

Indicators of Burnout in Nurses Working in Outpatient Care and Organ Transplant Management

Indicativos de Burnout em Enfermeiros do Cuidado Ambulatorial e Gestão em Transplante de Órgãos
Indicadores de Burnout en Enfermeros del Cuidado Ambulatorio y de la Gestión en Trasplante de Órganos

RESUMO

Objetivo: Mensurar a prevalência da Síndrome de Burnout em enfermeiros atuantes no Programa de Transplantes de Órgãos Sólidos. **Método:** Estudo exploratório, descritivo e transversal, realizado em 2024 em um centro transplantador de órgãos sólidos localizado no município de São Paulo. A coleta de dados foi realizada por meio de um questionário sociodemográfico e do Maslach Burnout Inventory - Human Services Survey (MBI-HSS) utilizado para avaliação dos níveis de Burnout. **Resultados:** A amostra foi composta por 16 enfermeiros, majoritariamente mulheres (93,7%), com média de 38,9 anos. Destes, 62,5% atuavam no ambulatório e 37,5% em cargos de gestão. Os escores médios do MBI-HSS indicaram exaustão emocional moderada ($18,75 \pm 8,9$), despersonalização baixa a moderada ($5,00 \pm 2,4$) e realização pessoal elevada ($38,81 \pm 11,3$). **Conclusão:** Foram identificados sinais sugestivos da Síndrome de Burnout entre enfermeiros do Programa de Transplantes de Órgãos Sólidos, especialmente entre aqueles da gestão, que apresentaram maior vulnerabilidade emocional, reforçando a necessidade de estratégias institucionais de prevenção e apoio à saúde mental.

DESCRIPTORIOS: Esgotamento profissional, Enfermagem, Vigilância em saúde do trabalhador; Transplante de órgãos.

ABSTRACT

Objective: To measure the prevalence of Burnout Syndrome among nurses working in the Solid Organ Transplantation Program. **Method:** Exploratory, descriptive, and cross-sectional study conducted in 2024 at a solid organ transplant center located in São Paulo, Brazil. Data collection was carried out using a sociodemographic questionnaire and the *Maslach Burnout Inventory - Human Services Survey* (MBI-HSS), applied to assess burnout levels. **Results:** The sample consisted of 16 nurses, mostly women (93.7%), with a mean age of 38.9 years. Among them, 62.5% worked in the outpatient clinic and 37.5% held management positions. The mean scores of the MBI-HSS indicated moderate emotional exhaustion (18.75 ± 8.9), low to moderate depersonalization (5.00 ± 2.4), and high personal accomplishment (38.81 ± 11.3). **Conclusion:** Signs suggestive of Burnout Syndrome were identified among nurses in the Solid Organ Transplantation Program, particularly those in management roles, who showed greater emotional vulnerability. These findings highlight the need for institutional strategies for prevention and mental health support.

DESCRIPTORES: Burnout, Professional; Nursing; Surveillance of the Workers Health; Organ Transplantation

RESUMEN

Objetivo: Medir la prevalencia del Síndrome de Burnout en enfermeros que actúan en el Programa de Trasplantes de Órganos Sólidos. **Método:** Estudio exploratorio, descriptivo y transversal, realizado en 2024 en un centro trasplantador de órganos sólidos ubicado en el municipio de São Paulo. La recolección de datos se llevó a cabo mediante un cuestionario sociodemográfico y el Maslach Burnout Inventory - Human Services Survey (MBI-HSS), utilizado para la evaluación de los niveles de Burnout. **Resultados:** La muestra estuvo compuesta por 16 enfermeros, en su mayoría mujeres (93,7%), con una media de 38,9 años. De ellos, el 62,5% actuaba en el ambulatorio y el 37,5% en cargos de gestión. Los puntajes medios del MBI-HSS indicaron agotamiento emocional moderado ($18,75 \pm 8,9$), despersonalización baja a moderada ($5,00 \pm 2,4$) y alta realización personal ($38,81 \pm 11,3$). **Conclusión:** Se identificaron signos sugestivos del Síndrome de Burnout entre enfermeros del Programa de Trasplantes de Órganos Sólidos, especialmente entre aquellos de la gestión, que presentaron mayor vulnerabilidad emocional, lo que refuerza la necesidad de estrategias institucionales de prevención y apoyo a la salud mental.

DESCRIPTORIOS: Agotamiento profesional; Enfermería; Vigilancia en salud laboral; Trasplante de órganos.

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INTRODUCTION

Stress in modern life impacts both personal and professional spheres, manifesting itself in absenteeism and decreased productivity, and is considered a public health problem. In the health sector, this risk is even greater, as continuous and highly complex care requires a high degree of responsibility and attention from professionals, favoring work exhaustion⁽¹⁾.

Signs of emotional exhaustion related to work activity in healthcare professionals led to the formulation of the concept of Burnout Syndrome (BS), considered by the World Health Organization (WHO) to be one of the most important problems in healthcare services⁽²⁾. BS has been defined as a reaction to emotional stress generated by direct, intense, and excessive contact with other people immersed in problematic or disturbing environments⁽³⁻⁵⁾. Currently, BS is part of a multidimensional context,

characterized by emotional exhaustion, depersonalization, and lack of personal involvement in work^(6,7).

Nursing staff face multiple stress factors in their routine, such as a shortage of human resources, an overload of activities, long shifts, frequent contact with dissatisfied users, and limited participation in decision-making and career processes^(8,9).

In the context of organ transplants, work overload is intensified not only by clinical complications and critical demands in the hospital environment, but also by the challenges faced by nurses at the outpatient and management levels^(10,11). In outpatient care, long-term follow-up involves clinical assessment and monitoring, health education, and family support, while in management, these professionals coordinate care flows, articulate multidisciplinary teams, and assume strategic responsibilities in the program's operation.

Most research on burnout in transplants focuses on hospital inpatient

teams, with a scarcity of studies focused on the psychosocial impact on outpatient and management nurses^(14,15). These professionals play continuous and strategic roles, accompanying the patient from the pre-transplant phase to late follow-up, in addition to assuming administrative and interinstitutional responsibilities⁽¹⁰⁾. Unlike inpatient nurses, who mainly deal with acute demands, outpatient and management nurses experience prolonged follow-up and strategic decision-making, which can lead to a greater risk of emotional exhaustion. Investigating burnout in these contexts is therefore essential to understand different vulnerability profiles and to support specific prevention and support strategies.

Thus, the objective of this study was to measure the prevalence of Burnout Syndrome in nurses working in the Solid Organ Transplant Program, specifically in outpatient and management settings, considering that these professionals play

central roles both in the direct clinical follow-up of patients and in the coordination and articulation of care throughout the transplant journey.

METHOD

This was a cross-sectional, descriptive, and exploratory study with a quantitative approach, conducted in the outpatient service linked to a large private hospital located in the city of São Paulo, Brazil. The sample was obtained through a non-probabilistic convenience sampling strategy, including as many nurses as possible working in the Solid Organ Transplant Program, provided they had been linked to the service for at least three months and agreed to participate in the study. Nurses working in the outpatient clinic dedicated to caring for patients in the Liver, Intestine, Kidney, Heart, and Lung Transplant Program were invited to participate in the study. The sample also included nursing professionals who are part of the Program's management team. Professionals without an effective link to the institution and those who were absent (vacation, medical leave, or other leave) were excluded.

Initially, the sample characterization instrument developed by the authors of the study was applied, consisting of data such as biological sex, age, marital status, education level, number of institutions in which they work, position held, monthly working hours, and length of service in the Transplant Program. Next, the Maslach Burnout Inventory – Service Human Survey (MBI – HSS⁽¹⁶⁻¹⁸⁾), version for health professionals, was applied to the participants. This instrument consists of 22 items distributed on a 7-point Likert scale, ranging from 0 (never) to 6 (every day). It was translated and adapted into Portuguese and validated among nursing professionals. This instrument measures burnout rates according to

scores assigned to different dimensions: emotional exhaustion, depersonalization, and personal fulfillment. High scores in emotional exhaustion and depersonalization and low scores in professional fulfillment reveal a high level of burnout. The final score is calculated by adding the points for the items related to each dimension.

To describe the study items in an accurate and standardized manner, the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) tool was applied⁽¹⁹⁾.

The research followed the ethical guidelines defined in Resolution No. 466, dated December 12, 2012⁽²⁰⁾ regarding research involving human subjects. Data collection began after approval by the Research Ethics Committee, according to opinion No. 6,142,769.

The data were entered with double checking so that the variables were stored in a database built in Microsoft Office Excel. They were then entered and analyzed in the Statistical Package for the Social Sciences (SPSS) version 20.0.

Descriptive statistics were used to characterize and summarize the sample data and describe the MBI-HSS scores. The data were presented separately for each subscale, and two distinct groups were created—one group composed of professionals with scores compatible with SB and another with professionals who did not score for SB.

RESULTS

This study analyzed the prevalence of Burnout Syndrome among nurses working in the Solid Organ Transplant Program, with a sample composed of 16 professionals working in the service, 10 of whom were allocated to the outpatient clinic and 6 to the transplant management sector. Most were female (93.75%), with a mean age of 38.93 years (SD ± 7.24), half were married or in a stable relationship (50%), and 62.5% had no children. About 68.75% had specialization in the area of transplants and 93.75% had an exclusive relationship with the institution.

The predominant activity was in the outpatient clinic (62.5%), and most nurses had more than 10 years of experience in the program (62.5%), with 68.75% classified as full nurses. The average workload varied between 8 and 11 hours per day, with a prevalence of daytime shifts (81.25%).

Table 1 shows the transplant programs in which professionals work primarily. Most participants reported involvement in more than one program, with kidney (81.25%) and liver (25%) programs being the most frequent.

Table 1. Transplant programs in which nurses participate

Transplant Program	Number of Nurses (n)	Percentage (%)
Kidneys	13	81.25
Liver	4	25.00
Pancreas	1	6.25
Lungs	2	12.50
Heart	1	6.25
Intestines	1	6.25

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Regarding the assessment of burnout using the MBI-HSS instrument, the mean scores for the three dimensions were distributed as follows:

emotional exhaustion (18.75 ± 8.9), depersonalization (5.00 ± 2.4), and personal accomplishment (38.81 ± 11.3). Table 2 shows the measures of

central tendency and dispersion obtained for each dimension.

Table 2. Measures of central tendency and dispersion in the MBI-HSS dimensions

Dimension	Minimum	Maximum	Mean	Median	Standard Deviation
Emotional Exhaustion	0	39	18.75	17.5	8.9
Depersonalization	0	12	5.00	4.0	2.4
Personal Achievement	0	48	38.81	38.5	11.3

The item-by-item analysis showed that the items 'I feel exhausted at the end of a workday' ($\Sigma=57$) and 'I feel emotionally drained by my work' ($\Sigma=51$) scored high-

est on the emotional exhaustion dimension. The item 'I can easily understand how my patients feel about things' ($\Sigma=87$) obtained the highest score in the personal

fulfillment dimension. These data are detailed in Tables 1, 2, and 3, which present the five items with the highest scores per dimension.

Table 1. Items with the highest scores in the Emotional Exhaustion (EE) dimension

Inventory item (EE)	Total (Σ)
I feel worn out at the end of a workday	57
I feel emotionally drained by my work	51
Working with people all day demands a lot from me	43
I feel exhausted because of my job	41
I feel frustrated with my job	35

Table 2. Items with the highest scores in the Depersonalization (DE) dimension

Inventory item (DE)	Total Frequency (Σ)
I feel that patients blame me for some of their problems	25
I have become more insensitive to people since I started this job	22
I don't really care what happens to some patients	19
I treat some patients as if they were objects.	15
I feel that my patients are an imposed burden	12

Table 3. Items with the highest scores in the Personal Fulfillment (PF) dimension

Inventory Item (PR)	Total Frequency (Σ)
I can easily understand how my patients feel about things	87
I feel that I am positively influencing people's lives through my work	71
I deal effectively with my patients' problems	64
I feel very energetic at work.	59
I feel satisfied when dealing directly with patients.	53

Table 3 shows the individual scores in the three dimensions of the MBI-HSS and allows the identification of professionals with signs of burnout.

Four nurses had high scores in emotional exhaustion and depersonalization, combined with low personal accomplishment—all working in

transplant management, representing 66.6% of the team in this sector.

Tabela 3. Escores individuais nas dimensões do MBI-HSS

Participant	EE	DE	RP	Place of Work
Nurse 1	21	12	39	Management
Nurse 2	32	11	35	Management
Nurse 3	34	10	28	Management
Nurse 4	8	2	42	Outpatient
Nurse 5	39	12	36	Management
Nurse 6	6	0	48	Outpatient
Nurse 7	23	1	46	Outpatient
Nurse 8	7	1	48	Outpatient
Nurse 9	11	3	35	Outpatient
Nurse 10	20	5	29	Outpatient
Nurse 11	15	2	36	Outpatient
Nurse 12	14	1	40	Management
Nurse 13	33	5	34	Management
Nurse 14	10	0	10	Outpatient
Nurse 15	0	6	0	Outpatient
Nurse 16	27	9	27	Outpatient

DISCUSSION

The results obtained in this study show evidence of Burnout Syndrome among nurses working in the Organ Transplant Program, especially among professionals involved in management. The study sample consisted of nurses who work directly in the Solid Organ Transplant Program, with emphasis on two key roles: the outpatient nurse and the transplant management nurse, who acts as the patient's navigator. The outpatient nurse accompanies the individual through all stages of the transplantation process, from pre-transplant evaluation to the management of immediate and late post-transplant complications, performing a continuous and specialized clinical care role. The management nurse acts strategically, accompanying the patient throughout their journey at various points of contact with the healthcare system. Their duties include monitoring clinical

outcomes and management indicators, supporting institutional leadership in strategic program planning, and coordinating the care network between different levels of care—from primary to tertiary—ensuring integration and coordination of care.

Although they are distinct functions, both require a high level of responsibility, technical competence, and emotional involvement. However, the data from the present study revealed that the worst scores in the dimensions of emotional exhaustion and depersonalization, combined with low levels of personal fulfillment, were observed precisely among nurses working in transplant management. This finding suggests that, in addition to indirect care demands, the strategic and interinstitutional role played by these professionals may be associated with greater emotional overload, requiring specific attention in the formulation of strategies to support and value this function.

The overall average for emotional exhaustion (18.75 points) and depersonalization (5.00 points) reveals a moderate level of psychological distress, consistent with findings in the international literature, which points to a high emotional burden in contexts of high care complexity, such as organ transplantation.

In 2015, a survey of 365 transplant nurses in the United States identified high levels of emotional exhaustion in half of the sample, in addition to 15.7% of depersonalization and 51.8% of low personal fulfillment⁽¹⁰⁾. Other studies reinforce that, although these professionals are driven by strong commitment and altruistic motivations, they report high levels of stress in the performance of their duties^(14,15).

The findings of this study have significant implications for nursing practice, especially in the structuring and management of transplant services. The identification of consistent signs of emotional exhaus-

tion among management nurses points to the need for management strategies aimed at redistributing workloads, establishing multidisciplinary support teams, as well as reviewing working hours, the number of professionals per shift, and access to psychological support programs. The implementation of care models based on valuing work, shared responsibility, and institutional support can contribute to mitigating burnout and improving the quality of care offered to transplant patients.

A previous study⁽¹⁰⁾ also identified high levels of emotional exhaustion in transplant nurses, with a prevalence of over 50%. These data corroborate the findings of this research, especially when considering the reports of depersonalization and frustration in professionals with long institutional careers and intense experience with cases of prolonged suffering, poor prognosis, and successive losses. The relationship between length of service and emotional exhaustion is a critical point to be explored in future investigations.

A recent systematic review⁽²¹⁾ analyzed 85 studies involving more than 288,000 nurses and revealed that burnout goes beyond compromising occupational health: it is directly associated with reduced quality of care, deterioration of patient safety, and an increase in adverse events, including nosocomial infections, falls, medication errors, and lower patient satisfaction. When this scenario is transposed to the context of transplants—a field that demands high clinical complexity, precision in processes, and rapid decision-making—the effects of burnout become even more alarming.

In the present study, the worst burnout scores were observed among transplant management nurses, who act as care coordinators throughout the patient's journey. Although often invisible in institutional support actions, these professionals accumulate clinical, administrative, and strategic functions, often without structured mechanisms for emotional protection. This finding reinforces the urgency of broadening the institutional view of psychological distress, which also affects leadership professionals, not just those on the front lines

of care.

Although the dimension of “personal fulfillment at work” had the highest average among participants (38.81 points), this data must be interpreted with caution. The high score may reflect high professional commitment and engagement—characteristics often associated with nursing in transplant contexts. However, this intense involvement, when not accompanied by institutional support and coping strategies, can contribute to the development of burnout, as suggested by Maslach's Burnout Inventory Manual⁽¹⁶⁾.

Working conditions are a constant concern in research in this area, considering factors such as working hours, organizational environment, shortage of human resources, and attention to the health of the team. Among healthcare professionals, nursing staff are the most impacted by adversities in the workplace, especially due to long working hours and the demands inherent in transplant program processes, such as compatibility testing, summoning, and preparing the recipient⁽²²⁾. These conditions contribute significantly to the dissatisfaction of these professionals. Additionally, the hierarchy of professions, with an emphasis on valuing medical work to the detriment of the work of the inter-professional team, is another factor that contributes to demotivation. Many professionals who are members of intra-hospital committees for organ and tissue donation for transplants do not receive specific remuneration for this activity, accumulating it with other hospital functions. This work overload favors the development of Burnout Syndrome among team members, compromising mental health and the quality of care provided.

Thus, the results presented here endorse the recommendation for systemic and organizational interventions that include a review of the workload, the promotion of intersectoral collaborative practices, and formal recognition of the strategic role of the nurse manager. Such measures are indispensable not only for preserving the mental health of professionals, but also for the safety and clinical outcomes of patients

in highly complex programs such as solid organ transplantation.

This research has limitations that should be considered. The cross-sectional design does not allow for causal inferences, and the use of a convenience sample, restricted to 16 participants from a single center, limits the generalization of the findings. Additionally, the instrument used—the Maslach Burnout Inventory-HSS—although validated for the Brazilian population, is based exclusively on self-reporting, which may be subject to response bias. Future studies should consider larger, multicenter samples, as well as mixed methods that integrate qualitative approaches and institutional indicators for a more comprehensive understanding of the phenomenon. Longitudinal research is also suggested to analyze the evolution of burnout levels and the effectiveness of institutional interventions.

Given this scenario, it is essential to strengthen institutional actions aimed at the well-being of healthcare professionals, with an emphasis on burnout prevention strategies. Valuing the nursing team results in motivation and impacts the improvement of organ and tissue transplant program indices^(22,23). Thus, the implementation of psychological support programs, the development of stress management skills, the promotion of spaces for qualified listening, and the encouragement of participation in care and organizational decisions can contribute to mitigating the impact of emotional overload and favoring talent retention.

CONCLUSION

This study identified signs of Burnout Syndrome among nurses working in the Solid Organ Transplant Program, especially among professionals in the Program's management core, who had higher scores in the dimensions of emotional exhaustion and depersonalization. Despite the high scores in the personal fulfillment dimension among the other participants, the data suggest the coexistence of emotional exhaustion in a context of strong involvement with care.

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