

International Journal of Health Science

GROUP OF TEACHERS AND THEIR OCCUPATIONAL HEALTH

Sandra Maria de Mello Cardoso

Master in Health and Work Management
Professor at ``Instituto Federal de Educação,
Ciência e Tecnologia Farroupilha``/ Campus
Santo Ângelo
Santo Ângelo, Rio Grande do Sul, Brazil

Andressa Peripolli Rodrigues

Doctorate in Postgraduate Nursing
Professor at ``Instituto Federal de Educação,
Ciência e Tecnologia Farroupilha``/ Campus
Santo Ângelo
Santo Ângelo, Rio Grande do Sul, Brazil

Marieli Teresinha Krampe Machado

Master in Nursing
Teacher of: ``Instituto Federal de Educação,
Ciência e Tecnologia Farroupilha``/ Campus
Santo Ângelo
Santo Ângelo, Rio Grande do Sul, Brazil

Gisele Schliotefeldt Siniak

Master student in Scientific and technological
teaching
Professor at ``Instituto Federal de Educação,
Ciência e Tecnologia Farroupilha``/ Campus
Santo Ângelo
Santo Ângelo, Rio Grande do Sul, Brazil

Suzete Maria Liques

Master's student in scientific and
technological teaching
Nursing Manager of: Hospital Santo Ângelo/
RS

All content in this magazine is
licensed under a Creative Com-
mons Attribution License. Attri-
bution-Non-Commercial-Non-
Derivatives 4.0 International (CC
BY-NC-ND 4.0).



Abstract: This research is justified by the fact that teaching in Brazil is considered one of the most stressful professional activities among all professional categories. Its general objective is to verify the perceived stress of professors at a federal institution, through Cohen's PSS (Perceived Stress Scale). As a specific objective to verify the conditions that generate stress. It was a research with a qualitative and descriptive approach, carried out with teachers, in a federal teaching institution, in the interior of Rio Grande do Sul. way interfere in the work dynamics, provided the understanding of factors related to occupational health. As stress in the occupational environment was identified, an extension project will be built with several proposals to be offered to teachers, since the institution has a Higher Technology Course in Aesthetics and Cosmetics, a Technical Course in Nursing and a physical education teacher, as a strategy for coping to try to alleviate the work stress.

Keywords: Teachers, stress, occupational health.

INTRODUCTION

Concern about occupational stress has increased in recent decades in many countries. Surveys carried out in the United States detect a high incidence of stress in one third of workers¹. Similar data were found in Europe. According to the European Foundation for the Improvement of Living and Working Conditions, a third of European workers are affected by stress. Brazil ranks second in the number of workers suffering from stress, second only to Japan².

Work, as a fundamentally human and social activity, is a reason for achievement, satisfaction and pleasure, as it is in it that human beings build their identity. However, work can become harmful to health when it results in wear on the body and mind, due to the singularities of its process and

organization, becoming a pathogenic element, causing damage to workers' health³. Quality of life is important evidence in the field of work, or worker's health, to understand the implication of certain variables that affect and interfere with the worker's mental and physical health⁴. For this reason, monitoring workers' illnesses and accidents enables managers and occupational health professionals to identify risks and injuries related to workers' health. This is a growing problem that has been affecting the working class and studies on occupational stress are still not enough to minimize the consequences caused by it⁵. However, the losses do not only occur for the workers, but also for the companies. This way, concern for the emotional health of employees can favor companies, as by contributing to improving their quality of life, it will increase productivity and reduce sick leave².

With regard to the work of teachers, major challenges have been observed in this field, as it goes far beyond the mission of teaching, especially related to the various transformations that have occurred in the area of education, which require greater productivity, but which, often, do not allow the conditions without harm to health, thus causing psychic suffering, in addition to feelings of impotence and emptiness³. This, in turn, causes stress, depression, anxiety and are the main causes that interrupt work activities and are responsible for 46% of absenteeism⁶. There are some professions that are more stressful than others due to their particular characteristics and several surveys show that being a teacher is one of the most stressful professions today^{1,2}. Teachers from public institutions, when compared to professionals working in private institutions, have more symptoms of Burnout Syndrome. People who develop a high level of stress due to work, have difficulty in fulfilling their work activities, as well as non-work-related assignments, and

are inclined to show depressive symptoms⁶.

Stress arises when environmental conditions exceed the adaptive capacity of physiological or psychological processes, putting people at risk and predisposing them to the onset of diseases, and it depends not only on the frequency and extent of this stress, but also on how the person perceives it. the situation and your lifestyle⁷.

There are ways to measure stress and according to Cohen & Williamson (1988)⁸ there are three. One is directed to the presence of specific stressors; another, to the physical and psychological symptoms of stress and the third, intends to measure the perception of individual stress in a global way, regardless of the stressor agents. In addition, there are scales that measure the level of stress through other scales that calculate the impact of specific stressful events (life-events impact). But there are limitations to these devices as stress-related events can vary greatly.

A permanent theoretical-practical construction individuals. Thus, Cohen et al(1983) proposed a scale that measures perceived stress, that is, it measures the degree to which individuals perceive situations as stressful. This scale, called the Perceived Stress Scale (PSS), was initially presented with 14 items (PSS 14). The PSS is a general scale and can be used in various age groups, from adolescents to the elderly, as it does not contain specific questions about the context.

And this is an important factor in the scale and, probably, the reason why this scale has been validated in many cultures⁹. This project is justified by the fact that teaching in Brazil is considered one of the most stressful professional activities among all professional categories². Its general objective is to verify the perceived stress of teachers at a federal educational institution, through Cohen's PSS (Perceived Stress Scale). As specific objectives, identify the ways in which stress occurs

(muscle pain, headaches, among others) and check how stress can be alleviated.

METHODOLOGY

This is a research with a qualitative and descriptive approach¹⁰. The participants were professors, linked to the investigated institution. Inclusion criteria were: being a professor at the institution and agreeing to participate in the research. As exclusion: being away during the data collection period. The Perceived Stress Scale [PSS] developed by Cohen et al. (1983) and the second is the instrument most used to assess the perception of stress, having been validated in more than 20 countries^{11,7}. It consists of 14 questions, assessed using a scale ranging from 0 to 4, where 0 means no degree of stress and 4 means the maximum degree of stress. The PSS evaluates the professor's perception of life events experienced in the last month and how unpredictable and uncontrollable they are, providing a subjective assessment of stress, due to the instrument's brevity⁸.

In addition to measuring stress levels, information was sought through a questionnaire, such as gender, marital status, work in graduate school, number of children, workload in the classroom, level of scientific production, extension activity and work in administration activities. These variables were used to verify whether these conditions have an impact on the lives of individuals and act as stressors for respondents. Data were only collected after approval by the Ethics Committee through opinion 3,081,316. To maintain the anonymity of the interviewees, Teacher 1, Teacher 2 and so on until Teacher 15 were used.

After analyzing the stages, the results were described and discussed with the relevant literature, resulting in two categories: STRESSING FACTORS AND ALLEVIATING STRESS.

RESULTS

After evaluating the results, we found that, of the 15 participants (N=15) in the studied sample, they are aged between 29 and 50 years. Regarding the marital status of the professors, 02 are single, 01 separated (female), 01 widowed, 10 are married and 01 divorced, 03 are in graduate school. The workload of teachers is 40 h.

PERCEIVED STRESS SCALE (PPS)

Cohen et al1 (1983) proposed a scale that measures perceived stress, that is, it measures the degree to which individuals perceive situations as stressful. The PSS is a general scale, which can be used in different age groups, from teenagers to the elderly, as it does not contain context-specific questions. The PSS has 14 questions with response options ranging from zero to four (0=never; 1=almost never; 2=sometimes; 3=almost always and 4=always). Questions with a positive connotation (4, 5, 6, 7, 9, 10 and 13) have their scores inverted, as follows: 0=4, 1=3, 2=2, 3=1 and 4=0. The other questions are negative and must be added directly. The total of the scale is the sum of the scores of these 14 questions and the scores can vary from zero to 56. Based on the results obtained in this study, it can be noticed that the studied sample presents medium to high levels of perceived stress. The sum of the scores for these 14 questions ranged from 14 to 36. A score above 20 means medium to high stress, and of the fifteen teachers, eleven, that is, 73.33% of the teachers have medium to high stress. Regarding the teachers' stress levels, surveyed through the PSS-14, the average stress was 26.20 points. After analyzing the stages, the results were described and discussed with the relevant literature, resulting in two categories: STRESSING FACTORS AND ALLEVIATING STRESS.

DISCUSSION

CATEGORY 1: STRESSING FACTORS

Work, in addition to having a strong influence on the formation of subjectivity, is inherent to human life in society. It is rooted in the personal identity, in the psychic constitution of the individual and aims at professional choice and fulfillment. However, the work is not always considered rewarding, and in the case of teaching, there is a growing and visible difficulty in its exercise, caused by many sources that generate tension, such as a large number of students in the classroom, high workload together with extracurricular activities, professional devaluation, among others¹³. In this sense, the professors of the studied federal educational institution attribute the following as stressful factors:

- Absence of history of solving old problems (Professor 1)
- Management and coordination (Professor 2)
- Academic production, search for updating and difficulty in separating leisure from work (Professor 3)
- Devaluation of work related to the function (Professor 4)
- Lack of commitment from colleagues (Professor 5)
- Too many meetings without objectives, excessive bureaucracy (Professor 6)

The presence of stressors at work will require people's efforts to face the loads imposed on the environment, which can lead individuals to develop a balance between the demands of the environment of work and non-work domains. However, when citizens experience a high level of stress due to work, they end up struggling with being able to carry out their work activities and occupations not related to work, and therefore are prone to developing depressive symptoms⁶ and mental disorders, as a coping strategy. difficulties that arise daily

at work. When asked about health problems caused by work, the following notes emerged:

- *Muscle tension from sitting for a long time (Professor 1);*
- *heart disease (Professor 2 (M of 60 years) and 14 (F of 57)*
- *tendinitis and bursitis (Teachers 5, 8, 10)*
- *depression (Teachers 7, 9, 11 and 13).*

Teachers' exhaustion is perceived in the reported physical and psychological symptoms of stress, observing the presence of impairments such as muscle tension, tendinitis, bursitis and depression. In relation to heart diseases, due to work overload, educators are people prone to showing symptoms of stress and cardiovascular diseases¹³. The interesting thing about this study is that half of the professors are under 39 years old.

However, inadequate lifestyle habits contribute to cardiovascular disease. It was possible to notice that 03 professors, aged 31, 59 and 60 years old, do not practice any physical activity and 03, aged 24, 32 and 58 years old, do it eventually, which represents 40% of the studied sample. None of them use tobacco and one, male, occasionally uses alcohol to relieve stress. Of the professors who report having heart diseases due to work, only one performs physical activity.

Physical inactivity represents one of the determining factors for chronic non-communicable diseases, causing one in every ten deaths worldwide and was prevalent in 79.7% of professors in another study with professors¹⁴.

However, physical exercise is configured as a practice for a healthy life, and its absence, by Public Health: A permanent theoretical-practical construction Chapter 5 39 in turn, is considered a risk factor for health. Knowledge updates were also considered as stressors by the studied sample, as mentioned by Professor 8 "knowledge cannot be measured or bought,

the process of learning and updating needs to be constant", interpersonal relationships, cited by Professors 1 and 10 "Lack of commitment from colleagues" and "Trouble with students and colleagues", inadequate environments as quoted by Professor 2 "High workload and lack of structure at the institution", lack of appreciation of the teacher as cited by Professor 6 "Devaluation of the related work the function".

It is not the increase in work that seems to generate greater suffering, but rather the loss of meaning linked to it and frustrated expectations. However, these expectations the teacher perceives as fundamental to their work, as agents of transformation of social reality. The lack of recognition of work is also pointed out as an occupational stressor and as a challenge for this profession, as many professors feel insecure about their future at the institution due to current political circumstances and, in addition, 20% of the professors in the sample do not are effective, thus contributing to increase the level of stress.

Labor reform and the liberation of indiscriminate outsourcing led to the reduction or annihilation of workers' rights, which included Brazil in the black list of the International Labor Organization (ILO), as one of the 24 nations that seriously violate international labor standards and conventions¹⁵. In addition, the country is undergoing a pension and administrative reform, which further contributes to raising the level of stress. The relationship between professors and students also seems to contribute to raising stress levels, as many students show a lack of interest and commitment in relation to classes, which seems to contribute to demotivation in relation to the teaching profession.

Given this, it is important for teachers to understand the limits and possibilities of their work, as students are co-responsible in this process, which will contribute to everyone's

work in the teaching-learning process ¹⁶. Interpersonal relationships, evidenced in this study, are significant in the lives of human beings and this practice requires a great effort, as we are different from each other and this fact sometimes generates insecurity in knowing the next. But that is how society is organized. When interpersonal relationships, as perceived in the study, social relationships can be impaired.

In addition, the way in which these relationships take place define the way in which people and the environment coexist. Therefore, the quality of these relationships can make a difference between well-being and suffering, which is why it is so relevant ¹⁷. Altered emotions, caused by some stimulus, which can be a feeling, an event, backlog of work, a misunderstanding or bad behavior by a colleague, are factors that can negatively impact interpersonal relationships, as they can cause conflicts between people who share the same work environment.

However, experiencing emotions is very personal, they can be felt in different ways by each person, which leads a person to react differently to an event, which can be evidenced through physical reactions such as changes in breathing, voice, crying, redness, tremors, irritation, headaches and body aches, fear, anger, high blood pressure, palpitations, fatigue, among others. The way each one responds emotionally to different situations, that is, how they handle emotions is with the aim of preserving their well-being. However, many times these stressful situations or emotional manifestations can be channeled and end up translating into physical changes, such as depression and heart disease. Each person has their own way of dealing with different situations. This way, what for some can be stressful, for others, are challenges to be overcome. In this sense, when the stress level is low, it favors personal and professional

satisfaction ¹⁸, and when, on the contrary, it lowers the body's defenses and can cause an increase in blood pressure, changes in the respiratory system and pain in the joints can emerge¹⁹.

Teachers in Brazil occupy second place in occupational categories with diseases. This data may be underestimated, since depression, anxiety and stress can be the result of burnout and not the main diagnosis. This syndrome is a three-dimensional theoretical model that encompasses the dimensions: emotional exhaustion, lack of personal fulfillment at work and depersonalization or dehumanization that is presented as a result of the development of feelings and negative attitudes and distancing in relation to people who come into direct contact with the professional ⁶.

CATEGORY 2: ELIMINIZING STRESS

The teachers' difficulties are so serious that more and more professionals are thinking of abandoning their careers, because they experience stressful tensions, which generate physical and psychological exhaustion.

This damages relationships by causing anxiety, irritation and a decrease in the level of tolerance, not only in the school environment, but also in the family and other social circles. In this study, 08 teachers (53.33%) claimed that they take work to do at home and they said that this interferes with family relationships. Teaching activities often require a weekly load beyond that stipulated, so that they can handle their attributions, such as reading authors to stay up-to-date, correcting assessment activities, preparing classes, among others ². In this study, all professors have a weekly workload of 40 (forty) hours of work, exclusively dedicated to teaching, research, extension and/or institutional management activities. The way of facing threatening situations will define the coping strategies used to deal with stress. In this sense, physical

activity is great for increasing self-confidence and improving health, which makes the mood more resistant to decline. However, a sedentary lifestyle is common among teachers, as 40% of the sample in this study does not practice or occasionally perform physical activity. In another study, physical inactivity was also observed, due to work-related obligations and needs and is linked to people's contemporary lifestyle, with work-related obligations and needs as determining factors¹⁴.

However, proper time management means that the person can reach the end of the day with much more energy, allowing for better development in the workplace. From the sample of this study, 100% of the professors stated that the career can harm the quality of life "*due to friction in the workplace, injustices and lack of ethics* (Teacher 2), "*it needs to be constantly updated* (Teacher 3), "*...the accumulation of activities and attributions can cause emotional problems and mental disorders*" (Professor 8). All statements corroborate to increase the level of stress. Situations like those mentioned above, chronic stress, increase cortisol, which affects the brain reward system (SRC). Thus, the sensitivity of the SRC increases, which can trigger excessive intake of highly palatable foods. Other hormones also act at the central level, causing the desire for palatable foods, such as dopamine, leptin and insulin. Thus, foods rich in fat and sugar promote pleasure and good emotions, increasing the desire to consume this type of food, as its consumption is associated with the memory of a feeling of reward¹⁹. Therefore, it is important to choose fresh foods, such as fruits and vegetables during stressful periods, as a healthy diet also contributes to improving the quality of life.

In addition, the social support offered by family and friends is an emotional strategy

in order to reduce the impact of stressors. It can be considered as a source of relaxation, allowing problems to be left on another plane. However, 60% of professors take their problems home with the aim of reducing stress, as observed in the following statements: "*Some activities make us put the family in the background*" (Teacher 3); "*... need to vent and not enjoy moments with the family*" (Professor 7); "*...little time for family*" (Professor 4); "*...taking work problems home*" (Teachers 5, 7, 8, 10, 12, 14) and also "*...some activities make us put the family in the background*" (Teachers 9 and 15). Family support contributes to helping to cope with stress, working as an individual coping strategy for occupational stress as a possibility of preserving the health and well-being of teachers².

FINAL CONSIDERATIONS

This research had the purpose of verifying the stress level of the teachers as well as the stressors. Therefore, recognizing what causes it is important to try to modify or reverse the presented reality. As stress in the occupational environment was identified, an extension project will be built with various proposals to be offered to teachers, such as massage, complementary therapy activities, physical activities, since the institution has a Higher Course in Technology in Aesthetics and Cosmetics, Course Nursing technician and physical education teacher, as a coping strategy to try to alleviate work stress. This project and its proposals will act as a way of facing threatening situations, trying to generate an increase in resistance to stress and improve health and contribute to increasing the teacher's self-confidence and improving their health, functioning as a buffer of the impact of stress on your life.

REFERENCES

1. SCHMIDT, J.; KLUSMANN, U.; LÜDTKE, O.; MÖLLER, J.; KUNTER, M. What makes good and bad days for beginning teachers? A diary study on daily uplifts and hassles. *Contemporary Educational Psychology*, n. 48, p. 85–97, 2017.
2. VANZIN, NATÁLIA GIÓIA CÍPOLA. Estresse ocupacional e trabalho docente: estudo de caso em uma instituição federal de ensino superior / Natália Gióia Cípola Vanzin – 2019.
3. SILVA, D. M. R.; ROSA, E. D.; MARTINS, A. A.; CARBALLO, F. P.; SOUSA, F. F. Educação em Revista, Marília, v.19, n.2, p. 129-142, Jul.-Dez., 2018.
4. TOLOMEU, R.; TAVARES, F.S.; MONTEIRO, I. P.; CAMARGOS, G. L.; CORREA, A. A. M. Qualidade de vida e estresse em professores de uma instituição de ensino superior do interior de minas gerais. *Revista Científica Fagoc Saúde - Volume II* - 2017.
5. SANTOS, L. A. M; VIDAL, V. M.O estresse do professor: estudo acerca da corporeidade em profissionais da educação básica. *Rev. InterEspaço Grajaú/MA* v. 3, n. 11 p. 280-303 dez. 2017.
6. BAPTISTA, M. N., SOARES, T. F. P., RAAD, A. J., & SANTOS, L. M. (2019). Burnout, estresse, depressão e suporte laboral em professores universitários. *Revista Psicologia: Organizações e Trabalho*, 19(1), 564-570. doi: 10.17652/rpot/2019.1.15417.
7. MACHADO, W. L. et al. Dimensionalidade da Escala de Estresse Percebido (Perceived Stress Scale, PSS-10) em uma Amostra de Professores. *Psicologia: Reflexão e Crítica*, v. 27, n. 1, p. 38-43, 2014.
8. COHEN S, WILLIAMSOM GM. Perceived Stress in a Probability Sample of United States. In: Spacapan S, Oskamp S, editores. *The Social Psychology of Health: Claremont Symposium on applied social psychology*. Newbury Park, CA: Sage; 1988.
9. LUFT, C. D. B.; SANCHES, S. O.; MAZO, G. Z.; ANDRADE, A. Versão brasileira da Escala de Estresse Percebido: tradução e validação para idosos. *Rev. Saúde Pública* [online]. 2007, vol.41, n.4, pp.606-615. ISSN 1518-8787. <https://doi.org/10.1590/S0034-89102007000400015>.
10. MINAYO, M. C. S. O desafio do conhecimento. 12. ed. São Paulo, 2010.
11. REMOR, E. (2006). Psychometric properties of a European Spanish version of the Perceived Stress Scale (PSS). *Spanish Journal of Psychology*, 9(1), 86-93.
12. MELO, B.R.; ARCANJO, N. A. B.; FEIJÃO, G. M. M. NÍVEIS DE ESTRESSE E ANSIEDADE EM PROFISSIONAIS DA EDUCAÇÃO. Semana do direito, número 1, volume 2, 2018.
13. GOMES, C. M. Estresse e risco cardiovascular: intervenção multiprofissional de educação em saúde. *Rev Bras Enferm [Internet]*. 2016 mar-abr;69(2):351-9.
14. DIAS J, DUSMANN JUNIOR M, COSTA MAR, FRANCISQUETI V, HIGARASHI IH. Qualidade de vida de docentes universitários. *Escola Anna Nery* 21(4) 2017
15. PINO, I. R. et al. A educação no atual cenário político econômico mundial: a disputa eleitoral e os retrocessos na educação. *Educ. Soc.*, Campinas, v. 39, nº. 144, p.515-521, jul.-set., 2018.
16. SILVA, Eduardo Pinto e. Adoecimento e sofrimento de professores universitários: dimensões afetivas e ético-políticas. *Psicol. teor.*, São Paulo, v. 17, n. 1, p. 61- 71, abr. 2015.
17. PEREIRA TJ, TRENTINO JP, ALVES FC, PUGGINA AC. Qualidade dos relacionamentos interpessoais. *Esc Anna Nery* 2019;23(1):e20180159
18. SÁ SCA, SILVA RM, KIMURA CA, PINHEIRO GQ, GUIDO LA, MORAES-FILHO IM. *Rev. Cient. Sena Aires. Estresse em docentes universitários da área de saúde de uma faculdade privada do entorno do distrito federal* 2018 Out-Dez; 7(3): 200-718.
19. PENAFORTE1, F.R.O; MATTA, N. C.; JAPUR C. C. Associação entre estresse e comportamento alimentar em estudantes universitários. *Demetra*; 2016; 11(1); 225-237.