

# Burnout and work organization in Nursing

*Burnout* e a organização do trabalho na Enfermagem

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**ABSTRACT | Background:** Burnout syndrome (BS) consists of a set of symptoms that appear in response to chronic interpersonal stressors at work and involve the perceptions individuals have of themselves and their work environment. **Objectives:** To identify psychosocial risk and work organization factors able to predict mental suffering, and to estimate the prevalence of BS in a sample of nursing professionals from a public hospital in the state of São Paulo, Brazil. **Methods:** Mixed methods research combining quantitative and qualitative approaches conducted at a public university hospital. Maslach Burnout Inventory-Human Services Survey (MBI-HSS) was used to estimate the prevalence of BS. Thematic content analysis of narratives gathered in focus groups was performed to identify psychosocial risk factors at work (PRFW). **Results:** The prevalence of BS at the investigated institution (5.7%) is consistent with the rates reported in the international literature. Analysis of the narratives gathered in focus groups revealed stressors in the organization of work. **Conclusion:** The present study also points to the need for a broader look into the causes of BS, in which consideration of singular psychosocial risk and work organization factors from the perspective of workers devoted to providing care to human beings has paramount importance.

**Keywords |** nursing; health care institutional environment; burnout, professional.

**RESUMO | Introdução:** A síndrome de *burnout* (SB) é um conjunto de sintomas que surgem da resposta a estressores interpessoais crônicos no trabalho e envolvem a percepção que a pessoa tem de si própria e do ambiente em que realiza seu trabalho. **Objetivo:** Identificar os fatores de risco psicossociais e da organização do trabalho preditores de sofrimento mental, bem como estimar a prevalência da SB em uma população de profissionais de Enfermagem de um hospital público do interior do Estado de São Paulo. **Métodos:** Pesquisa mista, combinando as abordagens quantitativa e qualitativa, desenvolvida em um hospital público universitário. Foram utilizados o Maslach Burnout Inventory-Human Services Survey (MBI-HSS), para estimar a prevalência de SB, e a análise de conteúdo em grupos focais (GFs), para identificar fatores psicossociais de risco no trabalho (FPRT). **Resultados:** A prevalência de SB na instituição estudada (5,7%) foi compatível com a literatura internacional. A análise das falas emergentes dos GFs revelou a existência de FPRT atuando como estressores na organização do trabalho. **Conclusão:** Esta pesquisa apontou ainda a necessidade de um olhar mais amplo sobre as causas da SB, sendo de grande importância a inclusão, nos trabalhos, do estudo da singularidade dos fatores psicossociais e da organização do trabalho por meio da voz dos profissionais que têm como foco de trabalho o cuidado ao ser humano.

**Palavras-chave |** enfermagem; esgotamento profissional; ambiente de instituições de saúde.

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## INTRODUCTION

Burnout syndrome (BS) consists of a set of symptoms that appear in response to chronic interpersonal stressors at work. The three key-dimensions of BS (emotional exhaustion — EE, depersonalization — DP, and professional accomplishment — PA) clearly place occupational life within a context that involves the perceptions individuals have of themselves and their work environment<sup>1</sup>.

The fact there is a relationship between BS and health care providers is nothing new considering the huge amount of studies on this subject. A search in database PubMed using keywords “burnout” and “health personnel” located 6,320 articles, with remarkable increase from the 1990s onward.

When the search was performed with keywords “burnout” and “nursing” the number of located articles was 4,132. Not by chance BS is currently considered a serious public health problem for both affected individuals and organizations as a function of the costs of absenteeism and presenteeism (going to work when ill; to be physically present, but without full conditions to perform one’s activities), loss of productivity and turnover<sup>2</sup>.

A large part of the studies on BS might be subsumed under two categories according to their focus: estimation of prevalence among different professional categories, for which purpose the instrument more widely used is Maslach Burnout Inventory-*Human Services Survey* (MBI-HSS); and identification of psychosocial risk factors at work (PRFW) associated with the genesis of BS<sup>3-7</sup>.

PRFW have been predominantly studied abroad, while in Brazil, although some studies did address them, a large part emphasizes the consequences and harm PRFW might cause to the health of workers, which points to the local interest in studying effects at the expense of predisposing work-related aspects<sup>8</sup>.

Therefore, the rationale underlying the present study precisely was to approach both aspects together in order to investigate a possible association, even if only cross-sectional and ecological, by measuring the prevalence of BS and detecting exposure to PRFW according to the workers’ perception<sup>9</sup>.

Thus being, the aims of the present study were to identify psychosocial risk and work organization factors able to predict mental suffering, and to estimate the prevalence of BS in a sample of nursing professionals from a public hospital in the interior of the state of São Paulo, Brazil.

## METHODS

A mixed methods research design was adopted by combining quantitative and qualitative approaches. First a cross-sectional design was developed to calculate the prevalence of BS among the analyzed population, next a qualitative stage followed, which sought to detect the main PRFW according to the participants’ perception.

The study was conducted at a public university hospital in the interior of the state of São Paulo. The hospital has 267 beds and performs 6,500 outpatient consultations in 37 specialties — including referred urgent cases, 1,100 admissions, 650 surgical procedures, 300 child deliveries and 14,000 laboratory tests per month. In addition, it is a reference within the Unified Health System (Sistema Único de Saúde — SUS) as a function of the quality of care delivery, having earned Canadian accreditation.

The study population included the full staff of nurses and nursing technicians and assistants. The inclusion criteria were: having been hired at least 6 months earlier (so that any change in the state of health could be attributed to the current work environment and to avoid the influence of previous jobs) and minimum 20-hour weekly working time. The exclusion criteria were: being on sick or maternity leave, or not having been contacted after three attempts; questionnaires with missing answers were excluded from analysis.

The total nursing staff comprised 539 employees, being 74 nurses and 465 nursing technicians or assistants.

A total of 167 employees were excluded because they had been hired less than 6 months earlier, further 30 who were on sick or maternity leave and 28 who could not be contacted after three attempts; 33 incomplete questionnaires were excluded from analysis. Therefore, the final sample comprised 281 participants (38 nurses and 248 nursing technicians or assistants).

The version of MBI-HSS for medical personnel translated, adapted and validated for the Portuguese language by Lautert<sup>10</sup> was applied to investigate the prevalence of BS. MBI-HSS comprises 22 items distributed across three dimensions, EE — 9 questions, DP — 5 questions, and PA — 8 questions, to be self-responded on a Likert scale; response scores range from 0 (never) to 4 (everyday). Each dimension score is calculated by adding the scores attributed to the corresponding questions. For each participant, a “D” score ranging from 0 to 3 was calculated as follows: EE scores

above the third quartile corresponded to 1 point on the D score; DP scores above the third quartile corresponded to 1 point on the D score; and PA scores within the first quartile corresponded 1 point on the D score. BS was defined as D score=3, i.e., subjects who scored within the extreme quartiles on all three dimensions<sup>11,12</sup>.

In the second (qualitative) stage, two focus groups (FGs) were conducted, one with seven nurses or nursing supervisors and the other with nine nursing technicians or assistants, all of whom had participated in the previous stage. The composition of the FGs was intentional, professionals from different areas were selected to obtain a sample representative of the organization as a whole so as to attain accurate understanding of their perception of the organization of work.

The fact that the qualitative sample was composed of volunteers could have been a source of selection bias, as only nurses disposed and open to talk participated in the FGs. However, such openness to discussion is an asset in qualitative studies, as it contributes to satisfactory development of dialectics in the construction of dialogue.

In addition, we complied with Barbour's recommendation to include 6 to 10 participants in each group<sup>13</sup>.

To increase the information on the institution, only employees hired for at least one year were invited to participate.

Nurses and nursing technicians or assistants were allocated to different FGs to avoid having supervisors and subordinates together, which might have had inhibited the participants.

The FGs were held on four weekly 90-minute sessions from 31 August to 11 October 2013. The sessions were conducted by the investigator and a psychologist invited to act as observer. The meetings followed a script containing semi-structured questions on six subjects relating to organization of work — demand and control; professional role; social support; relationships; professional recognition; and communication and changes. These subjects were selected considering the approach developed by the Health and Safety Executive, an official governmental agency charged of prevention of psychosocial hazards in the United Kingdom<sup>14</sup>.

The narratives were taped, for which previous authorization was obtained from the participants, then fully transcribed and treated according to the content analysis technique with the following steps for analysis of thematic

categories: data organization; unfocused reading; exhaustive reading; categorization of narratives based on record (sentences) and context (paragraphs) units; development of subcategories (then clustered per similarity into categories); and core themes describing the experiences of the analyzed subjects<sup>15</sup>.

The study was approved by Institute of Research and research ethics committee of State University of Campinas (UNICAMP) ruling no. 182,693, and complied with national and international ethical standards for research involving human subjects.

## RESULTS

Among the participants, 89% were female and 9% male (2% did not report their sex); 86% were nursing technicians or assistants and 14% were nurses.

The average age was similar between the groups of nurses (34.5 years old) and nursing technicians and assistants (35.7 years old). Most participants were married/had a stable union, 60% - 61% for nursing technicians and assistants and 53% for nurses.

The average length of work in the profession was 10.8 years for the nurses and 9.3 years for the nursing technicians and assistants, and the length of work at the institution 5.4 and 4.6 years, respectively. All the participants had been hired under the Consolidation of Labor Laws regimen, while 21% of technicians and assistants and 26% of nurses worked at two jobs.

Table 1 describes the scores on the three MBI-HSS dimensions per professional category.

The overall prevalence of BS for the full sample was 5.7% (nursing technicians and assistants, 6.2%; nurses, 2.6%) as shown in Table 2.

## FOCUS GROUPS

The results of the FGs were categorized according to the detected themes. To protect the participants' anonymity, nursing assistants and technicians are represented by letters A/T and nurses by letter N.

### Demand and control

Within category "demand and control", the participants cited the following as PRFW: high job demands; lack of

autonomy in the performance of tasks mainly due to rigid mandatory protocols; excessive bureaucracy; pressure for productivity; improper working conditions; improper ergonomic conditions; and lack of equipment (or of equipment maintenance).

Routine and the amount of work were seen as so heavy, that they were transferred to the participants' private and personal lives. The staff was rated quantitatively insufficient, resulting in exhausting working days and work overload. These factors together might increase the absenteeism and presenteeism rates. Some narratives represent the participants' views on the organization of work:

I can never leave on time, I feel frustrated, I always take work home, this messes with our personal lives, because we have to meet the deadlines (N7).

The number of doctors and nursing staff is not enough... not to speak of the huge number of absences, of people who get sick at work (N2).

Turnover is very high... and the staff ends by teaching what to do amidst the rush (A/T 3).

Absences demand rearrangement of the schedule of shifts, as a minimum of personnel is required in each one. When supervisors cannot find a substitute, they request staff members to work overtime in another shift, with the consequent impact on rest. Overtime work is exceptionally paid, but is rather computed as compensatory time off, yet such extra days off must be approved by supervisors.

We work a lot more to cover for a sick colleague, and thus also we fall sick often (A/T7).

**Table 1.** Descriptive statistics of responses to Maslach Burnout Inventory-Human Services Survey by nursing technicians and assistants and nurses. State of São Paulo, 2013 (n=281).

Dimensions	Nursing assistants/technicians			Nurses		
	EE	DE	PA	EE	DE	PA
Mean	12.6	3.5	24.2	13.9	3.90	24.2
Standard deviation	7.5	3.5	5.5	6.3	3.10	3.9
Minimum	0.0	0.0	6.0	2.0	0.00	16.0
1 <sup>st</sup> quartile	7.0	0.0	21.0	10.0	1.25	22.0
2 <sup>nd</sup> quartile	12.0	3.0	25.0	15.0	4.00	24.0
3 <sup>rd</sup> quartile	17.0	6.0	28.0	19.0	6.00	27.0
Maximum	32.0	17.0	32.0	27.0	14.00	32.0

EE: emotional exhaustion; DE: depersonalization; PA: personal accomplishment.

**Table 2.** Number of participants who scored on the upper (emotional exhaustion and depersonalization) and lower (professional accomplishment – reverse scoring) quartiles of dimensions and corresponding percentage (%) per professional category. State of São Paulo, 2013 (n=281).

Category	Total	n (%)			
		D=0	D=1	D=2	D=3 (SB)
Nursing assistants/ technicians	243	115 (47.3)	78 (32.1)	35 (14.4)	15 (6.2)
Nurses	38	16 (42.1)	13 (34.2)	08 (21.1)	01 (2.6)
Total	281	131 (46.6)	91 (32.4)	43 (15.3)	16 (5.7)

D: domain; BS: burnout syndrome.

Although a cause for dissatisfaction, payment was not mentioned as a source of stress, but behaves as a factor of aggravation when added to work overload:

What we make here doesn't match the sacrifice, payment is bad anywhere, but if I get to find a place with less pressure, I'll move without thinking twice (N1).

Equipment and technology were described as flawed and as a cause of tension:

Often there's no monitor, oximeter, the lift stops working (A/T2).

That kind of bed is impossible, lifting the patient makes us suffer (A/T7).

The participants reported they have no power of decision, which is a cause of frustration:

I'm frustrated by the nurses' lack of autonomy [ ... ] I'm there just to assist him (the doctor) [ ... ] I don't have the power of decision my level of education entitles me (N2).

Administrative work was seen as bureaucratic and meaningless, in addition to hindering the proper care of patients, which increased the feelings of pressure and discontent:

Paperwork is the main cause of stress [ ... ] I want is to provide care to patients (A/T4).

To get medicines, there're queues, bureaucracy, the doctors get stressed and take it out on us (A/T3).

## Social support

Within category "social support" the participants discussed the support they receive from supervisors and colleagues. When available, such support is understood as help in the accomplishment of tasks. The participants expect their supervisors to be more open to their suggestions and to make effective changes whenever problems arise:

I feel we don't have any support, [the supervisor] asks for our opinion, I answer and [the supervisor] understands I'm complaining (N4).

It's not only about making demands, I've never heard any praise, meetings are seldom held (A/T9).

Here it's all warnings and layoffs, I don't agree with this (N2).

The participants also demanded equality in the management of shifts, fair mediation of conflict and representation of their needs:

Decisions are made in each different shift according to different parameters [ ... ] in ours we can't leave without having finished the work, but others can, and the result is overload (N5).

I was almost assaulted twice, I had to lock myself in the bathroom, there's no one to intervene (A/T7). If they'd care for the people here, absences would be avoided, I tend to patients for the institution [ 's sake], but it doesn't care for us (A/T3).

The participants stated that work should be synchronized like the parts of a machine. Lack or malfunction of any one is a cause of stress, because it increases the load for all the others:

We work in pairs, and synchrony is necessary, otherwise the team doesn't work (A/T8).

All the time someone does it and it's heavy for the staff [ ... ] when someone doesn't come to work, there's no support (A/T2).

## Relationships

In regard to this category, the relationships of the participants with physicians, supervisors and colleagues were described as impregnated by conflict:

There's much tension between colleagues and supervisors [ ... ] at least, we the members of the morning staff get to talk (A/T3).

Conflict also characterizes the communication between physicians and nursing staff:

The doctor said I do nothing at all and I freaked out [ ... ] many people go away because they aren't appreciated (N2).

Lack of dialogue, of understanding the dynamics of work [...] many believe they can be rude with the staff just because they're doctors... (A/T3).

Conflict also impregnates the control exerted by supervisors; lack of solidarity among colleagues was seen as a source of stress:

The supervisor makes many demands, but we are never praised, never get any feedback (N6).

We don't have time for coffee, for friends [...] all talk done is about demands (A/T6).

Some people believe their work is more urgent, their shift is the most urgent, we need to improve as a team (N3).

### Professional role

Job positions and tasks proper to the nursing staff (nursing assistants and technicians and nurses) were not seen as a source of stress. The participants had a clear idea of the hierarchical levels and their functions (attributions, duties, responsibilities and requirements inherent to their activities):

I'm happy with the choice I made, I like what I do, I found my path (A/T1).

There's a hierarchy, each one has their own role and boundaries, we have a major responsibility by providing care to people, writing reports, giving medication and staying until the end of the shift (N3).

The scope of functions, understood as essential for teamwork, was described as strongly influenced by the high turnover rate; the increased need to train new employees was described as a cause of stress:

We complete [their] training here, in everyday work, courses don't teach as they should, we're overloaded (N1).

Turnover is high and very tiresome (N5).

### Communication and changes

Changes in the work process or organization are decided by the highest hierarchical levels, for which reason the

participants feel them as an imposition. There is no room for dialogue within the work process:

I'd like to hold meetings with my team [...] but we're always in a rush, we can't (N6).

Perhaps if things would be clearer [...] there's no dialogue (N4).

### Professional recognition

Category "professional recognition" evidenced the participants' expectations vis-à-vis the institution; when such expectations are frustrated, they lead to lack of motivation and leaving the job:

It makes no difference if you invest in further learning, no recognition at all. Therefore, the good ones move to other places where they'll get recognition (N4).

Career plan and benefits were perceived as recognition, and their lack as a factor of stress:

There isn't a career plan, because our duty is to motivate the team, managing problems is huge (N1).

To me recognition means benefits, I don't think it's fair to pay for health insurance, I work at a reference hospital, with excellent health care professionals (N6).

## DISCUSSION

Analysis of the sociodemographic data showed that the participants' profile was consistent with the ones reported in other studies on the same subject<sup>4,16,17</sup>.

Also the prevalence of BS among the study population was similar to the rates found in recent studies conducted with health care professionals: at a reference hospital for pediatric cancer in Campinas, São Paulo, Brazil, the prevalence of BS was 4,8%<sup>16</sup>; among nursing technicians from a public hospital also in Campinas 5.9%<sup>3</sup>; and among nurses from a general hospital in Recife, Pernambuco, Brazil, 4.7%<sup>17</sup>.

We should observe that the prevalence rate we found in the present study might have been underestimated as a result of the "healthy worker effect," which means that ill

employees (including the ones with BS) were possibly on leave and thus were not analyzed.

As an aggravating circumstance, a significant proportion of the participants (15.3% of the total sample; 14.4% of nursing technicians and assistants; 21.1% of nurses) scored within the critical quartiles on two dimensions ( $D=2$ ). Similar results were found in other studies<sup>4,18</sup>. These findings should be seen as a warning signal: if no intervention is developed or the individual defense strategies fail, the number of employees with BS might increase.

In addition, the percentages corresponding to the individual dimensions indicate that the participants could have, indeed, been performing their work under conditions of suffering, as they must accomplish their tasks with exhausted bodies and minds. Accurate knowledge of this situation is relevant for institutions to identify and address the determinants of BS before it develops.

One further relevant finding is that 26% of the nurses and 21% of the nursing assistants and technicians worked at two jobs, which practice might increase the work overload of this category of workers, as they need to balance the demands at two or more jobs. This situation might have led us to overestimate the prevalence of BS and its dimensions. However, the prevalence rates of BS found in other studies which assessed samples with employees working at more than one job were similar<sup>16-18</sup>.

Analysis of the data obtained in FGs allowed identifying the factors that the workers themselves considered to be sources of stress: lack of autonomy, work overload, lack of support by supervisors and even colleagues, relationship issues, lack of dialogue within the work process and lack of recognition. All these factors are frequently associated with BS in the literature.

In a comparative study of health care providers in Portugal and Brazil, satisfaction with the physical work environment, supervision (supervisors' support) and participation exhibited significant correlation with BS<sup>6</sup>.

Also a study conducted with 250 federal civil servants emphasized the association of BS with work overload, lack of autonomy and interpersonal difficulties at work<sup>19</sup>.

A review of 18 studies published from 1990 to 2007 found that overload and relationships with staff members behaved as risk factors for occupational stress<sup>20</sup>.

In many of these studies, however, the triggers of BS were identified by means of structured questionnaires,

and thus only aspects included in such instruments were considered. Facing this scenario, the FG technique allows evidencing critical aspects of the organization of work from the perspective of the workers themselves.

We call the attention to the relevance of listening to the voice of workers by means of FGs in the collective construction and individual appropriation of the work process, as they allow identifying work process features which are omitted when only quantitative questionnaires are applied.

The PRFW described in FGs show there is room in the organization of work at the analyzed hospital, and possibly also in others, to improve the working conditions and prevent not only BS, but also other health problems.

The participants' expectations disclosed in the FGs go much beyond salary-related issues. They expect to be rewarded for their work, that the hospital will provide them an adequate structure, with all the required equipment and technology, stable staffs in number adequate to accomplish all the required tasks, that it will prioritize the support given to the employees' health in the performance of their tasks, and clear and effective communication with the management, without any authoritarianism, but allowing for dialogue and change.

The institution has a crucial role to play in the organization of work and in the identification of occupational stressors, by supporting strategies for workers' health promotion.

Therefore, health care institutions should promote actions that prioritize the health of workers regarding all aspects related with PRFW, including development of continued and permanent education strategies, in addition to joint discussions with the staff on the hazards to which they are exposed for employees to become aware of their effects on their health and quality of life<sup>21</sup>.

## CONCLUSION

In the present study, the prevalence of BS among the analyzed population was 5.7%. However, 15.3% of the sample scored on two BS dimensions and 32.4% on one dimensions, which points to imminent illness among this population of workers.

In addition to the mental suffering inherent to the job of nursing professionals resulting from care delivery

to patients, the narratives obtained in the FGs disclosed a type of work organization that might contribute to illness and vulnerability to BS as a function of how tasks are structured.

The present study further points to the need for a broader scoped look into the causes of BS, in which consideration of singular psychosocial risk and work organization factors from the perspective of workers devoted to proving care to human beings has paramount importance.

The main limitation of the present study is its cross-sectional design, which does not allow establishing cause-effect relationships between the measures of exposure of

interest and effects, as both were assessed along one and the same time period. In addition, the fact that the study population belongs with a specific occupational setting hinders the generalization of the results to other situations.

One further limitation derives from the fact that, as a rule, the participants simultaneously worked at more than one health care institution, which might contribute to their work overload, and consequent overestimation of the prevalence of BS in the analyzed population.

Considering the limitations of cross-sectional studies vis-à-vis interventions at the workplace, longitudinal studies to follow up changes made based on established diagnoses are necessary.

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