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Work Challenges and Adjustment among Novice Firefighters in Taiwan

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Abstract

This study explored the work-related challenges and adjustment experiences of novice firefighters in Taiwan. Using a qualitative thematic analysis design, we conducted semi-structured, in-depth interviews with four novice firefighters (one woman and three men) aged 27–33 years (M = 29.75) who had 2–3.5 years of work experience. The findings revealed several salient challenge-related themes, including perceived unfairness and oppression in the workplace, ethical dilemmas in practice, organizational and interpersonal stressors, stress associated with insufficient work resources, and pressure arising from public expectations and commentary. Regarding adjustment and coping, participants expressed substantial concerns about using formal mental health resources and therefore relied primarily on personal resources to manage stress. Implications for practice and directions for future research are discussed.

Keywords: *Novice firefighters, Work challenges, Work adjustment, Resilience*

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In recent years, global climate anomalies have contributed to increasingly complex and unpredictable disasters. In Taiwan, economic development and population concentration—together with larger, taller, and more diverse building structures—have expanded firefighters' operational demands and increased exposure to hazardous labor conditions [1]. To address workforce shortages, the National Fire Agency launched the "Firefighting Workforce Enhancement Initiative" in 2018 and added 3,100 firefighting personnel [2]. Under these conditions, the training and development of novice firefighters becomes especially critical. Without resilience-building opportunities and a health-supportive work environment, novice personnel may experience excessive stress and maladaptation that ultimately contribute to early exit from the profession. Despite the practical significance of this issue, research on novice firefighters' work challenges and psychological adjustment in Taiwan remains limited. Novice firefighters may face structural, systemic, and hierarchical constraints; high job demands may intensify perceived stress, while access to organizational resources may be restricted. Over time, an imbalance between excessive demands and insufficient resources may contribute to anxiety, depression, and stress-related symptoms, increasing the risk of physical and psychological burnout. Accordingly, this study aims to describe (a) the work-related challenges novice firefighters in Taiwan encounter and (b) their experiences of adjustment and coping.

Firefighters and Their Work

Firefighters' work encompasses a broad range of duties. In Taiwan, novice firefighters commonly perform two major categories of frontline tasks: (1) disaster response and life-saving rescue, including fire suppression, rescue operations across disaster types, and the management and deployment of rescue resources; and (2) emergency medical services (EMS), including the planning, supervision, and delivery of prehospital emergency care, as well as communication and coordination with medical institutions. In this study, we use the term fire and emergency service work experience to denote frontline operational experience spanning disaster response/rescue, life-saving or technical rescue, and EMS. Firefighting is widely recognized as a high-risk occupation characterized by substantial physical demands, heavy psychological load, and high task complexity. As disaster responders, firefighters are required to enter and operate at hazardous scenes; even under life-threatening and terrifying conditions, professional responsibility typically precludes avoiding the scene or refusing assigned duties. Firefighting work is dangerous, unpredictable, and time-sensitive. Prolonged exposure to heavy workloads, shift-related strain, and traumatic events places firefighters at elevated risk for exhaustion and compromised physical and mental health [3]. Firefighters often must remain in a continuous "combat-ready" state, making firefighting a particularly high-stress occupation [4]. Long-term on-call shift systems can disrupt sleep and interfere with normal physical and psychological recovery processes [5]. Kuo [6] further noted that, driven by a sense of mission and responsibility,

firefighters must meet public expectations; at disaster scenes, they may suppress physical discomfort and psychological distress in order to execute tasks calmly and courageously. When such reactions accumulate without adequate processing, firefighters may develop PTSD-related symptoms (e.g., hypervigilance, insomnia, exaggerated startle responses, irritability, and concentration difficulties). If psychological trauma is not addressed in a timely manner, symptoms may intensify over time.

Operational conditions also constrain emotional processing. During missions, firefighters often lack the time and space to process emotions and may temporarily set aside personal feelings until tasks are completed, at which point they begin to experience and interpret the impact of the event. Frequent exposure to disaster incidents may require firefighters to re-enter distressing rescue contexts before psychological equilibrium is restored, thereby accumulating negative emotions and traumatic experiences [7]. In addition, firefighters face public pressure through media coverage and public praise or criticism, which may further intensify occupational stress [8].

Novice Firefighters

Novice firefighters are commonly defined as those with 2–4 years of service [9]. They are expected to learn and perform core duties such as fire suppression and emergency medical response while adapting to the realities of frontline work. In Taiwan, however, empirical research on novice firefighters remains limited. Existing literature has primarily examined safety and training effectiveness, the influence of overall health on performance, the effects of stress, and the development of professional knowledge [10]. Because novice firefighters often serve as frontline personnel, they may experience substantial pressure associated with disaster response. Prior evidence suggests that shorter tenure is associated with stronger stress responses among firefighters [11,12]. Novice firefighters may also report higher stress than senior firefighters [13]. Moreover, they require an adjustment period to manage challenges such as the gap between training and real-world practice and the complexity of diverse duty types [14]. At the same time, they must learn to navigate bureaucratic features of the firefighting system and pressures related to obedience and hierarchical authority [15].

Job Demands and Resource Provision

Work environments shape employees' health, well-being, and performance [16]. The Job Demands–Resources Model (JDRM) provides a useful framework for understanding how occupational conditions influence stress and adjustment [17]. Job demands refer to aspects of a job that require sustained physical and/or psychological effort and include negative factors at physical, psychological, social, or organizational levels; such demands entail specific physiological and/or psychological costs. Examples include workload, time pressure, emotional load, and role conflict. Although moderate job demands may stimulate motivation and alertness, chronically excessive demands can initiate a health-impairment process that depletes resources and increases burnout risk, physical and mental health problems, and performance decrements.

In contrast, job resources refer to positive job characteristics at physical, psychological, social, or organizational levels. Job resources support goal attainment, reduce job demands and their associated costs, and promote personal growth, learning, and development. Resources may operate at the task level (e.g., autonomy), organizational level (e.g., career development opportunities), interpersonal level (e.g., supervisor and coworker support), and job design level (e.g., performance feedback). Adequate resources activate a motivational process, enhance engagement, and are associated with positive outcomes such as safety behaviors, job performance, and organizational commitment.

Safety-Oriented JDRM

Building on the JDRM, scholars have proposed a safety-oriented JDRM that foregrounds safety-relevant job demands and safety-relevant resources [18]. For firefighting, this model highlights four demand dimensions: (1) Workload, referring to the speed and volume of task completion under time constraints and pressure; high time pressure has been linked to increased firefighter fatality rates. (2) Physical demands, including high-intensity biomechanical activities such as running, carrying, and ladder climbing; excessive exertion contributes to fatigue that can undermine reaction time and adherence to safety procedures. (3) Emotional demands, referring to the psychological effort required to manage emotions and cope with affective reactions (e.g., fear, suppression); sustained emotional labor may deplete energy reserves and contribute to emotional exhaustion. (4) Complexity, involving cognitive demands associated with handling multiple difficult tasks, maintaining situational awareness, making rapid decisions, and conducting risk assessments—particularly in life-threatening contexts.

Structural Insufficiency of Resources

Fire service organizations may also face structural shortages of resources. Insufficient resources have been identified as a key factor undermining firefighters' psychological health [19]. In addition, interpersonal conflict, discrimination, harassment, and negative perceptions of organizational justice can weaken resilience and are associated with anxiety, depression, and physical illness [20]. In particular, perceptions of organizational and systemic unfairness increase mental health risks and are closely tied to hierarchical stress. In such contexts, employees may engage in proactive behaviors that reshape their work conditions. These include job crafting (actively modifying one's job or available resources) and self-undermining (stress-related mistakes that inadvertently increase one's own job demands). Novice personnel may adjust their work behaviors in response to hierarchical pressure, or they may reduce engagement due to fear of making mistakes. When social support is limited, interpersonal resources become scarce and fragile, and this vulnerability is closely linked to trauma-related stress symptoms, depression, and emotional exhaustion [21]. Moreover, negative views of organizational systems (e.g., unfair policies or promotion practices) may further elevate mental health risks. Interpersonal conflict can also obstruct help-seeking and support access, producing a "double hit" of resource loss. Under conditions of high hindrance, high demands, and

systemic resource deficiencies, job demands may substantially exceed resource provision, creating a structural imbalance that undermines job performance directly or indirectly through psychological distress.

The Buffering Effects of Resources

The JDRM also emphasizes personal resources, defined as individuals' beliefs about their ability to control and influence their environment. Job resources can buffer strain associated with job demands and mitigate the negative effects of work stressors. This buffering function suggests that resources may be especially protective under high-demand conditions, supporting both well-being and work performance. Common personal resources include self-efficacy, optimism, and resilience. Such resources predict work engagement by strengthening confidence in one's capacity to manage challenges and sustain involvement. Personal resources may also operate similarly to job resources by buffering the adverse effects of job demands on stress. In sum, when employees face high demands (e.g., heavy workload or emotional load), greater resources (e.g., autonomy, social support, performance feedback, and professional development opportunities) are generally associated with lower burnout and emotional exhaustion.

Organizational Culture

Organizational culture is another critical influence on firefighters' well-being and help-seeking. A traditional culture emphasizing "toughness, silence, and self-sacrifice," along with emotional taboo, may inhibit seeking psychological support [22]. In contrast, framing professional psychological help-seeking as a constructive form of self-care may facilitate a healthier organizational climate [23].

Resource adequacy in the fire service also matters. The quality, quantity, and suitability of personal protective equipment are central to firefighters' sense of safety. Station facilities, vehicles, staffing, and occupational health and safety measures represent foundational resources that directly shape the safety and comfort of the work environment. Supervisor support is likewise influential: when perceived support from managers, family, or friends decreases, depressive symptoms tend to increase. Supervisors' support, trust, and care may strengthen subordinates' resilience. Leadership practices—such as reward and punishment systems, internal management, duty scheduling, performance evaluation, discipline, and performance demands—may function either as resources or as stressors, depending on how they are enacted and experienced.

Firefighters' Adjustment and Coping

Carver et al. [24] developed a coping strategies inventory that categorizes coping behaviors into problem-focused coping, cognitive restructuring coping, emotional support coping, and avoidance coping. Chung and Chiou [25] suggested that firefighters who predominantly use problem-focused coping tend to recover gradually, whereas reliance on avoidance coping may increase risk for psychological disorders. Prior research indicates that firefighters often rely on individual coping strategies to manage work stress. Lee [26] and Chen [27] found that after exposure to death or major critical incidents, firefighters often cope privately; when adjustment is insufficient or support is unavailable, some may request transfer or resign. Some firefighters manage occupational stress through a passive stance (e.g., "you get used to it over time") [28], whereas others use strategies such as active reflection for improvement or emotional detachment [29]. Firefighters may also cope by maintaining task focus and calm during operations [30] or by adopting passive coping patterns, allowing emotions to fade over time through emotional numbing, suppression, or self-isolation. Although these strategies may stabilize functioning in the short term, they may carry negative long-term consequences.

Resilience also shapes adjustment. Firefighters with higher resilience are more likely to appraise stress as a challenge rather than a threat [31]. Firefighters commonly report using conversation, exercise, leisure activities, and faith practices to reduce stress. Professional competence also increases with accumulated experience and knowledge, which can strengthen coping capacity. Individuals with stronger self-efficacy tend to believe they can control and change situations, thereby moderating the impact of perceived stress on burnout.

Peer support functions as an important buffer by enabling emotional exchange, experience sharing, mutual reminders, and opportunities for emotional ventilation. Colleagues' competence, knowledge, and experience can enhance individual safety, and camaraderie is a strong predictor of firefighters' mental health. Firefighters often reduce distress through peer dialogue—talking through tasks and coping approaches—and through experiential transfer from senior peers. Everyday conversations and informal gatherings may also help relieve emotional strain. In Taiwan, fire agencies have established counseling and guidance systems and offer courses and lectures. They may provide psychiatric services, psychological counseling, and consultation, sometimes combined with medication to improve sleep conditions [32]. Overall, building a comprehensive mental health support system—including accessible psychological services, effective communication channels, regular health check-ups, financial and emotional support, and health- and law-related information—may strengthen organizational support and enhance firefighters' resilience.

Method

This study employed thematic analysis to examine the occupational experiences of novice firefighters in Taiwan. The analytic focus was directed toward describing both the substantive content and the processes embedded in their work, thereby highlighting the complexity of frontline practice and the trajectories through which participants adapted and coped.

Participants

A purposive sampling strategy was adopted. Four frontline novice firefighters were recruited through professional networks by the first author. The sample comprised one woman and three men, aged 27–33 years (M = 29.75), with work tenure ranging from 2 to 3.5 years—consistent with the career stage of novice firefighters (defined as within four years of service). Participants were drawn from brigades located in diverse service contexts: an eastern rural area, a central semi-urban area, a central rural area, and a northern metropolitan area. Two participants held certification as Emergency Medical Technicians–Paramedic (EMT-P), and one participant held Rescue Technician certification.

Data Collection

Data were generated through semi-structured, in-depth interviews. The first author conducted one individual interview with each participant, lasting approximately 60–90 minutes. Participants were invited to narrate their occupational challenges and their experiences of adaptation and coping. The interview guide encompassed questions on: motivations and expectations for entering the fire service; job tasks and sources of stress; interpersonal interactions; utilization of organizational resources; coping strategies; and perceived impacts of work on physical and mental health. Interviews were conducted in quiet, convenient locations selected by the first author. Prior to each interview, participants were informed of the study's purpose and procedures, potential benefits and risks, and their rights. Ethical principles were observed throughout, including respect for autonomy and confidentiality. Written informed consent was obtained before interviews commenced. All interviews were audio-recorded and subsequently transcribed verbatim by the first author.

Data Analysis

Thematic analysis was conducted following Braun and Clarke's [33] framework. The first and second authors conducted the analysis using Braun and Clarke's thematic analysis. They engaged in repeated reading of transcripts, open coding, identification of cross-case patterns, and iterative refinement of thematic coherence. Themes were subsequently defined, named, and integrated into the analytic report. Throughout the process, the researchers maintained an open and reflexive stance, engaging in ongoing dialogue to ensure rigor. Particular attention was devoted to issues raised by participants concerning tenure, hierarchical power relations, the novice role, and work-related challenges, including organizational and structural barriers, resource utilization, and coping/adaptation processes.

Trustworthiness and Ethics

To enhance trustworthiness, multiple strategies were employed, including triangulation, reflexivity, thick description, and cross-checking. These measures ensured coherence between themes and textual evidence, strengthened descriptive appropriateness, and enhanced credibility. Ethical standards were rigorously observed: all participants signed informed consent forms and were informed of the study's purpose, rights, and procedures for voluntary participation and withdrawal. Audio files and transcripts were de-identified and presented using pseudonyms to ensure anonymity. All study materials were securely stored by the first author, and data were used exclusively for academic purposes.

Results

Seven themes emerged from the thematic analysis. Themes are illustrated with representative participant narratives.

Unfairness and Oppression at Work

Novice firefighters characterized their work as highly complex, unpredictable, and psychologically demanding. One participant described each dispatch as opening a "mystery box," because incidents could involve life-threatening conditions such as earthquakes, rockfalls, or fires. This uncertainty not only tested physical limits but also created substantial psychological burden.

Beyond the inherent danger of the job, participants emphasized that risk exposure was distributed unevenly across ranks. They reported that novices were frequently assigned the most hazardous roles during operations. For example, one participant noted that junior firefighters were expected to be the first to force entry into unknown environments. He also described death-related incidents in which novices could be tasked with handling particularly distressing duties (e.g., carrying severed body parts). He described this as an unspoken rule: "the most junior firefighter is expected to face unknown risks first or bear the greatest known risks." Such expectations reflected a power imbalance between senior and novice firefighters and contributed to participants' perceptions of unfairness and oppressive treatment.

Ethical Dilemmas in Practice

In addition to operational danger, participants reported repeated exposure to ethical and moral shocks, especially during emergency medical work. In out-of-hospital cardiac arrest (OHCA) cases, they often faced dilemmas about whether resuscitation was clinically meaningful—particularly when family members insisted on continuing resuscitation even when firefighters perceived it as futile. In these moments, participants described feeling ethically conflicted and powerless. One participant reflected: No intubation, no defibrillation… and then when we arrived at the hospital, the doctor said there was no chance—just stop resuscitation… I kept wondering… Was my CPR and oxygen meaningful?"Participants also described moral conflict from the opposite direction: even when resuscitation was successful, severe post-resuscitation outcomes could raise questions about long-term suffering and family burden. One participant stated: "Even though I brought him back—breathing, pulse—he would only survive with those machines. Sometimes I struggle inside… Should I save him or not?" Overall, participants emphasized that firefighters often confront ethically fraught situations without clear ethical guidance or standardized norms. For novices in particular, real-world emergency care required enduring ongoing tension among professional obligations, personal values, and ethical considerations.

Systemic Organizational and Interpersonal Pressures

Participants described hierarchical pressure and workplace bullying as major sources of stress. Some supervisors were portrayed as hostile toward newcomers (described as "newcomer killers"), frequently scolding, intimidating, or imposing punitive controls. One participant recalled that during the first six months he was reprimanded almost daily and received leave restrictions for minor issues: "For about the first six months, I was getting scolded almost all day… For small things—five minutes late, missing a signature—I was banned from taking leave for two months… he wrote it down and kept scolding me." Another participant described feeling constantly monitored and scrutinized by supervisors and senior colleagues, which made his work experience "miserable." He gave an example of being questioned for not attending activities that occurred on his scheduled days off: "There were two activities… both fell on my days off, and then I was called in and asked, 'Why didn't you participate?'"

Participants further reported that some senior firefighters undermined novices' confidence through disparaging remarks. One participant described being mocked while studying for professional exams: "A senior saw me studying… and said, 'You won't pass,'… those sarcastic, belittling things." They also noted that minor station-related issues (e.g., a gym not being tidied immediately or trash temporarily left) could trigger scolding, and supervisory pressure sometimes extended into rest time. Participants reported being unable to relax even during breaks; using a phone could invite suspicion, and taking leave could lead to criticism for "not helping the team" with dispatch duties. Accumulated pressure affected both physical and psychological functioning. One participant described missing a dispatch alarm due to a malfunctioning bell near his bed; fear of being reprimanded increased stress and contributed to sleep disturbance.

In addition to interpersonal dynamics, participants described institutional unfairness that amplified helplessness. One participant stated that performance evaluations were opaque and highly subjective—dependent on "the supervisor's mood"—yet directly influenced salary and promotion. When effort was not matched by recognition or reward, participants reported frustration and demoralization. Another participant described being reassigned to another brigade despite holding strong paramedic qualifications, which he experienced as unfair and identity-undermining.

Finally, participants described rigid systems and dysfunctional equipment as chronically depleting. They reported pressure to meet unreasonable key performance indicators and to complete large volumes of administrative tasks despite inadequate staffing and limited experience. Under directives from higher-level leadership, core emergency work was sometimes displaced by unrelated activities (e.g., sports events) and could even become entangled with election-related events—at the expense of essential rescue and EMS duties. Participants also described being constrained by outdated protocols: even after learning improved clinical approaches, they were expected to follow older procedures because regulations had not been updated and senior members insisted on "the old way." Collectively, these systemic conditions were perceived as obstructing professional development, eroding motivation for learning and innovation, and fostering high pressure, helplessness, diminished self-efficacy, and weakened professional identification.

Scarcity of Job Resources

Participants consistently emphasized that job resources were insufficient relative to the demands they faced. At the basic operational level, one participant reported chronic shortages of essential supplies and incomplete distribution of equipment. For example, ambulance gauze ran out and was not replenished for an extended period; paramedic medication kits were not fully issued, forcing firefighters to purchase supplies themselves or seek support from physicians: "Resources are very limited—equipment, gear, consumables. The gauze on the ambulance ran out… and the whole station had none because it wasn't issued… The medication kit wasn't provided, so I bought it myself… This affects how well I can do the job, and it affects my quality of life."Another participant highlighted chronic understaffing. On some days, only three personnel were on duty, increasing the likelihood of station closure or even single-person dispatch, which substantially elevated operational risk. Resource scarcity also extended to compensation. One participant stated that pay was disproportionate to high risk and long working hours, estimating an hourly wage lower than that of part-time student workers. He also described institutional limits on overtime pay, whereby excess overtime was converted to compensatory leave rather than paid overtime. Additionally, leave taken across months could reduce the salary of a given month, despite leave being largely nonvoluntary in practice. Participants experienced these arrangements as discouraging and demoralizing. Participants further described resource deficits in organizational infrastructure and administrative systems. One participant reported frequent crashes in electronic systems with little improvement. Shared computers lacked internet access and could not support routine administrative tasks; outdated equipment was neither functional nor replaced. These barriers disrupted both administrative operations and professional emergency duties, increasing stress, draining energy, and undermining morale.

Pressure From Public Expectations and Commentary

Participants described substantial pressure arising from public expectations, scrutiny, and online commentary. When rescue or response efforts were perceived as inadequate, participants experienced intense criticism and what they viewed as unreasonable accusations, which increased emotional disturbance and work stress. They noted that even cautious decision-making could be judged negatively, resulting in complaints or online attacks. One participant listed common disputes, such as being criticized for driving "too slowly," questioned for running red lights during emergency transport, reported for siren noise at night, or asked by bystanders to move hoses during active fire response. He recalled: "Once, during a fire response, I was still dealing with it, and there was a hose on the ground. Someone said he wanted to drive home and asked me to move the hose… I said, 'I'm still fighting a fire!'"Overall, participants expressed a sense that "whatever we do, the public will criticize." They reported that minor mistakes could be amplified, leaving them uncertain about how to respond and pressured by constant evaluation. This perceived scrutiny affected their occupational identity and sense of meaning in the work.

Personal Ajustment and Coping

In response to the imbalance between high demands and limited resources, participants described diverse coping strategies that ranged from proactive competence-building to emotional self-protection and cognitive reframing. Proactive learning and competence-building. Some participants demonstrated strong agency. One participant repeatedly volunteered for training opportunities despite low seniority and initial supervisory rejection: "I'm pretty junior, so it wouldn't be my turn… I recommended myself… he rejected me two or three times before finally letting me go." Another participant described enrolling in an instructor-training program to rekindle motivation: "Last year… I changed my mindset… I decided to recover my passion… I applied for instructor training, and I got in."

Participants also described practice-based improvement, especially in EMS. One participant reported reviewing the quality

of CPR and airway management after OHCA cases, requesting simulation training, and striving to improve care quality. Another described systematically refining EMS procedures—practicing operational details, adjusting workflows, strengthening competence, and promoting team improvements. He explained how training translated to smoother field performance: "When I arrived on scene, I followed the training model… and the next time, I didn't waste time… it went smoothly, and I completed the EMS work successfully." He further described keeping organized records, publicly noting procedural gaps, advocating updated protocols, and optimizing team workflows. These efforts increased accomplishment and self-efficacy; when improved performance was recognized during later dispatches, confidence was reinforced in a positive feedback cycle.

Self-protective Emotional Strategies

In contrast, some coping strategies emphasized denial, minimization, or emotional detachment. One participant described himself as "digesting emotions quickly," "letting it pass," and being "forgetful," noting that positive events could override work-related distress: "I digest (negative emotions) pretty fast… after sleeping a few times, I'm fine… If something happy happens, it covers up the unpleasantness." Another participant rationalized supervisory harshness by framing militarized management as something men "should" endure, interpreting survival of strict training as evidence of becoming competent.

Compartmentalization and Technical Focus

One participant described being briefly frightened at the scene but switching immediately to professional judgment and action. After returning to the station, he reviewed dispatch footage to evaluate technical execution and team communication, using procedural focus to avoid being absorbed in distress: "Back at the station, I watch the footage again… if there are problems, we discuss and improve next time. That way, I don't think too much… or get stuck on why it happened."

Relational Coping and Future-oriented Strategies

Some participants described selectively collaborating with reliable senior firefighters to support smoother teamwork. Others attempted to transform unfair treatment into motivation for self-improvement—strengthening training, obtaining key EMS certifications, and preparing for potential future transfers to other units.

Cognitive Reframing

One participant reduced distress by reframing EMS work as "taxi" service: complete necessary tasks without judging whether patients were misusing EMS resources and without ruminating: "We arrive a hospital and see he (the patient) is actually okay—fine, take measurements, transport him, then happily go back to rest… I imagine my work is like a taxi driver."

In summary, across accounts, the above strategies reflect novice firefighters' attempts to preserve functioning, maintain competence, and sustain meaning under chronic stress in work.

Concerns About Using Counseling Resources

Although participants acknowledged that fire agencies provide mental health resources (including on-site counseling), they expressed substantial concerns about using them. One participant noted that counseling appointments required taking personal leave; after exhausting shifts, he preferred to use leave for sleep and rest. Another participant expressed fear of stigma and confidentiality breaches, reporting limited trust in counseling privacy and concern that supervisors might learn about counseling use: "Privacy… If I go talk to a counselor… will my supervisor know and 'check on' me?… Work stress is private… Counselors keep records—are they stored somewhere? Would people know?… Would I be labeled as having a mental problem?"

One participant questioned whether counseling could address structural sources of distress—such as authoritarian supervision, unfair treatment, or outdated equipment—given that these conditions would remain unchanged after counseling: "If I'm bullied long-term… would talking to a counselor make me better?… I still have to go back, and the supervisor is the same… So is counseling useful? I have a question mark."

Overall, participants viewed counseling as potentially providing temporary emotional ventilation but offering limited practical benefit for stressors rooted in persistent organizational and structural conditions. Consequently, they tended to rely more on personal coping resources than on formal psychological services.

Discussion

The novice firefighters in this study characterized firefighting as an occupation involving high risk, heavy physical demands, substantial psychological load, and high complexity. They also emphasized that the work environment and organizational culture strongly shape mental health and necessitate coping strategies to manage occupational stress. These findings are consistent with Bakker and Demerouti's argument that the work environment influences employees' health, well-being, and performance. Taken together, the results suggest that novice firefighters' early-career adjustment is not determined solely by the inherent dangers of frontline work, but also by organizational arrangements, leadership practices, resource provision, and public scrutiny—factors that jointly produce a structural pattern in which demands often exceed available resources. Participants described having to cope with diverse operational and administrative challenges, as well as bureaucratic features of the firefighting system and hierarchical pressures requiring obedience. Their narratives also highlighted pronounced hierarchical stress, including implicit workplace rules that positioned novices to assume high-risk and high-impact tasks, and supervisory practices experienced as punitive or oppressive. In addition, the findings echo prior evidence that firefighters are exposed to societal expectations and external evaluation—including media coverage and public praise or criticism—which can intensify occupational stress.

Smith and Dyal's safety-oriented JD–R model is particularly useful for interpreting these results, as it emphasizes both safety-related job demands and safety-related resource provision. The

current findings partially converge with this framework and with the four dimensions of firefighting job demands described by Smith and Dyal. Participants repeatedly reported working under stringent time constraints and pressure, which heightened stress. They also described emotional demands, especially in emergency medical and urgent rescue contexts, where fear, shock, and emotional suppression were common. Such emotional demands can deplete psychological energy and contribute to emotional exhaustion. In addition, participants emphasized cognitive complexity: managing multiple difficult tasks in life-threatening contexts required sustained situational awareness, rapid decision-making, risk assessment, and the execution of emergency interventions.

Notably, when these demands were experienced as persistent and cumulative, participants' accounts suggested a health-impairment process consistent with the JD–R perspective. For example, some participants described wanting only to rest during time off and reported limited capacity for additional activities, including psychological counseling. This pattern underscores that excessive demands may constrain recovery opportunities and gradually erode psychological resources, thereby increasing risks for burnout and compromised functioning over time.

In the safety-oriented JD–R model, resource provision is not a peripheral issue but a central determinant of safety and well-being. Participants in this study described a broad range of resource constraints, including shortages of supplies, malfunctioning or obsolete systems, insufficient infrastructure (e.g., computers and internet access), and understaffing that increased operational risk. They also expressed dissatisfaction with compensation and overtime arrangements that were perceived as disproportionate to workload, risk, and time demands. These findings align with Payne and Kinman's argument that insufficient resources represent a key factor undermining firefighters' psychological health, and with research emphasizing that adequate equipment, facilities, staffing, and occupational health and safety measures influence the safety and comfort of firefighters' work environments.

At the interpersonal and organizational levels, participants described authoritarian supervision, frequent reprimands for minor issues, disparaging remarks, and a sense of constant scrutiny. They also reported unfair or inconsistent evaluation and managerial practices, leaving them uncertain about behavioral standards and concerned that outcomes depended on supervisors' subjective judgments. These experiences are consistent with prior literature identifying interpersonal conflict and low organizational justice as critical risk factors that erode resilience and increase vulnerability to anxiety, depression, and physical illness. They also reinforce the importance of supervisory support: deficiencies in managerial support have been linked to elevated depressive symptoms, whereas supervisors' trust, care, and support may strengthen resilience. In the present study, perceived unfairness and hierarchical oppression appeared to operate as chronic "hindrance demands," increasing stress while simultaneously restricting access to key resources such as psychological safety, guidance, and professional recognition.

A salient contribution of this study is the centrality of ethical dilemmas, particularly in OHCA cases. Participants described moral conflict when family requests for resuscitation diverged from firefighters' assessment of futility, and they also described ambivalence when resuscitation succeeded but survival implied severe impairment and long-term dependence on life-sustaining equipment. These experiences suggest that novice firefighters may be exposed to moral distress—ethical discomfort arising when one's professional judgment conflicts with external demands or constrained options—yet they may lack clear norms, ethical guidance, and structured opportunities to process these conflicts. Accordingly, ethical strain should be considered a meaningful component of job demands in EMS-related duties, not merely an emotional byproduct of trauma exposure.

Participants' coping strategies reflected both active and avoidant patterns. Some described relatively active coping approaches, including cognitive reframing, transforming frustration into motivation for professional development, pursuing training and certifications, and strengthening technical competence. These strategies appeared to enhance self-efficacy, a key personal resource within the JD–R framework, and are consistent with evidence that believing one can control or change situations may mitigate the impact of stress on burnout. Participants also described drawing on interpersonal resources, such as selectively collaborating with supportive senior colleagues, which partially supports the safety-oriented JD–R proposition that social support buffers the psychological impact of high-demand work. At the same time, several participants reported passive or self-protective coping—emotional suppression, compartmentalization, denial, replacement, and self-isolation—used to maintain immediate functioning. These patterns align with prior research suggesting that some firefighters use passive stances or emotional detachment to cope, while others engage in active reflection and improvement. Although avoidant strategies may provide short-term stabilization and enable continued performance, they may carry longer-term risks. Lin similarly noted that passive coping can temporarily stabilize psychological states but may yield adverse long-term consequences for health and work functioning.

Participants also indicated that rescue and EMS work often involves immediate shock, but firefighters must rapidly regain composure to complete tasks according to standard procedures. This aligns with evidence that firefighters cope by focusing on the task and maintaining calm during operations. It also echoes Yeh's observation that firefighters often lack time and space to process emotions during missions and must temporarily set aside feelings until tasks are completed. However, in the present study, novices did not clearly report structured post-mission emotional processing; instead, they tended to rely on compartmentalization, suppression, or redirection of attention. This suggests that novice firefighters may have limited awareness of cumulative trauma risks and may underestimate the potential harm of unprocessed emotional and psychological impact. If distress is repeatedly ignored, cumulative strain may contribute to psychological depletion, emotional exhaustion, intrusive re-experiencing, and triggered recall, with trauma-related symptoms becoming more pronounced over time.

Although participants were aware that fire agencies provide mental health services (including counseling), they tended to perceive

such services as offering only temporary emotional relief and limited practical utility for problem solving. They also reported concerns about privacy and the confidentiality of counseling records, which reduced willingness to seek help. These findings imply that existing governmental and organizational mental health resources may not fully match novice firefighters' needs. Importantly, participants' skepticism was not solely attitudinal; it reflected a perception that counseling cannot resolve structural sources of distress (e.g., authoritarian supervision, institutional injustice, and equipment/resource deficits). Thus, improving service uptake likely requires both strengthened confidentiality safeguards and organizational reforms that address upstream stressors and demonstrate institutional accountability.

In summary, the findings indicate that novice firefighters' job demands arise not only from the inherent danger of frontline tasks, but also from organizational oppression and institutional injustice—manifested as hierarchical pressure, workplace bullying, and opaque managerial practices—combined with structural resource deficits (e.g., shortages of supplies, malfunctioning systems, and insufficient interpersonal support). Under such conditions, personal coping and adaptation may help individuals maintain day-to-day functioning but remain insufficient to compensate for systemic problems. Novice firefighters in this study appeared to operate in a structural imbalance in which demands substantially exceeded available resources, highlighting the need for multi-level interventions that extend beyond individual resilience.

Implications

Fire service organizations should prioritize novice development by ensuring reasonable work allocation and adequate resources, supported by a constructive work environment, healthy organizational culture, and fair performance evaluation systems. Providing sufficient equipment and accessible psychological resources may foster a more supportive workplace and reduce the risk of work-related psychological harm. More specifically, leaders and supervisors should establish transparent and equitable assessment mechanisms, acknowledge and address resource shortages, and ensure stable provision of emergency medical supplies and other essential materials. Institutional protections for novice personnel should be strengthened to prevent unfair or oppressive treatment arising from hierarchical differences. Supervisors should proactively attend to novices' needs and shift their role from "monitor" to a buffering resource—providing guidance on professional values, emotional support, and tangible resources, and helping novices navigate supports for processing distress and potential trauma-related reactions. Future research may examine the effectiveness of different coping strategies in response to specific challenges (e.g., hierarchical oppression and ethical dilemmas) and investigate how organizational resources and culture shape novice firefighters' adjustment over time.

Conclusion

Within highly hierarchical fire service organizations, novice firefighters may experience a structural pattern of high demands and low resources, including hierarchical pressure, institutional injustice, resource scarcity, prolonged high-risk work, and compensation perceived as disproportionate to workload and risk. Despite these conditions, novice firefighters strive to adapt and often demonstrate resilience and commitment to professional practice. However, they primarily rely on individual coping strategies—such as emotional suppression, compartmentalization, and attentional redirection—to manage stress and emotional reactions, strategies that may carry hidden risks of long-term psychological depletion and escalation of trauma-related symptoms. Accordingly, supporting novice firefighters' sustainable adaptation requires coordinated efforts that combine individual- and peer-level supports with organizational reforms in leadership practices, procedural justice, resource provision, and the design and credibility of mental health services.

References

1. National Fire Agency (2024) *Manpower in Fire Agency. Report from National Fire Agency, Ministry of the Interior, Taiwan.*
2. National Fire Agency (2018) Manpower supplementation in Fire Agency. *Report from National Fire Agency, Ministry of the Interior, Taiwan.*
3. Chang CM (2009) A study on occupational safety and health management of firefighters-An example of Taipei County. National Chiao Tung University.
4. Kuo NC (2014) *The study of work stress turnover intension job satisfaction emotion regulation- for example of fire-fighter*. I-Shou University.
5. Yeh TC (2021) *Research on mental health of firefighters and psychological impact after rescue disaster: A case study of Yilan County Fire Bureau*. Southeast University of Science and Technology.
6. Kuo CW (2015) A survey study of firefighters' stress and PTSD. *Report from National Fire Agency Ministry of the Interior Taiwan*.
7. Lin CH (2023) *The study to explore the vicarious trauma experiences and mental adjustment process of polices and firefighters participated in the disaster incident*. National Taipei University of Education.
8. Chen, W. H (2001) Stress coping of firefighters. *Extinguishing and Protection Monthly 4*: 17-24.
9. Lewis A, Hall TE, Black A (2011) Career stages in wildland firefighting: implications for voice in risky situations. *International Journal of Wildland Fire 20*: 115-124.
10. Choudhury NA, Saravanan P (2025) Mapping critical decisions and cues in firefighting: A structured analysis using the critical decision method. J*ournal of Cognitive Engineering and Decision Making*
11. Goh KK, Jou S, Lu ML, Yeh LC, Kao YF. et al (2021) Younger, more senior, and most vulnerable? Interaction effects of age and job seniority on psychological distress and quality of life among firefighters. *Psychological Trauma: Theory Research Practice and Policy 13*: 56-65. [crossref]
12. Heydari A, Ostadtaghizadeh A, Ardalan A, Ebadi A, Mohammadfam I.(2022) Exploring the criteria and factors affecting firefighters' resilience: A qualitative study. *Chinese Journal of Traumatology 25*: 107-114.
13. Liao SC (2017) *A comparison of perceived stress heart rate variability respiratory function and standing balance in firefighters with different seniority*. University of Taipei.
14. Hsiao TC (2020) *Novice firefighters' task features stressors and stress coping: A team in New Taipei City.* Fo Guang University.
15. Lin CK (2023) *The impact of subordinate voice behavior on subordinate resilience under authoritarian leadership: A case study of firefighters*. National Tainan University.
16. Bakker AB, Demerouti E (2017) Job Demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology 22: 273-285.* [crossref]
17. Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB (2001) The job demands-resources model of burnout. *Journal of Applied Psychology 86*: 499-512. [crossref]
18. Smith TD, Dyal M (2016) A conceptual safety-oriented job demands and resources model for the fire service. *International Journal of Workplace Health Management 9*: 443-460.
19. Payne N, Kinman G (2019) Job demands, resources and work-related well-being in

UK firefighters. *Occupational Medicine 69*: 604-609. [crossref]

20. Igboanugo S, Bigelow PL, Mielke JG (2021) Health outcomes of psychosocial stress within firefighters: A systematic review of the research landscape. *Journal of Occupational Health 63*: e12219. [crossref]

21. 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 Work14*: 431-437.

22. Schuhmann B (2022) *The assessment of burnout and resilience in firefighters*. Nova Southeastern University.

23. Eryılmaz İ, Dirik D, Öney T (2024) A phenomenological study on psychological resilience of aircraft rescue and fire fighting professionals. *Current Psychology 43*: 20286-20308.

24. Carver CS, Scheier MF, Weintraub JK (1989) Assessing coping strategies: a theoretically based approach. *Journal of Personality and Social Psychology 56*: 267-83. [crossref]

25. Chung YY, Chiou JJ (2013) The relationships of post-traumatic stress disorder and coping behavior among first-line firefighters. *Journal of Crisis Management 10*: 69-78.

26. Lee SF (2012) *The study of the strikes and learning needs facing death events for firefighters in Chiayi County*. National Chung Cheng University.

27. Chen TY (2019) *A narrative analysis about pressure adjustment of rescuers participating in major disasters: A case study of firefighters*. National Taina University.

28. Hsu CW (2022) A *Study of work stress and the needs of psychological counseling system of firefighters-Taking the Fire Department of New Taipei City as an example*. Ming Chuan University.

29. Blaney L, Brunsden V (2015) Resilience and health promotion in high-risk professions: A pilot study of firefighters in Canada and the United Kingdom. *International Journal of Interdisciplinary Organizational Studies 10*: 23-32.

30. Paterson C, Leduc C, Maxwell M, Aust B, Amann BL. et al (2021) Evidence for implementation of interventions to promote mental health in the workplace: a systematic scoping review protocol. *Systematic Reviews10*: 41. [crossref]

31. Ogińska-Bulik N, Kobylarczyk M (2016) Association between resiliency and posttraumatic growth in firefighters: The role of stress appraisal. *International Journal of Occupational Safety and Ergonomics 22*: 40-48. [crossref]

32. Gao PT (2025) *A narrative study on the resilience of frontline firefighters: Experiences from disaster and emergency response*. National Changhua University.

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