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# Factors associated with burnout in a multidisciplinary team of an oncology hospital*

## Fatores associados ao *burnout* em equipe multidisciplinar de um hospital oncológico

## Factores asociados con el *burnout* en un equipo multidisciplinar de un hospital oncológico

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## ABSTRACT

**Objective:** To identify the factors associated with burnout among professionals of a multidisciplinary team from an oncology hospital. **Method:** This is a descriptive quantitative study that used a cross-sectional observational design. A sociodemographic, clinical, and professional questionnaire developed by the authors and three items from the Professional Quality of Life Scale were used for data collection. For data analysis, the Kruskal-Wallis and Mann-Whitney tests were used. The significance level adopted was 5%. **Results:** A total of 442 professionals from the multidisciplinary team participated in the study. Participants showing more factors associated with burnout were those who witnessed a higher number of deaths and conflicts in the workplace, worked the night shift, used medications, and did not have religious beliefs, among others. **Conclusion:** Although professionals had an average score in the burnout domain, many variables were related to factors associated with burnout, identifying imminent danger to workers and exposing patients and the institution. Strategies should be developed to minimize the risks identified in this study.

## DESCRIPTORS

Nursing; Quality of Life; Burnout, Psychological; Psychological Distress; Medical Oncology; Patient Care Team.

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## INTRODUCTION

Health professionals often experience stressful situations that can affect their physical and mental health. High workload, low wages, inadequate work agreements, and lack of organizational support are among the most frequent causes of pressure suffered by them, with more chances of having disorders and psychosomatic symptoms[1]. Moreover, health professionals who provide care to oncologic patients experience several situations involving feelings of compassion, pain, suffering, and powerlessness in the face of the patient's pain[2].

Known as a lasting response to chronic emotional and interpersonal stressors at work, emotional exhaustion is one of the three dimensions of the burnout syndrome, along with depersonalization and reduced personal accomplishment[3]. Emotional exhaustion is characterized by feelings of physical and emotional depletion and excessive job and personal demands. Depersonalization refers to emotional detachment from various aspects of work, while reduced personal accomplishment is defined by negative evaluation of the self[3].

The symptoms of the burnout syndrome appear in the long term, when the individual's ability to fight the stress in the work environment is depleted[3]. Studies[4,5] show that stressors involving organizational aspects, such as relationship problems among co-workers, discontentment, increased self-reported workload and insufficient experience, are some factors that can trigger the burnout syndrome. Investigations also indicate this syndrome affects several health professionals[5,6].

Although the burnout syndrome has been widely studied at both national and international levels[4–7], since the publication of the first articles[8–10], gaps are still observed in the literature regarding the factors associated with burnout in multidisciplinary teams in oncology, which must be explained. Given the above, the question that guided this investigation was: What factors may be associated with burnout among professionals in multidisciplinary teams in oncology?

Then, this study aimed to identify the factors associated with burnout among professionals of a multidisciplinary team from an oncology hospital.

## METHOD

### Design of Study

This is a cross-sectional observational study.

### Local

This study was conducted in a large high-complexity oncology hospital in the state of São Paulo, Brazil. The following units were assessed:

- **Admission units:** Clinical, surgical, and hematologic units;
- **Outpatient units:** Chemotherapy, radiotherapy, and day hospital (DH);
- **Critical care units:** Intensive care unit (ICU), surgery center (SC), dialysis and emergency care (EC).

### Selection Criteria

This study selected professionals aged 18 years and over, who had been working at the institution for more than six months, and who agreed to participate in the study. On the other hand, professionals who did not have direct contact with the patient, in leadership and management roles, and who worked in the Material and Sterilization Center (MSC/*CME*) were not eligible to participate.

### Sample Definition

In total, 1,053 oncology professionals were invited to participate. Out of these, 442 professionals from the multidisciplinary team agreed to participate, as follows: 190 (42.98%) nursing technicians; 126 (28.5%) nurses; 46 (10.4%) physical therapists; 36 (8.14%) nutritionists; 22 (4.97%) psychologists; 15 social workers (3.39%); three (0.67%) pharmacists; two (0.45%) physical educators; and two (0.45%) occupational therapists.

The sample size calculation indicated 404 professionals and data were collected by convenience sampling.

### Data Collection

Data collection was conducted from January 2019 to January 2020 using a sociodemographic, clinical, and professional instrument developed by the authors, which consisted of 37 variables, as well as three statements expressing burnout: "I feel worn out because of my work," "I feel overwhelmed by the amount of work," and "I feel 'bogged down' by the system," extracted from the Professional Quality of Life (ProQOL) Scale validated for Brazilian Portuguese by Lago and Codo[11]. These statements refer to behaviors indicative of burnout syndrome, but they should not be considered for diagnosis purposes. Higher scores indicate higher risk of developing burnout. The instruments for data collection were distributed to the professionals in sealed envelopes during their work period. It could be answered at home or at work and were returned to the researcher at a scheduled date and time.

The participants were instructed to ask the researcher for clarification in case of any question about how to fill out the questionnaire or answer a question.

### Data Analysis and Treatment

Data were organized and stored in a Microsoft Office Excel spreadsheet. The statistical analysis was conducted in R 4.0.2 software.

Data were stored by the researcher ensuring data secrecy, privacy, and confidentiality, and will be retained for five years after the end of the study, according to the regulatory guidelines for research with human beings (Resolution 446, of December 12, 2012).

Means were calculated for the three items using the Likert scale of the ProQOL instrument, ranging from 1 to 5, as follows: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = very often. Higher means indicated higher chances of developing burnout symptoms. Normality tests and group comparison tests were performed to check for statistical difference, according to the categories of the other variables contained in the database, using

the Mann-Whitney test for variables with only two categories and the Kruskal-Wallis test for those with more than two categories[12,13]. These tests are used in statistical analysis where data do not have a normal distribution. Significance values $\alpha = 0.05$ were considered.

### Ethical Aspects

In agreement with Resolution 466/2012 of the National Health Council (CEP/Plataforma Brasil), which regulates studies with human beings, this study was submitted to the Ethics Committee for the Analysis of Research Projects in 2018, and to the Research Ethics Committee of the Universidade de São Paulo School of Nursing. The project was approved according to the opinion No. 2.831.480 in August 2018 and No. 2.903.721 in September 2018, respectively. After approval, the researcher met with the managers and coordinators of the multidisciplinary team from the oncology hospital for a presentation of the study, when data collection period was defined for the respective units. Every participant signed an informed consent form, whose text ensured anonymity of participants. Confidentiality of participant identity was also ensured.

## RESULTS

Among the 1,053 professionals initially planned to compose the study sample, 315 did not return the questionnaire in the scheduled period and five did not accept to participate in the study. Furthermore, 54 professionals were from the MSC team, 70 had no direct contact with patients, 30 were researchers from the hospital, 110 had been working in the hospital for less than six months, and 27 returned incomplete questionnaires, so they were excluded from the study. Then, the final study sample consisted of 442 professionals, most were female (83.7%) and aged 36 years or older (52.71%). Table 1 shows the results of the association of demographic data (categorical data) with the three burnout questions extracted from the ProQOL instrument

**Table 1** – Association of sociodemographic data with variables of risk factors for burnout among professionals of a multidisciplinary team from an oncology hospital – São Paulo, SP, Brazil, 2020.

| Characteristic | | Risk of burnout | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I feel worn out because of my work | | | | I feel overwhelmed by the amount of work | | | | I feel 'bogged down' by the system | | | |
| | | N | % | Mean | P value | N | % | Mean | P value | N | % | Mean | P value |
| Age** | 20–35 years | 203 | 45.93% | 3.24 | 0.001* | 203 | 45.93% | 2.89 | 0.566 | 202 | 45.70% | 2 | 0.265 |
| | 36 or more | 233 | 52.71% | 2.83 | | 235 | 53.17% | 2.81 | | 233 | 52.71% | 1.83 | |
| Sex** | Male | 72 | 16.29% | 2.83 | 0.129 | 72 | 16.29% | 2.57 | 0.041* | 72 | 16.29% | 1.71 | 0.081 |
| | Female | 363 | 82.13% | 3.05 | | 365 | 82.58% | 2.90 | | 362 | 81.90% | 1.94 | |
| Marital status*** | Single | 157 | 35.52% | 3.03 | 0.471 | 157 | 35.52% | 2.95 | 0.694 | 156 | 35.29% | 1.94 | 1 |
| | Separated/ Divorced | 42 | 9.50% | 2.76 | | 42 | 9.50% | 2.81 | | 42 | 9.50% | 1.98 | |
| | Married | 223 | 50.45% | 3.07 | | 225 | 50.90% | 2.78 | | 223 | 50.45% | 1.87 | |
| | Widow(er) | 14 | 3.17% | 2.93 | | 14 | 3.17% | 2.86 | | 14 | 3.17% | 2 | |
| Children** | Yes | 227 | 51.36% | 2.89 | 0.043* | 229 | 51.81% | 2.73 | 0.069 | 227 | 51.36% | 1.79 | 0.057 |
| | No | 206 | 46.61% | 3.15 | | 206 | 46.61% | 2.97 | | 205 | 46.38% | 2.03 | |
| Spirituality*** | Yes | 300 | 67.87% | 3.01 | 0.879 | 301 | 68.10% | 2.83 | 0.748 | 299 | 67.65% | 1.85 | 0.202 |
| | More or less | 26 | 5.88% | 2.92 | | 27 | 6.11% | 2.74 | | 26 | 5.88% | 1.69 | |
| | No | 106 | 23.98% | 3.08 | | 106 | 23.98% | 2.92 | | 106 | 23.98% | 2.1 | |
| Religious practice** | Yes | 423 | 95.70% | 2.99 | 0.002* | 424 | 95.93% | 2.83 | 0.103 | 422 | 95.48% | 1.88 | 0.032* |
| | No | 13 | 2.94% | 4.08 | | 14 | 3.17% | 3.43 | | 13 | 2.94% | 2.85 | |
| Economic classification (according to ABEP)**** | A | 27 | 6.11% | 3.11 | 0.791 | 27 | 6.11% | 2.48 | 0.191 | 27 | 6.11% | 1.48 | 0.414 |
| | B1 | 63 | 14.25% | 3.22 | | 63 | 14.25% | 3.16 | | 63 | 14.25% | 2.11 | |
| | B2 | 179 | 40.50% | 2.98 | | 180 | 40.72% | 2.79 | | 180 | 40.72% | 1.91 | |
| | C1 | 115 | 26.02% | 2.98 | | 116 | 26.24% | 2.91 | | 113 | 25.57% | 1.91 | |
| | C2 | 45 | 10.18% | 2.96 | | 45 | 10.18% | 2.73 | | 45 | 10.18% | 1.89 | |
| | D-E | 7 | 1.58% | 2.86 | | 7 | 1.58% | 2.57 | | 7 | 1.58% | 1.86 | |

*Statistically significant association at 5%.
**Mann-Whitney test.
***Kruskall-Wallis test.
****Brazilian Market Research Association (BMRA/ABEP).

among health professionals of a multidisciplinary team from an oncology hospital.

Table 1 shows a statistically significant association between "religious practice" and two of the three questions of the ProQOL instrument, so professionals with no religious practice (mean = 4.08) feel more worn out at work (p = 0.002) and bogged down by the system (mean = 2.85; p = 0.032). Furthermoer, sex and burnout were associated (p = 0.041), so female professionals (mean = 2.90) feel more overwhelmed by the amount of work when compared to male participants. Also, younger professionals (20–35 years; mean = 3.24; p = 0.001) with no children (mean = 3.15; p = 0.043) were more worn out because of work. Table 2 shows the results of the association of clinical and lifestyle variables with risk factors for burnout in professionals of a multidisciplinary team from an oncology hospital.

According to Table 2, professionals taking general medication (mean = 3.16; p = 0.049) and those who had already taken sleeping pills (mean = 3.68; p = 0.002) were more worn out because of work. Additionally, professionals taking sleeping pills (mean = 3.32; p = 0.038) with alcohol consumption (mean = 3.02; p = 0.008) felt overwhelmed by the amount of work. Also, health professionals taking sleeping pills (mean = 2.45; p = 0.024) felt bogged down by the labor system. Table 3 shows the associations of labor variables (Part 1) with risk factors for burnout in professionals of a multidisciplinary team from an oncology hospital.

According to Table 3, professionals who had worked for less time in the training area (up to 80 months – mean = 3.20; p = 0.037), who worked in critical care units (mean = 3.21; p = 0.047), and who had vacation in the previous year (mean = 3.10; p = 0.004) felt worn out because of work. Professionals in oncology for 46 to 88 months (mean = 3.01; p = 0.015), in admission units (mean = 3.01; p = 0.023), working in night shift (mean = 3.38; p < 0.001), and who had vacation in the previous year (mean = 2.91; p = 0.015) felt more overwhelmed with the amount of work than the other professionals. Finally, professionals who had vacation in the previous year (mean = 1.98; p = 0.016) and who saw more than 16 patients a day (mean = 2.18; p = 0.039); this number of daily patients was obtained for professionals who worked in emergency and outpatient units) and in admission units (mean = 2.04; p = 0.024) felt bogged down by the system. Table 4 shows the association of labor variables (Part 2) with risk factors for burnout in professionals of a multidisciplinary team from an oncology hospital.

According to Table 4, feeling worn out because of work was higher among professionals experiencing more than five deaths in the previous month (mean = 3.27; p = 0.007), who experienced more than seven conflicts at work in the previous month (mean = 3.32; p = 0.003), with low level of satisfaction with the work unit (mean = 3.88; p < 0.001), who wanted to give up work (mean = 3.95; p < 0.001), who wanted to give up the profession (mean = 3.70; p < 0.001), who had a leave from work in the last 12 months (mean = 3.34; p < 0.011), who wanted to change to another healthcare area (mean = 3.54; p < 0.001), and who no longer wanted to work in the healthcare field (mean = 3.6; p < 0.001).

In addition, feeling overwhelmed by the amount of work was higher in professionals who experienced more than five deaths in the previous month (mean = 3.10; p < 0.001), who experienced more than seven conflicts at work in the previous month (mean = 3.11; p = 0.005), with low level of satisfaction with the work unit (mean = 3.90; p < 0.001), who wanted to give up work (mean = 3.62; p < 0.001), who wanted to give

**Table 2** – Association of clinical and lifestyle variables with risk factors for burnout among professionals of a multidisciplinary team from an oncology hospital – São Paulo, SP, Brazil, 2020.

| Characteristic | | Risk of burnout | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I feel worn out because of my work | | | | I feel overwhelmed by the amount of work | | | | I feel 'bogged down' by the system | | | |
| | | N | % | Mean | P value | N | % | Mean | P value | N | % | Mean | P value |
| Diabetes** | Yes | 13 | 2.94% | 3 | 0.935 | 13 | 2.94% | 3.08 | 0.567 | 13 | 2.94% | 2.31 | 0,156 |
| | No | 423 | 95.70% | 3.02 | | 425 | 96.15% | 2.84 | | 422 | 95.48% | 1.9 | |
| Hypertension** | Yes | 60 | 13.57% | 3.07 | 0.676 | 60 | 13.57% | 2.97 | 0.424 | 60 | 13.57% | 2.12 | 0,187 |
| | No | 376 | 85.07% | 3.01 | | 378 | 85.52% | 2.83 | | 375 | 84.84% | 1.88 | |
| Smoking habit** | Yes | 27 | 6.11% | 2.93 | 0.809 | 28 | 6.33% | 2.75 | 0.61 | 27 | 6.11% | 1.59 | 0,073 |
| | No | 409 | 92.53% | 3.03 | | 410 | 92.76% | 2.85 | | 408 | 92.31% | 1.93 | |
| Alcohol consumption** | Yes | 207 | 46.83% | 3.11 | 0.153 | 209 | 47.29% | 3.02 | 0.008* | 208 | 47.06% | 1.99 | 0,084 |
| | No | 229 | 51.81% | 2.94 | | 229 | 51.81% | 2.69 | | 227 | 51.36% | 1.84 | |
| General medication** | Yes | 152 | 34.39% | 3.16 | 0.049* | 152 | 34.39% | 2.99 | 0.071 | 152 | 34.39% | 2.05 | 0,060 |
| | No | 284 | 64.25% | 2.94 | | 286 | 64.71% | 2.77 | | 283 | 64.03% | 1.83 | |
| Sleeping pill** | Yes | 31 | 7.01% | 3.68 | 0.002* | 31 | 7.01% | 3.32 | 0.038* | 31 | 7.01% | 2.45 | 0,024* |
| | No | 405 | 91.63% | 2.97 | | 407 | 92.08% | 2.81 | | 404 | 91.40% | 1.87 | |

*Statistically significant association at 5%.
**Mann-Whitney test.

**Table 3** – Association of labor variables (Part 1) with risk factors for burnout among professionals of a multidisciplinary team from an oncology hospital – São Paulo, SP, Brazil, 2020.

| Characteristic | | Risk of burnout | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I feel worn out because of my work | | | | I feel overwhelmed by the amount of work | | | | I feel 'bogged down' by the system | | | |
| | | N | % | Mean | P value | N | % | Mean | P value | N | % | Mean | P value |
| Professional category*** | Nurse/Nursing Technician | 311 | 70.36% | 3.02 | 0.814 | 313 | 70.81% | 2.84 | 0.263 | 310 | 70.14% | 1.9 | 0.387 |
| | Physical Therapist/ Occupational Therapist/ Physical Educator | 50 | 11.31% | 3.04 | | 50 | 11.31% | 3.08 | | 50 | 11.31% | 2.06 | |
| | Pharmacist/ Nutritionist | 39 | 8.82% | 3.13 | | 39 | 8.82% | 2.92 | | 39 | 8.82% | 2.05 | |
| | Psychologist/ Social Worker | 36 | 8.14% | 2.89 | | 36 | 8.14% | 2.53 | | 36 | 8.14% | 1.67 | |
| Highest training level*** | Technician | 141 | 31.90% | 2.85 | 0.196 | 142 | 32.13% | 2.74 | 0.417 | 141 | 31.90% | 1.85 | 0.461 |
| | Undergraduate | 61 | 13.80% | 3.18 | | 61 | 13.80% | 2.93 | | 61 | 13.80% | 1.98 | |
| | Specialization | 234 | 52.94% | 3.08 | | 235 | 53.17% | 2.89 | | 233 | 52.71% | 1.93 | |
| Professional training time*** | 1–6 years | 139 | 31.45% | 3.1 | 0.163 | 139 | 28.05% | 2.76 | 0.058 | 138 | 31.22% | 1.91 | 0.362 |
| | 6–11 years | 123 | 27.83% | 3.15 | | 124 | 35.52% | 3.08 | | 123 | 27.83% | 2.05 | |
| | Over 11 years | 156 | 35.29% | 2.88 | | 157 | 32.58% | 2.76 | | 156 | 35.29% | 1.84 | |
| Time between home and work*** | Up to 50 min | 144 | 32.58% | 2.99 | 0.818 | 144 | 32.58% | 2.82 | 0.992 | 143 | 32.35% | 1.92 | 0.885 |
| | 51 to 80 min | 128 | 28.96% | 3.05 | | 128 | 28.96% | 2.87 | | 128 | 28.96% | 1.91 | |
| | Over 81 min | 159 | 35.97% | 3.01 | | 161 | 36.43% | 2.86 | | 159 | 35.97% | 1.9 | |
| Time in oncology*** | Up to 45 months | 132 | 29.86% | 2.96 | 0.786 | 132 | 29.86% | 2.58 | 0.015* | 130 | 29.41% | 1.82 | 0.339 |
| | 46 to 88 months | 148 | 33.48% | 3.07 | | 148 | 33.48% | 3.01 | | 148 | 33.48% | 2.03 | |
| | Over 88 months | 154 | 34.84% | 3.03 | | 156 | 35.29% | 2.92 | | 155 | 35.07% | 1.88 | |
| Time in training area*** | Up to 80 months | 145 | 32.81% | 3.20 | 0.037* | 145 | 32.81% | 2.75 | 0.438 | 143 | 32.35% | 1.91 | 0.517 |
| | 81 to 140 months | 145 | 32.81% | 3.04 | | 146 | 33.03% | 2.93 | | 146 | 33.03% | 1.99 | |
| | Over 140 months | 144 | 32.58% | 2.83 | | 145 | 32.81% | 2.86 | | 144 | 32.58% | 1.85 | |
| Prior work*** | Admission | 113 | 25.57% | 2.88 | 0.305 | 113 | 25.57% | 2.96 | 0.108 | 113 | 25.57% | 1.87 | 0.757 |
| | Outpatient | 142 | 32.13% | 3.15 | | 143 | 32.35% | 2.73 | | 142 | 32.13% | 1.89 | |
| | Critical care | 97 | 21.95% | 3.04 | | 98 | 22.17% | 2.71 | | 96 | 21.72% | 1.82 | |
| | Other | 44 | 9.95% | 2.82 | | 44 | 9.95% | 3.16 | | 44 | 9.95% | 2.09 | |
| Current unit*** | Admission | 184 | 41.63% | 2.93 | 0.047* | 184 | 41.63% | 3.01 | 0.023* | 183 | 41.40% | 2.04 | 0.024* |
| | Outpatient | 92 | 20.81% | 2.88 | | 92 | 20.81% | 2.55 | | 91 | 20.59% | 1.67 | |
| | Critical care | 160 | 36.20% | 3.21 | | 162 | 36.65% | 2.83 | | 161 | 36.43% | 1.89 | |
| Weekly hours** | Up to 36 hours | 194 | 43.89% | 2.99 | 0.307 | 195 | 44.12% | 2.86 | 0.736 | 192 | 43.44% | 1.89 | 0.68 |
| | Over 36 hours | 210 | 47.51% | 3.12 | | 211 | 47.74% | 2.89 | | 211 | 47.74% | 1.95 | |
| Daily number of patients on average*** | Up to 7 patients | 146 | 33.03% | 3.05 | 0.198 | 148 | 33.48% | 0.87 | 0.366 | 146 | 33.03% | 1.92 | 0.039* |
| | 8–16 patients | 149 | 33.71% | 2.95 | | 149 | 33.71% | 2.9 | | 148 | 33.48% | 1.81 | |
| | Over 16 | 65 | 14.71% | 3.25 | | 65 | 14.71% | 3.12 | | 65 | 14.71% | 2.18 | |
| Shift** | Day | 327 | 73.98% | 3 | 0.342 | 327 | 73.98% | 2.68 | <0.001* | 325 | 73.53% | 1.85 | 0.126 |
| | Night | 104 | 23.53% | 3.12 | | 106 | 23.98% | 3.38 | | 105 | 23.76% | 2.12 | |
| Fixed working hours** | Yes | 405 | 91.63% | 3.01 | 0.141 | 407 | 92.08% | 2.84 | 0.579 | 404 | 91.40% | 1.9 | 0.358 |
| | No | 27 | 6.11% | 3.37 | | 27 | 6.11% | 2.96 | | 27 | 6.11% | 2.15 | |

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| Characteristic | | Risk of burnout | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I feel worn out because of my work | | | | I feel overwhelmed by the amount of work | | | | I feel 'bogged down' by the system | | | |
| | | N | % | Mean | P value | N | % | Mean | P value | N | % | Mean | P value |
| Employment bond** | Yes | 77 | 17.42% | 3.08 | 0.628 | 78 | 17.65% | 2.92 | 0.582 | 77 | 17.42% | 1.96 | 0.951 |
| | No | 357 | 80.77% | 3.02 | | 358 | 81.00% | 2.84 | | 356 | 80.54% | 1.9 | |
| Vacations in the previous year** | Yes | 365 | 82.58% | 3.10 | 0.004* | 367 | 83.03% | 2.91 | 0.015* | 365 | 82.58% | 1.98 | 0.016* |
| | No | 68 | 15.38% | 2.62 | | 68 | 15.38% | 2.5 | | 67 | 15.16% | 1.57 | |
| Reason for working in oncology** | Specific reason | 259 | 58.60% | 3.03 | 0.806 | 260 | 58.82% | 2.81 | 0.470 | 259 | 58.60% | 2.01 | 0.151 |
| | Non-specific reason | 165 | 37.33% | 3.02 | | 166 | 37.56% | 2.9 | | 164 | 37.10% | 1.74 | |

*Statistically significant association at 5%.
**Mann-Whitney test.
***Kruskall-Wallis test.

**Table 4** – Association of labor variables (Part 2) with risk factors for burnout among professionals of a multidisciplinary team from an oncology hospital – São Paulo, SP, Brazil, 2020.

| Characteristc | | Risk of burnout | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I feel worn out because of my work | | | | I feel overwhelmed by the amount of work | | | | I feel 'bogged down' by the system | | | |
| | | N | % | Mean | P value | N | % | Mean | P value | N | % | Mean | P value |
| Death*** | None | 143 | 32.35% | 2.8 | 0.007* | 143 | 32.35% | 2.48 | <0.001* | 141 | 31.90% | 1.7 | 0.015* |
| | 1 to 5 | 129 | 29.19% | 2.99 | | 130 | 29.41% | 3.02 | | 130 | 29.41% | 1.92 | |
| | More than 5 | 134 | 30.32% | 3.27 | | 135 | 30.54% | 3.10 | | 134 | 30.32% | 2.12 | |
| Conflicts at work*** | None | 152 | 34.39% | 2.83 | 0.003* | 153 | 34.62% | 2.6 | 0.005* | 153 | 34.62% | 1.68 | 0.003* |
| | 1 to 7 | 125 | 28.28% | 2.98 | | 125 | 28.28% | 2.87 | | 124 | 28.05% | 1.95 | |
| | More than 7 | 120 | 27.15% | 3.32 | | 121 | 27.38% | 3.11 | | 119 | 26.92% | 2.11 | |
| Satisfaction with work unit*** | Low | 40 | 9.05% | 3.88 | <0.001* | 41 | 9.28% | 3.9 | <0.001* | 41 | 9.28% | 3.1 | <0.001* |
| | Moderate | 182 | 41.18% | 3.35 | | 183 | 41.40% | 3.11 | | 181 | 40.95% | 2.11 | |
| | High | 212 | 47.96% | 2.58 | | 212 | 47.96% | 2.42 | | 211 | 47.74% | 1.51 | |
| Work accident** | Yes | 16 | 3.62% | 3.5 | 0.113 | 16 | 3.62% | 2.88 | 0.941 | 16 | 3.62% | 2.06 | 0.567 |
| | No | 419 | 94.80% | 3 | | 421 | 95.25% | 2.85 | | 418 | 94.57% | 1.91 | |
| Willing to give up work** | Yes | 63 | 14.25% | 3.95 | <0.001* | 63 | 14.25% | 3.62 | <0.001* | 63 | 14.25% | 3.02 | <0.001* |
| | No | 372 | 84.16% | 2.87 | | 374 | 84.62% | 2.72 | | 371 | 83.94% | 1.72 | |
| Willing to give up the profession** | Yes | 79 | 17.87% | 3.7 | <0.001* | 79 | 17.87% | 3.76 | <0.001* | 79 | 17.87% | 2.7 | <0.001* |
| | No | 354 | 80.09% | 2.86 | | 356 | 80.54% | 2.64 | | 353 | 79.86% | 1.72 | |
| Leave from work in last 12 months** | Yes | 86 | 19.46% | 3.34 | 0.011* | 86 | 19.46% | 3.14 | 0.019 * | 85 | 19.23% | 2.19 | 0.012* |
| | No | 350 | 79.19% | 2.94 | | 352 | 79.64% | 2.78 | | 350 | 79.19% | 1.84 | |
| Want to change to another healthcare area** | Yes | 110 | 24.89% | 3.54 | <0.001* | 111 | 25.11% | 3.41 | <0.001* | 110 | 24.89% | 2.48 | <0.001* |
| | No | 324 | 73.30% | 2.84 | | 325 | 73.53% | 2.65 | | 323 | 73.08% | 1.72 | |
| No longer want to work in the healthcare field** | Yes | 107 | 24.21% | 3.6 | <0.001* | 107 | 24.21% | 3.43 | <0.001* | 107 | 24.21% | 2.38 | <0.001* |
| | No | 329 | 74.43% | 2.83 | | 331 | 74.89% | 2.66 | | 328 | 74.21% | 1.76 | |

*Statistically significant association at 5%.
**Mann-Whitney test.
***Kruskall-Wallis test.

up the profession (mean = 3.76; p < 0.001), who had a leave from work in the last 12 months (mean = 3.41; p < 0.001), who wanted to change to another healthcare area (mean = 3.43; p < 0.001), and who no longer wanted to work in the healthcare field (mean = 3.6; p < 0.001).

Finally, feeling bogged down by the system was greater among the professionals who experienced more than five deaths in the last month (mean = 2.12; p = 0.015), who have experienced more than seven conflicts at work in the last month (mean = 2.11; p = 0.003), with low level of satisfaction with the work unit (mean = 2.11; p < 0.001), who thought about giving up work (mean = 3.02; p < 0.001) and the profession (mean = 2.70; p < 0.001), who had a leave from work in the last 12 months (mean = 2.48; p < 0.012), who wanted to change to another healthcare area (mean = 3.54; p < 0.001), and who no longer wanted to work in the healthcare field (mean = 2.38; p < 0.001).

## DISCUSSION

Younger professionals, aged 20 to 35 years, felt more worn out (p = 0.001), as well as female professionals, who felt more overwhelmed by the amount of work than male participants, in agreement with a review study with ICU professionals in which age, sex, marital status, and shift, among other variables, were associated with burnout[6,14]. On the other hand, a study conducted in the United States concluded that younger oncology professionals showed less stress[15].

Another significant fact was that professionals with no children felt more worn out (p = 0.043). A recent study reported that burnout levels decreased with an increase in the number of children[16], which may be related to higher balance or resilience, although the literature has no consensus on the association of children and burnout[6].

Regarding lifestyle and clinical habits, professionals who consumed alcohol felt more overwhelmed by the amount of work (p = 0.008). It is known that alcohol consumption has been related to problems at work such as stress, dissatisfaction and conflicts in teamwork[17]. The use of general medication and sleeping pills among oncology professionals was associated with feeling overwhelmed by the amount of work. In a cross-sectional study conducted in Brazil with a multidisciplinary team, the professionals reported excessive working hours, stress, poor working conditions, and sleepless nights as reasons to use psychoactive drugs[18].

Regarding religious practice, professionals without such practice are more susceptible to feeling worn out and overwhelmed. Studies show therapeutic communication and spiritual practices offer comfort for daily concerns and help professionals handle psychological stress. Active religion participation may involve lower risk of developing burnout, regardless of the religion[19,20].

Regarding the labor factors, professionals who had worked for less time in the training area felt more worn out (p = 0.037). Professionals who had been in the oncology area for 46 to 88 months felt overwhelmed (p = 0.015). A study analyzing the risk profile for burnout found multiple associations with overwhelmed professionals and professionals with little experience at work, which can influence the quality of care provided[21]. On the other hand, an American study reported that nurses without much experience presented medium to low level of stress when compared to more experienced professionals[15].

Although more studies are found assessing nursing professionals, in our study, the professionals less prone to burnout were psychologists and social workers – probably because they are in contact with positive factors supporting the patient and family, as observed by the researcher, they may present a higher protection factor.

Regarding the critical care unit, our study showed professionals felt worn out. A study assessing ICU work found a strong association with burnout, in agreement with our study[14]. On the other hand, regarding the admission units, a Thai study with 43 admission units showed that nurses had less job dissatisfaction and burnout, unlike the findings of our study[22].

Concerning the daily number of patients, the participants felt more overwhelmed when they saw more than 16 patients a day (of note, this number is attributed more to EC and outpatient units; p = 0.039), in agreement with a review study reporting that high working hours and reduced staff—consequently increasing the number of patients per health professional—are associated with burnout[23].

Regarding the shift, in our study, the night shift (p < 0.001) was significant for the professionals to have a perception of the amount of work and feeling overwhelmed. A review study also found associations between burnout and work environment, working hours, and shift[14]. In a study with 758 occupational therapists, professionals working at night also showed a higher percentage of burnout than those in day shift[16].

In another analysis, the characteristics of the profession, such as high amount of work and long shifts, were associated with burnout in nursing, whose consequences for both the patient and the professional can be serious. It is important to emphasize that patient safety is always correlated with a domain of burnout[23,24].

According to our study, professionals who took a vacation in the previous year felt more worn out, overwhelmed by the amount of work, and bogged down by the system. It was difficult to find another study to compare this finding for discussion – only one study conducted in Brazil showed a similar result. No other investigation was found with this significant variable in oncology professionals in the country. The study mentioned here shows that vacation can facilitate the incidence of burnout syndrome (emotional exhaustion, depersonalization and reduced personal accomplishment), as professionals need to work during the vacation period to increase their income[25].

Regarding the number of deaths witnessed by professionals, similar findings were found in a study with 70 oncology nurses. Issues frequently reported were also feeling worn out (58.6%), psychological coping of patients and frequent deaths (24.3%). Unlike the outpatient study conducted with the nursing team, the major stress factors were patient deaths and workload[15,26].

The conflicts experienced by the participants of our study were significant in the three questions made (p < 0.001), in agreement with an American study in which a possible additional stress factor was related to relationships with co-workers and conflicts with physicians and other nurses[15].

Regarding the participants of our study who showed low satisfaction with their work unit (p < 0.001), a similar study

found that dissatisfaction resulted mainly from exposure to the exhaustive amount of work and death of oncology patients[27].

Regarding the desire to give up work and the profession, oncology professionals felt more worn out, more overwhelmed by the amount of work and bogged down by the system ($p < 0.001$). A similar study showed that 6 out of 12 professionals thought about quitting the profession. It may be related to the high physical, emotional, and mental burden that was associated with the burnout syndrome symptoms[28].

Regarding the number of leave from work, in a study conducted in the State of São Paulo, Brazil, with a nursing team, technicians had a higher number of leave from work due to illness, mental and behavioral disorders (24.80%) and musculoskeletal diseases (17.86%)[29]. In our study, professionals who had a leave from work felt more worn out, more overwhelmed by the amount of work and bogged down by the system. Although the cause of leave was not investigated, they verbally reported feeling sad and low back pain as a result of physical and emotional burdens with patients.

Regarding the desire to give up work and the profession and change to another unit, a multicenter study conducted in eight hospitals reported a relationship between stress and high anxiety at work. In a study mentioned above, professional dissatisfaction was due to deaths and high amount of work. These data are similar to our study and mention possible desire to give up work[27,30].

It should be noted that no study was found in the international and national literature with significant variables regarding the desire to change to another healthcare area associated with burnout symptoms.

Our study shows relevant aspects that must be considered by managers as they present factors that can affect the mental health of employees. Attention to professionals who work in critical areas or areas of distress must be prioritized with institutional policies and intervention strategies to prevent or control the consequences of burnout. Besides, the physical/psychological damage can cause personal, institutional and, especially, care costs.

Study limitations referred to scarce literature addressing multidisciplinary teams, not allowing a comparison of results. A local non-multicenter study was conducted with a limited number of participants. The option to answer the questionnaire at home and at work may have affected the answers. Further study should be conducted, with the inclusion of public or private institutions for a better understanding of the burnout syndrome.

## CONCLUSION

Our study found that, in general, professionals had an average level of burnout, although the results of our study indicated an association of several variables, such as age, sex, children, alcohol, medication, religious practice, work shift, work conflicts, patient deaths, work unit, willingness to quit the profession and work, among others, with burnout, a risk that has affected professionals in general.

Of note, the importance of addressing topics related to health of workers through continuing education activities should be highlighted. Focus and support groups can improve the quality of life in the workplace of multidisciplinary teams, with positive impact on patient care and biopsychosocial well-being of oncology professionals.

The scarce national and international literature about multidisciplinary teams related to burnout risk factors is a gap that still exists, limiting the discussion to other areas. A higher number of studies was found assessing medical and nursing professionals.


### RESUMO

**Objetivo:** Identificar os fatores associados ao *burnout* em profissionais de equipe multidisciplinar da área de oncologia. **Método:** Estudo quantitativo do tipo descritivo, com desenho observacional e transversal. Utilizou-se um questionário sociodemográfico, clínico e profissional elaborado pelos autores e três itens do Instrumento de Qualidade de Vida Profissional para coleta de dados. Para análise de dados, foram utilizados os testes de Kruskal-Wallis e Mann-Whitney. O nível de significância adotado foi de 5%. **Resultados:** Participaram do estudo 442 profissionais da equipe multidisciplinar. Os que apresentaram maiores fatores associados ao *burnout* foram aqueles que presenciaram maior número de óbitos, conflitos no seu ambiente de trabalho, trabalhavam no turno noturno, usavam fármacos enão praticavam a crença religiosa, entre outros. **Conclusão:** Embora os profissionais apresentassem média pontuação no domínio de *burnout*, muitas variáveis foram relacionadas aos fatores associados para *burnout*, identificando perigo iminente ao trabalhador e expondo pacientes e instituição. Faz-se necessário buscar estratégias para minimizar os riscos identificados.



### DESCRITORES

Enfermagem; Qualidade De Vida; Esgotamento Psicológico; Angústia Psicológica; Oncologia; Equipe de Assistência ao Paciente.



### RESUMEN

**Objetivo:** Identificar los factores asociados con el *burnout* en profesionales de un equipo multidisciplinar del campo de la oncología. **Método:** Estudio descriptivo, cuantitativo, con diseño observacional y transversal. Para la recolección de datos se utilizaron un cuestionario sociodemográfico, clínico y profesional elaborado por los autores y tres ítems del Instrumento de Calidad de Vida Profesional. Para el análisis de datos se utilizaron las pruebas de Kruskal-Wallis y Mann-Whitney. El nivel de significación adoptado fue del 5%. **Resultados:** Participaron en el estudio 442 profesionales del equipo multidisciplinar. Los equipos que mostraron mayores factores asociados con el *burnout* fueron los que presenciaron mayor número de muertes, conflictos en su entorno laboral, trabajaron en el turno de noche, consumían drogas y no practicaban creencias religiosas, entre otros. **Conclusión:** Aunque los profesionales tuvieron una puntuación media en el dominio de *burnout*, muchas variables tuvieron factores asociados con el *burnout*, lo que muestra un peligro inminente al trabajador y expone a pacientes y la institución. Es necesario buscar estrategias para minimizar estos riesgos.



### DESCRIPTORES

Enfermería; Calidad de Vida; Agotamiento Psicológico; Distrés Psicológico; Oncología Médica; Grupo de Atención al Paciente.

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