos trabalhadores de enfermagem. *Revista Enfermagem Centro-Oeste Mineiro*, 10. <https://seer.ufsj.edu.br/recom/article/view/3824>
- Machado, M. G., & Ximenes Neto, F. R. G. (2018). Gestão da educação e do trabalho em saúde no SUS: Trinta anos de avanços e desafios. *Ciência & Saúde Coletiva*, 23(6), 1971–1980. <https://doi.org/10.1590/1413-81232018236.06682018>
- Machado, M. H., Santos, M. R., Oliveira, E., Wermelinger, M., Vieira, M., Lemos, W., et al. (2016). Mercado de trabalho da enfermagem: Aspectos gerais. *Enfermagem em Foco*, 7(esp.), 35–62.
- Neuman, B., & Fawcett, J. (2011). *The Neuman systems model* (5ª ed.). Pearson.
- Neves Júnior, T. T., Gonçalves, R. G., Neves, M. C. D. C., Oliveira, J. S. A., Araújo, R. O., & Menezes, R. M. P. (2024). Teoria de Betty Neuman no cuidado de enfermagem holístico ao paciente oncológico: Ensaio reflexivo. *Escola Anna Nery*, 28, Article e20240014. <https://doi.org/10.1590/2177-9465-EAN-2024-0014pt>
- Oliveira, E. B. de, Gallasch, C. H., Silva Junior, P. P. A. da, Oliveira, A. V. R., Valério, R. L., & Dias, L. B. S. (2017). Estresse ocupacional e burnout em enfermeiros de um serviço de emergência: A organização do trabalho. *Revista Enfermagem UERJ*, 25, Article e28842. <https://www.e-publicacoes.uerj.br/enfermagemuernj/article/view/28842>

- Paixão, T. C. R., Campanharo, C. R. V., Lopes, M. C. B. T., Okuno, M. F. P., & Batista, R. E. A. (2014). Dimensionamento de enfermagem em sala de emergência de um hospital-escola. *Revista da Escola de Enfermagem da USP*, 48(4), 657–664. <https://www.scielo.br/j/reeusp/a/9JhgsT6LwQJxKCrXQTkrw7K/?format=pdf&lang=pt>
- Rodrigues, C. C. F. M., Santos, V. E. P., & Sousa, P. (2019). Patient safety and nursing: Interface with stress and Burnout Syndrome. *Revista Brasileira de Enfermagem*, 72(6), 1690–1696. <https://doi.org/10.1590/0034-7167-2018-0463>
- Sales, W. B., Bernardes, A., Camelo, S. H. H., Andrade, S. R., Balsanelli, A. P., & Cocco, M. (2022). Ambiente da prática profissional e os resultados dos cuidados de enfermagem em hospital universitário. *Revista Latino-Americana de Enfermagem*, 30, Article e3766. <https://www.scielo.br/j/rlae/a/zGHHGxzhKmq4rcpnqpy9XnB/?format=pdf&lang=pt>
- Silva, R. M., Zeitoun, R. C. G., Beck, C. L. C., Martino, M. M. F., Prestes, F. C., & Loro, M. M. (2017). Chronotype and work shift in nursing workers of university hospitals. *Revista Brasileira de Enfermagem*, 70(5), 958–964. <https://doi.org/10.1590/0034-7167-2016-0542>
- Teixeira, G. S., Silveira, R. C. P., Mininel, V. A., Moraes, J. T., & Ribeiro, I. K. S. (2019). Qualidade de vida no trabalho e estresse ocupacional da enfermagem em unidade de pronto atendimento. *Texto & Contexto Enfermagem*, 28, Article e20180298. <https://doi.org/10.1590/1980-265X-TCE-2018-0298>
- The World Health Organization Quality of Life Assessment (WHOQOL): Position paper from the World Health Organization. (1995). *Social Science & Medicine*, 41(10), 1403–1409. [https://doi.org/10.1016/0277-9536\(95\)00112-k](https://doi.org/10.1016/0277-9536(95)00112-k)
- Trettene, A. dos S., Andrade, C. S., Kostrish, L. M. V., Tabaquim, M. de L. M., & Razera, A. P. R. (2016). Estresse em profissionais de enfermagem atuantes em um hospital especializado. *Revista Enfermagem UFPE on line*, 10(12), 4450–4458. <https://periodicos.ufpe.br/revistas/index.php/revistaenfermagem/article/view/11509>
- World Health Organization. (2019). Burn-out an “occupational phenomenon”: International Classification of Diseases. <https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases>
- World Health Organization. (2020). State of the world’s nursing 2020: Investing in education, jobs and leadership.
- Zigmond, A. S., & Snaith, R. P. (1983). The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica*, 67(6), 361–370. <https://doi.org/10.1111/j.1600-0447.1983.tb09716.x>