



## Work overload in hospital units: perception of nurses

### *Sobrecarga de trabalho em unidades hospitalares: percepção de enfermeiros*

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#### RESUMO

Conhecer a percepção de enfermeiros sobre a sobrecarga de trabalho em unidades hospitalares. Pesquisa de abordagem qualitativa, exploratória-descritiva, realizada em um hospital de ensino no Rio Grande do Sul. Participaram enfermeiros atuantes em serviços de internação clínica e cirúrgica. A coleta dos dados ocorreu por meio da observação sistemática não participante e entrevista semiestruturada. Para a análise dos dados foi utilizada a técnica de análise de conteúdo temática. Participaram 12 enfermeiros. Das categorias emergiram relatos de materiais de insumo de baixa qualidade, interrupções no desenvolvimento do trabalho, consequências decorrentes da sobrecarga para a saúde dos profissionais e estratégias de enfrentamento a respeito da mesma. É imprescindível o planejamento de ações que busquem minimizar a sobrecarga de trabalho e, assim, preservar e promover a saúde dos enfermeiros, na perspectiva da valorização e apoio, possibilitando a oferta de uma assistência integral e de qualidade.

**Palavras-chave:** Enfermagem. Saúde do trabalhador. Jornada de trabalho em turnos. Carga de trabalho. Pessoal de saúde.

#### ABSTRACT

Nurses' perceptions on work overload in hospital units are analyzed. Current qualitative, exploratory-descriptive research was conducted in a university hospital in the state of Rio Grande do Sul, Brazil, with the participation of nurses in clinical and surgical hospitalization services. Data were collected through systematic non-participant observation and semi-structured interviews. For data analysis, the thematic content analysis technique was used. Twelve nurses participated. Categories revealed reports on low quality materials, interruptions in work development, consequences resulting from work overload on the health of professionals and their coping strategies. It is important to plan actions that minimize work overload and, thus, preserve and promote nurses health, from the perspective of valorization and support, enabling the provision of comprehensive and quality care.

**Keywords:** Nursing. Worker's health. Shift work. Work load. Health personnel.

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## INTRODUCTION

Nursing personnel are constantly exposed to situations related to organization

and working conditions, such as performing shift work, exposure to psychosocial and physical risks, insufficient human resources and materials, long working hours and work

overload, which may have an impact on their health. Work overload may harm professionals and patients. Although several tools may assess health policies and problems, investment is needed to identify the workers' real needs, such as adequate working conditions and efficiency in human resources.<sup>1</sup>

The organization of nursing work in shifts is a particularity within the hospital context, a typically unhealthy environment. Activities in unhealthy and difficult environments, precarious conditions, work relationships, and physical and mental overwork<sup>2</sup> are actually situations that burden the nursing personnel. Further, the night shift imposes on workers social and family adaptations which may impact their lives by insufficient sleeping hours, attention, life quality, social and family life, low income and accident risks.<sup>3-4</sup>

Health work in unhealthy environments and in situations that make it impossible to perform it fully contributes towards a negative impact on workers' health, with changes in the health/disease process<sup>2</sup>. Results may comprise lack of motivation for work and health, which compromises the workers' life quality and the care provided, coupled to high rates of absenteeism.<sup>5</sup>

Several studies have shown that work overload precedes physical and psychological illness,<sup>4,6-7</sup> job dissatisfaction, exhaustion and health degradation for nursing personnel, featuring obesity and sleep disorders.<sup>7</sup> On the other hand, few research works have been published on the perception on nurses'

overload at different hospital units and work shifts.

Consequently, it is crucial to identify possible illness-causing situations to contribute towards the personnel's health and minimize the impacts on care quality so that nurses could minimize the impact of work on their health. Current paper investigates nurses' perception on work overload in hospital units.

## METHODS

Current qualitative, exploratory and descriptive research was performed in 2017 in a university hospital, in the state of Rio Grande do Sul, Brazil, at the hospitalization units of general surgery and medical clinic.

When data were retrieved, there were 39 nurses working at the units under analysis. Nurses with more than six months work at the units participated in the study and only those who had been relieved of their working duties for any cause were excluded. Following the criteria above, five nurses were excluded and 34 professionals participated in current study. A draw of the possible participants by place and work shift (morning, afternoon, night) was carried out.

Data retrieval techniques consisted of the non-participating systematic observation and a semi-structured interview. Observations occurred throughout the morning (7 - 13 h), afternoon (13 - 19 h) and night shifts (19 - 7 h, next day), in alternate days, in May and June 2017, with a total of 72 h (24 h for each unit). A schedule was employed (interaction between the team and aspects with regard to

the presence of students; interruptions within the work process and situations that may be causing overloading). Notes were taken in a field diary, while observations, or rather, the results of the first stage and which will be given below, were identified by “NO” (Observation notes).

The semi-structured interview consisted of open and flexible questions. It even allowed new questions to be asked according to the direction the discussion was taking. The interview comprised a list of themes referring to situations that affected overload in work and one's life. The interview also contained questions on the participants' social and work issues. Prior to the start of data collection, a pre-test interview was conducted with one of the personnel who did not attend to the inclusion criteria above with the sole aim of contributing towards the inclusion or modification of questions during the true interview.<sup>8</sup> No changes were made in the pre-established schedule.

Nurses were individually contacted to schedule interviews which were conducted in a room, on the work premise, that would guarantee the participants' privacy. Each had a duration of about 35 minutes; interviews were recorded and then transcribed by content's thematic analysis. Answers on social and work aspects were transferred to Excel spreadsheets which generated a descriptive statistical analysis by data saturation for the calculation of simple and mean frequencies. Data collection ended by data saturation when information formed by the researcher on the field reached the internal logic or collectivity of the group under analysis.<sup>8</sup>

Draws were taken till data saturation and ended when no new information was upcoming on the investigated object. The participation of the twelve nurses was transcribed by the letter E followed by the order in which interviews took place (1, 2, 3...12), with the letters (M = morning; T = afternoon; N = night) for work shift period. The study was approved by the Committee for Ethics in Research (n. 1.985.046). Ethical principles following Resolution 466/2012 were complied with.

## RESULTS

Twelve nurses participated in the study, predominantly females (83.3%, n = 10), average age, 37±5.59 years old; mean training period 13.3 years, with specialization course in the area (58.3%, n = 7); with partner (75%, n = 9). Further, 66.7% (n = 8) worked in the morning and afternoon shifts and 91.7% (n = 11) did not have any other employment.

Categories that emerge from the analysis of the interviews comprised work overload, consequences of overload on health and life quality, positive aspects of work within the hospital environment in spite of the overload and the strategies to face it.

## HOSPITAL ENVIRONMENT AND WORK OVERLOAD

Lack of good work conditions, characterized by insufficient and precarious quality of materials used in procedures and insufficient human resources, is a situation that overloads the nursing personnel.

*It's something more than quality conditions that has to be accounted for [...] sometimes, there is a lack of material which procedures require. There is a lack of material, there is a lack of basic things to attend people with. This brings an overload of things; you have to invent things to make them work. And they perceive it; the patient perceives it ... Therefore, it produces stress. You get stressed ... (E5M)*

*Lack of material. Frequently, you get stressed because of this, using bad materials. The patients lose their chance since the material is rotten. So you have to redo the work, you have to put another needle since you did not access the vein. Low quality materials abound. Double connectors are also lacking [...] (E6T)*

*[...] Sometimes it seems that there are many people, but if one nurse has sick leave for the night shift, the whole scheme falls down [...] (E10T)*

A great amount of activities was underscored by nurses. Activities inherent to the position, demanding immediate evaluation, plus administrative work, were also mentioned by the personnel.

*In my opinion, [overload] is the cause, [...] Often it is difficult to give the care that the patients really need since you have to choose what to do, either to write a nursing prescription or go there and assist a patient [...] (E1N)*

*[...] Besides the overwork of procedures which have to be done, sometimes the physical fatigue is not so burdensome as that to solve problems. He sometimes comes with his team, and you are executing a procedure, he calls you to help him in another one, or he has doubt on a prescription or on the medicine to be given, or to confirm if that medicine is part of the drugs that should be taken, whether that is the dose to be administered [...] (E3T)*

*[...] there is the case when you are doing a procedure and someone calls you to solve a problem in the hospital unit; or something didn't work, someone wants to talk to the nurse to see a certain exam, to see something which is different from what you are doing, but will affect assistance as a whole, within the unit. You feel overloaded, really [...] (E7M)*

*If one arrives here and does her nursing work and does everything right, but it is a prescription which does not depend on the pharmacy; you have to call the intern doctor; you have to leave everything and he has to prescribed another, so that the drug may go to the pharmacy. When you go on your own work and the phone rings asking you to make a bed; you have to leave everything and make the bed. Things like this, not your job, plainly not a nurse's job. Things that other should do, you keep running to do them. This*

*overloads your work, disrupt everything and you feel at a loss. [...] (E10T)*

Care activities are compounded to teaching activities since the environment is that of a school hospital. Development in doing things is somewhat slow and accompanying students overloads the nurse.

*[...] the fact that the students are present requires more work. I have to stop doing what I had in mind. The time it takes to do one thing, it takes more time to do it. Since I have to explain and guide them, with great patience [...] (E9T)*

Frequently the nurses' work was interrupted during procedures or bureaucratic work they were doing. Even at break time they were interrupted by professionals of the health team or by relatives of patients. It is important to note that these interruptions were not emergencies or something urgent but doubts on the administration of medicine, installing of apparatuses and help in procedures (NO, 08/06/2017/Afternoon).

## CONSEQUENCES OF WORK OVERLOAD IN HEALTH AND THE PROFESSIONALS' LIFE QUALITY

Work overload, caused by situations often inherent to the working process, makes a great impact on the nurses' health. Work requirements *versus* time spent in its execution are directly related to the nurses' perception on the harm done to health.

*Sometimes I have backaches, often headaches. When you are extremely busy, you feel great fatigue, it seems that you can't do everything, you feeling that something has been missed [...] (E4N)*

*[...] when you quit the shift, you are stressed, fatigued and you feel like having someone as a scapegoat, even if you do not want to, someone will be hit. And who will be hit? Somebody of your family. It actually interferes; you feel stress, weary, you want to arrive home, sleep and leave all other things undone. (E1N)*

*[...] sometimes you do not have the will to eat anything, you know, you go to eat, you come here, you see something on the run, sometimes you take a sandwich to eat in the car[...] (E6T)*

One nurse of the shift had a urine urgency condition. She said this in a loud voice, crying "My bladder is bursting". Since she had to undertake things that had to be done, such as receiving a call on the phone on the availability of beds, requisitions by the multi-professional team for materials and issues brought to her by the nursing team on the administration of medicine, she could only go to the toilette after 50 minutes (NO, 27/04/2017/Morning).

Further, interviews revealed visible consequences in nurses on their shifts. Nurses detected differences in the work process of each shift, especially in the afternoon. In their opinion, the afternoon

shift demands more work and may impact their perception on overload. In the case of the night shift, reports reinforce the idea that after entering the night shift, sleep quality and feeding habits worsened, characterizing influences of the shift on the nurses' health

*In the afternoon, it's terrible. You have to pass the entire day solving things, and the afternoon is more stressful than in the morning [...] I surmise that the night shift is somewhat calmer, although it is night, which is not good for the body [...]* (E11M)

*[...] After starting on the night shift, I sleep less; my leisure hours became different too; frequently they are in the evening or at night the next day, to do something; since you have to enter work at 19 h in the evening; at 18h 30 you have to present yourself. So, my life's routine has been modified, feeding time is something totally wrong, even at night [...] practically you survive on snacks [...]* (E12N)

Several members of the nursing team, especially those of the night shift, had to take medicines against muscular pain and gastric problems. Some nurses offered painkillers to others who had pain during the shift (NO,04/05/2017/Night).

## STRATEGIES TO COPE WITH OVERLOAD

Experience with undergraduates, the use of technology for care and care for the

family are strategies that help promote the workers' health.

*[...] undergraduates that stay with us for a longer period are a great help in our task. They instigate us to study more and they bring to us many novel things. Recently a female undergraduate gave us information on a new scientific discovery which I was not aware of [...]* (E9T)

One notes that the mobile telephone is a great help for the nurses' task since it forwards immediate answers and makes possible a follow-up in the treatment of lesions. The Whatsapp of the unit team was a highly efficient working tool to take fast decisions. Skin lesions were photographed so that nurses would follow the evolution of the treatment (NO, 04/05/2017/Morning and Afternoon).

*We have the two side of the same coin; (technology) is a great help in several cases; in others, such as the mobile, it is an impairment. In my case, it's a problem rather than a help. Some people do not realize that you are working and it is a period in which one cannot lose time in dealing with private affairs. It's the same with the Internet. You search for what you need; others use it otherwise. Actually, within common sense, they are a great help, but in the right measure [...]* (E11M)

*[...] I appreciate good relationships and I think that if one is educated*

*enough, you may say what you want and frequently change things that one sees and disagree of [...] I think that one may gain a lot of things in this manner, with good manners [...] (E11M)*

*[...] many things are asked of you to solve and it seems that you will not support everything. However, working is a great asset; it is highly satisfactory to listen to a patient who says: "So good you returned after two days off; it's good to see you again". Acknowledgement. Often it's big enough by patients, relatives. Acknowledgement of the task undertaken [...] (E3T)*

The family's contribution as a therapy to minimize overload in post-work situations and the execution of physical activities were mentioned as some of the resources used by the personnel.

*[...], after a 12-hour duty shift, my God, I arrive home shattered! But I have children, I have a son; I have to prepare things for my daughters, [...] play with them; it's so good. It seems to be a therapy [smiles] [...] (E6T)*

*[...] and I start thinking on self-care, on the self-care of each professional. So, one thing I try to do when possible, I go to the gym for a better support, to cope with the demands. It a thing that I talk about with the technical nurses, to take care of themselves when on leave so that in the hospital I may have the mental health*

*to cope with everything [...] (E9T)*

## DISCUSSION

The predominance of females mirrors the nursing profile in Brazil. Although the number of male nurses is on the increase, the predominance of females (85.1%) in the profession is overwhelming.<sup>9</sup> In the case of nurses under analysis, overwork existed when assistance was given at an inferior quality than required, a fact that may worsen when fewer workers are present. From their point of view, the number was acceptable but no absentees would be allowed since instability would occur within the work environment.

Work overload would worsen by an absent nurse from work. One research<sup>10</sup> identified a great number of staff absences in a hospital with patients with chronic diseases and with a longer permanence, due to the high level of care required. This fact suggested physical and psychological overwork.

Another source of overwork are interruptions in nursing which may also compromise a safe care. Another study<sup>11</sup> recorded that interruptions predominated during activities dealing with indirect care of nursing and the main causes were the nursing team motivated by communications on care protocols and supplementation of material. The occurrence of interruptions during work is a source of concern since they may have an unfavorable repercussion on care quality, patient's safety and the work of the nurses.<sup>12</sup>

Research failed to show any significant differences ( $p > 0.05$ ) in the

evaluation of interruptions between nursing shifts in a university hospital. Different causes for the interruptions were detected: in the morning shift, cooperation demands with other professionals ( $n = 9$ ; 70.4%) probably due to visits by the multidisciplinary team which occur during the period. In the afternoon, it may be due to emergencies and unexpected occurrences ( $n = 24$ ; 77.4%) due to admissions, discharges, post-surgery complications and others, whilst during the night shift, it may occur due to the solution of issues in the unit ( $n = 21$ ; 95.5%).<sup>12</sup>

Besides frequent interruptions that jeopardize the patients' safety and raise the level of nurses' overload, shift work was identified as an overload factor which negatively affected the nurses' work.<sup>13</sup> Nursing complaints include activities that interfere in the worker's health and this worsens when shift work, total load and gender are taken into account. Female nurses show a greater physical and mental fatigue, besides exposure to error risks and accidents.<sup>14</sup>

Evidence exists that productivity per shift reveals better conditions in the morning when compared with the afternoon and night shifts<sup>15</sup>, when it has been shown that this shift was the most overloaded. One should mention the complaints of the participants with regard to body pains which were remedied by self-medication by the nurses. Self-medication with analgesics may induce unexpected reactions in the nurse, with negative results for their health. It should be underscored that they are drugs and that posology, adequate indication and treatment period must be complied with.

Therefore, nurses should take into consideration undesired consequences and recurring symptoms which may demonstrate worsening of problems badly treated.<sup>16</sup>

Continuous exposure of work overload and daily experience with sufferings cause a great deal of wear on nurses, which may develop into sickness. Nurses should understand the specificities of their profession and make use of strategies that lessen professional wear and the improvement of their health.<sup>17</sup> Lack of valorization and acknowledgement of the nurses' work may interfere directly in their performance, self-esteem and the relationship between self-esteem and work. If they do not feel valorized, the nurses will fail in their performance and efforts.

Consequently, several alternatives (cited by the participants) that modify their lives, should be developed to avoid psychic suffering and stress related to issues on the work milieu. This may affect the professionals' satisfaction and well-being, especially with regard to work conditions, physical milieu and work shifts.<sup>18</sup>

On the other hand, when the same context is analyzed from another aspect, one may clearly see their satisfaction when their importance is appreciated. Patients' praise and thanks are seen as a positive response to their service. They feel valorized and their work acknowledged.<sup>19</sup>

In the case of the participants' mental health, there are several contradictory feelings, or rather, mixed satisfaction and frustration with their work. Satisfied nurses with their working milieu tend to develop their work with attention,



cordiality and friendship, contributing towards the humanization of the relationships between the team and the patients.<sup>20</sup> One may underscore that frustration in the nursing profession arises everywhere, within and outside work. One is accountable for different activities through the accumulation of several functions.

On the other hand, when undergraduates arrive at the work milieu, nurses start treating them with more appreciation and perceive changes in their routine work. In fact, the undergraduates carry updated experiences and information on theoretical and practical issues. Exchange of information causes a renewal in professional knowledge and stimulates the search for new data. Consequently, an instance of mutual learning occurs.<sup>21</sup> The presence of undergraduates is extremely healthy for the nursing team since it enhances constant search for updating and helps in the patients' direct care.

The nurses had different strategies to minimize the effects of overload in work, such as making communication and decision-taking faster. The use of technological resources provides the nurse team with more time in the direct care of the patient and optimizes the work process. The nurse team should be aware of development of competences and capacities in the use of computational technologies.<sup>22</sup> In spite of the benefits in the use of technology, one should also be aware that they may be potential motives of lack of attention within the work milieu and may disseminate microorganisms in the environment.

Mobile telephones are personal tools with a high-level rate of contamination and with difficult disinfection methods, with repercussions on the patient's health. Their use in health premises may transfer infectious agents and participate in the transmission of infections if no adequate disinfection is undertaken.<sup>23</sup>

Results in nurses' interviews and data obtained during observation evidence that work overload for the nurses under analysis occurred within the work milieu and may bring several complications for the worker in many aspects of their lives. On the other hand, strategies exist that may help in their identification and minimization within the working milieu.

It should be emphasized that alternatives for the maintenance, promotion and recovery of health are an opportunity for the satisfaction of work and may be a source for minimizing overload.

## FINAL CONSIDERATIONS

Nurses perceived work overload when there was interruption in the execution of tasks, during the afternoon shift and when they provided lower quality work than expected. On the other hand, several factors which contributed toward job satisfaction were identified.

Results show that work overload of hospital nurses should be understood as a consequence of a multifactorial process. It should be discussed within the perspective of finding solutions. Consequently, activities should be planned to preserve and promote workers' health. They become less prone to illnesses. Nursing will be more

valorized and supported by the health team, making it possible to offer comprehensive and quality care.

Current study is limited since it was carried out in only one school hospital institution, with obvious singularity. Similarly, it may be suggested that nurses' work overload be investigated in other environments and by new research approaches to make more in-depth studies on the theme. Results may subsidize hospital and nursing managements in the development and implementation of joint actions to reduce excess demands and work overload and increase institutional support for their nursing teams.

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