Stress among nursing professionals: effects of the conflict on the group and on the physician’s power

ESTRESSE EM PROFISSIONAIS DE ENFERMAGEM: IMPACTO DO CONFLITO NO GRUPO E DO PODER DO MÉDICO

ESTRÉS EN PROFESIONALES DE ENFERMERÍA: IMPACTO DEL CONFLICTO EN EL GRUPO Y DEL PODER DEL MÉDICO

Daniele Tizo Costa¹, Maria do Carmo Fernandes Martins²

ABSTRACT
This study was performed with the purpose to investigate the impact of perceptions regarding intragroup conflicts and physician power bases on the stress of nursing professionals. To do this, 124 nursing aides and technicians of a university hospital answered Scales on Work Stress, Supervisor Power Bases Perception, and Intragroup Conflict Perception, and a form containing socio-demographic data. Most subjects presented low stress levels (58%), perceived a medium level of intragroup conflict and legit power as the most often used by physicians. Stepwise Regression Analysis results revealed that the task conflict and coercion power are direct predictors of stress, whereas age appears as an inverse predictor. The physician in charge has an important role on the nursing team’s perception of stress and the need to seek solutions for task conflicts and, therefore, reduce the stress of these professionals.

DESCRIPTORS
Nursing, team
Stress
Burnout, professional
Physician-nurse relations
Interprofessional relations
Power (Psychology)

RESUMO
Este estudio propôs-se a investigar o impacto das percepções de conflito intragrupal e de bases de poder do médico sobre o estresse de profesionales de enfermería. Para ello, se aplicaron en 124 técnicos y auxiliares de enfermería de un hospital universitario las Escalas de Estresse no Trabajo, de Percepción de Bases de Poder del Supervisor y de Percepción de Conflictos Intragrupales, más un formulario de datos sociodemográficos. A mayoría presentó bajos niveles de estrés (58%), percibió conflicto intragrupal suma gradaición media y el poder legítimo como el más utilizado por los médicos. Resultados de análisis de regresión stepwise revelaron que conflicto de tareas y poder de coerción son predictores directos de estrés, mientras que la edad se reveló como predictor inverso. Se destaca la importancia del papel del médi-co responsable en la percepción de estrés del equipo de enfermería y la necesidad de buscar soluciones para conflictos de tareas y, consecuentemente, reducir el estrés en dichos profesionales.

DESCRITORES
Equipe de enfermagem
Estresse
Esgotamento profissional
Relações médico-enfermeiro
Relações interprofissionais
Poder (Psicologia)

DESCRITORES
Grupo de enfermería
Estrés
Agotamiento profesional
Relaciones médico-enfermera
Relaciones interprofesionales
Poder (Psicologia)

*Taken from the Research Project “Impacto das percepções de conflito no grupo e de bases de poder do médico sobre o estresse em profissionais de enfermagem”, Instituto de Psicologia, Universidade Federal de Uberlândia. ¹Psychologist. Master’s student, Graduate Program, Instituto de Psicologia, Universidade Federal de Uberlândia. Uberlândia, MG, Brazil. danitcosta@yahoo.com.br ²Ph.D. in psychology. Full Professor, Graduate Program in Health Psychology and Graduate Program in Administration at Universidade Metodista de São Paulo. Collaborative Professor, Graduate Program in Psychology, Instituto de Psicologia, Universidade Federal de Uberlândia. Uberlândia, MG, Brazil. mcfernandesmartins@yahoo.com.br
INTRODUCTION

The hospital environment contains a range of factors that cause health risks and suffering for professionals working there and different studies appoint nursing as a profession in this context that faces a high level of occupational stress.

Occupational stress is defined as a result of the relation between individual and work environment, in which the latter is assessed as a burden and too much for the person’s resources, and perceived as a risk for that person’s wellbeing[1]. The importance of research on the theme rests in the potential negative consequences that can be felt on both sides in the work relation, as the organization loses productivity and quality of the delivered service, while the worker loses physical and psychological health[2-4]. In case of nursing professionals, the enhanced interest in stress research is related to the risk of burnout, conflicts and dissatisfaction at work, which is extremely concerning in view of the consequences for professionals, institution, patients and population.

Identifying the factors directly related with occupational stress is not an easy task though. According to some authors[2,4,5], the interpersonal relationship is considered a potential stressor. This relationship involves individual and group variables and a study that addresses all of these would be unfeasible. With a view to contributing to knowledge on stress among nursing auxiliaries and technicians, this study focuses on the role of bases of power and intragroup conflicts. The goal is to identify the ability to predict the bases of power the supervisor (superior in command) uses and intragroup conflicts in the context of stress among nursing auxiliaries and technicians at a public hospital.

The hypothesis was raised that relationship conflicts and legitimate and coercive bases of power would serve as direct predictors of occupational stress, while task conflicts and expert and reward bases of power would act as inverse predictors of the consequent variable.

In general, a trend exists to consider occupational stress as a stressors-reactions process, as it represents the most complete focus covers both the stressor and the reaction-based process[6].

Today, however, individual characteristics are taken into account, because they interfere in the individual’s perception of the environment, as participating factors in the stress level a person experiences, but that the stress level depends on the presence of events in the organizational environment that are assessed as stressors.

In the hospital environment, a range of factors exist that entail health risks and suffering for the professionals working there. Nursing professionals may be the most affected in this context[7]. Some of the components that represent a threat to nursing professionals’ health are: disproportional relation between the small number of professionals and excess activities to be performed, difficulty to outline roles between team professionals (nurses, nursing technicians and auxiliaries) and issues related to salary tightening, which obliges professionals to have more than one job, resulting in a long and exhausting hour load[8]. A survey of all literature on nursing stress published in Brazil between 1982 and 2001 revealed that the intrinsic work factors most related with stress are: work environment,
overload, unsatisfactory interpersonal relations, night work and longer time on the job\(^{(19)}\). Besides, constant exposure to anguish and to the patient’s suffering and its impact on his/her psychological condition can also be considered a stress factor\(^{(10)}\).

Based on the referred scientific literature, a trend seems to exist to identify a relation between nursing team stress and work conditions: excessive standardization of work procedures, routine and repetitive activities, low remuneration, which drives professionals to work longer workdays, besides difficulties in interpersonal relations.

**Bases of power**

Power refers to the production of intentional effects, depending on the relation among people for that purpose\(^{(11)}\). Power is also defined as the ability to influence other individuals, in a situation in which a subject or group imposes its will on another. The social influence process is intrinsic in the exercise of power. It is based on this exercise that one person induces the other to modify his/her behavior\(^{(12)}\).

When analyzing the exercise of individual power, one is confronted with the concept of bases of power, which are resources an individual uses and which make him/her capable of influencing another person, permitting the influencing agent to reach his/her objectives, besides producing the influenced person’s partial dependence\(^{(13)}\). A ranking was proposed to identify the types of bases of power in a dyadic relation and to analyze its affects and the changes generated in the process\(^{(13)}\). This theory\(^{(13)}\) focuses on the influenced person, the target of the power exercise, and the consequences of social influence on his/her behavior. They proposed a five-type taxonomy of bases of power: reward power, coercive power, legitimate power, referent power and expert power, departing from the target of the power exercise’s perspective. Later, based on the review of these studies, a sixth type of power base, information power, was considered\(^{(14)}\). Picture 1 shows the definitions proposed for each type of power base.

**Table 1 – Types of bases of power – Uberlândia, MG - 2009**

<table>
<thead>
<tr>
<th>Types of bases of power</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reward</td>
<td>Based on the subject’s perception of the influencing agent’s ability to reward him for the desired behavior.</td>
</tr>
<tr>
<td>2. Coercive</td>
<td>Based on the subject’s perception of the influencing agent’s ability to apply punishments.</td>
</tr>
<tr>
<td>3. Legitimate</td>
<td>Based on the subject’s perception that the influencing agent has the legitimate right to indicate his behavior and that this indication should be complied with.</td>
</tr>
<tr>
<td>4. Referent</td>
<td>Based on the subject’s identification with the influencing agent, seeking to behave like him.</td>
</tr>
<tr>
<td>5. Expert</td>
<td>Based on the subject’s perception that the influencing agent has knowledge and expertise in a certain area.</td>
</tr>
<tr>
<td>6. Information</td>
<td>Based on the influencing agent’s presentation of information and logical arguments.</td>
</tr>
</tbody>
</table>


The bases of power arouse experts’ interest due to their consequences, i.e. the possibility that personal, group, organizational and societal results are influenced, based on the mobilization of resources that lead to the behavior or even through the construction of meaning\(^{(11)}\). Hence, it is imperative to identify the possible effects of using bases of power on relations in the work environment and their potential impact on the stress dominated individuals experience.

**Intragroup conflict**

The exercise of power bases does not always entail positive consequences\(^{(14)}\). In some situations, the influenced person does not acknowledge or opposes the power exerted by the influencing agent, starting to act against what the agent expected. Consequently, tensions and conflicts can emerge.

Conflict is defined as the manifestation of incompatibility, disagreement or dissonance among people, groups or organizations\(^{(12)}\). Conflict research in work groups started in 1954, aiming to investigate the conflicts emerged during decision processes\(^{(13)}\). Various other studies followed and different names were used to refer to existing conflict types. Recent studies use the terms task conflict and relationship conflict to refer to the two different types of intragroup conflict\(^{(15-16)}\).

The task conflict or cognitive conflict derives from the perceived disagreement among group members about the content of their decisions, and can involve different viewpoints, ideas and opinions. Relationship or emotional conflicts derive from perceived interpersonal incompatibility, involving tension, irritation and anger among group members\(^{(13)}\).

In view of their possible consequences for the group, task conflicts can be considered functional, while relationship conflicts can be considered dysfunctional\(^{(17)}\). This is due to the fact that relationship conflicts derive from individual disputes and differences, arousing negative feelings among stakeholders and bad work outcomes. In other words, the discussions deriving from task conflicts seem to generate richer ideas on the theme, satisfactory work results, besides making the stakeholders perceive that they participate in decisions\(^{(17)}\). When levels of task conflicts are high\(^{(18)}\), however, or when they turn into re-
relationship conflicts\(^{(12)}\), they can also be dysfunctional, reducing satisfaction and group commitment. Other studies\(^{(16,18)}\) indicate high correlation levels between relationship conflict and task conflict. Thus, in some conditions, the task conflict can be perceived as a relationship conflict.

A Brazilian study\(^{(16)}\) on interaction and conflict among professional categories in public hospital organizations appoints that intragroup conflict and power are closely related when considering work relations among health professionals in the hospital environment. Besides, there are signs that these two factors entail negative consequences for interpersonal relations and work performance. In the literature review for this study, however, no research was located that aimed to identify whether conflict and power bases can be considered stress factors for nursing team work, which justifies this study.

**METHOD**

This study can be classified as a correlation research, in which relations can be established among variables without the researcher’s intervention in the reality, and cross-sectional, as variables were measured at the same time.

**Place of study**

The Hospital where this study was developed is a hospital unit affiliated with a Federal University, constructed as a teaching unit for the Medical Course and inaugurated in 1970. Today, it is the only public referral hospital for medium and high-complexity care in the region and the largest hospital that delivers services through the Unified Health System in Minas Gerais.

**Participants**

The sample comprised nursing professionals working as nursing auxiliaries and technicians, over 18 years of age, without any gender or marital status restrictions, who volunteered to answer the questionnaires by signing an informed consent term. This was a convenience sample.

**Instruments**

To assess the constructs proposed in the objectives, a questionnaire with socio-demographic data was used (gender, age, marital status, education, wage range, time of work at the hospital, workweek, other jobs and work area at the hospital), as well as a set of three scales: WSS – *Work Stress Scale* – short version\(^{(14)}\), SBPS – *Supervisor’s Bases of Power Scale*\(^{(19)}\) and ECI – *Intragroup Conflict Scale*\(^{(20)}\), all of which have been validated in Brazil with adequate reliability ratios.

**Data collection**

All ethical requirements established in National Health Council Resolution No 196 were complied with for the free and informed participation of volunteering professionals. They received information about the research objectives and the set of printed instruments. They were asked to answer them anonymously and cast them in a sealed box, which the researcher only opened at the end of data collection. N. processo

**Data analysis**

Statistical analysis of the collected data was performed using SPSS (Statistical Package for the Social Sciences) for Windows software, version 15.0. Answers were submitted to descriptive analyses (means, modes, standard deviation, medians) and stepwise regression analysis.

**RESULTS**

Most participants were female (77.4%), with a higher frequency of married participants (42.7%). The respondents’ mean age was 35 years, with a broad age distribution (sd = 11 years). Most participants had finished up to secondary education (52.4%), as expected, since the researchers chose to investigate professionals working as auxiliaries or technicians.

The mean time of work at the institution was 112.9 months (approximately 9 years and 3 months), with a wide range (sd = 109.56 months). Professionals with five years on the job (statistical mode) were more frequent.

Most research participants only work at the hospital (73.4%). Although most gain up to R$ 700 (30.6%), a wide range exists in the distribution of wage ranges, including salaries of more than R$ 1900 (15.3%). For technicians and auxiliaries who only work at this institution, the mean weekly hour load is 38 hours, against 74 hours for professionals who also work at other institutions.

In view of compliance with the premises for regression analysis, Pearson’s correlations among the variables were investigated, with a view to identifying mutual interaction patterns. Significant moderate correlations were found between stress and task conflict (r=0.54; p<0.01), indicating that, the greater the perception of task conflict, the greater the perception of occupational stress, and between task conflict and relationship conflict (r=0.72; p<0.01), indicating that, the greater the perception of task conflict, the greater the perception of relationship conflict.

The analysis of other correlations showed low (r<0.50) but significant and positive rates between the variables: stress and legitimate power (r=0.21; p<0.05), stress and expert power (r=0.18; p<0.05), stress and coercive power (r=0.28; p<0.05), stress and reward power (r=0.19; p<0.05), stress and relationship conflict (r=0.49; p<0.01). These results demonstrate that, the stronger the stress perception,
the stronger the perception of all of these variables. The same type of relation was observed between legitimate power and expert power (r=0.30; p<0.01) and between legitimate power and reward power (r=0.36; p<0.01). The correlation between expert power and reward power was also significant and positive (r=0.39; p<0.01).

Factor means were calculated for each factor in each scale to characterize the levels of stress, intragroup conflict perception and perception of bases of power used by the supervising physician. Regarding stress, the results revealed that 24% of participants can be considered not stressed, 34% mildly stress, while 28% perceive themselves as averagely stress and 12% as very stressed. Only 2% reports feeling extremely stressed (Table 1).

The factor means for the types of Intragroup Conflict (2.4 for relationship conflicts and 2.5 for task conflicts) indicate that participants perceive that a conflict exists in work teams and that these conflicts can be ranked as medium (Table 1).

Regarding the perception of bases of power, the results indicated that the nursing auxiliaries and technicians in the sample perceive that the physicians in their team have the legitimate right to prescribe their behaviors because they perceived the legitimate base of power as the most used one (mean 3.8). They perceived, on the other hand, that coercive power was the base the physicians in their team used less, indicating that these professionals do not perceive the ability to punish in the physicians. Perception levels of all bases of power showed standard deviations higher than 1, indicating great variations in participants’ perception of all power types physicians use in contact with these professionals (Table 1).

Table 1 – Maximum and minimum scores, means and standard deviations of answers to the stress, bases of power and conflict scales – Uberlândia, MG – 2009

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Scale Median</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physician Bases of Power</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reward</td>
<td>1</td>
<td>5</td>
<td>2.3</td>
<td>3.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Coercive</td>
<td>1</td>
<td>5</td>
<td>2.0</td>
<td>3.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Legitimate</td>
<td>1</td>
<td>5</td>
<td>3.8</td>
<td>3.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Expert</td>
<td>1</td>
<td>4.8</td>
<td>2.5</td>
<td>3.0</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Intragroup Conflicts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>1</td>
<td>4</td>
<td>2.4</td>
<td>2.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Task</td>
<td>1</td>
<td>4</td>
<td>2.5</td>
<td>2.5</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Occupational Stress</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4.6</td>
<td>2.4</td>
<td>3.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Stepwise regression analysis was used to test the hypothetic model that perceptions of intragroup conflicts and the exercise of physician bases of power predict stress in nursing auxiliaries and physicians, verifying the sense of these relations. Besides the appointed preceding variables, the variables work hours per week and age were included.

The best model identified maintained task conflict, coercive power and age and explained 36% of occupational stress (F=23.98; p<0.001). Task conflict revealed the greatest explanatory power (R²=0.28, F=48.28; p<0.001). Coercive power explained 5% (β=0.18, t=2.46; p<0.05; R²=0.05) and age 3% (β = 0.18, t = - 2.44; p<0.05; R²=0.03) (Table 2).

Table 2 – Stepwise regression of conflict, power and age on stress – Uberlândia, MG - 2009

<table>
<thead>
<tr>
<th>Variable</th>
<th>Task conflict</th>
<th>Coercive power</th>
<th>Age</th>
<th>B</th>
<th>β</th>
<th>Sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task conflict</td>
<td>0.54**</td>
<td>------</td>
<td>------</td>
<td>0.75**</td>
<td>0.53</td>
<td>0.28</td>
</tr>
<tr>
<td>Coercive power</td>
<td>0.28**</td>
<td>0.09**</td>
<td>------</td>
<td>0.14**</td>
<td>0.18</td>
<td>0.04</td>
</tr>
<tr>
<td>Age</td>
<td>-0.19**</td>
<td>0.05**</td>
<td>-0.18**</td>
<td>-0.016**</td>
<td>-0.18</td>
<td>0.03</td>
</tr>
<tr>
<td>Mean</td>
<td>2.4</td>
<td>2.5</td>
<td>2.0</td>
<td>35 anos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard deviation</td>
<td>1.0</td>
<td>0.7</td>
<td>1.3</td>
<td>11 anos</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results did not demonstrate the hypothesized inverse relations. Except for age, all results indicated a direct relation between the preceding variables and the stress variable. These results are discussed next.
DISCUSSION

Literature appoints that one potential stressor in job activities is group members’ perception of intragroup conflict. Problems in interpersonal relations are one of the most relevant stress sources(3). Another study(21) obtained similar results and associated intragroup conflict with stress as well as low effectiveness in group performance. In Brazilian studies, conflicting interpersonal relations among work team members figure among the main stress sources in nursing professionals(22,25). Hence, the present study data support literature findings, in that intragroup conflict can predict occupational stress.

As opposed to literature(16,18), however, the relation between perceived relationship conflict and stress was not found in this study. For the present research participants, only task conflict revealed a role in the explanation of stress, against the constructive nature of this conflict type defended in literature(18). The intensity of the task conflict(18) can explain this apparent contradiction, in which task conflict, as opposed to relationship conflict, is related to stress. When very intense, it exerts negative effects similar to the relationship conflict and can cause a cognitive overload and suffering among group members. On the other hand, the task conflict can turn into a relationship conflict(17). Other studies(16,18) even identified a high correlation between both, which reveals little distinction between the concepts. Hence, individuals supposedly perceive the existence of intragroup conflicts but do not distinguish its type. That could be one explanation for the present study findings, as a high correlation was obtained between the two conflict types (α = 0.72; p<0.01).

Another important result found was the inverse relation between workers’ age and stress levels, with the former predicting the latter. In the literature review, one study(21) of nursing professionals found the same results, identifying that younger professionals felt more higher occupational stress levels. The reviewed literature itself contains a suggested explanation, which should be investigated in future studies. To be perceived as a stressor, a situation depends on the individual’s cognitive assessment and coping ability(4). Thus, it is believed some relation may exist between maturity and better coping efforts and strategies, and, hence, lower stress levels. This is an explanatory hypothesis because this study did not investigate coping strategies, but a possibility that should be looked into in future studies.

As for the bases of power the physician exerts and their relation with stress in nursing technicians and auxiliaries, coercive power revealed a significant ability to predict stress among the professionals under analysis. The study results reported here are in line with findings in the literature review, although only a small number of studies were located that aimed to investigate the relation between these two variables. In a study on stress in nurses(22), a direct relation was identified among coercive power, stress and intended turnover. It was also appointed that reward and expert power are inversely related with stress at work. This relation was not found in the present research, in which only coercive power revealed the ability to significantly predict stress among the participants.

Another noteworthy factor identified in this study is the participating technicians and auxiliaries’ greater perception of physicians’ legitimate power. A study of public hospital professionals reveals that physicians have a kind of specific knowledge that grants them legitimacy to exert control(7). As the authors did not specifically investigate bases of power though, they denote this knowledge as legitimacy. They define the knowledge domain as expert power, and legitimate power as deriving from the performance of the job or function that exist in the organizational structure(7). As a result of the definition, the authors(7) refer to expert power instead of legitimate power. They do appoint, however, that the knowledge domain broadens to such an extent in the hospital context that it ends up representing a formal power in the structure, equivalent to what was originally called legitimate power(7). In this sense, the present study results are in line with literature findings because they reveal that the base of power the participants perceived as the type physicians most frequently use derived from their legitimate position in the organization.

Literature also appoints that disagreement exists on the possible causes of occupational stress(3). Nevertheless, the researchers believe this study offered some contributions to knowledge on occupational stress among nursing professionals.

CONCLUSION

The results found, except for the proposed inverse relation, partially confirm the hypothetical model proposed, which involved perceptions of intragroup conflict and physician bases of power as occupational stress predictors in nursing technicians and auxiliaries.

In line with the reviewed scientific literature, for the research sample, perceived intragroup conflicts predict occupational stress for nursing technicians and auxiliaries. As opposed to the hypothesis, however, only the role of task conflicts was identified as a preceding variable for stress, while relationship conflicts were not significantly related with stress. As demonstrated in the discussion, previous studies support this finding, confirming a high correlation between relationship and task conflict, which seems to indicate that the latter can also be perceived as a relationship conflict.

In addition, the results indicated an inverse relation between workers’ age and stress levels, also in accordance with literature, which does not provide conclusive explanations for this finding though. It was also concluded that,
for these participants, physicians’ coercive power exercise predicts stress among nursing professionals although, according to them, the base the physicians most used was legitimate power.

Among the participants, stress levels were identified and compared with perceptions of conflict in the work team and of physician bases of power. Finally, predictive relations were identified between the bases of power and the stress nursing auxiliaries and technicians feel, reaching a model for the relationship between these factors.

**REFERENCES**


Methodological criticism is due, however, because this research involved professionals from one single hospital organization and is hence a case study. It should be taken into account that the obtained conclusions solely apply to this institution and do not permit generalizations, not even to other hospitals in the city.

Nevertheless, the researchers hope this study can contribute to future research and to occupational stress management in hospital institutions, in the attempt to mitigate and, who knows, develop strategies to avoid these professionals’ suffering.