



NURSING TEAM STRESS IN THE PERIOPERATIVE PERIOD: AN INTEGRATIVE REVIEW

O ESTRESSE DA EQUIPE DE ENFERMAGEM QUE ATUA NO PERÍODO PERIOPERATÓRIO: REVISÃO INTEGRATIVA

EL ESTRESE DEL EQUIPO DE ENFERMERÍA QUE ACTÚA EN EL PERIOPERATORIA: REVISIÓN INTEGRADORA

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This integrative review aimed at analyzing evidences available in literature regarding stress levels in nursing teams during the perioperative period. Primary studies were searched in the following databases: PubMed, CINAHL and LILACS. Included studies were grouped into the following thematic categories: stress level in the workplace and stress factors (n=8) and stress coping strategies used by the nursing staff (n=6). Evidence suggests that stress in the workplace worsens the health of the nursing team, provoking undesirable effects both in the professional and personal lives of these professionals. The assessment of working conditions to identify the main stressing factors and the implementation of individual and organizational measures to reduce nursing teams stress may increase productivity and workers' satisfaction, improving the assistance quality offered to surgical patients.

Descriptors: Perioperative Nursing; Nursing, Team; Burnout, Professional; Review.

O estudo teve como objetivo analisar as evidências disponíveis na literatura sobre o estresse da equipe de enfermagem que atua no perioperatório. A revisão integrativa foi o método de revisão adotado. Para a busca dos estudos primários, as seguintes bases de dados foram selecionadas: PubMed, CINAHL e LILACS. Os estudos incluídos foram agrupados em categorias temáticas: grau de estresse no trabalho e os fatores de estresse (n=8) e, estratégias de enfrentamento do estresse utilizadas pela equipe de enfermagem (n=6). As evidências indicaram que o estresse no local de trabalho agrava a saúde da equipe de enfermagem, proporcionando efeitos indesejáveis tanto na vida profissional quanto pessoal destes profissionais. A avaliação das condições de trabalho para identificar os principais estressores e implementação de medidas individuais e organizacionais para a redução do estresse da equipe de enfermagem poderão incrementar a produtividade, satisfação dos trabalhadores e a melhoria do cuidado prestado ao paciente cirúrgico.

Descritores: Enfermagem Perioperatória; Equipe de Enfermagem; Esgotamento Profissional; Revisão.

El objetivo fue analizar las evidencias disponibles en la literatura acerca del estrés del equipo de enfermería que actúa en el perioperatoria. La búsqueda de estudios primarios se realizó en las siguientes bases de datos: PubMed, CINAHL y LILACS. Los estudios incluidos se agruparon en las categorías temáticas: grado de estrés en el trabajo y los factores de estrés (n=8) y, estrategias de afrontamiento del estrés utilizadas por el equipo de enfermería (n=6). Las evidencias indicaron que el estrés en el trabajo agrava la salud del equipo de enfermería, proporcionando efectos indeseables en la vida profesional y personal de profesionales. La evaluación de las condiciones de trabajo para identificar los principales factores de estrés e implementar medidas individuales y organizacionales para reducir el estrés del equipo de enfermería podrá incrementar la productividad, la satisfacción de trabajadores y mejorar la atención prestada al paciente quirúrgico.

Descriptores: Enfermería Perioperatoria; Grupo de Enfermería; Agotamiento Profesional; Revisión.

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INTRODUCTION

In modern life, stress is present both in the professional and the personal life. The nurse is the professional who offers assistance to the patients and their families within the hospital environment, coexisting with conflictive aspects such as birth as death⁽¹⁾.

Stress is a non-specific reaction that affects individuals exposed to factors and/or situations that unleash such reaction, in other words, the stress triggers. Stress is manifested in the physiological area (heart, lung, hormones, among others) as well as in psychological and behavioral aspects⁽²⁾.

One of the fields in which the nursing team is most affected by stress is the perioperative work. Perioperative includes the preoperative, intraoperative and postoperative stages of the patient's surgical experience and implies the interdependent participation of the nursing and surgical teams. During this period, stress results from the combination of different factors related to the type of environment, complexity of human relations and work, professional autonomy, high demand level of professional capabilities, skills and responsibilities, adequate human resources and materials planning⁽³⁾.

A daily routine of high stress levels may result in physical and emotional exhaustion, which is known as the Burnout Syndrome. This condition is characterized by pessimism, negative self-image and negative attitudes towards life and work⁽⁴⁾.

The nurse acts in her daily routine with little or no awareness of the stress she is facing. Understanding the stress process is necessary in order to face it adequately. It is important to identify stress triggers at work, as it helps to make the necessary changes, as once possible solutions to minimize stress triggers effects are implemented, they can make the nurse's daily routine more productive and less tiring⁽⁵⁾.

Therefore, the analysis of the summaries of already published research on perioperative stress may

offer subsidies for the nurse and the nursing teams in the planning and implementation of measures that can minimize the problem, generating more productivity at work and the improvement of the assistance rendered to the surgical patient. Therefore, the present study aims at analyzing available evidences in literature on nursing teams stress during the perioperative period.

METHOD

In order to reach our goal, an integrative review (IR) was selected as revision method. The IR followed these steps: elaboration of research issues; search for primary studies in literature; data extraction; evaluation of primary studies; analysis, summary of results and review introduction⁽⁶⁾.

The IR guiding question was: which evidence is available in literature on nursing team stress during the perioperative phase?

The search for primary studies was carried out in the National Library of Medicine, the National Institutes of Health (PubMed) database, the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Latin American and Caribbean Literature in Health Sciences (LILACS). To perform the search, controlled descriptors (Medical Subject Headings- MeSH, CINAHL Headings and Health Sciences descriptors - DeCS) were delimited according to each database and uncontrolled descriptors (keywords) were established in agreement to previous readings on topics of interest. In order to grant a wide research, controlled and uncontrolled descriptors were combined in different ways.

In the PubMed database, the following controlled descriptors were entered: intraoperative period; perioperative period; perioperative care; perioperative nursing; burnout, professional; operating room nursing and occupational health nursing, as well as the keyword "stress".

Controlled descriptors used in the CINAHL

database were: intraoperative period; perioperative period; nursing; perioperative nursing and stress. The following controlled descriptors were applied to LILACS: perioperative nursing; nursing; professional burnout; perioperative period; intraoperative period and the keywords "stress" and "health professionals".

Inclusion criteria for primary studies selected for the present revision were: 1) studies that reflected the stress of nursing teams acting in the perioperative period; 2) studies published in English, Portuguese or

Spanish from January 2001 to December 2011. The time limit was set to ensure adequate quantitative information to the primary studies, once high research demand may make the IR elaboration unfeasible or introduce biases in the subsequent methodology stages. The exclusion criteria consisted of studies identified as traditional literature revision, editorial or letter-response.

The search for primary studies in the selected databases took place in January 2012 and was performed by one of the IR authors.

Chart 1 – Number of primary studies eligible and exclusion criteria in selected databases for the construction of an integrative review. Ribeirão Preto, SP, 2012.

Database	Eligible primary studies	Primary study outside the subject of interest / researched population	Primary study outside delimited period	Primary study in a foreign language	Repeated primary study	Literature revision/ thesis	Included primary studies
PubMed	121	24	29	4	59	1	4
CINAHL	120	100	-	6	3	5	6
LILACS	21	13	-	-	4	-	4

As introduced in chart 1, the IR sample included 14 primary studies, being four of them taken from the PubMed database, six from CINAHL and four from LILACS.

Data extraction from primary studies included in the IR was made with the help of the instrument proposed by researcher⁽⁷⁾ and the two IR authors independently. Analysis of results was carried out in a descriptive form. In the descriptive analysis, the reviewer introduces a summary of each study included in the revision (for example, data on the sample size, type of study, goal and main results obtained) comparing them and emphasizing differences and similarities amongst studies.

RESULTS

Most of the 14 primary studies included in the IR were published in English (n=8). Journals were of diverse origin, with a predominance of the Contemporary Nurse Journal (n=2) and the Minas Gerais Nursing Journal (n=2).

As for the methodology used, 11 studies applied a quantitative approach and all of them followed a non-experimental research delimitation, being most of them of a descriptive type. Only three studies adopted a qualitative approach.

In order to organize the introduction of IR results, studies included were grouped in thematic categories as follows: stress levels in the workplace, stress factors and strategies to deal with stress used by the nursing team. We now introduce a summary of each primary study. Eight studies were included in the first thematic category.

A descriptive-exploratory study aimed at identifying physical stress symptoms in the nursing team of a surgical center according to the different work shifts. The sample was composed of 50 people, being four nurses and 46 nursing technicians. For data collection purposes, the instrument used was adapted to the Portuguese language (Occupational Stress Indicator-OSI). Results demonstrated that the symptoms mentioned by most participants are related to sleep and

rest needs, sexuality, painful perception and gastric disorders. These symptoms, associated to the feeling of tiredness, characterize the chronic fatigue syndrome⁽⁸⁾ (Burnout Syndrome).

The objectives delimited by another developed research (descriptive-exploratory study) were: elaborating the nursing professionals' profiles in the personal and professional aspects, describing their perceptions on satisfaction and stress levels in the workplace and stress triggers in the surgical center. Participants (n=70, nurses, technicians and nursing assistants) worked in the surgical center of an oncology unit. Data was collected through private interviews applying a questionnaire composed of closed and open questions. Results suggest that most participants were working 40 hours a week and were happy to work in the surgical center, despite considering the environment as highly stressing. They highlighted work organization, personnel management, tasks, environment, patients and even their workmates as factors related to stress in their respective hospital area⁽⁹⁾.

Some researchers studied the occupational stress levels of professionals working in the surgical area and the intensive care unit of the Belo Horizonte Philanthropic Hospital (n=31, 25 nursing assistants and nine attendants from the surgical and intensive care units). A previously tested and evaluated instrument was applied for data collection. Most nursing workers (58%) presented stress levels considered within the normal range, however 93.5% (n=29) showed physical symptoms typical of anxiety or stress⁽⁴⁾.

Another sample researched included 89 people, being 31 of them nurses working at medical-surgical units while 58 of them were working in home care. The set goal was to identify stress triggers and their intensity to establish the relation between stress and mental wellbeing. For this purpose, the following instruments were applied: Job Stress Survey (occupational stress) and Affect Balance Scale (mental wellbeing), as well as

the materialization of a structured interview. Results show that excessive bureaucracy was the main stress trigger for the two groups of nurses studied, being that stress in the workplace for medical-surgical nurses was higher than normal and significantly higher than the stress suffered by home care nurses⁽¹⁰⁾.

In a descriptive study made with 29 perioperative nurses, the goal was to determine the level to which these professionals perceive their work as stressful and the aspects of their work that they believe to provoke more stress. Data was collected through the application of an elaborated instrument that included 19 stress triggers. The instrument items were divided into four categories: interpersonal relations; excessive expectations; frustration and crisis at work. Most perioperative nurses mentioned situations included in the work crisis category as being the most stressful although these situations did not occur very frequently. Many items from the interpersonal relations category were also appointed as stressful and reported as happening frequently⁽¹¹⁾.

The goal of identifying stress triggers and the physical and psychological symptoms experienced by the team of professionals working at a surgical unit was established in a research performed with a qualitative approach. The sample was composed of 29 subjects (nine nursing technicians, two nurses, seven anesthetists and 11 surgeons). A semi-structured interview (recorded in audio) and the field journal were adopted as techniques for data collection. Professionals interviewed experienced different stress triggers such as those related to interpersonal relations, lack of materials/equipments and insufficient number of qualified professionals, high surgery demand and patient conditions. Physical symptoms described were body pain, tachycardia, tiredness and hypertension among others. Psychological symptoms mentioned were impotence, hate, nervousness, anxiety, fear of patient death and anguish among others⁽¹²⁾.

Another research investigated the stress causes and its levels in nurses working in surgery units all over Brazil (n=80) through the application of a questionnaire (Bianchi Stress Questionnaire). The nurses' stress level was moderate. The unit operation and its management were considered as the most stressful routine. Nurse managers were experiencing more stress than nurses who were not in managerial positions⁽¹³⁾.

The goal of evaluating the presence of occupational stress among nursing professionals at the surgery department, analyzing possible interactions between occupational stress levels and the work characteristics was set in a descriptive and correlational study. 211 people were included in the sample (nurses, technicians, assistants and nursing attendants) and data collection was carried out through the application of a specialized instrument, being the first part related to the workers' profiles and the second one to the Job Stress Scale Portuguese language version. Most participants were in the category of intermediate exposure to occupational stress (56.1%); 26.3% (n= 54) were in the high exposure category and only 17.6% (n=36) considered themselves not exposed to stress⁽³⁾.

In the second thematic category (stress coping strategies used by the nursing team) six primary studies were included in the IR. In a qualitative approach, phenomenology was adopted as theoretic reference and the answers of perioperative nurses (n=5) on stress in the workplace were exploited. Interviews were used as a data collection technique. Three topics were identified in data collection, being the first one the nurses' external reactions like physiological responses to stress (such as fight or escape). The second issue was internal responses such as emotional reactions, beliefs during a stressful situation and thoughts after the event. The third topic was the description of behaviors with regards to partners, children and/or family when the nurse returns home. Getting irritated with child or partner was referred to as a common situation⁽¹⁴⁾.

A descriptive-exploratory research aimed at identifying coping strategies used by nursing professionals (n=54, nurses, technicians and nursing assistants) from the surgical unit of a teaching hospital, proposing measures to minimize stress-generating situations. An instrument adapted to the Portuguese language was used for data collection purposes (Folkman and Lazarus Coping Strategies). Results showed that 30% of strategies adopted by professionals were focused on the problem and 24% on the emotion, being that 26% of professionals were using the strategy of escape-avoidance, mainly due to defensive processes, which enable people to avoid conscious confrontation with the threatening reality⁽¹⁵⁾.

A transversal study was carried out to investigate stress in the workplace, stress coping strategies and nurses' satisfaction levels at surgery units (n=121) in different types of hospitals, also evaluating the interactions among different factors. Data was collected through a questionnaire. Stress levels and their frequency as perceived by study participants were clearly related to the hospital type. The most intense stress trigger perceived by nurses was related to patient safety. The most frequent stress trigger was the administrative burden⁽¹⁶⁾.

Another research evaluated the behavior, health promotion and lifestyles of intensive care nurses through the Health Promotion Model. The sample was composed of 149 nurses, out of whom 54 were working in critical units and 46 in medical-surgical units, while 49 did not identify their unit. For data collection, the Health-Promoting Lifestyle Profile II instrument was applied. Results demonstrated that stress management and physical activity were the weakest amongst health promotion strategies. Medical-surgical unit nurses obtained better health promotion scoring than their critical unit counterparts⁽¹⁷⁾.

A study carried out through the qualitative methodology approach (Theory Based on Data as

theoretical framework) analyzed the role of stress triggers as experienced by perioperative/managerial nurses (n=6) as well as the resources and strategies used by professionals in order to face the multiple demands of these positions. A recorded interview and the observation of participants in the performance of their activities were adopted as data collection techniques. The main stress trigger experienced by perioperative/managerial nurses was related to personnel management. The stress was reduced through the use of hospital resources and the support of their co-workers (techniques learned through management courses and information obtained in conferences). Besides, they used strategies to develop teamwork, priority leveling and involvement in social activities⁽¹⁸⁾.

Another sample studied was composed of 46 perioperative nurses and authors investigated the effects of reported traumas at work during care activities, identifying the ways in which these professionals coped with contextual stress triggers. For this purpose, data was collected through the Impact of Event Scale instrument, which includes a quantitative and a qualitative component (verbalization in writing of a recent event occurred at the workplace and how the nurse coped with that event). Traumatic events were grouped in five categories: practice-related problems, patient death; conflict/abuse, lack of human resources and materials and patient conditions. Results suggest that less experienced nurses suffered the highest negative impact during traumatic situations. Post-trauma reactions were predominantly negative and included frustration and insecurity feelings⁽¹⁹⁾.

DISCUSSION

In the first category, primary studies included approached stress levels, stress triggers and the manifestations (signs and symptoms) of these problems. Stress in the workplace has undesirable effects on professionals' health and safety, as well as on the

efficiency of health services^(3-4,8-13). It is worth highlighting that in two studies, the sample was composed of professionals that worked not only in the perioperative sector but also in other hospital units^(4,10).

Perioperative work demands a high level of responsibility and qualification, being that the excess of duties as a result of a deficiency in the number of professionals combined to the lack of necessary equipments/materials, provoke, as years go by, workers' physical and emotional tiredness. The importance of performing research to identify stress factors, seeking to implement prevention measures in health services must be remarked^(4,8-9).

Similar results to those demonstrated through the present study are found in literature. One study⁽²⁰⁾ demonstrated that the nurses of a surgical center reported higher stress levels in areas related to adequate unit operation, personnel management and interactions with other units. A recent research⁽²¹⁾, with a sample composed of surgical unit nurses also identified activities related to personnel management as the most stressful.

Health services can implement measures to minimize stress in the workplace, such as professionals' support (personalized approach) promotion of multi-professional interaction, improvement of working conditions and unit infrastructure, investment in worker's health care programs, rational organization and work valorization^(3,10-13).

It is fundamental that nursing team members develop effective strategies that can help them cope with daily perioperative stress, as the surgical environment itself is considered stressful by professionals^(11,13).

In the second category, primary studies identify stress coping strategies used by the nursing team. Professionals use coping strategies based on both problem solving (problem-focused approach) as well as on the emotional aspects (emotion-focused

approach)⁽¹⁵⁾. External responses (fight, escape, sleep and nutrition disorders) and internal ones (frustration, anger) expressed by nurses as workplace stress reactions were identified⁽¹⁴⁾.

Seeking to help the perioperative nurse cope with stress in the workplace, it is necessary that these professionals take part in courses focused on this problem. The surgical center nurse manager must be attentive to the stress levels of his nursing team, helping to implement strategies to reduce stress, promote quality of life improvements and growing satisfaction within the working environment⁽¹⁶⁾.

Coping strategies mentioned by critical unit nurses were mainly the participation in educational courses on holistic nursing, stress management activities such as massage, reflexology and imagination and the development of health promotion programs by different organizations⁽¹⁷⁾.

For the nurse manager, the main stress trigger appointed was personnel management. This professional is frequently challenged due to the lack of sufficient staff, employees with difficulty to deal with changes, poor personal behavior and performance issues. Generally, the manager also needs to face a bad organizational environment, which does not encourage team development or the improvement of staff performance⁽¹⁸⁾.

In the researched sample (n=49), 25% of female nurses demonstrated a tendency to avoid stressful situations and 83% of male nurses used problem-solving strategies. Avoiding a stressful situation may reduce emotional stress but it is a palliative approach. Situational agents are significant to determine coping strategies and need to be considered in the analysis of how the perioperative nurse copes with stress. Hospitals need to implement an approach that is more focused on the individual when dealing with stress in the workplace⁽¹⁹⁾.

Considering all these aspects, it is extremely

important to identify stress triggers present in the workplace, as well as stimulating the development of individual competences to prepare people to face negative situations⁽²²⁾. Organizations must invest in initiatives that may reduce nurses' stress levels, especially with regards to personnel distribution and adequate leadership and management training. The participation in stress coping programs must be encouraged, highlighting the importance of the individual experience for stress evaluation⁽¹⁾.

Workplace stress management programs may be focused on work organization and/or on the worker. Interventions aimed at the organization are developed in order to modify work environment stress triggers, often including changes in the organizational structure, working conditions, training and development policies, participation, autonomy and interpersonal relations at work. Interventions focused on the individual aim at reducing the impact of preexistent risks through the development of an adequate set of individual stress coping strategies⁽⁵⁾.

CONCLUSION

Results obtained from primary studies included in this integrative review suggest that stress in the workplace (perioperative) aggravates the nursing team health, provoking undesirable effects both in the professional and personal lives of these workers.

As for the implications in the professional practice, results show that the evaluation of working conditions in order to identify the main stress triggers and the implementation of individual and collective measures to reduce nursing team stress may increase productivity, and workers' satisfaction, improving the quality of the assistance offered to the surgical patient.

According to the delimitations of the primary studies included in this integrative review, we can corroborate that available evidence offers a clear picture of the studied problem. However, in order to move

forward, it is necessary to conduct further research aimed at studying effective measures to reduce stress in perioperative nursing teams.

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