

POST-SECONDARY VOCATIONAL EDUCATION: FEMALE STUDENT STRESS AND WOMEN'S MENTAL HEALTH

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ABSTRACT

This study investigates stress among female student in post-secondary vocational education, in the Occupational Safety program at the Federal Institute of Rio Grande do Norte (IFRN), Natal Central Campus, in 2023. In a sample of 113 students — 78 women (69%) and 35 men (31%) — the study examined the extent to which women are affected by stress and how frequently stress-related factors impact their academic routine. The methodology included bibliographic, documentary, and field research, conducted through an online

questionnaire with both objective and subjective questions. Findings revealed a predominance of stress symptoms — such as exhaustion, irritability, and sleep disturbances — among female students, as well as a higher incidence of complaints related to academic life, including difficulties with concentration and learning. These conditions compromise the mental health of these women and highlight a gender disparity in the experience of academic stress.

KEYWORDS: Stress, Women, Post-Secondary Vocational Education.

EDUCAÇÃO PROFISSIONAL SUBSEQUENTE: ESTRESSE DISCENTE E SAÚDE MENTAL DE MULHERES

RESUMO

A presente pesquisa investiga e analisa o estresse discente em mulheres matriculadas na educação profissional subsequente no curso de Segurança do Trabalho do Instituto Federal do Rio Grande do Norte (IFRN), Campus Natal Central, no ano de 2023. Em uma amostra de 113 discentes, sendo 78 mulheres (69%) e 35 homens (31%), problematizou-se em que medida as mulheres são acometidas por estresse e com que frequência os fatores relacionados a ele refletem no cotidiano escolar. A metodologia envolveu pesquisa

bibliográfica, documental e de campo, por meio de questionário online com perguntas objetivas e subjetivas. Constatou-se a predominância de sintomas de estresse, como esgotamento, irritabilidade e dificuldade de dormir, nas discentes do gênero feminino, além de maior incidência de queixas relacionadas ao cotidiano escolar, como dificuldade de concentração e aprendizagem. Tais situações comprometem a saúde mental dessas mulheres, evidenciando uma disparidade de gênero na vivência do estresse.

PALAVRAS-CHAVE: Estresse, Gênero Feminino, Educação Profissional.

1 INTRODUCTION

Post-secondary vocational education (PSVE) appears to be an important tool for professional qualification and integration into the labor market. However, for women, this journey may be characterized by specific challenges that affect their mental health, such as academic stress.

Vocational education – offered by the Federal Institutes of Education, Science, and Technology (IFs) – provides society with technical and technological training that integrates theoretical and practical components, in accordance with Law No. 11.892/2008 (Brazil, 2008) which created the Federal Institutes of Education in Brazil. This type of education may be integrated into upper secondary education or offered subsequently, serving students with diverse profiles, as established in the Law of Guidelines and Bases of National Education (LDB), Law No. 9.394/1996 (Brazil, 1996).

Regarding post-secondary technical and vocational education, Decree No. 2.208/1997 (later revoked by Decree No. 5.154/2004, which nonetheless maintained the provision) enabled the offering of programs aimed at individuals who had already completed high school, with the objective of facilitating their entry or re-entry into the labor market (Ramos, 2011). These subsequent-level programs are primarily targeted at youth and adult learners, who may obtain professional qualification certificates upon completing each stage or module (Viana, 2012). Article 36-A of the LDB, included by Law No. 11.741/2008, reinforces this modality by permitting that vocational training be conducted either within high school institutions themselves or in partnership with specialized institutions (Brazil, 1996).

The Subsequent Technical Course in Occupational Safety offered by the Federal Institute of Rio Grande do Norte (IFRN), Natal Central Campus, which is the focus of this study, is structured as a semester-based program totaling 1,670 hours. Of this total, 105 hours are allocated to the core curriculum, 225 hours to the integrative module, 870 hours to the technological module, 70 hours to curriculum seminars, and 400 hours to professional practice, which may be fulfilled through a supervised internship or through research and/or extension projects (IFRN, 2011). Detailed curricular organization of this course is presented in Figure 1. It is important to emphasize that the specific structure and workload of the program constitute a relevant contextual factor for understanding the academic demands faced by students.

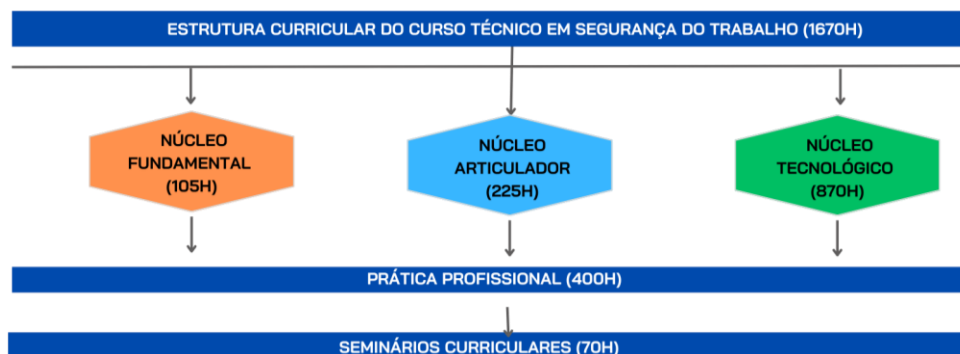


Figure 1: Curriculum Structure of the Post-Secondary Technical Course in Occupational Safety Core Curriculum (105h); Integrative Module (225h); Technological Module (870h); Professional Practice (400h); Curricular Seminars (70h)

This study delves into the investigation and analysis of academic stress, with a specific focus on women enrolled in the post-secondary Occupational Safety course at the Federal Institute of Rio Grande do Norte (IFRN), Natal Central Campus, in the year 2023. The sample consisted of 113 students, 78 of whom were women (69%) and 35 men (31%), as illustrated in Figure 2. This predominance of female students reflects the overall enrollment profile in the course under study. Given this context, the research seeks to address the following questions: To what extent are women enrolled in the Occupational Safety course at IFRN Natal Central Campus affected by stress in the educational setting? And how frequently do stress-related factors impact their school routine?

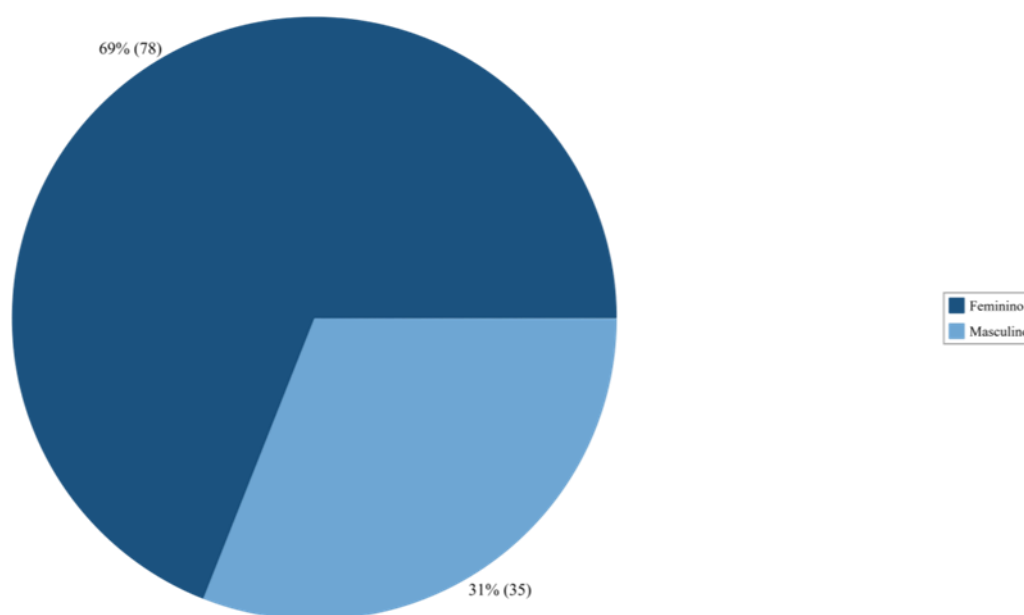


Figure 2: Research Participants by Gender and Course Period

According to the World Health Organization (WHO), mental health encompasses an individual's overall psychological and emotional well-being, including the ability to cope with stress, challenges, relationships, decision-making, and emotions in a balanced manner (World Health Organization, 2002). Mental health goes beyond the mere absence of mental disorders; it represents a positive mental state that enables individuals to reach their full potential, manage daily demands, and contribute to their communities. Discussing mental health, therefore, involves addressing everyday challenges that may lead to high levels of stress, often becoming a determining factor in emotional balance. The WHO recognizes the magnitude of stress as a public health issue in contemporary society, classifying it as "a global epidemic" (World Health Organization, 2022). This statement highlights the widespread impact of stress on global health and well-being, transcending geographic, socioeconomic, and cultural boundaries.

The concept of stress was introduced into biology and medicine by Hans Selye in 1936. Until then, the term had been used in physics to describe the tension and deformation of materials under strain. Selye (1936) defined stress as a nonspecific response of the body to any demand placed upon it—an adaptive effort of the organism in the face of harmful agents (stressors) that threaten its

homeostasis. The “General Adaptation Syndrome” proposed by Selye (1936) outlines the stages of this response: alarm, resistance, and exhaustion. Stress is, therefore, a physiological and psychological response to events that disrupt an individual’s routine, requiring adaptation. When successful, this adaptation can be beneficial, fostering resilience. However, if the adaptive effort is insufficient or excessively prolonged, the individual may experience physical and psychological symptoms that can impair learning and overall health (Tabaquim & Marquesini, 2013).

According to Lipp (2000), stress can affect both the body and the mind, manifesting through physical symptoms such as gastrointestinal issues, muscle and headaches, sleep disturbances, cardiovascular problems, and changes in the immune system.

In addition, stress may also trigger psychological symptoms such as anxiety, irritability, difficulty concentrating, mood swings, and depression. The author emphasizes the importance of paying attention to these signs and seeking professional help if they persist or interfere with one’s quality of life.

The educational context may constitute a fertile environment for the emergence of stress-inducing situations for students. Within it, a multiplicity of factors—such as pressure to perform, complex interpersonal relationships, and academic overload—can contribute to the development of stress-related conditions among learners. Not infrequently, stressed students present physical symptoms such as sweating, dry mouth, muscle tension, nausea, stomach pain, tingling sensations, and headaches. Psychologically, they may experience interpersonal difficulties, excessive worry, anxiety, tension, distress, emotional lability, and difficulty concentrating (Milsted et al., 2009; Monteiro et al., 2007).

It is important to highlight that stress can have significant impacts on health and well-being, particularly among students, as it affects academic performance and quality of life. Tsunematsu et al. (2021) emphasize that student mental health is a critical dimension to be considered in Professional and Technological Education (PTE), stressing that “the researcher who aims to address the subjectivity of individuals within the context of Professional and Technological Education (PTE) must be aware of an education oriented toward the full human expression, that is, omnilaterality” (Tsunematsu et al., 2021, p. 71). The authors argue that promoting mental health within the school environment is fundamental to students’ holistic development and to fostering a healthier and more equitable learning space. They advocate for institutional actions that go beyond individualized care, such as strengthening psychological support, revising curricular structures, and creating a more welcoming and less competitive educational atmosphere.

When examining student stress in vocational education through a gender lens, it becomes evident that women tend to experience higher levels of stress. In the context of PTE, stress may stem from varied sources, including excessive workload, performance pressure, learning difficulties, and school-related challenges (Borges & Mourão, 2010). For women—who frequently face additional challenges stemming from gender inequalities in both the labor market and society—stress may represent an even more substantial obstacle to their professional and personal development (Bruschini & Lombardi, 2000). The study by Borges and Mourão (2010) reveals that work overload, pressure for results, and difficulties balancing personal and professional life are significant contributors to stress among women seeking professional qualification. Bruschini and Lombardi (2000) support this view, highlighting that gender-based inequalities present in both

society and the world of work can intensify the effects of stress on women's health and well-being. The introduction of this gendered perspective from the outset justifies the focus of the present study and lays the groundwork for the data analysis that follows, specifically exploring the experiences of women.

Thus, the aim of this study was to investigate and analyze academic stress among women enrolled in the subsequent-level vocational education program in Occupational Safety at the Federal Institute of Rio Grande do Norte, Natal Central Campus, in the year 2023. This is a study with a predominantly qualitative approach, supported by descriptive quantitative data. It comprises three pillars: bibliographic research, documentary research, and field research conducted through an online questionnaire consisting of both objective and open-ended questions.

2 SOCIAL CONSTRUCTION OF FEMALE GENDER AND THE IMPACT OF STRESS ON WOMEN'S LIVES

Simone de Beauvoir, a French philosopher and writer, is regarded as one of the leading voices of twentieth-century feminism. Her most renowned work, *The Second Sex* (originally published in 1949), is a landmark in the history of feminist thought, challenging traditional notions of femininity and the condition of women in society. In *The Second Sex*, Beauvoir questions the idea that women are defined by their biology, arguing instead that femininity is a social construct. She explores the various forms of oppression and discrimination faced by women, from childhood through adulthood, and how such oppression shapes their experiences and opportunities. The book addresses themes such as women's history, female sexuality, motherhood, labor, and the representation of women in culture. Beauvoir's (2016) assertion, "One is not born, but rather becomes, a woman" (p. 9), revolutionized the understanding of female gender by deconstructing the notion of innate biological essence and highlighting the influence of social construction on women's experiences.

From this perspective, the social challenges imposed on women can be seen as determining factors in the roots of female stress. The analysis reveals how societal expectations and prescribed roles can generate internal conflict, emotional overload, and consequently, a negative impact on women's mental health and well-being. Understanding that gender is socially constructed helps explain why stress experiences can differ significantly between men and women—not due to inherent biological differences, but rather due to the distinct pressures and social roles assigned to each gender.

Supporting this view, Swedish psychologists Marianne Frankenhaeuser and Ulf Lundberg, in a seminal 1986 study on the influence of sex roles in the psychophysiology of stress, were pioneers in exploring the relationship between gender and stress. Frankenhaeuser and Lundberg (1986) pointed to women's heightened vulnerability to stress, observing that female socialization—often focused on prioritizing others and assuming domestic and caregiving responsibilities—can lead to role conflicts and demands that contribute to stress. According to the authors, women may experience more stress due to the multiplicity of roles and responsibilities, such as balancing family care and external work (Frankenhaeuser & Lundberg, 1986, p. 163). This finding, made decades ago,

remains relevant today, highlighting the persistence of gender inequalities and their impact on women's mental health.

Beauvoir's pioneering work on the social construction of gender, alongside the psychophysiological investigations of Frankenhaeuser and Lundberg, offers a robust theoretical framework for understanding empirically observed gender disparities in stress. Gender inequality, as a social issue, has deep-rooted origins that span from childhood through adulthood in women's lives. These disparities manifest in multiple ways—through role overload, wage gaps, and gender-based violence. In a narrative literature review, Fernandes et al. (2019) found that “research indicates that women are more burdened by stress than men from childhood to adulthood, due to the multiple roles they assume in society, within the family, and in the workplace” (p. 13).

This overload, often imposed by social and cultural norms, negatively impacts women's physical and mental health, making them more vulnerable to conditions such as depression, anxiety, and burnout. Moreover, gender inequality limits women's opportunities for personal and professional development, perpetuating a cycle of discrimination and exclusion. Although both men and women are affected by stress, studies indicate that women are more overloaded and thus more vulnerable to illness. Calais et al. (2007) observe that “women exhibit a higher level of psychological stress compared to men, which can be explained by role overload and the double work shift” (p. 113). Sadir et al. (2010) reinforce this view by stating that “contemporary women face constant challenges in reconciling professional, family, and personal life, which contributes to increased stress and risk of illness” (p. 56). The persistence of these observations over time—from Frankenhaeuser and Lundberg (1986) to more recent studies such as Fernandes et al. (2019), Calais et al. (2007), and Sadir et al. (2010)—demonstrates the structural and enduring nature of the problem.

To reverse this harsh reality, it is essential to deepen the discussion on gender disparity and its consequences to raise societal awareness about the importance of equality between men and women. It is necessary to question and deconstruct gender stereotypes that perpetuate inequality, as well as to invest in public policies that guarantee equal opportunities and combat violence against women. As Bourdieu (2002) states, “male domination is exercised not only through physical violence or economic coercion, but also through symbolic mechanisms that lead women to internalize their own inferiority” (p. 72). It is therefore necessary to denaturalize gender inequality and empower women so that they can break free from imposed norms and build a fairer and more egalitarian society. The inclusion of Bourdieu's perspective adds a further analytical layer on the symbolic mechanisms that sustain these inequalities, suggesting that interventions should focus not only on material changes but also on beliefs and internalized attitudes.

3 METHODOLOGY

This study adopted a predominantly qualitative approach, aligned with Minayo's (2002) perspective, which emphasizes the importance of in-depth understanding of social phenomena within their context (p. 21). The objective was to investigate the incidence and factors related to stress in the school environment, with a particular focus on the experience of female students enrolled in vocational education, specifically in the post-secondary Occupational Safety course at

IFRN Natal Central Campus. The sample consisted of 113 participants who voluntarily responded to the questionnaire, of which 78 (69%) identified as women and 35 (31%) as men.

Data collection was carried out using a structured online questionnaire hosted on the Google Forms platform. This tool is widely used in educational research due to its ability to create customized forms and collect responses automatically (Flick, 2018, p. 412). The questionnaire consisted of 24 objective questions (multiple choice, Likert scale) and one open-ended question, allowing participants to freely express their opinions and experiences. The combination of closed and open questions is consistent with the approach of Bogdan and Biklen (1994), who advocate for the use of multiple data sources to build a comprehensive picture of the investigated reality (p. 157).

Clarity in the structure of the instrument is essential to ensure the collection of relevant and comparable data among participants. Thus, the questionnaire was organized into five sections, as detailed in Table 1, aiming to collect data on participant characteristics, the frequency and symptoms of stress, as well as their perceptions regarding institutional support and coping strategies for stress.

Questionnaire Sections	Number of Questions
Identification (Sociodemographic characterization)	4
Frequency of stress in school life	4
Physical and emotional symptoms related to school stress	13
Perception of institutional support regarding stress & suggestions for preventive actions	2
Individual coping strategies for school stress	1

Table 1: Research participants by gender and course enrollment period

The link to the questionnaire was shared via WhatsApp group chats of the classes and institutional email with students enrolled in the Occupational Safety course. This dissemination strategy facilitated access and allowed a significant number of participants to be reached in a short time, as noted by Flick (2018, p. 415). It is important to note that participation in the research was voluntary and anonymous. In accordance with the ethical guidelines for research involving human subjects (established in Brazil by CNS Resolution No. 466/2012, which updates the former Resolution No. 196/96 cited in the original text), the Informed Consent Form (ICF) was provided on the first page of the online form. Participants were informed about the study's objectives, data confidentiality, and their freedom to withdraw at any time. Only after agreeing to the terms could they proceed to the questions. The questionnaire was available online from May 10 to May 20, 2023.

The data collected were exported from Google Forms and subsequently systematized and categorized. For the analysis of the qualitative data from the open-ended question and integration with the descriptive quantitative data, the Maxqda software (version 2024) was used. Employing a specific software for qualitative data analysis such as Maxqda allows for a more rigorous and systematic treatment of the information, facilitating the identification of themes and patterns in the open responses and triangulation with the quantitative data, thereby enhancing the credibility of the results presented. The detailed data analysis ultimately enabled a deeper understanding of the causes and consequences of stress among students—especially female students—contributing to

the discussion on the need for effective interventions to promote mental health and well-being in the school environment.

4 RESULTADOS E DISCUSSÃO (O ESTRESSE DISCENTE FEMININO NA EDUCAÇÃO PROFISSIONAL, DADOS E DISCUSSÕES)

The analysis of the collected data reveals important nuances about the experience of stress among students in the post-secondary Occupational Safety Technical Program. The results are presented and discussed below, addressing the frequency and sources of stress, its impact on academic performance, the symptoms reported, and the students' perceptions of institutional support, culminating in their own suggestions.

4.1 Frequency and sources of stress by gender

The investigation into how frequently students perceive stress in their academic life reveals a marked difference between men and women. Women often face double or even triple shifts (work, study, domestic/family responsibilities), and when enrolled in a demanding educational program such as vocational education, the challenges they face may intensify. The data from this study confirm this perception, as they indicate a higher vulnerability to stress among female students in the educational context under analysis, as illustrated in Figure 3.

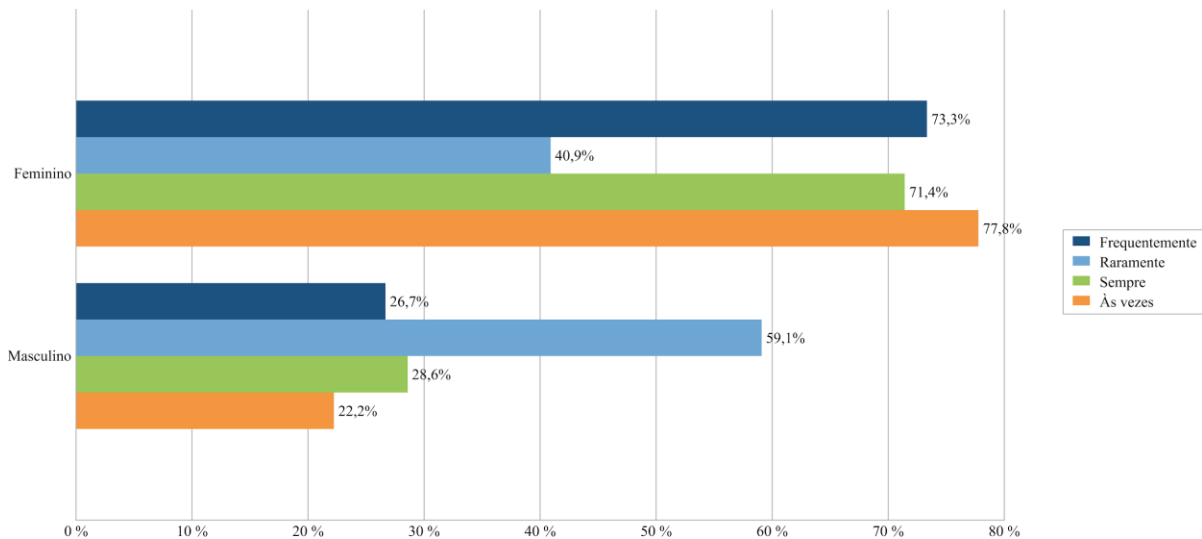


Figure 3: Frequency of school-related stress by gender Frequently, Rarely, Always, Sometimes

The analysis of Figure 3 reveals a significant disparity. Women exhibit greater vulnerability to stress in almost every frequency category. In the “Frequently” category, 73.3% of responses were from women, compared to 26.7% from men who reported experiencing stress at that frequency. This sharp difference suggests that women face more intense challenges and pressures in their daily academic lives. The “Always” category reveals the greatest vulnerability to chronic stress among women, with 77.8% of responses from female students, whereas only 22.2% were from male

students. Even in the “Sometimes” category, women accounted for the majority of responses (71.4% vs. 28.6%). The only category in which men predominated was “Rarely” (59.1% men vs. 40.9% women), indicating that women experience fewer perceived moments of stress relief, which may contribute to a worsening of the situation. These data clearly quantify the disproportionate burden of stress experienced by female students in the investigated context.

To further deepen this analysis, Table 2 details the sources of stress in academic life, once again highlighting notable gender differences.

Sources of School-Related Stress	Female (%)	Male (%)
Academic workload and assignments	71,4	28,6
Lack of time for extracurricular activities	72,7	27,3
Insecurity about professional future	80,0	20,0
Pressure for grades and academic performance	68,8	31,2
Academic performance, workload, and employment	72,5	27,5
Combined stressors: pressure for grades, lack of time for activities/hobbies, and professional insecurity	76,9	23,1
Interpersonal relationships with teachers and peers	50,0	50,0
Other	60,0	40,0

Table 2: Sources of school-related stress by gender (%)

The analysis of Table 2 shows that, across a variety of stress sources in school life, female students in the Occupational Safety program experience higher levels of stress compared to their male counterparts. "Academic workload and assignments" were cited as stressors by 71.4% of the women who selected this option, versus 28.6% of men. "Lack of time for extracurricular activities" was also more impactful for women (72.7%) than for men (27.3%). "Insecurity about the professional future" emerged as a considerably more prominent stressor for women (80%) than for men (20%).

Although "Pressure for grades and academic performance" is a common academic stressor, it appears to affect women (68.8%) more than men (31.2%). When multiple factors are combined, the disparity becomes even more pronounced. The combination of "Academic performance, workload, and employment" impacts more women (72.5%) than men (27.5%). Similarly, the combination of "Pressure for grades, lack of time for extracurricular activities and hobbies, and insecurity about the professional future" is predominantly a female stressor (76.9%), affecting only 23.1% of men who indicated this combination. The perception that multiple combined stressors disproportionately affect women suggests a cumulative burden that may be particularly taxing—likely a reflection of the multiple responsibilities many women juggle (study, work, family). Only "Interpersonal relationships with teachers and peers" seemed to affect both genders equally (50% each).

In summary, the data on stress frequency and sources reveal a gender imbalance in the academic experience of the students investigated. Women are more likely to experience stress frequently, intensely, and chronically, and report a greater impact from factors such as workload, lack of time, and future insecurity—especially when these are combined. This alarming result points

to the need for closer attention to gender dynamics in the daily life of vocational education and in society as a whole.

4.2 Impact of stress on Academic Performance

The stress experienced by students is not merely a matter of subjective well-being; it has tangible consequences for the learning process and their ability to cope with academic demands. Figures 4 and 5 illustrate, respectively, students' perceptions of the influence of stress on learning and the difficulty in dealing with pressure for academic results.

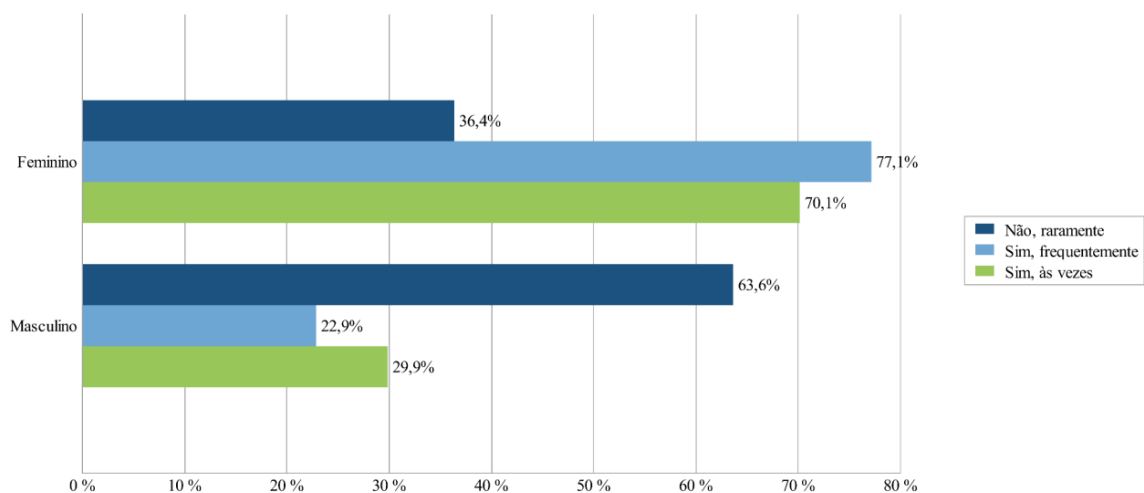


Figure 4: Influence of stress on learning by gender

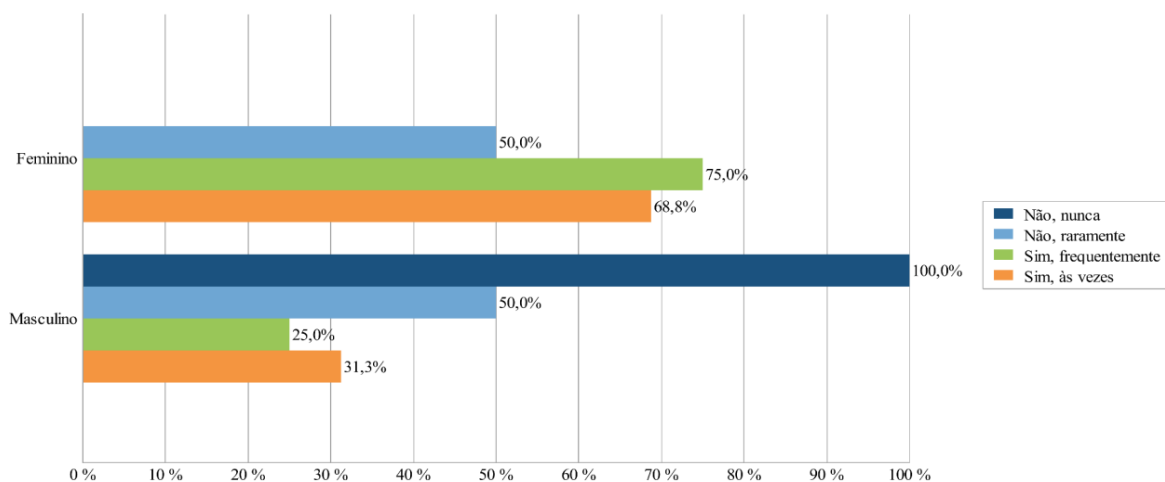


Figure 5: Difficulties in coping with pressure for grades and academic performance by gender

The data presented in Figures 4 and 5 support the assertions of Tabaquim and Marquesini (2013) regarding the negative relationship between academic stress and performance. They also align with the discussions by Borges and Mourão (2010) as well as Bruschini and Lombardi (2000) on the specific challenges faced by women in educational and professional contexts. In Figure 4, it is observed that most female students (71%) report that stress influences their learning, a

percentage higher than that of male students (60.1%). Similarly, Figure 5 shows that difficulty in dealing with pressure for grades and academic performance affects 72% of women, compared to 58.3% of men.

Although stress is a relevant issue for both genders, the data reveals that it seems to significantly affect women's perceptions of their learning processes and their ability to manage academic pressure. This may be related to the additional challenges they face in society, such as role overload and gender inequalities, as pointed out by Bruschini and Lombardi (2000), which can undermine their coping resources and exacerbate the impact of academic stress. Therefore, the difficulties faced by women in the educational context—intensified by stress—reinforce the need for institutional policies and practices that promote gender equity and the well-being of all students, recognizing that experiences and needs may vary significantly across genders.

4.3 Sintomas físicos e emocionais do estresse por gênero (impacto do estresse na saúde de estudantes de segurança do trabalho: uma análise de gênero)

Stress, defined as a set of physical and emotional reactions to stressful stimuli (Lipp, 2002), represents a significant challenge in academic environments, with the potential to impair both learning and student well-being (Tabaquim & Marquesini, 2013). The present research, conducted with students enrolled in the Occupational Safety program, corroborates findings in the literature (Lipp, 2002; Milsted et al., 2009; Monteiro et al., 2007) by demonstrating the incidence of physical and emotional symptoms, with notable variations across genders.

Figures 6 through 9 present the prevalence of common physical symptoms associated with stress, revealing distinct experiences between men and women.

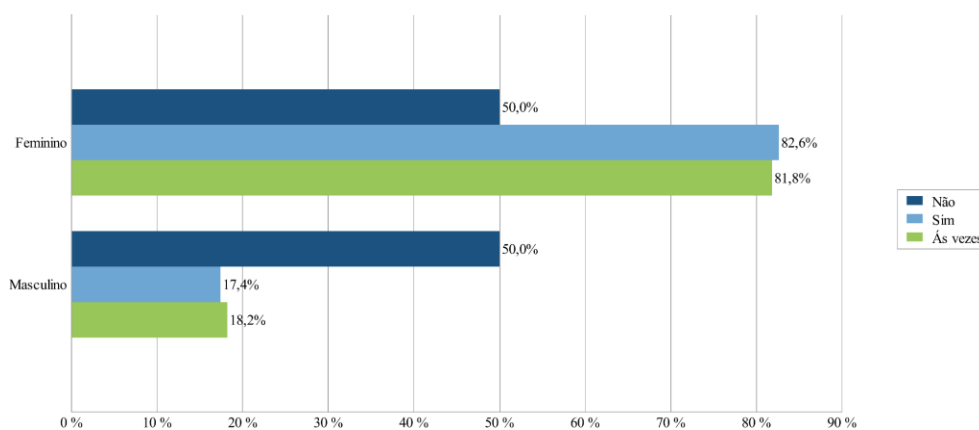


Figure 6: Reports of headaches by gender

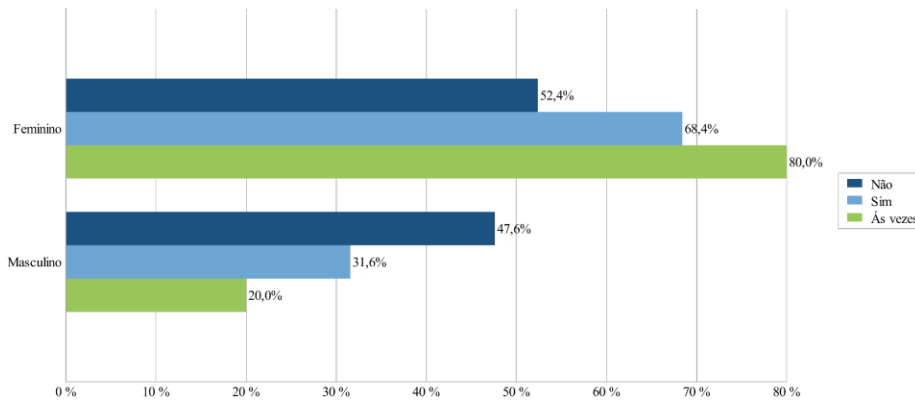


Figure 7: Reports of muscle tension, back or neck pain by gender

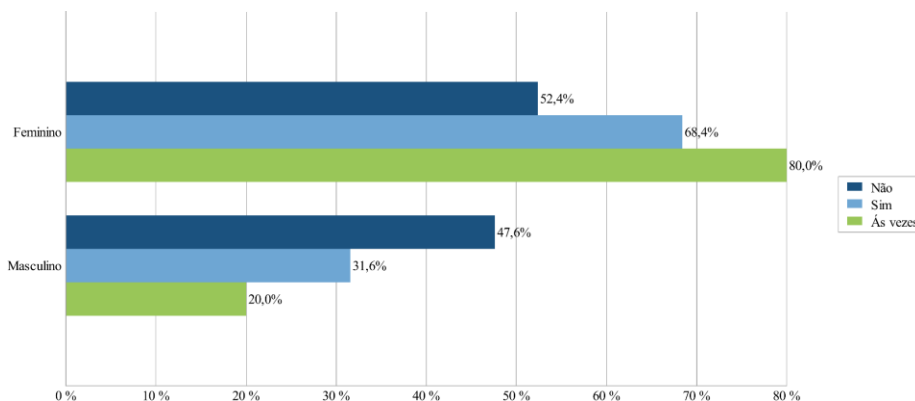


Figure 8: Reports of fatigue despite a full night's sleep by gender

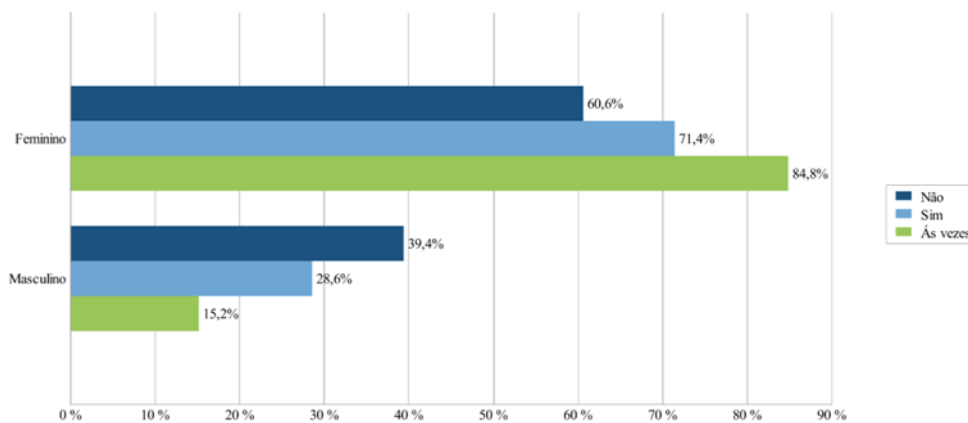


Figure 9: Reports of dizziness and shortness of breath by gender

Figure 6 ("Headaches") reveals a significant gender difference, with 82.6% of female students reporting this symptom, compared to 50% of male students. This finding underscores the heightened vulnerability of women to this particular manifestation of stress and confirms studies identifying headaches as a frequent symptom of stress in women (Batista et al., 2011). Symptoms such as muscle tension and back or neck pain (Figure 7) also appeared more frequently among women (53.8%) than men (46.2%), echoing findings in the literature regarding the somatization of

stress in the female body. Ferreira and Fischer (2008) state that "somatization is a common way of expressing psychological suffering in women, and stress can trigger or exacerbate physical symptoms" (p. 15).

Persistent fatigue – even after a full night of sleep (Figure 8) – affects more than half of the women (57.1%) and less than half of the men (42.9%), aligning with studies that identify exhaustion as a prevalent symptom among women under chronic stress (Lipp, 2002, p. 68). Finally, dizziness and shortness of breath (Figure 9) were also reported more frequently by women (22.9%) than by men (10%), suggesting a possible connection with anxiety, which is often associated with female stress responses. Botega (2006) notes that "anxiety is a common mental disorder among women, and stress can act as a trigger for anxiety attacks" (p. 95). This consistent pattern of greater prevalence of physical symptoms among women suggests that the female body may be expressing the burden of academic and social overload more intensely or visibly.

On the emotional level, Figures 10 and 11 show the prevalence of symptoms such as anxiety and irritability.

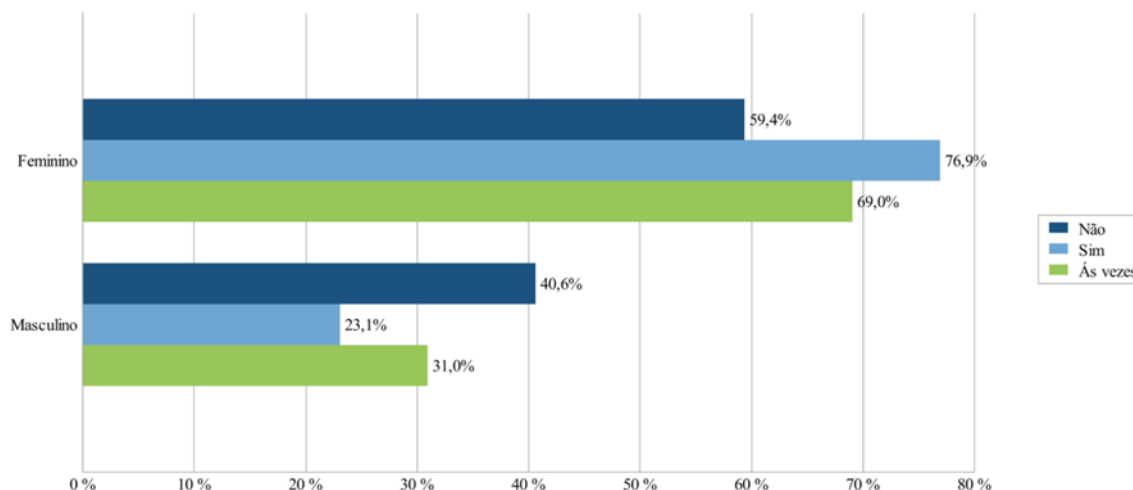


Figura 10: Relato de ansiedade ou medo sem motivo aparente por gênero

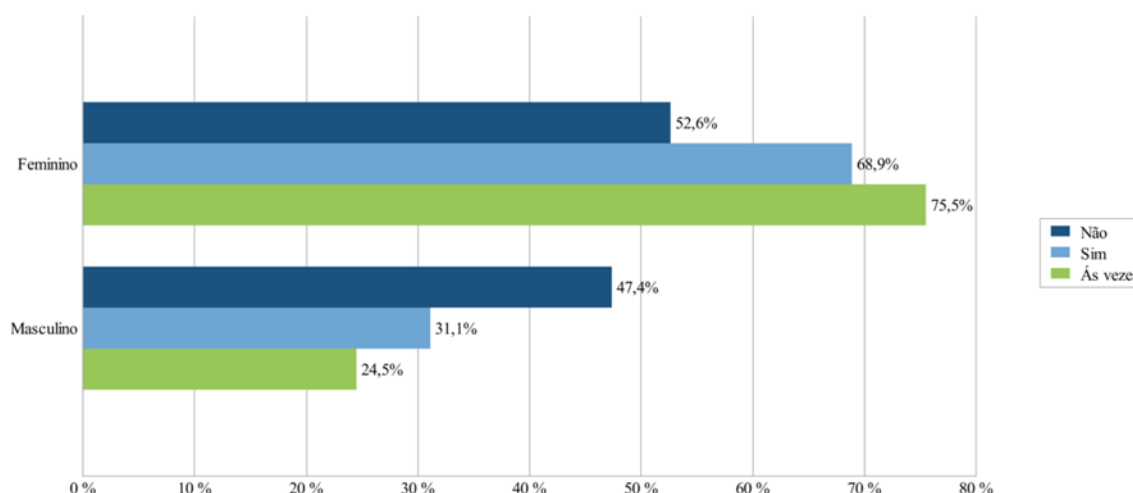


Figura 11: Relato de impaciência ou irritabilidade com facilidade por gênero

Anxiety, characterized as "fear without apparent cause," was reported by 60.7% of women and 39.3% of men (Figure 10), confirming its prevalence in the context of stress, as noted by Lipp (2002) and Milsted et al. (2009). Irritability, expressed as "frequent impatience," showed a smaller gender gap but still affected more women (53.8%) than men (46.2%) (Figure 11), which is consistent with literature identifying irritability as a common symptom of stress (Lipp, 2002).

Taken together, the data collected on physical and emotional symptoms demonstrate a serious impact of stress on the health of students in the Occupational Safety program, with gender-specific patterns that warrant attention. The results show that, while both genders are affected, women exhibit greater vulnerability to most of the symptoms investigated. This supports findings in the literature regarding the higher psychological stress burden experienced by women, often linked to the overload of responsibilities and the "double burden" of academic and domestic duties (Calais et al., 2007; Sadir et al., 2010). It is worth emphasizing that identifying these patterns of symptoms and their gender-based differences—especially the heightened vulnerability among women—is essential for the development of effective interventions.

The creation of prevention and stress management programs that consider gender-specific needs and coping strategies can significantly contribute to students' health and well-being, especially for women. Oliveira (2010) emphasizes that "psychoeducational interventions can help students develop stress management skills and promote mental health" (p. 82). These interventions may include relaxation techniques, problem-solving skills, assertive communication strategies, and the promotion of a healthy lifestyle, all tailored to the specific needs identified in this study.

4.4 Perception of institutional support and student suggestion (among suggested Interventions and educational actions: female student voices)

The role of psychology in Federal Institutes (IFs), according to Tsunematsu et al. (2021), does not align with the traditional model of psychotherapeutic clinical care, but rather functions as a space for "listening, support, and guidance," with a collective focus (p. 70). The authors identify common demands such as anxiety, emotional and family issues, as well as difficulties in adaptation, particularly among students in Integrated Secondary Education. The study by Tsunematsu et al. (2021) underscores the importance of mental health in the context of IFRN, emphasizes that student well-being is fundamental to academic success, and highlights how institutional factors (curricular structure, school environment, interpersonal relationships) can contribute to stress. They stress the need for institutional actions to promote student mental health, including strengthening psychological support, reviewing curricular structures, and working toward a more welcoming and less competitive academic environment.

The Federal Institute of Education, Science and Technology of Rio Grande do Norte (IFRN), as an educational institution, has the responsibility of fostering a healthy academic environment. The Institutional Development Plan (PDI), aligned with the Political-Pedagogical Project (PPP) of each campus, must consider students' needs, particularly those of groups more vulnerable to stress, such as female students. As highlighted in this study, women are more affected by stress and its consequences on learning and health, which justifies the implementation of actions tailored to this reality.

Does the institution offer support to deal with student stress?	Percentage of Responses (%)
Yes, fully	6%
Yes, partially	59%
No, very little	28%
No, none	7%
Total	100%

Table 3: Students’ perception of institutional support in coping with stress

Table 3 reveals a predominantly negative or partial perception among Occupational Safety students regarding institutional support. The majority of them (59%) consider that the institution offers support only "partially," while a significant group (28% + 7% = 35%) evaluates the support as "little" or "none." Only 6% believe the support is "total." These data indicate a significant mismatch between the need for support – evidenced by the high levels of reported stress—and the perceived availability and effectiveness of that support. While there may be recognition of certain institutional efforts, most students feel that the support provided is insufficient to cope with the challenges posed by stress. This prevailing perception demands institutional attention, urging a deeper understanding of existing gaps and implementing more effective measures to promote students' well-being and mental health, aligning the goals of the Institutional Development Plan (PDI) with the students lived experiences.

Given this perception, the students’ suggestions become particularly valuable. Of the 78 women who participated in the study, 62 (approximately 79%) offered concrete suggestions in the open-ended question regarding what the institution could do to help students cope with stress. These suggestions were thematically categorized and are summarized in Table 4.

Thematic category	Examples of Suggestions (with anonymous student identification)	Approx. No. Suggestions
Strengthening Psychological Support	Improve psychological support with more appointments (D06); create an accessible psycho-pedagogical channel for conversation/support (D08); offer psychological support to assist in study routines, especially for those who work and study (D13); create effective psychological assistance with optimized screening (D14); increase psychological support (D17, D25, D27, D31, D48); hire more psychologists and encourage consultations (D41); have a psychologist always available (D74); simplify appointment scheduling with the psychologist (D85); offer more psychological support with more professionals and greater availability (D100, D104).	25
School and Teaching Practices	Teachers could give organizational tips and propose relaxing activities (D03); teachers should have reflection moments with students, some are hard to deal with (D32); teachers should be more understanding, explain better, and avoid pressuring students (D41); reduce	8



	pressure from assignments, teachers should be more precise and flexible (D58); some teachers need to change their methodology and be aware of students' workload, with more dynamic classes (D61); manage the high volume of activities and have teaching strategies to assist struggling students (D93).	
Health and Well-being Activities	A day with lectures and student activities (D11); lectures and discussion circles on mental health (D12, D16, D43, D49, D82); biweekly relaxation moments (music, drawing, painting, stretching, massage) (D22); extracurricular activities to increase motivation (D30); encourage physical exercise (D38); offer accessible physical activity workshops (D60); outdoor classes and breaks between lessons (D81); monthly happy hour with classmates, discussion circle, snacks (replacing a class) (D83).	11
Institutional Integration and Awareness	Multidisciplinary program with psychologists and pedagogues, more dynamic classes (D09); training for teachers and staff to identify students with difficulties (D10); encourage exercise, help-seeking, relaxation activities, and mental health awareness campaigns (D59); raise teacher awareness about workload and create support systems for students with mental health issues (D91); reform evaluation systems, include more field classes, replace teachers with "questionable conduct" (D109).	9
Other	More field classes (D18); free snacks for night students (D81).	2
(No suggestions provided)	-	16
Total Suggestions Considered	-	62

Table 4: Students' suggestions for institutional interventions related to stress (thematic summary)

The students' narratives, summarized in Table 4, highlight the need for a multifaceted approach. The category with the highest number of suggestions (25) focuses on Strengthening Psychological Support Services, with demands for more professionals, greater availability of appointment times, simplified scheduling, and accessible listening channels. This emphasis suggests that students view mental health as a cornerstone for both well-being and academic performance, calling for more robust and accessible institutional support in this area—an appeal that resonates with the recommendations of Tsunematsu et al. (2021).

Beyond psychological support, the narratives point to the importance of actions in other institutional spheres. The category School and Teaching Practices received eight suggestions,

indicating a need for more understanding and empathetic teachers, more dynamic teaching methods, improved communication, reduced pressure for high grades, and a more balanced management of workload and evaluative demands. Eleven students proposed practical activities to promote health and well-being, including lectures, discussion circles, physical activities, relaxation moments, and motivating extracurricular initiatives – reflecting a desire for proactive and collective care strategies.

The Institutional Integration and Awareness category gathered nine suggestions, pointing to the need for a more systemic approach. This includes multidisciplinary programs, staff training, awareness campaigns, a review of evaluation systems, and even the creation of specific support systems for students facing mental health issues. Furthermore, suggestions such as "training teachers to identify students with difficulties" (D10) and "raising teachers' awareness about workload" (D91) reflect the perception that responsibility for mental health should not fall solely on the psychology department but should permeate the entire academic community.

Taken together, these suggestions outline a comprehensive action plan for IFRN that aligns with recommendations from the literature (Tsunematsu et al., 2021) and the institution's own guidelines (PDI). The voices of the students call for an institution that not only reacts to mental health challenges but actively fosters a healthier, more welcoming, empathetic, and less stressful academic environment—one that acknowledges the specific pressures experienced, especially by women, in the context of vocational and technical education.

5 FINAL CONSIDERATIONS

O This study revealed a concerning picture regarding the mental health of women in post-secondary vocational education, specifically within the Work Safety program at IFRN's Natal Central Campus. The high prevalence of stress—manifested through physical symptoms (headaches, muscle tension, fatigue) and emotional ones (anxiety, irritability)—negatively affects the well-being and academic performance of the students. Academic overload, performance pressure, lack of time (often related to the need to juggle studies, work, and/or family), and insecurity about future career prospects emerged as the main triggering or aggravating factors of the reported stress.

One of the central findings of this research is the gender disparity in the experience of stress. Women consistently demonstrated greater vulnerability to stress and its associated symptoms. This gender difference cannot be dissociated from the broader social context, in which factors such as double or triple work shifts, structural inequalities, and culturally established gender roles contribute to a disproportionate physical and emotional burden on women, making them more susceptible to stress and its harmful effects within the academic environment. Thus, while vocational education can serve as a pathway to empowerment and professional development, it also appears to reproduce—or even intensify—these pressures for the women who participated in this study.

The students' suggestions for addressing academic stress reflect a clear call for institutional action and highlight the need for a multifaceted approach. On an individual level, they recognize the importance of seeking psychological support and adopting self-care strategies. However, their

primary demands are directed at the institution. There is a strong appeal for more robust, accessible, and effective psychological support. Moreover, the suggestions go beyond individualized care, encompassing the need to revise pedagogical practices and workload management, promote a more welcoming, understanding, and less competitive school environment, and implement proactive initiatives aimed at health and well-being. In other words, the students perceive the need for an institutional culture that values mental health and acknowledges the impact of academic and social pressures.

Considering the findings of this research, the urgency of effective actions to promote the mental health of women in post-secondary vocational education becomes evident. It is essential that IFRN and other educational institutions recognize student stress—particularly from a gender perspective—as a relevant and high-priority issue. This involves investing in prevention and intervention measures that go beyond discourse.

Promoting mental health in the academic community requires a real strengthening of psychological and student support services, which includes expanding staff, ensuring easy access to services (flexible hours, simplified scheduling), and diversifying support modalities—such as individual counseling, group sessions, and workshops. Additionally, it is imperative to invest in the awareness and ongoing training of faculty and staff, equipping them to identify early signs of psychological distress, adopt more flexible and empathetic teaching practices, and develop an understanding of the impact that workload and assessment processes have on mental health.

Moreover, the regular creation of spaces for dialogue and support—such as discussion circles, lectures, and workshops focused on topics like mental health, stress, anxiety, time management, and coping strategies—is essential. In addition, a critical review of the curriculum and assessment practices is needed, including an analysis of workload, activity distribution, and the nature of evaluations, with the aim of reducing excessive pressure and fostering more meaningful learning. Completing this set of necessary actions is the promotion of an institutional environment grounded in mutual support—one that encourages student-led initiatives for peer care, actively combats all forms of discrimination or harassment, and promotes healthy interpersonal relationships among all members of the academic community.

Finally, it is important to highlight the need for future research that deepens the understanding of student stress among women in vocational education, investigating its causes, consequences, as well as strategies for prevention and treatment across different programs, formats, and regions. Longitudinal studies could track the trajectories of female students throughout their academic journey, while more in-depth approaches, such as interviews, could offer a richer understanding of the nuances within their individual experiences. Building more comprehensive knowledge on this issue is essential to support the development of more effective and equitable public and institutional policies aimed at promoting the mental health of women in professional and technological education—so that this educational model may fully fulfill its role in driving both social and professional transformation.

6 REFERÊNCIAS

- American Psychological Association. (2017). Stress in America: The State of Our Nation. <https://www.apa.org/news/press/releases/stress/2017/state-nation.pdf>
- Batista, K. M., Almeida, R. A., & Gordan, P. A. (2011). Prevalência de cefaleia em universitários. *Revista Dor*, 12(4), 303-308. <https://doi.org/10.1590/S1806-00132011000400004>
- Beauvoir, S. de. (2016). *O segundo sexo* (Vol. 2: A experiência vivida; S. Milliet, Trad.). Nova Fronteira.
- Bogdan, R. C., & Biklen, S. K. (1994). *Investigação qualitativa em educação: Uma introdução à teoria e aos métodos* (M. J. Alvarez, S. B. Santos, & T. M. Baptista, Trans.). Porto Editora.
- Borges, L. O., & Mourão, L. (2013). *O trabalho e as organizações: Atuações a partir da psicologia*. Artmed Editora.
- Botega, N. J. (2015). *Crise suicida: avaliação e manejo*. Artmed Editora.
- Bourdieu, P. (2002). *A dominação masculina* (2ª ed.; M. H. Kühner, Trad.). Bertrand Brasil.
- Brasil. (1996). Lei nº 9.394, de 20 de dezembro de 1996. Estabelece as diretrizes e bases da educação nacional. *Diário Oficial da União*.
- Brasil. (1997). Decreto nº 2.208, de 17 de abril de 1997. Regulamenta o § 2º do art. 36 e os arts. 39 a 42 da Lei nº 9.394, de 20 de dezembro de 1996, que estabelece as diretrizes e bases da educação nacional. *Diário Oficial da União*. (Revogado pelo Decreto nº 5.154/2004)
- Brasil. (2008). Lei nº 11.741, de 16 de julho de 2008. Altera dispositivos da Lei nº 9.394, de 20 de dezembro de 1996, que estabelece as diretrizes e bases da educação nacional, para redimensionar, institucionalizar e integrar as ações da educação profissional técnica de nível médio, da educação de jovens e adultos e da educação profissional e tecnológica. *Diário Oficial da União*.
- Brasil. (2008). Lei nº 11.892, de 29 de dezembro de 2008. Institui a Rede Federal de Educação Profissional, Científica e Tecnológica, cria os Institutos Federais de Educação, Ciência e Tecnologia, e dá outras providências. *Diário Oficial da União*.
- Brasil. (2012). Resolução nº 466, de 12 de dezembro de 2012. Aprova diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Conselho Nacional de Saúde.
- Bruschini, C., & Lombardi, M. R. (2000). As mutações no trabalho das mulheres nos anos 90. In C. Bruschini & M. R. Lombardi (Orgs.), *Trabalho feminino no final do século: desafios e perspectivas*. Editora Fundação Perseu Abramo.
- Calais, S. L., Andrade, L. M. B., & Lipp, M. E. N. (2003). Diferenças de sexo e escolaridade na manifestação de stress em adultos jovens. *Psicologia: Reflexão e Crítica*, 16(2), 257–263. <https://doi.org/10.1590/S0102-79722003000200006>

- Cooper, C. L., & Payne, R. (Eds.). (1988). *Causes, coping and consequences of stress at work*. John Wiley & Sons.
- Fernandes, J. M., Morais, J. C. C. A., Silva, L. A. S., Silva, L. P., Nascimento, M. M., & Preto, V. A. (2019). O estresse psicológico em relação ao sexo feminino e masculino no Brasil: uma revisão narrativa da literatura. *Revista Eletrônica de Humanidades do Curso de Ciências Sociais da UNIFAP*, 12(2).
- Ferreira, M. C., & Fischer, F. M. (2008). Estresse e trabalho em mulheres: Uma revisão da literatura. *Psicologia & Sociedade*, 20(2), 244–251. <https://doi.org/10.1590/S0102-71822008000200011>
- Flick, U. (2018). *Introdução à pesquisa qualitativa (3ª ed.; J. E. Costa, Trad.)*. Penso Editora.
- Frankenhaeuser, M., & Lundberg, U. (1986). The influence of sex roles on the psychophysiology of stress. In U. Lundberg, M. Frankenhaeuser, & P. H. Gjesdal (Eds.), *Contemporary psychology: Biological processes and theoretical issues* (pp. 163–182). Springer Netherlands.
- IFRN - Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Norte. (2011). *Projeto Pedagógico do Curso Técnico de Nível Médio em Segurança do Trabalho na forma Subsequente, modalidade presencial – Campus Natal Central*. IFRN.
- IFRN - Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Norte. (2019). *Plano de Desenvolvimento Institucional – PDI 2019-2023*. IFRN.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.
- Lipp, M. E. N. (Org.). (2000). *Inventário de sintomas de stress para adultos de Lipp (ISSL)*. Casa do Psicólogo.
- Lipp, M. E. N. (Org.). (2002). *O estresse do professor*. Papirus Editora.
- Maxqda. (2024). *Maxqda: The Art of Data Analysis [Software]*. VERBI GmbH. <https://www.maxqda.com/>
- Milsted, M., Amorim, R. C. G., & Santos, M. A. (2009). Estresse e estratégias de enfrentamento em estudantes de graduação da área da saúde. *Psicologia: Teoria e Pesquisa*, 25(4), 545–552. <https://doi.org/10.1590/S0102-37722009000400011>
- Minayo, M. C. S. (Org.). (2002). *Pesquisa social: teoria, método e criatividade (21ª ed.)*. Editora Vozes.
- Monteiro, G. T. R., Freitas, R. R. M., & Ribeiro, A. P. (2007). Estresse em estudantes de Medicina da Universidade Federal de Minas Gerais. *Revista Brasileira de Educação Médica*, 31(3), 261–269. <https://doi.org/10.1590/S0100-55022007000300008>
- Oliveira, C. T. (2010). *Psicologia da Educação*. Pearson Prentice Hall.

- Organização Mundial da Saúde. (2002). Relatório Mundial da Saúde 2001: Saúde mental: nova concepção, nova esperança. OMS.
- Organização Mundial da Saúde. (2022). World mental health report: Transforming mental health for all. WHO. <https://www.who.int/publications/i/item/9789240049338>
- Ramos, M. N. (2011). O ensino técnico sob nova perspectiva curricular. In M. N. Ramos (Org.), Educação profissional: da LDB ao PROEJA. Cortez Editora.
- Sadir, M. A., Bignotto, M. M., & Lipp, M. E. N. (2010). Stress e qualidade de vida: um estudo comparativo de gênero em docentes do ensino fundamental. Paidéia (Ribeirão Preto), 20(45), 77–84. <https://doi.org/10.1590/S0103-863X2010000100010>
- Selye, H. (1936). A syndrome produced by diverse nocuous agents. Nature, 138(3479), 32. <https://doi.org/10.1038/138032a0>
- Selye, H. (1956). The stress of life. McGraw-Hill.
- Tabaquim, M. L. M., & Marquesini, R. F. (2013). Relação entre estresse acadêmico e desempenho escolar em estudantes universitários. Revista Psicologia e Saúde, 5(1), 33-39.
- Tsunematsu, J. P. J., Pantoni, R. P., & Versuti, F. M. (2021). Saúde mental discente na educação profissional e tecnológica: experiências de estudantes e docentes dos cursos técnicos integrados. Educação Profissional e Tecnológica em Revista, 5(2), 70–90. <https://doi.org/10.36524/profept.v5i2.888>
- Viana, H. A. (2012). Educação profissional e tecnológica: uma contribuição para o desenvolvimento do Brasil. Editora Atlas.

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