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Article

Interpersonal relations in a firefighter corporation: political and institutional implications

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The study aimed to understand interpersonal relationships at work within a military firefighter corporation. This qualitative study, conducted in 2023 with 32 military firefighters from Minas Gerais, Brazil, used audio-recorded interviews guided by the prompt: "Tell me about what interpersonal relationships at your job are like for you." The recorded material was fully transcribed and submitted to thematic analysis, which consists of six well-defined steps: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, (6) producing the report. Symbolic interactionism provided the theoretical framework, as it considers aspects of social interactions. The results revealed three main categories: "Hierarchical and Disciplinary Culture," related to vertical leadership style, punishments, and negative perspectives on the environment and system; "Barriers, Expectations, and Demands in Work Relationships," associated with gaps and restrictions in communication, stressors with peers, and demands and expectations from the public served; and the "Complex Dynamics of (Mal)Adaptation Related to Work," due to work-related mental suffering, coping resources, and protection within work relationships. It was concluded that interpersonal relationships signified greater perspectives of maladaptation to the firefighter work context. The study contributed to public administration by raising data to foster a deeper understanding of interpersonal relationships in a work organization with characteristics of an extreme context, especially leadership actions, leading to political implications and rethinking behaviors, as well as for the training of new professionals.
Keywords: interpersonal relationships; social support; firefighters; military; work.

Relações interpessoais em uma corporação de bombeiros: implicações políticas e institucionais

O estudo presente tem como objetivo compreender as relações interpessoais no ambiente de trabalho característico dos bombeiros militares, e conscientizar para as implicações políticas das relações, bem como para a sua importância no equilíbrio físico e mental dos bombeiros. A pesquisa baseia-se em um estudo qualitativo realizado em 2023 com 32 bombeiros militares do Estado de Minas Gerais, Brasil. As entrevistas audiogravadas foram norteadas pela questão: "Conte-me como são, para você, as relações interpessoais no trabalho". O material foi transcrito

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na íntegra e submetido à análise temática, que consta de seis etapas bem definidas: 1- Familiarização com os dados; 2- Gerar códigos iniciais; 3- Buscar os temas; 4- Revisão dos temas; 5- Definição e nomeação dos temas; 6- Produzir relatório. O referencial teórico adotado foi o Interacionismo Simbólico, pois pressupõe os aspectos das interações sociais. Dos resultados emergiram as categorias: "cultura hierárquica e disciplinar", relacionada a liderança com estilo vertical, punições e perspectivas negativas sobre o ambiente e sistema; outro aspecto foram os "alcances e limites da comunicação e demandas nas relações de trabalho" associados às lacunas e restrições na comunicação, estressores com os pares e exigências, expectativas do público atendido; e a "dinâmica das relações de trabalho" devido ao sofrimento mental associado ao trabalho, recursos de enfrentamento e proteção nas relações de trabalho. Conclui-se que as relações interpessoais significaram mais perspectivas de desadaptação ao contexto de trabalho do bombeiro. O estudo contribuiu para a administração pública por levantar dados para maior compreensão das relações interpessoais em uma organização de trabalho com características de contexto extremo, sobretudo as ações das lideranças, gerando implicações políticas, e para a reestruturação de condutas, bem como para a formação de novos profissionais.
Palavras-chave: relações interpessoais; apoio social; bombeiros; militares; trabalho.

Relaciones interpersonales en una corporación de bomberos: implicaciones políticas e institucionales

El objetivo del estudio fue comprender las relaciones interpersonales en el trabajo dentro de una corporación de bomberos militares. Este estudio cualitativo se realizó en 2023 con 32 bomberos militares de Minas Gerais, Brasil. Las entrevistas audiograbadas se guiaron por la pregunta: "Cuénteme cómo son, para usted, las relaciones interpersonales en su trabajo." El material fue transcrito en su totalidad y sometido a un análisis temático, que consta de seis etapas bien definidas: 1- Familiarización con los datos; 2- Generación de códigos iniciales; 3- Búsqueda de temas; 4- Revisión de los temas; 5- Definición y nombramiento de los temas; 6- Elaboración del informe. El marco teórico adoptado fue el interaccionismo simbólico, ya que considera los aspectos de las interacciones sociales. De los resultados surgieron las siguientes categorías: "Cultura jerárquica y disciplinaria", relacionada con el estilo de liderazgo vertical, sanciones y perspectivas negativas sobre el ambiente y el sistema; otra categoría fue "Barreras, expectativas y demandas en las relaciones laborales", asociadas a las brechas y restricciones en la comunicación, factores estresantes entre compañeros, y exigencias y expectativas del público atendido; y la "Dinámica compleja de (des)adaptación relacionada con el trabajo", debido al sufrimiento mental asociado al trabajo, recursos de afrontamiento y protección en las relaciones laborales. Se concluye que las relaciones interpersonales representaron mayores perspectivas de desadaptación al contexto laboral del bombero. El estudio contribuyó a la administración pública al aportar datos para una mayor comprensión de las relaciones interpersonales en una organización de trabajo caracterizada por un contexto extremo, especialmente en cuanto a las acciones de liderazgo, generando implicaciones políticas y para la reestructuración de conductas, así como para la formación de nuevos profesionales.
Palabras clave: relaciones interpersonales; apoyo social; bomberos; militares; trabajo.

1. INTRODUCTION

As public safety professionals, firefighters are responsible for safeguarding populations against various types of disasters. Their role demands a high level of physical fitness and vigilance (Corpo de Bombeiros Militar Minas Gerais [CBMMG], 2020; Wagner et al., 2006) due to constant exposure to emergencies (Haddock et al., 2017).

In addition to inherent physical risks, firefighters face psychosocial challenges, including insufficient workplace support and mental health issues stemming from the high emotional demands of their profession (Pereira et al., 2020). The physical and psychological hazards they encounter often exceed organizational resources, presenting significant leadership challenges (Hannah et al., 2009).

Organizations classified as "traumatic," such as hospital emergency rooms and rescue teams, operate under high-pressure conditions and exposure to extreme events. These contexts demand situational awareness and sustained vigilance from professionals (Hannah et al., 2009).

The daily stress often leads firefighters to face elevated risks of substance abuse, suicidal tendencies, and excessive alcohol and tobacco use (Gulliver et al., 2018; Haddock et al., 2017). They often have post-traumatic stress disorder (PTSD) (Bing-Canar et al., 2019) associated with the risk of suicide by firearms (military equipment) (Pennington et al., 2021), suicidal ideation (ideas and thoughts about

dying) and attempts (self-harming behaviors with a non-fatal outcome) (Bartlett et al., 2018, Borges & Werlang, 2006). These challenges are compounded by compassion fatigue (CF), characterized by a diminished capacity to empathize with others' suffering (Figley, 2002), and burnout resulting from the emotional demands of their work (Jeung & Chang, 2021).

Interpersonal relationships should be highlighted when examining a context where firefighters are highly exposed to occupational stressors (Azevedo et al., 2019). Positive relationships mediate psychological distress throughout their career (Huang et al., 2022), contributing to freedom of expression and professional fulfillment (Oliveira & Moraes, 2021).

Two studies in Brazil emphasize the importance of social support for firefighters. The first is a cross-sectional study involving 711 firefighters, revealing that 30.9% perceived their social support as low (Azevedo et al., 2019). The second is a longitudinal study with 312 participants that found that social support was associated with greater control and lower work demands (Vasconcelos et al., 2021).

International studies further contribute to this discussion. A cross-sectional study in China with 407 firefighters demonstrated the effectiveness of social support in protecting mental health (Wang et al., 2023). In Canada, a quasi-experimental study with firefighters and emergency medical personnel emphasized the role of peer support in fostering psychological safety at work, calling for more research into the benefits of such support (Price et al., 2022).

While these studies primarily used quantitative methods to examine interpersonal relationships, this qualitative research aims to provide a broader and more in-depth understanding of these dynamics in firefighters' work environments, offering a holistic view of the phenomenon (Rodrigues et al., 2021).

This study seeks to address some of the gaps observed in the literature. First, it presents a qualitative design, which is rarely used in studies on interpersonal relationships among firefighters (Azevedo et al., 2019; Price et al., 2022; Vasconcelos et al., 2021; Wang et al., 2023). Second, the research emphasizes the interpersonal relationships of these professionals, considering these relationships as a priority when it comes to their well-being (Price et al., 2022; União Geral dos Trabalhadores [UGT], 2017), mainly due to the mediation role played by interpersonal relationships in issues such as the risk of suicide, PTSD, and burnout, commonly observed throughout a career (Bing-Canar et al., 2019; Jeung & Chang, 2021; Pennington et al., 2021). Third, the challenges posed to organizations and leaders when it comes to psychosocial risks and the role of interpersonal relationships (Hannah et al., 2009), particularly in the face of the extreme nature of the activity of firefighters and their exposure to various emergency and catastrophic situations (Haddock et al., 2017), which is an area little explored in academia.

Understanding interpersonal relationships is critical for establishing psychological support standards for firefighters (Kyron et al., 2021). This knowledge should inform policies, training programs for new professionals, and organizational practices. This study aims to explore these relationships within the typical work environment of firefighters, emphasizing the political and psychological implications for maintaining firefighters' physical and mental well-being.

2. THEORETICAL FRAMEWORK

Considering the risks workers face in their respective environments, identifying factors that may contribute to illness is crucial (World Health Organization [WHO] & International Labour

Organization [ILO], 2021). Brazil, aligned with the Sustainable Development Goals (SDGs), aims to implement the 2030 Agenda established by the United Nations (UN), incorporating measures to promote workplace safety and well-being (Nações Unidas no Brasil, 2024).

Interpersonal relationships in the workplace, psychosocial in nature, can significantly impact various aspects of workers' lives. They influence well-being (Paschoal & Tamayo, 2004), self-worth (Ricciardelli et al., 2020), emotions (Payne & Kinman, 2019), and job satisfaction (Whitehead et al., 2023).

Interpersonal relationships encompass an individual's ability to interact effectively with others, institutions, or organizations, potentially driving behavioral changes (Freitas, 2024). These relationships promote social support by fostering trust, care, communication, and mutual assistance (Fonseca & Moura, 2008). Social support manifests in three dimensions: emotional, instrumental, and informational. The emotional dimension is characterized by affective connections, whereas the instrumental refers to offering financial or practical resources. Finally, the informational dimension is related to supporting decision-making through guidance and shared information (Cardoso & Baptista, 2015).

Interpersonal relationships foster social support, tolerance, and healthy communication between colleagues and managers, which serve as psychosocial protective factors in the workplace. However, they can become risk factors, leading to physical or social isolation, interpersonal conflicts, and exposure to violence when they fail to promote social support (UGT, 2017).

Interpersonal relationships, alongside autonomy in task execution and participation in decision-making, are recognized as protective factors in the work environment (Silva & Tolfo, 2022). Understanding psychosocial risks at work is a priority for organizations aiming to enhance workers' physical and mental health and overall well-being (UGT, 2017).

This study adopts an interactionist perspective on interpersonal relationships and social support, employing symbolic interactionism (SI) as its theoretical framework. SI is a sociological approach that examines the dynamic and interpretative interaction of objects and people, exploring how actions and meanings are created, modified, and represented through these interactions (Charmaz et al., 2009). It posits that human behavior results from the meanings attributed to objects, individuals, and other factors (Blumer, 1986). Interactions are deemed symbolic because they carry mutual significance for both agents and recipients (Blumer, 1986).

By linking SI to the research theme, it becomes evident that workplace interpersonal relationships involve symbolic interactions. Firefighters engage in dynamic interaction processes with themselves and others, assigning meaning to their interpersonal experiences in the fire department. This interaction shapes coexistence in their work environment.

3. METHODOLOGY

3.1 Study design and theoretical-methodological framework

By adopting symbolic interactionism (SI) as a theoretical framework, this qualitative study assumes that the internal and external aspects of firefighters' behavior are determined by how they define reality through social and work interactions (Blumer, 1986). This research report adopted the criteria from the Consolidated Criteria for Reporting Qualitative Research (COREQ) guide (Souza et al., 2021).

3.2 Sampling and recruitment

The research was conducted with firefighters from the Fire Department of the State of Minas Gerais (CBMMG) in the Triângulo Sul region. In Brazil, fire brigades are state-run institutions that operate under a military hierarchy and adopt military characteristics. Data were collected through interviews with 32 firefighters, forming a theoretical sample. The sample was defined concurrently with data collection, coding, and analysis, ensuring the identification of necessary data and determining how to access them. This approach prioritized variability in identifying patterns of behavior and social interactions over numerical significance (Strauss & Corbin, 2008). Eligibility criteria included active members who were not on leave during the data collection period, had at least six months of professional experience, and were likely more engaged with the norms and routines of the work process.

Participants were recruited after a preparation phase in which potential key informants were identified. The researchers invited these individuals to participate in interviews, providing details about the study and its ethical considerations. Participation was confirmed by signing two copies of the Informed Consent Form (ICF). All invited firefighters agreed to participate in the study.

3.3 Data collection

Data collection for the research was conducted between May and June 2023. Individual, open-ended interviews were held in person in a private setting at the fire department. The interviews were digitally audio-recorded, and some transcripts were shared with participants for comments and/or corrections. Data collection was carried out by the first author, who holds a nursing degree and doctorate and has experience conducting interviews and qualitative research.

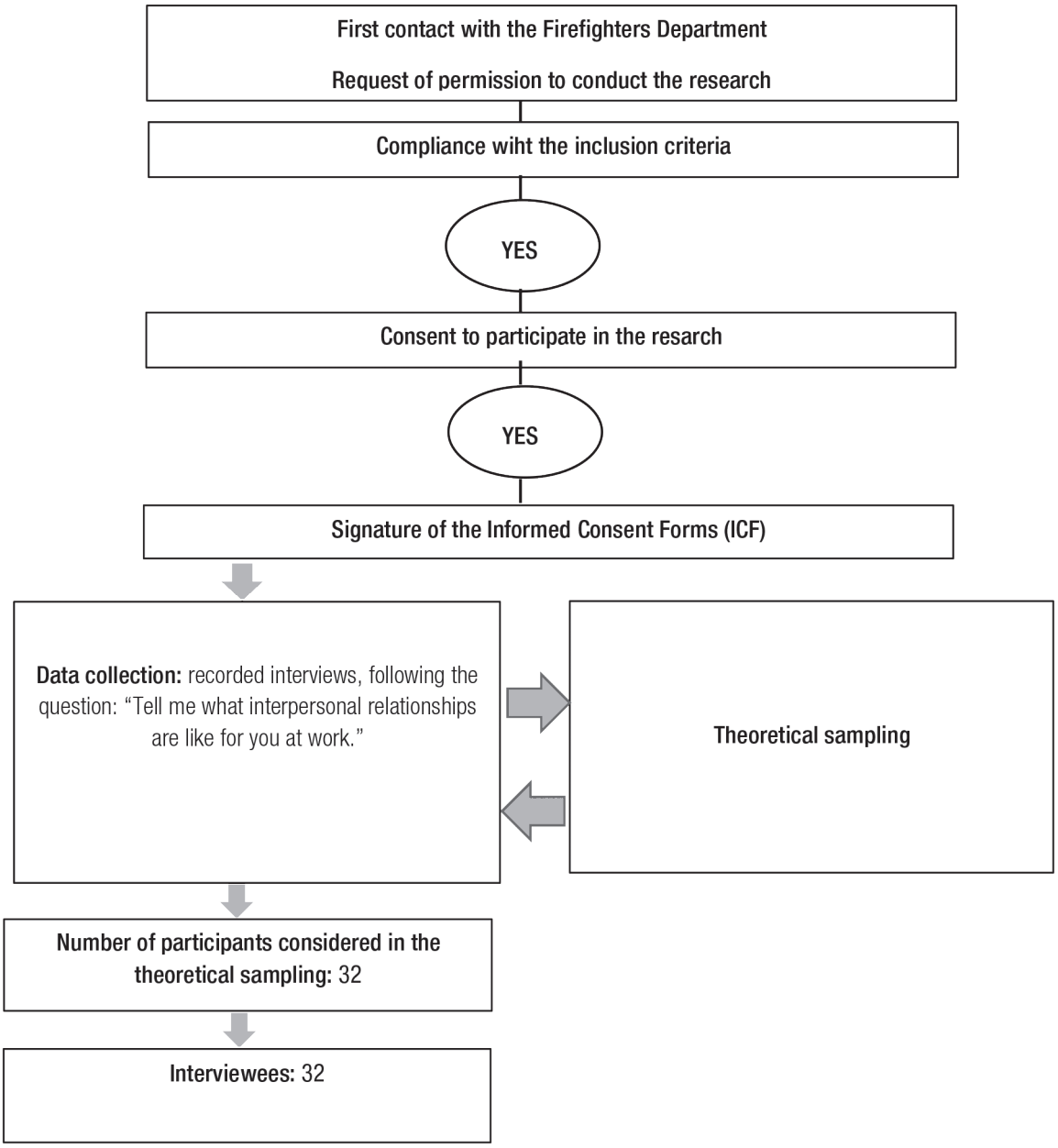
The interview's guiding question was: "Tell me what interpersonal relationships are like for you at work." Additional questions, such as "What makes work relationships easier?" and "What makes them more difficult?" were posed to participants who did not address these aspects in their initial responses. These supplementary questions aimed to deepen understanding of the interviewees' perspectives on the phenomenon being investigated (Strauss & Corbin, 2008).

A sociodemographic and professional characterization form was designed for the participants, incorporating data commonly used for this audience (Makara-Studzińska et al., 2020). The form included the following items: age, sex, marital status (single, married, living with a partner, widowed, separated, or divorced), academic background (secondary education, higher education), position or rank (captain, lieutenant, sergeant, corporal, soldier), type of activity performed (operational, administrative, prevention and inspection, telemarketing), weekly workload, and length of professional experience.

Each interview lasted less than an hour to minimize disruption to the participants' work. Participant anonymity was maintained by assigning each interviewee a code comprising the letter "I" (for "Interviewee") followed by an Arabic numeral indicating the sequence of the interviews, from I1 to I32. Memorandums were also created to document observations made during the data collection and analysis.

Figure 1 illustrates the preliminary data collection procedures and the theoretical sampling composition.

FIGURE 1 PRELIMINARY DATA COLLECTION PROCEDURES



Source: Elaborated by the authors.

3.4 Data analysis

The interviews were fully transcribed, and thematic analysis (TA) (Braun & Clarke, 2006) was employed to analyze the data. TA involves six interconnected and flexible phases, allowing for a non-linear and recursive process as needed. These phases are 1) familiarization with the data, which involves data collection, full transcription, review, immersion in the data, and thorough reading to achieve an in-depth understanding of the content; 2) generation of initial codes, organizing similar

data into groups; 3) theme development, focusing on classifying different codes into themes and grouping relevant extracts; 4) theme review, i.e., ensuring the homogeneity of the content within each theme, which involves re-coding when necessary; 5) theme definition, or establishing a clear correlation between themes and their respective aspects, separating themes from one another, and identifies subthemes based on their scope and complexity; and 6) report production, involving the final analysis and preparation of a scientific report organized around the identified themes. These six steps were systematically followed, resulting in a detailed description of the phenomenon and an analytical exposition of the participants' experiences.

Additionally, univariate data analysis was performed using the Statistical Package for the Social Sciences (SPSS) software, version 21. This facilitated the distribution of absolute and relative frequencies, enabling the description of the sociodemographic and professional characteristics of the firefighters.

3.5 Ethical aspects

This study is an excerpt from a main research project and was approved by the Research Ethics Committee of the Federal University of Triângulo Mineiro under the evaluation report 5.861.404/2023, CAAE: 31313420.9.0000.8667. All the criteria recommended for the development of research with human beings were followed, including confidentiality, coding of participants, and obtaining the signature of the Informed Consent Form (ICF).

4. RESULTS

Thirty-two firefighters participated, aged 28 to 48 years old, with an average age of 38.09 ± 5.34. The interviewees had worked as firefighters for 6 to 29 years, averaging 14.84 ± 6.37. Most participants were male (n = 27; 84.4%), married (n = 22; 68.8%), with higher education (n = 20; 62.5%), working in some type of operational activity (n = 17; 53.1%), with a weekly workload of up to 48 hours (n = 21; 65.6%). Most of the interviewees were sergeants (n = 12; 37.5%) or corporals (n = 11; 34.4%);

The analysis of the collected data, from the symbolic interactionism (SI) perspective, identifies three thematic categories: "hierarchical and disciplinary culture," "scope and limits of communication and demands in work relationships," and "dynamics of work relationships." The categories revealed the interviewees' perceptions of interpersonal relationships at work, including challenges, limits, and experiences related to social support in the work context.

4.1 Hierarchical and disciplinary culture

The category "hierarchical and disciplinary culture" reflects the context in which interpersonal relationships occur. Interpersonal relationships and hierarchical and disciplinary cultures mutually reinforce each other, contributing to the perpetuation of discipline, verticality in relationships, negative perspectives on the work environment, and the possibilities for change (Table 1).

TABLE 1 SUMMARY OF THE CATEGORY "HIERARCHICAL AND DISCIPLINARY CULTURE," SUBCATEGORIES, AND CENTRAL CODES

Subcategories	Central codes
Discipline and hierarchy	Rules and protocols, excessive and meaningless demands
	Culture of infantilization of subordinates
	Inflexibility and little freedom, taking measures to avoid exceeding limits
	Hierarchy, superiority, verticality
	Excessively strict punctuality
	Restriction of behavior imposed by discipline
	Following the "rules of the game" is mandatory
	Limited, pruned, and restricted behavior (no support)
	High level of demand
	Little recognition or appreciation
Punishments	Exaggerated, severe, and unjustifiable punishments
	Veiled and unverifiable punishments: unwanted shifts, workplace, and transfers
	Disciplinary communications, persecution
Negative perspectives on the environment and system	Toxic, unhealthy environment associated with negative long-term consequences
	Old, archaic, masculine system
	Dangerous system (access to weapons)
	Unsustainable (toward collapse)
	Uneven distribution of workload
	Overload: high demand and shortage of professionals
	Different pressures, according to the role: administrative or operational
	Constraints due to sexism, harassment, and bullying
	Injustices, repression, oppression, and discomfort
Legacy and possibilities for change	Blind obedience, uncomfortable submission
	Reproduction of experiences of oppression
	Withdrawal from confrontation after punishments
	Disbelief in the possibility of change
	Newcomers have a higher level of education
	Recognition of unconstitutional parameters, such as awareness of excesses, abuse, and inadequacies
	Identification of gaps for flexibility (conditioned by the professional situation or training)

Source: Research data.

The category of hierarchical and disciplinary culture reflects the behavior of superiors toward subordinates and the enforcement of excessive rules and protocols. This behavior is associated with excessive demands, infantilization, and the restriction of autonomy, leaving subordinates feeling compelled to "follow the rules of the game." High demand and absence of recognition or appreciation are highlighted as defining elements of the work environment for firefighters.

> [...] the demands are too much, and some make no sense [...] there is a culture of infantilizing subordinates. For example, the lieutenant treats the sergeant like a child, and the sergeant treats the corporal like a child (I01).

> […] we always have to have that limited, restrained, restricted behavior [...] I'm not saying that this is wrong, but punctuality to the point where you are punished for being one minute late[...] This leads us to a point where we can't cope anymore; we end up exploding (I02).

> [...] you can't complain; you have to follow the rules of the game (I26).

Workplace punishment is perceived as exaggerated, severe, and often unjustifiable. Many are veiled rather than explicit, creating tension, fear, and the perception that voicing discontent is unsafe.

> And the punishment, at times, was so severe, with disciplinary notices, persecutions, that people abandoned military life [...] if we complain, we are punished, either it is an obvious punishment, or it is a veiled punishment – worse shifts, allocation in a workplace that we do not want to work in, we are thrown into that environment [...]. Still, we cannot prove it [that we are being punished] [...] all the people I know who complained about the system were punished somehow (I02).

Interviewees shared negative perspectives on the workplace environment and its systemic issues. They cited risks, unhealthy conditions, inflexibility, pressure, embarrassment, and the urgent need for reform:

> I believe that change will not happen because it is a very old system, very archaic, very masculine [...] the system is collapsing (I02).

The unequal distribution of work and increasing demands foster perceptions of overload and inequality between subordinates and superiors. Participants also reported experiences of sexual harassment, bullying, embarrassment, and sexism, with women identified as particularly vulnerable to workplace violence:

> [...] people who have a higher degree of education always use this as a reason to work less, to order other people to do much more. So, we see that inequality is huge here (I25).

> [...] I have faced a lot of harassment in the past [...] it happened in the past at a party; I was dancing with a superior of mine, then he grabbed my butt, and I pushed him. From then on, he picked on me until he retired. Thank God he retired, but he picked on me forever. [...] the issue here is bullying, too; there is a lot of it here (I09).

> [...] mainly because I am a female soldier, there are sexist jokes or pranks. This is embarrassing, and I have difficulty defending myself from it (I20).

The legacy of this culture is identified as a negative inheritance perpetuated through controlling attitudes. Attempts to promote change and break cycles are hampered by power structures that legitimize obedience and discourage opposition. Authoritarian management practices further suppress active resistance among those who feel oppressed:

> People have a functional duty to obey him, in principle, without question (I17).

> Many relationships are based on the order to obey [...] because it is a military environment full of various acts of submission… things that many people find uncomfortable (I25).

> [...] it is as if it were an inheritance. We gradually picked up this inheritance from our elders and carried out the service the same way we didn't like (I02).

> So, as superior bosses, their orders are always the right ones; they are always right. You cannot easily criticize an order received from a superior, from a high-ranked officer. This messes up our lives (I07).

Although less emphasized by interviewees, the possibility of change within the system and its culture is linked to improvements in professional training, the attitudes of certain leaders, and opportunities for greater flexibility and dialogue:

> And as time goes by, the level of education in the institution increases significantly. Nowadays, most of those who join have a college degree, are educated and know that several parameters used within the military [...] many are even unconstitutional (I25).

4.2 Scope and limits of communication and demands in work relationships

The scope, communication limits and gaps, stressors associated with coexistence with peers, and the high level of demands from the public they serve are challenges faced by military firefighters (Table 2).

TABLE 2 SUMMARY OF THE CATEGORY "SCOPE AND LIMITS OF COMMUNICATION AND DEMANDS IN WORK RELATIONSHIPS," SUBCATEGORIES AND CENTRAL CODES

Subcategories	Central codes
Gaps and restrictions in communication	Difficult relationships, no support
	True friendships are limited by hierarchy
	(Harmful) use of personal information, distrust
	Formal conversation (referred to as "on paper," i.e., through written messages)
	Inaccessible superiors (experienced professionals or higher-ranking leaders)
	Fear of being misunderstood, judged, harmed
	Little or no openness to opinions and suggestions
Stress factors in peer coexistence	Lack of dialogue, solidarity, companionship, empathy, support
	Focus on helping society versus seeking power and promotions
	Perceptions linked to evil, falseness, laziness, negative charge, lack of cooperation from peers
	Intense coexistence: discomfort and exhaustion
	Dispute for benefits
Demands, expectations, and demands of the public served	Treat people well
	Understand despair, aggressiveness, revolt, and lack of education
	Insults, hostility, threats
	Expression of serenity or lack of emotion
	Public dissatisfaction
	Stress factors associated with services
	Incompatibility between the expectations of the public served and the role played by firefighters
	Blame for situations over which they have no control if there is governability
	Recognition, admiration, affection, respect, "superhero"

Source: Research data.

Gaps and restrictions in communication are particularly detrimental to relationships with superiors, fostering a lack of trust, limited dialogue, and reliance on "on-paper" conversations, i.e., through written messages. This emphasis on formal, written communication hinders the establishment of closer relationships. The analysis reveals discomfort, difficulty expressing oneself, and fear of being misunderstood or punished.

> So, we often cannot access other military personnel because they are more senior than us, more senior […] we only 'talk on paper' [through written messages] (I02).

> […] we can't give much of an opinion, right? Sometimes, we give suggestions, but some chiefs are not open to suggestions (I23).

> Interpersonal relationships within the corporation are difficult […] (I29).

Stressor factors arising from corporate coexistence are linked to behaviors perceived as a lack of cooperation, laziness, deceit, lack of solidarity, or an interest in promotions and personal benefits. Sharing space, mutual coexistence, and extended shifts exacerbate these occupational stressors.

> […] In addition to the demands of the service they perform, serving citizens, collecting materials, organizing materials. Sometimes, they start to shift tasks onto others. Sometimes, one person is lazier than another, which becomes annoying […] and sometimes this task has to be performed as a team, and someone on the team doesn't help. […] We work on a 24-hour service schedule. So, we spend a lot of time with people […] there's accommodation, bathrooms, showers, flushing the toilet, glasses out of place. It's like a day at home, really." (I30).

Another issue is the relationship with the public, an important subcategory. This represents a paradox for firefighters, who are simultaneously admired as "superheroes" and criticized when they fail to meet the public's high expectations, often due to factors beyond their control.

> So, my relationship with the public, in general, is excellent. We can see in the eyes of children and also of many adults, in addition to admiration for all of us, respect, affection, attention, and that is good. (I26).

> Sometimes we are put under a lot of pressure. People think that firefighters are superheroes, but we have limitations too (I27).

> We arrive, and sometimes we are harassed. There is a lot of stress, and people swear at us (I13).

> For example, people call the firefighter and say that the traffic light is broken [...] minutes later, there is another person with another demand that has nothing to do with the firefighter, and they want the firefighter to solve it. Then I must be patient and explain to them and calm them down [...], which is where it gradually wears down and everything else generates stress (I12).

4.3 Dynamics of work relations

The third and final category concerns the dynamics of work relations. It brings together representations of suffering, ways of coping, and questions about the adaptation process, which do not always coincide with healthy behaviors from the perspective of mental health (Table 3).

TABLE 3 SUMMARY OF THE CATEGORY "DYNAMICS OF WORK RELATIONS," SUBCATEGORIES, AND CENTRAL CODES

Subcategories	Central codes
Perception of mental suffering associated with work	Intolerance to pressure: harmful consequences for oneself or others (aggravating factor: access to weapons, witness atrocities)
	Recognition of the need for help (for oneself and colleagues)
	Perception of symptoms (anxiety, crises)
	Fear of symptomatic and armed colleagues
	Outbursts in the face of accumulated pressure (high and continuous)
	Exceeding what is socially acceptable: "outbursts, nervous breakdowns"
	Stress, impatience, intolerance, lack of motivation
	Feeling offended and oppressed
Coping and protection resources in work relations	"Disconnecting as much as possible" from work
	Seek mental health support: psychiatrist, psychologist, psychotropic medication
	Distance from the system
	Calm down and relax
	Let off steam, feel free and authentic outside the work environment
	Resorting to alcohol and other toxic substances as an escape valve
	Recognition of the influences of excessive disciplinary measures (obeying, accepting) in the work environment on family relationships
	Playing a character: laughing, accepting, playing dumb
	Dodging, assuming a defensive, suspicious, vigilant, professional, and impersonal posture
	Using power to solve personal problems
	Identifying privileged groups: their "little group"
	Maintaining good working relationships and worrying about the well-being of colleagues
	Uniting with coworkers, maintaining affinity relationships
	Dedicating oneself to family, adopting a hobby, practicing varied activities outside of work
	Reflecting on the use of "militarism" in other relationships to avoid this approach
	Being cordial, polite, and respectful (regardless of hierarchical position)
Adapting (or not) to the work environment	An oppressive environment can become a comfort zone for those who no longer adapt to society
	Difficulties in adapting at the beginning of a career: recognizing rules
	Adapting to orders, rules, hierarchy, and system
	Maintaining positive relationships, "excellent," "wonderful" relationships
	Feeling of being adapted and calm

Source: Research data.

Firefighters perceive significant signs of emotional distress among themselves and evaluate what should or should not be tolerated. They also express concern about the harmful consequences of suffering related to "atrocities against life," anxiety, stress, crises, and "nervous breakdowns." Additionally, they highlight the risk factors associated with possessing weapons.

> There are reports—not just reports, but facts—of people who could not withstand this pressure and committed atrocities against the lives of others or their own lives. [...] Many firefighters also suffer from anxiety attacks, stress attacks, nervousness, etc. [...] It is very dangerous, even at work. [...] We are people who work armed, and 'military police' [state police in Brazil also is related to the armed forces] are also armed, so we have access to weapons. And today, people are using weapons either against others or themselves (I02).

Excessive submission and the inability to express emotions in the workplace lead firefighters to develop coping mechanisms to relieve this pressure. These strategies include positive actions such as "disconnecting" from work, regulating emotions, establishing supportive relationships both at work and outside of it, seeking psychiatric and psychological treatment, and striving to prevent workplace pressure from harming their personal lives. However, some coping mechanisms involve risky behaviors, such as the use of psychoactive substances.

> When I leave work, I try to disconnect as much as possible (I01).

> You have to think a lot about how to calm down at home and be more relaxed, and not let it affect you so much (I07).

> And then, often, when we leave here, we let off steam in a way that we are free from these clothes, this character [...] so, many people seek drinks, sometimes there are many reports of using other substances, because it is an outlet (I02).

> And then I try, with my family, my hobbies, my activities that I do, I use them as therapy so as not to be affected (I11).

> And for the subordinate, I make sure of asking how they are. And if I come across any of his problems, I try to help him quickly [...] I worry about the soldier's well-being (I21).

The last subcategory, related to adaptation, contrasts the firefighters' perception. On the one hand, the interviewees question whether adapting to the military, intrinsic to the role in Brazilian fire departments, ends up causing maladjustment in other spheres of life, such as imbalances in mental health and social relationships. On the other hand, some interviewees claim to be well-adapted and maintain positive interpersonal relationships with their coworkers.

> Well, in general, I consider the relationships I have at work to be good. At times, excellent [...] (I26).

> So, both the police officer and the firefighter, they get used to the hierarchy, the operation of the command chain. They cope with it well (I28).

> At the beginning of my career, I was more enthusiastic; I was more enthusiastic about the work, and I expected more. So, my level of frustration was also higher despite being more enthusiastic. Nowadays, I can[...] I can handle it more calmly, leave everything in its proper place […] (I31).

5. DISCUSSION

This study seeks to understand interpersonal relationships within the typical work environment of firefighters and raise awareness of the political implications of these relationships based on thematic analysis and the adopted theoretical framework. It addresses the disciplinary and hierarchical culture inherent to the connection of the firefighter departments in Brazil with the military forces. Firefighters perceive this link negatively, as it perpetuates traditional practices and norms without offering substantial opportunities for change.

The research explores the scope and limits of communication and the demands associated with firefighters' interpersonal relationships. Barriers and gaps are particularly evident in communication with superiors. Communication difficulties among colleagues lead to conflicts in an intense daily coexistence. A duality emerges on the public front: firefighters are admired as heroes and held accountable for outcomes beyond their control. The dynamics of work relationships reveal perceptions of mental suffering and associated losses, alongside the use of coping strategies that are not always constructive.

Hierarchical culture is linked to the reproduction of oppressive practices, creating distance between firefighters and their leaders. The rigidity of the system, enforced submission, fear of punishment, silencing, and hopelessness regarding change highlight the extreme nature of the work environment. Psychosocial risks are further exacerbated by leaders' inflexibility and lack of dialogue (Hannah et al., 2009). Inefficient communication affects workplace dynamics and extends to firefighters' family relationships. Additionally, long shifts and the constant stress of critical decision-making negatively impact personal lives (Easterbrook et al., 2022).

Opportunities for change are associated with improved knowledge and training among professionals and greater flexibility from leaders. Firefighters in operational roles, who comprise the majority of personnel, experience greater pressure and suffering (Corpo de Bombeiros Militar Santa Catarina [CBMSC], 2018; Obuobi-Donkor et al., 2022). Work overload, identified as a significant stressor, is linked to the persistent experience of emotional exhaustion (Easterbrook et al., 2022). A shortage of professionals further contributes to firefighters' negative perceptions of their work environment and operation system.

In an environment perceived as oppressive and unsafe, interpersonal relationships often perpetuate discipline, verticality, excessive demands, individualism, and stressors tied to peer coexistence, with little emotional sharing. These findings align with a study of 297 firefighters in the Brazilian state of Espírito Santo, which identified emotional distress arising from the exclusion of subordinates from discussions, professional disputes, limited autonomy, and unfair task distribution (Oliveira & Moraes, 2021).

Workplace pressure and demands leave little room for subjectivity. A study involving 1,096 Romanian firefighters found that work pressures, including emotional demands, were associated with physical and emotional exhaustion (Roşca et al., 2021).

The positive impact of firefighters' work on the population generates satisfaction (Oliveira & Moraes, 2021), reinforces their identification with the profession, and, to a certain extent, mitigates the psychological demands of the job (Roșca et al., 2021). In this study, recognition and appreciation in work relationships come mainly from the public served. However, this is an ambiguous relationship in which admiration contrasts with excessive demands and misplaced blame. Among firefighters, there are several manifestations of emotional distress and negative feelings toward themselves and their lives (Oliveira & Moraes, 2021). Testimonies collected in this study reveal cases of suicidal ideation linked to work pressures, with some professionals attempting to take their own lives using their firearms (Pennington et al., 2021).

Another concerning finding is workplace violence, to which women are particularly vulnerable. Reports indicate that victims often resort to individual self-protection measures, highlighting the inadequacy of institutional mechanisms for preventing and addressing harassment and violence. Such cases are generally underreported, and court decisions and criminal and administrative law doctrines seem incapable of responding to this demand (Silva & Sena, 2020). Silva and Sena (2020) observed that it is up to the law enforcement officer to be aware of the legal elements to judge reprehensible behaviors in defense of victims.

Low satisfaction with social support within firefighter teams, combined with exposure to traumatic events, heightens the risk of emotional distress (Bevan et al., 2022; Obuobi-Donkor et al., 2022; Wang et al., 2023). Some firefighters report their own and their colleagues' emotional distress and the manifestation of symptoms of depression, anxiety, stress, and nervous breakdowns. They also express concern about crises that may lead them to commit acts of violence against themselves and others. Positively, they recognize manifestations of social support as a protective resource for mental health against the negative effects of exposure to trauma and suicidal ideation (Back et al., 2023). In addition, social support promotes self-esteem and reduces symptoms of depression (Wang et al., 2023).

Contemporary public sector leadership demands a shift toward collaborative innovation characterized by distributive, horizontal, and adaptive approaches, moving away from traditional command-and-control models (Paschoiotto et al., 2024).

The main limitation of this study is its focus on a single fire department. However, the selected corporation encompasses several cities and shares similarities with other organizations in terms of institutional rules and work context.

Despite the potential gaps of a qualitative approach, this study's findings align with quantitative research on low social support, insufficient institutional backing, and limited coworker assistance. The qualitative method enabled a comprehensive and detailed exploration of firefighters' interpersonal relationships, particularly in the context of psychosocial risks that compromise their physical and mental health. Regarding leadership, in the context of extreme characteristics such as that of a fire brigade, the study shows the dominance of vertical decision-making and severe disciplinary measures, adversely affecting the overall working conditions of firefighters.

6. CONCLUSION

This study successfully achieves its general objective, providing a clearer understanding of interpersonal relationships in the typical work environment of firefighters.

The findings highlight the need for greater awareness and attention, not only from political and administrative perspectives but also from a human perspective, in addressing interpersonal relationships in extreme work environments such as firefighting. The predominantly negative perception of work relationships among firefighters emphasizes the urgency of revisiting and updating the hierarchical culture, fostering less asymmetrical relationships, and addressing the issue of work overload by hiring additional personnel to ensure a fairer distribution of tasks. Thus, this study contributes to the administration and public safety fields by shedding light on the dynamics of work relationships in high-stress environments. It also offers valuable insights for health studies, particularly in the area of mental health, by demonstrating the effects of stress and suffering on individuals' overall well-being. Furthermore, the findings encourage reflections and revisions in education, supporting the development of more updated and humanized firefighter training programs.

Given the necessity and inevitability of the risks inherent to the role of firefighters, this study calls for a reexamination of foundational concepts in this sector. It advocates for healthier interpersonal relationships, with a particular focus on leadership, to promote better working conditions and enhance the well-being of firefighters.

REFERENCES

Azevedo, D. S. S., Lima, E. P., & Assunção, A. Á. (2019). Fatores associados ao uso de medicamentos ansiolíticos entre bombeiros militares. *Revista Brasileira de Epidemiologia*, *22*, e190021. https://doi.org/10.1590/1980-549720190021

Back, C. Y., Hyun, D. S., Chang, S. J., & Jeung, D. Y. (2023). Trauma exposure and suicidal ideation among korean male firefighters: Examining the moderating roles of organizational climate. *Safety and Health at Work*, *14*(1), 71-77. https://doi.org/10.1016/j.shaw.2022.11.005

Bartlett, B. A., Jardin, C., Martin, C., Tran, J. K., Buser, S., Anestis, M. D., & Vujanovic, A. A. (2018). Posttraumatic stress and suicidality among firefighters: the moderating role of distress tolerance. *Cognitive Therapy and Research*, *42*(4), 483-496. https://doi.org/10.1007/s10608-018-9892-y

Bevan, M. P., Priest, S. J., Plume, R. C., & Wilson, E. E. (2022). Emergency first responders and professional wellbeing: a qualitative systematic review. *International Journal of Environmental Research and Public Health*, *19*(22), 14649. https://doi.org/10.3390/ijerph192214649

Bing-Canar, H., Ranney, R. M., McNett, S., Tran, J. K., Berenz, E. C., & Vujanovic, A. A. (2019). Alcohol use problems, posttraumatic stress disorder, and suicide risk among trauma-exposed firefighters. *The Journal of Nervous and Mental Disease*, *207*(3), 192-198. https://doi.org/10.1097/NMD.0000000000000947

Blumer, H. (1986). *Symbolic interactionism: perspective and method*. University of California Press.

Borges, V. R. & Werlang, B. S. G. (2006). Estudo de ideação suicida em adolescentes de 15 a 19 anos. *Estudos de Psicologia*, *11*(3), 345-351. https://doi.org/10.1590/S1413-294X2006000300012

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Cardoso, H. F., & Baptista, M. N. (2015). Evidência de Validade para a Escala de Percepção do Suporte Social (Versão Adulta) – EPSUS-A: um estudo correlacional. *Psicologia: Ciência e Profissão*, *35*(3), 946-958. https://doi.org/10.1590/1982-3703001352013

Charmaz, K., Costa, J. E., & Caregnato, S. E. (2009). *A construção da teoria fundamentada: guia prático para análise qualitativa*. Penso.

Corpo de Bombeiros Militar de Santa Catarina. (2018). *Legislação e regulamentos: manual do aluno. CFSd 2018*. https://www.msconcursos.com.br/admin/arquivos/download/Legisla%C3%A7%C3%A3o%20e%20regulamentos%20internos%20-%20Manual%20do%20aluno.pdf

Corpo de Bombeiros Militar de Minas Gerais (2020). *Atendimento do Corpo de Bombeiros em Minas Gerais*. https://www.bombeiros.mg.gov.br

Easterbrook, B., Brown, A., Millman, H., Van Blyderveen, S., Lanius, R., Heber, A., McKinnon, M., & O'Connor, C. (2022). The mental health experience of treatment-seeking military members and public safety personnel: a qualitative investigation of trauma and non-trauma-related concerns. *Health promotion and chronic disease prevention in Canada: Research, Policy and Practice*, *42*(6), 252-260. https://doi.org/10.24095/hpcdp.42.6.03

Figley, C. R. (2002). Compassion fatigue: psychotherapists' chronic lack of self-care. *Journal of Clinical Psychology*, *58*(11), 1433-1441. https://doi.org/10.1002/jclp.10090

Fonseca, I. S. S., & Moura, S. B. (2008). Apoio social, saúde e trabalho: uma breve revisão. *Psicologia para América Latina*, *15*. http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1870-350X2008000400012&lng=pt&tlng=pt

Freitas, C. R. D. (2024). *Relacionamento interpessoal e inteligência emocional no trabalho*. Quipá Editora.

Gulliver, S. B., Zimering, R., Knight, J., Morissette, S., Kamholz, B., Meyer, E., Keane, T., Pennington, M., Denman, T., Carpenter, T., & Kimbrel, N. (2018). Tobacco and alcohol use among firefighters during their first 3 years of service. *Psychology of Addictive Behaviors*, *32*(3), 255-263. https://doi.org/10.1037/adb0000366

Haddock, C. K., Poston, W. S. C., Jahnke, S. A., & Jitnarin, N. (2017). Alcohol Use and Problem Drinking among Women Firefighters. *Women's health issues: official publication of the Jacobs Institute of Women's Health*, *27*(6), 632-638. https://doi.org/10.1016/j.whi.2017.07.003

Hannah, S., Uhl-Bien, M., Avolio, B. J., & Cavarretta, F. L. (2009). A framework for examining leadership in extreme contexts. *Leadership Quarterly*, *20*, 897-919. https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1038&context=managementfacpub

Huang, Q., An, Y., & Li, X. (2022). Coping strategies as mediators in the relation between perceived social support and job burnout among Chinese firefighters. *Journal of Health Psychology*, *27*(2), 363-373. https://doi.org/10.1177/1359105320953475

Jeung, D. Y., & Chang, S. J. (2021). Moderating Effects of Organizational Climate on the Relationship between Emotional Labor and Burnout among Korean Firefighters. *International Journal of Environmental Research and Public Health*, *18*(3), 914. https://doi.org/10.3390/ijerph18030914

Kyron, M. J., Rees, C. S., Lawrence, D., Carleton, R. N., & McEvoy, P. M. (2021). Prospective risk and protective factors for psychopathology and wellbeing in civilian emergency services personnel: A systematic review. *Journal of Affective Disorders*, *281*, 517-532. https://doi.org/10.1016/j.jad.2020.12.021

Makara-Studzińska, M., Wajda, Z., & Lizińczyk, S. (2020). Years of service, self-efficacy, stress and burnout among Polish firefighters. *International Journal of Occupational Medicine and Environmental Health*, *33*(3), 283-97. https://doi.org/10.13075/ijomeh.1896.01483

Nações Unidas no Brasil. (2024). *Os Objetivos de Desenvolvimento Sustentável no Brasil*. https://brasil.un.org/pt-br

Obuobi-Donkor, G., Oluwasina, F., Nkire, N., & Agyapong, V. I. O. (2022). A scoping review on the prevalence and determinants of post-traumatic stress disorder among military personnel and firefighters: Implications for public policy and practice. *International Journal of Environmental Research and Public Health*, *19*(3), 1565. https://doi.org/10.3390/ijerph19031565

Oliveira, K. T. D., & Moraes, T. D. (2021). Saúde mental e trabalho em profissionais do corpo de bombeiros militar. *Revista Psicologia: Organizações & Trabalho*, *21*(1), 1388-1397. https://doi.org/10.5935/rpot/2021.1.21135

Paschoal, T., & Tamayo, Á. (2004). Validação da escala de estresse no trabalho. *Estudos de Psicologia (Natal)*, *9*(1), 45-52. https://doi.org/10.1590/S1413-294X2004000100006

Paschoiotto, W. P., Cunha, C. J. C. A., & Silva, S. M. (2024). Liderança no processo de inovação colaborativa no setor público: uma revisão integrativa. *Revista de Administração Pública*, *58*(1), e2023-0037. https://doi.org/10.1590/0034-761220230037

Payne, N., & Kinman, G. (2019). Job demands, resources and work-related well-being in UK firefighters. *Occupational Medicine (Oxford, England)*, *69*(8-9), 604-609. https://doi.org/10.1093/occmed/kqz167

Pennington, M. L., Ylitalo, K. R., Lanning, B. A., Dolan, S. L., & Gulliver, S. B. (2021). An epidemiologic study of suicide among firefighters: Findings from the National Violent Death Reporting System, 2003-2017. *Psychiatry Research*, *295*, 113594. https://doi.org/10.1016/j.psychres.2020.113594

Pereira, A. C. L., Souza, H. A., Lucca, S. R., & Iguti, A. M. (2020). Fatores de riscos psicossociais no trabalho: limitações para uma abordagem integral da saúde mental relacionada ao trabalho. *Revista Brasileira de Saúde Ocupacional*, *45*, e18. http://dx.doi.org/10.1590/2317-6369000035118

Price, J. A. B., Landry, C. A., Sych, J., McNeill, M., Stelnicki, A. M., Asmundson, A. J. N., & Carleton, R. N. (2022). Assessing the perceptions and impact of critical incident stress management peer support among firefighters and paramedics in Canada. *International Journal of Environmental Research and Public Health*, *19*(9), 4976. https://doi.org/10.3390/ijerph19094976

Ricciardelli, R., Czarnuch, S., Carleton, R. N., Gacek, J., & Shewmake, J. (2020). Canadian public safety personnel and occupational stressors: how PSP interpret stressors on duty. *International Journal of Environmental Research and Public Health*, *17*(13), 4736. https://doi.org/10.3390/ijerph17134736

Rodrigues, T. D. F. F., Oliveira, G. S., & Santos, J. A. (2021). As pesquisas qualitativas e quantitativas na educação. *Revista Prisma*, *2*(1), 154-174. https://revistaprisma.emnuvens.com.br/prisma/article/view/49

Roşca, A. C., Mateizer, A., Dan, C. I., & Demerouti, E. (2021). Job demands and exhaustion in

firefighters: The moderating role of work meaning. a cross-sectional study. *International Journal of Environmental Research and Public Health*, *18*(18), 9819. https://doi.org/10.3390/ijerph18189819

Silva, M. G., & Tolfo, S. R. (2022). Processos psicossociais, saúde mental e trabalho em um instituto federal de educação. *Revista Brasileira de Saúde Ocupacional*, *47*, e13. https://doi.org/10.1590/2317-6369/22620pt2022v47e13

Silva, R. R., & Sena, I. A. (2020). Assédio sexual: análise dos elementos constitutivos do tipo aplicáveis aos militares de Minas Gerais. *Vigiles*, *3*(1), 9-23.

Souza, V. R., Marziale, M. H., Silva, G. T., & Nascimento, P. L. (2021). Tradução e validação para a língua portuguesa e avaliação do guia COREQ. *Acta Paulista de Enfermagem*, *34*, eAPE02631. http://dx.doi.org/10.37689/actaape/2021AO02631

Strauss, A., & Corbin, J. (2008). *Pesquisa qualitativa: técnicas e procedimentos para o desenvolvimento de teoria fundamentada*. Artmed.

União Geral dos Trabalhadores. Riscos psicossociais no trabalho: Riscos, efeitos na saúde e prevenção. (2017). *Departamento de Saúde e Segurança no Trabalho. União Geral de Trabalhadores*. https://www.ugt.pt/publicfiles/6qkw5lae6qr9tlwapatzl4lwttic2baax1txdzoj.pdf

Vasconcelos, A. G., Lima, E. D. P., Teoh, K., Nascimento, E., MacLennan, S., & Cox, T. (2021). Work-related factors in the etiology of symptoms of post-traumatic stress among first responders: The Brazilian Firefighters Longitudinal Health Study (FLoHS). *Cadernos de Saúde Pública*, *37*(9), e00135920. https://doi.org/10.1590/0102-311x00135920

Wagner, N. L., Berger, J., Flesch-Janys, D., Koch, P., Köchel, A., Peschke, M., & Ossenbach, T. (2006). Mortality and life expectancy of professional fire fighters in Hamburg, Germany: a cohort study 1950-2000. *Environmental Health: a global access science source*, *5*, 27. https://doi.org/10.1186/1476-069X-5-27

Wang, L., Chen, F., Zhang, Y., & Ye, M. (2023). Association between social support, and depressive symptoms among firefighters: the mediating role of negative coping. *Safety and Health at Work*, *14*(4), 431-437. https://doi.org/10.1016/j.shaw.2023.10.002

Whitehead, D., Hamidi, Y., Ebrahimi, H., Hazavehei, S. M. M., & Moghadam, S. M. K. (2023). Relationships between lifestyle, quality of life, organizational culture and job satisfaction among nurses related to Health Promoting Hospital (HPH) standards. *Health Services Insights*, *16*, 11786329231193792. https://doi.org/10.1177/11786329231193792

World Health Organization, & International Labour Organization (Eds.). (2021). WHO/ILO joint estimates of the work-related burden of disease and injury, 2000–2016. *World Health Organization and the International Labour Organization*. https://webapps.ilo.org/wcmsp5/groups/public/---ed_dialogue/---lab_admin/documents/publication/wcms_819788.pdf

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DATA AVAILABILITY

The dataset supporting the results of this study is not publicly available.

PEER REVIEW REPORT

The peer review report is available at https://doi.org/10.5281/zenodo.14018245