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A qualitative investigation of the occupational perceptions of firefighters with or without post-traumatic stress disorder symptoms

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ABSTRACT

This qualitative study aims to examine the relationships between post-traumatic stress symptoms (PTSS) and the perceptions of Turkish firefighters, categorized by lower and higher degrees of PTSS, regarding work and family life, social interactions, and professional circumstances. Eleven firefighters participated in the interviews. The data was analyzed using a thematic approach. The high-PTSS group displayed symptoms such as re-experiencing, avoidance, and hyperarousal, which impeded their daily functioning and occupational performance. The low-PTSS group recognized these symptoms as a natural component of their occupation. Both groups reported that administrative inefficiency made them feel less positive about their careers. Both groups emphasized the protective role of personal protective equipment during emergency situations; although those with higher PTSS stressed psychological protection more than the other group. The high-PTSS group required comparatively greater social support, whereas both groups utilized the psychological assistance offered by their institutions. The recommendations include broader mental health intervention programs for firefighters that focus on improving family and social support, formulating a more inclusive administrative strategy for fire departments, promoting the utilization of personal protective equipment for both groups, and providing mental health intervention programs along with enhancement of collaborative leadership within the fire department.

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Post-traumatic stress disorder (PTSD) is characterized by the occurrence of specific symptoms after exposure to one or more traumatic events, including combat, terrorist attacks, crime, accidents, or natural disasters (APA, 2013, pp. 272–276, 2015, p. 815). Individuals with PTSD may have intrusive memories or flashbacks, avoidance of stimuli linked to traumatic experiences, hypervigilance, irritability, self-destructive behavior, angry outbursts, and dissociative symptoms such as depersonalization (APA, 2013).

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They may also encounter depression (Zegel et al., 2021), sleep disturbances (Vargas de Barros et al., 2012; Zegel et al., 2021), elevated suicide risk (Boffa et al., 2018; Klimley et al., 2018; Zegel et al., 2021), alcohol use disorders (Haddock et al., 2017; Zegel et al., 2019, 2021), and diminished life satisfaction (Bastug et al., 2019).

Firefighters are at an increased risk of developing PTSD due to their recurrent exposure to hazardous environments during rescue operations and their observation of traumatized individuals and traumatic settings (APA, 2013; Bryant & Harvey, 1995; Carleton et al., 2019; Jacobsson et al., 2015; Katsavouni et al., 2015; Mitchell & Dyregrov, 1993; Oliveira et al., 2023; Riolli & Savicki, 2012; Wagner et al., 1998). Therefore, they are prone to secondary traumatization (Bastug et al., 2019). Firefighters experience a higher frequency of traumatic incidents, such as life-threatening natural disasters, fires or explosions, transportation accidents, extreme human suffering, hazardous substances, abrupt violent or accidental fatalities, significant workplace accidents, domestic incidents, recreational mishaps, and physical assaults (Carleton et al., 2019). Several research studies indicate that firefighters have a higher frequency of stressful incidents than other emergency responders (Meyer et al., 2012; Serrano-Ibáñez et al., 2022). A comprehensive study (Obuobi-Donkor et al., 2022) encompassing 16 studies from many countries throughout North America, Asia, Europe, Australia, and Africa indicated that the frequency of PTSD among firefighters ranged from 1.9% to 57%. Our prior research indicated a significant prevalence (40%) of PTSD in a cohort of Turkish firefighters (Bastug et al., 2019). Nonetheless, several firefighters did not exhibit PTSD symptoms despite significant exposure to severe incidents. Consequently, existing data indicates that the prevalence of PTSD among firefighters is dependent upon many circumstances.

Initially, psychological characteristics were identified as beneficial in distinguishing the variations in PTSD levels among firefighters. Recent studies demonstrate burnout and rumination as potential risk factors (Jo et al., 2018; Serrano-Ibáñez et al., 2022). Firmin et al. (2018) conducted a study that identified significant motives among firefighters, highlighting both an altruistic desire to assist others and an enthusiasm for firefighting. These motivational sources may have a protective function against the physical and psychological consequences of this occupation. M. Lee et al. (2018) emphasized that active coping strategies, such as problem-focused coping and seeking social support, may significantly mitigate post-traumatic stress responses. Conversely, the cumulative impact of persistent trauma is anticipated to elevate the probability of PTSD (Zwetzig et al., 2021).

Occupational conditions of firefighters can also influence their severity of PTSD. Certain research demonstrated a significant correlation between organizational issues, including injustice and job ambiguity, and higher post-traumatic stress symptoms (PTSS) among firefighters (Chung et al., 2015; Saijo et al., 2012). Operational stress, job experience, and hiding feelings about work stress can increase the risk of PTSD while feeling connected to others and being mindful can help protect against it (Serrano-Ibáñez et al., 2022). According to Firmin et al. (2018), a flexible work schedule that let firefighters spend more time at home, was a source of motivation. Conversely, Jang et al. (2020) discovered that employment circumstances in urban regions correlated with increased anxiety and depression attributed to elevated workloads.

The last factor discussed in the previous research referred to the diverse forms of support firefighters received for the challenges inherent in their profession. Social support from family and friends has been shown to significantly mitigate high-risk disorders among firefighters, including suicidal thoughts (Carpenter et al., 2015; Regehr, 2009). Firefighters reportedly have less stress when they perceive enough satisfaction with social support (Cowman et al., 2004). Despite these findings, experienced firefighters were reported to have markedly less overall social support, along with feeling reduced support from their families and employers (Regehr et al., 2005; Regehr et al., 2003). The principal issue was that counseling from untrained individuals can contradict professional recommendations thus increasing their confusion (MacDermid et al., 2021). This underscores the significance of providing mental health care to firefighters. Organizational support in the form of referral to mental health professionals provided by the fire department can be mentioned as an example of the provision of such services. Mental health interventions have shown efficacy in diminishing subjective psychopathological symptom severity in firefighters, and their effectiveness increased with continuing implementation (Won et al., 2020). Moreover, those getting assistance must recognize themselves as recipients of the assistance (Cherry et al., 2021), which is more likely within an organizational framework. Although professional and scientific support from mental health experts is essential, research indicates that numerous firefighters are reluctant or unwilling to access these services due to workplace and social stigmatization, as well as factors such as overnight shifts and financial constraints (Hom et al., 2016; Vujanovic & Tran, 2021).

The literature research revealed that our prior study (Bastug et al., 2019), which examined the impact of secondary trauma on firefighters in Turkey, was the single investigation on this subject within that demographic. This study revealed that firefighters had a significant prevalence of PTSD (40%) as per DSM-IV criteria. Additionally, those with PTSD demonstrated elevated levels of burnout, emotional exhaustion, and depression, along with diminished life satisfaction. This rate (40%) was significantly elevated in comparison to prior global findings (Obuobi-Donkor et al., 2022). The higher prevalence of PTSD in Turkey necessitates an examination of the factors that contribute to the development of PTSD in some firefighters, while others remain unaffected. Therefore, because of the high PTSD rates found in our earlier research, we designed this study to explore the reasons and traits associated with firefighters who have low and high PTSS. Furthermore, comprehending the factors linked to PTSS is crucial for formulating intervention programs for firefighters, who perform an essential societal duty. Moreover, PTSD correlates with significant social, vocational, and physical impairments, with substantial economic burdens and elevated medical expenditure (APA, 2013). Firefighters, as high-risk professionals, represent an optimal cohort for examining the correlation between PTSD and perceptions of occupational life and social relationships, along with other challenges such as financial constraints and health concerns. In sum, the current qualitative study aims to investigate how firefighters experience and make sense of their PTSS as well as the occupational perception of firefighters with PTSS.

Table 1. Sample characteristics.

Groups	Subjects	Age	Total years of education	Duration of the profession	The decision to become firefighter	Job satisfaction	Perceived threat concerning the profession	Current economic burden
Higher-PTSS group ($n = 7$)	*p*-1	27	16	7	Others' advice	Partial	Highly dangerous	Present
	p-3	48	8	23	Own decision	Full	Highly dangerous	Present
	p-6	43	5	22	Others' advice	Full	Highly dangerous	Present
	p-7	45	11	24	Own decision	Full	Highly dangerous	No
	p-8	52	11	25	Own decision	Full	Extremely dangerous	Partial
	p-10	54	11	25	Own decision	Full	Highly dangerous	Present
	p-11	54	9	24	Own decision	Full	Highly dangerous	Present
	Mean (*SD*)	46.14 (*3.58*)	10.14 (*3.39*)	21.43 (*6.45*)				
Lower-PTSS Group ($n = 4$)	*p*-2	27	15	6	Own decision	Partial	Highly dangerous	No
	p-4	31	15	8	Own decision	Full	Extremely dangerous	Present
	p-5	50	15	25	Own decision	Full	Highly dangerous	Partial
	p-9	55	11	31	Own decision	Full	Highly dangerous	Present
	Mean (*SD*)	40.75 (*6.91*)	14.00 (*2.00*)	17.50 (*12.40*)				

Method

Participants

Participants were selected from a sample of our previous study by Bastug et al. (2019), carried out with 100 male firefighters, with ages ranging from 20 to 60 years (M = 45.12, SD = 9.72) in Turkey that investigated the frequency of PTSD as well as the relationship between PTSD and depressive symptoms, burnout, and life satisfaction in firefighters. The current study included the Posttraumatic Stress Symptoms Scale (PTSSS) scores of the participants from the previous study (Bastug et al., 2019). The PTSSS was developed by Sahin et al. (2001) to assess the participants' levels of secondary traumatic stress. The PTSSS consists of 36 Likert-type items ranging from 1 (none) to 4 (too much). The PTSSS has three subscales, namely intrusive thoughts, physiological arousal, and cognitive avoidance that have high reliability coefficients, ranging from .89 to .91. Higher scores indicate more severe symptoms. Based on the PTSSS, 7 participants with the higher PTSS ($M = 75.05$, $SD = 9.78$, range = 53–99) and 4 participants with the lower PTSS ($M = 40.85$, $SD = 1.98$, range = 37–44), a total of 11 participants were conducted in-depth interviews. Sociodemographic characteristics of the participants are presented in Table 1. Except *p*-6 (divorced), all the participants were married. All of them were working for 60 h a week.

Procedure

The study was approved by the Ethics Committee of Çankırı Karatekin University (no:28 / 23-11-2022). In-depth interviews, which lasted for 40–80 minutes with and an average of 60 min, were carried out with 11 male participants, and the interviews were completed upon reaching data saturation (Neuman, 2018). The participants were contacted via phone to agree on the time and place of the interview after giving clear information about the aims of the study and receiving their consent. Their consents were also taken for tape recording prior to the interviews. The sample was exclusively composed of male firefighters since there was no female firefighter working in the fire department intervention teams in the city of Ankara at the time of this study. These interviews were conducted by a clinical psychologist and a social worker by using a semi-structured questionnaire. While one asked the questions and followed the answers, the other assumed a supportive role by observing the participants' reactions to the questions and asking further questions to gain a more complete story of the subject matter. The interviews were audio recorded and took place in private rooms at stations where the privacy of the interviewees could be ensured.

The audio recordings of the interviews had been transcribed and coded via Atlas.ti Cloud. A hybrid approach (Fereday & Muir-Cochrane, 2006) was adopted for data analysis. The transcribed interviews were coded by the researchers in two cycles. During the first cycle (initial coding), inductive coding was used, which let the researchers come up with codes directly from the transcribed texts. This approach ensured that the experiences of the participants were kept true. The inductive approach to coding also enabled the researchers to use descriptive coding in the first cycle. In this type of coding, researchers create codes based on what the coded text segment is about. This format was chosen since there were some predefined themes of the questions used to create the semi-structured questionnaire. The second cycle of coding (focused coding) aimed to sum the previous codes into coherent groups, consolidating the explorative approach of the study, guided by the themes built via studying the literature and the transcribed interviews, resulting in thematic analysis of data (Saldana, 2021; Skjott Linneberg & Korsgaard, 2019, pp. 263–265). In the second cycle, these data-driven codes were brought together under broader themes in light of both recurring patterns in the data (repetition) and existing conceptual frameworks in the trauma and occupational stress literature (theoretical consistency). This two-stage process ensured that the findings were both data-driven and theoretically meaningful. All the researchers took part in the coding procedure and checked for the dependability of the coding process.

During the analysis, it was specifically examined whether there were statements that contradicted or differed from the dominant themes (outliers). These possible statements were sought by the research team in the participants' statements to more clearly define the boundaries of the themes and to capture nuances that may have been overlooked in the analysis. This process was carried out to ensure that the findings reflected the diversity of the participants' experiences. More specifically, during the data analysis process, discrepant or negative cases (Saldaña, 2015) were actively sought to test the validity of the developed themes and refine their conceptual boundaries. This approach aims to make the themes more robust by testing them not only with supporting data but also with potentially contradictory data. However, due to the high narrative consistency within the groups (high and low-PTSS) and the clarity of the differences between the

groups in the conducted analysis, no exceptional cases were encountered that would fundamentally change or seriously contradict the main findings.

In order to increase the reliability of the study, triangulation was used (Creswell & Poth, 2018). The involvement of two researchers from different disciplines such as clinical psychology and social work in the data collection and analysis processes prevented the findings from being limited to a single perspective and provided a richer interpretation opportunity. The coding and theme development processes were carried out with regular discussions and consensus of the researchers. To ensure credibility, peer debriefing was used throughout the analysis process (Creswell & Poth, 2018). The research team shaped the analysis process together by regularly discussing coding strategies, emerging themes, and interpretations. This collaborative effort provided the opportunity to continuously test the fit of findings to the data. In order to ensure inter-coder reliability of the study, the collaborative features of the ATLAS.ti Cloud platform were utilized for data analysis. All researchers analyzed the interview transcripts simultaneously and synchronously. This dynamic process allowed the researchers to instantly discuss the codes assigned to a piece of text, resolve differences in interpretation as they arose, and reach consensus on a common coding scheme and thematic understanding from the outset. This collaborative approach increased the reliability of the analysis by ensuring transparency of the analysis process and that the findings were based on the shared interpretation of multiple researchers. No attempt was made to develop a numerical reliability rating because our goal was to achieve consensus on the code set. Any differences in codes were worked through with the participants until agreement was reached (Harry et al., 2005). To increase the confirmability of the findings, the entire process of reaching the final themes from the raw data was recorded via Atlas.ti Cloud software to create an audit trail (Lincoln & Guba, 1985). In addition, the participation of researchers with different disciplinary backgrounds in the analysis process (researcher triangulation) (Flick, 2018) ensured that the findings were due to the participants' data rather than individual researcher biases.

Transferability of the study was supported using a thick description (Lincoln & Guba, 1985). Detailed information about the demographic characteristics, occupational contexts, and living environments of the participants, as well as rich and direct quotations supporting the findings, allowed readers to evaluate the similarity and relevance of the results to their own context.

Survey tools

Semi-structured questionnaire

In the semi-structured questionnaire, there were four groups of open-ended questions focusing on different aspects of the participants' professional lives. These groups were about the beginning of and adaptation to the profession, feelings about being a firefighter, social aspects of the profession, and occupational conditions.

The first group of questions addressed their reasons for choosing the profession and how they adapted to being a firefighter despite its difficulties. Furthermore, this theme was used to determine whether their perceptions about the profession changed throughout the years. The second group focused on their feelings about the profession. Both their positive and negative feelings about being a firefighter were investigated along with their stress-coping

Table 2. Main themes and sub-themes of the analysis.

Main Themes	1. Psychological Factors	2. Occupational Circumstances	3. Support
Sub-themes	1.a. Psychological difficulties associated with events in the field	2.a. Risks of the profession	3.a. Family support
	1.b. Psychological difficulties associated with administrative issues	2.b. Administrative problems	3.b. Colleagues' support
	1.c. Stress-coping strategies	2.c. Occupational belongingness	3.c. Institutional support

strategies. The third group was centered on social aspects of the profession, such as the impact of working as a firefighter on their familial and social relations. The last group was about occupational conditions. The impact of working hours or difficulties of administrative issues on their perception of the occupation was explored.

Results

After analyzing the narratives of the participants, three main themes were determined in light of current literature: psychological factors, occupational circumstances, and support. We will look into different aspects of these main themes in this part to reveal the similarities and differences between participants with low and high PTSS. The views of the two participant groups were presented separately for each theme. The main themes and sub-themes are presented in Table 2.

Psychological factors

Psychological difficulties associated with events in the field

During the interviews, it became clear that job experience was an important factor in coping with the effects of traumatic events, as younger firefighters from both groups reported experiencing strong negative effects: *'There was a big explosion at Güvenpark (a public park in the downtown of Ankara). Fortunately, we were not working at that time. My friends told me about the shattered body parts, severed feet, and arms . . . They had to put it all in plastic bags . . . I wouldn't be able to recover from it for at least a month . . .* ' (*p*-4), '*After the explosion, I receded to passive duty. I had a tough time . . . We put 27 dead bodies in the bags. I don't remember it clearly. I just sat somewhere staring at emptiness*.' (*p*-1).

When more experienced participants from both groups talked about the traumatic events generally, they stated that with more job experience, negative psychological effects weakened: '*I was afraid when I first saw a dead body. I couldn't eat or sleep for about ten days. But in time, as we worked with the paramedics carrying wounded or dead bodies, I got used to it*.' (*p*-7), '*At first, when we took heavily wounded people from crashed vehicles, we were negatively affected. It was something we didn't think about when we started working. Then I told myself that this is my job, and to do it properly, I should not be affected by such scenes*.' (*p*-5).

Our first finding about the effect of job experience from the interviews started changing when both groups talked about a specific traumatic event in their past

when we asked about a specific event that could be considered a turning point in their career. After the participants mentioned their turning point events, the previously observed effect of experience was lifted and replaced by whether they showed PTSS or not. The high-PTSS group mentioned some past traumatic events to cause harm to the way they feel about their profession: *'I think the explosion was the main reason for my reluctance*.' (*p*-1), *'The events like floods or burnt houses. I put myself in their place. I say to myself, "It might have been my house, and I get depressed"*.' (*p*-11). In contrast, the low-PTSS group seemed to have accepted such events as a natural part of their profession: *'It is the same in any profession. Once you begin a job, your hands adjust to it, your body adjusts to it and your mind adjusts to it psychologically*.' (*p*-9), *'I tell myself that this is my job. It is my responsibility to remove that individual from the accident scene. If I am indeed responsible for this, then I should be doing my best*.' (*p*-5). Based on the participants' statements, showing or not showing PTSS was a prominent factor of how the events in the field were being processed by them.

Re-experiencing symptoms were present in the high-PTSS group: *'You don't feel anything when you first arrive at the scene. But when you go home after the event and see the news on TV talking about who they were and about their families . . . They keep talking and talking . . . That was the thing messing with my mind*.' (*p*-1),*'I still have pictures of the event when I put my head on the pillow. Those people . . . we gathered their parts . . .* ' (*p*-10). As it can be detected from the participants' statements, such experiences had relatively long-term negative effects on their daily lives.

The low-PTSS participants also had re-experiencing moments/flashbacks of traumatic events: *'Being affected means keeping the memories of the event for a while. For example, in a traffic accident, people might have bleeding, or their organs might be damaged. These images come to mind sometimes*.' (*p*-5), *'In a most unexpected moment, that image comes to mind, and I feel sorry. If you are drinking tea at that moment, you lose interest or you lose appetite while eating something*.' (*p*-4). These quotes show that the low-PTSS group recognized reexperiencing as a symptom of posttraumatic stress, that is, an experience to be dealt with. But they did not report any long-term negative effects on their daily lives.

Avoidance was one of the main symptoms in the high-PTSS group: *'There is fear, of course; I don't talk about that frequently. I try not to . . . I can't bear it; it was very difficult . . . It was very painful. Our friends burned there; we saw them burned, all their skins swelled, and we couldn't help them*.' (*p*-3), *'I can't forget it but I try to. . . I have to try . . .* ' (*p*-11), *'After seeing all those bodies and blood . . . I don't like ketchup, you know . . . That day, my wife cooked pasta, as luck would have it. When the plate of pasta was served at the table, I couldn't eat*.' (*p*-6). The high-PTSS participants seemed to avoid anything that made them remember traumatic experiences.

There were also clues of hyperarousal in some high-PTSS firefighters: '*After the explosion, everyone in the station had been more silent. People would burst out over nothing*.' (*p*-1), *'If an ordinary person had the troubles we deal with every day, that person couldn't sleep anymore. Even we can't sleep sometimes*.' (*p*-10).

As shown with the statements above, the perception of trauma and the incidence of PTSS differ between the two groups. The high-PTSS group's discourses included some symptoms of reexperiencing, avoidance, and hyperarousal, which seem to have caused problems in their personal and professional lives. Such problems were not reported by

the low-PTSS group despite some of them having the symptoms of reexperiencing. These findings were consistent with the results of our previous study (Bastug et al., 2019).

The high-PTSS group, which was mostly experienced firefighters, reported more pronounced psychological consequences such as reluctance to work, stress, eating and sleeping problems, and depression. According to these results, experience alone does not seem to be sufficient to cope with traumatic events. Results of previous studies indicate that there is a complex relationship between age and PTSD risk (Obuobi-Donkor et al., 2022). Besides, some studies have found that with more job experience, firefighters tend to show more PTSD symptoms (Chen et al., 2007; Chung et al., 2015; Katsavouni et al., 2015).

There are numerous factors contributing to the psychological difficulties of the firefighters. Traumatic experiences seemed to be more vivid in the memories of the high-PTSS group. Additionally, such traumatic experiences affected experienced firefighters more than the younger ones, although they claim to be dealing with the consequences of PTSS when they generally talk about the relation between job experience and dealing with PTSS. Burnout due to emotional exhaustion affected both groups, but the high-PTSS group underlined the effect of such issues in a manner that can be defined as bureaucratic violence, which meant the negative feelings towards their job were stemming from administrative issues rather than traumatic events during interventions. As mentioned before, despite saying that they were used to the disturbing scenes during the interventions, some experienced firefighters had significant PTSS scores. This might be because of the bureaucratic violence affecting them every workday rather than the experiences that can cause traumatic effects to which they seem to have adapted.

Psychological difficulties associated with administrative issues

Both groups pointed out that their struggle with administrative problems was a common issue contributing to the burnout and emotional exhaustion they felt: '*The main problem is the attitude of the superiors. There is easygoing behavior on the one side, and there is exclusion on the other. If you are excluded, then you don't enjoy what you are doing anymore.*' (*p*-10), '*The trauma (i.e. traumatic experiences) doesn't affect me too much . . . You get over it since it happens occasionally, but other problems (i.e. administrative problems) don't have a solution, and we experience them every day.*' (*p*-4).

Although the participants from both groups mentioned the negative effects of administrative issues, participants from the high-PTSS group approached the issue from an individualized perspective, which might be related to their emotional exhaustion mentioned above. The concept of bureaucratic violence, which is defined as the way bureaucratic structures transmit and augment structural forms of oppression under the guise of technocratic adjustments (Norberg, 2021) can explain their approach more clearly. For instance, some injustices in the workplace and unjust administrative processes may have hampered the motivation of the firefighters in this group: '*I am more knowledgeable than him, for instance. . .I am a university graduate, but this person is a high school graduate. But he becomes the superior officer. This affects us negatively and makes us estranged.*' (*p*-7), '*The reason we feel distanced in this job is not its difficulty in the field. Some burdens are always put onto our shoulders. As I said earlier, some of our friends are still paying their repair installments since the*

fire trucks didn't have vehicle insurance. If the state doesn't interfere in this, how are we going to pay all those debts?' (*p*-3). Such problems were so common that it led to thoughts of quitting work, which could not be realized due to financial constraints: '*We had to gulp our thoughts back. If you keep talking, no one stands behind you, or you give your resignation . . . It is not easy; we are raising kids, you know. We must put up with some things, and we do*.' (*p*-3). Unsatisfactory salary and payment were another aspect of the bureaucratic violence: '*I have 24–25 years of experience as a firefighter. I am paid 2980 Turkish liras today. What can I do with such an amount of money?*' (*p*-10), '*The personnel at AFAD* (Ministry of Interior Disaster and Emergency Management Presidency, a government organization for emergency rescue) *take 4500–5000 Turkish liras, whereas we are stuck at around 3000 Turkish liras*.' (*p*-11).

These quotes indicated that the high-PTSS group was talking about administrative problems in relation to exhaustion relatively more frequently than the low-PTSS group. Another difference was that the high- PTSS group dwelled on the administrative issues in terms of how exhaustion affects them or others individually rather than approaching it as a structural and impersonal issue like the low-PTSS group.

At the time of this interview, the gross minimum income in Turkey was 2029 Turkish liras, which gives a clear idea about the participants' financial state. The above statements from the participants demonstrated the extent of the bureaucratic violence they were experiencing, which put some of them under pressure to seek additional sources of income: '*I also work at another job. When our shift ends in the morning, I go straight to the other job and go home in the evening from there*.' (*p*-3).

While statements about emotional exhaustion were mostly related to the administrative issues, depersonalization statements of both groups of participants were more related to their field experiences: '*For instance, there were burnt bodies in a case. The effect of it is not what it used to be. It is just the smell. . . It stays on you for about a couple of hours, and it completely passes on to the next day*'. (*p*-11), '*In time you begin caring less about it. I mean, you get used to it*'. (*p*-3), '*We saw a traffic accident with my daughter once . . . There were newspaper pages on a body. My daughter pointed out that detail to me, and I told her that they cover the dead bodies like that at first. She told me how insensitive I sounded. But you become comfortable around such events as time passes*.' (*p*-9).

Jo et al. (2018) stated that PTSD symptoms are caused by trauma or dealing with people who have been traumatized, whereas burnout is caused by job characteristics, such as workload, work structure, job support, role conflict, and role ambiguity. Although PTSD and burnout were found to be related to different causes, burnout appears to be a factor contributing to the symptomatic development of PTSD. The findings of our study indicated that the high-PTSS group was much more concerned about bureaucratic violence in the workplace since it can be considered a type of trauma, which increases the likelihood of showing PTSS. This might be related to their individualization of the administrative issues, bringing hopelessness about change in the workings of the administration. It can be seen from the above quotes and discussion that the two groups did not differ in terms of depersonalization but emotional exhaustion. The findings of our previous study (Bastug et al., 2019) were in line with the results of this study. This qualitative study highlighted further issues: emotional exhaustion was critical in terms of the difference between the two groups and in terms of their approach

to administrative issues. Emotional exhaustion related to administrative issues might be among the important sources of difference in PTSS scores between the two groups rather than depersonalization related to the problems in the field.

Stress coping strategies

As a strategy for coping with various stresses, participants from both groups tended to have a separation between personal and professional lives: '*I arrive at the station and forget about home and vice versa.*' (*p*-9), '*The images of home would come to my mind in the first years, but now I don't think about it*'. (*p*-11).

Coping became easier as the time passed in the profession increased. For the experienced firefighters in the low-PTSS group, forgetting or erasing the traumatic moments as a form of coping was something that they got used to: '*As you gain experience, you become calmer and start focusing on doing your job. If you erase the memory of an event in two or three days in the first years, you erase it faster as you progress . . .* ' (*p*-5), '*We got used to it, so we don't do anything about it*'. (*p*-9). This seemed to be much more difficult and required extra effort for the high-PTSS group, as expressed by one participant like this: '*I took it out of my mind by working more.*' (*p*-11).

Participants from the low-PTSS group frequently mentioned coping strategies through socializing with friends or family: '*Personally, I go to nature with my friends or family. I go to the mountains, or we sail with friends. The city is a difficult place, a lot of stress. . . Even if you sit on the balcony, it causes stress.*' (*p*-5), '*Playing football relaxes me mentally.*' (*p*-4). The ones in the high-PTSS group also tried socializing with family and friends, but they also exercised other strategies like getting lost in spiritual ways or socializing via consuming alcohol: '*We go out to eat ice cream or do something else with my family to handle stress. If I experience excessive stress, I go outside to connect with nature, observe the trees and birds, and reflect on my thoughts . . . I ask myself how Allah created this tree. . .*' (*p*-7), '*We blow off steam with friends. We usually get some alcohol.*' (*p*-8).

In terms of stress coping, the low-PTSS group tended to overcome it through familiarity of experience and taking customary steps like socializing with family and friends. The high-PTSS group, however, tended to take additional actions to deal with stress other than the ones taken by the low-PTSS group such as working more, resorting to spirituality, or increasing alcohol consumption as ineffective coping styles.

Occupational circumstances

Risks of the profession

When it came to the risks of the profession as a factor that might be related to differences in PTSS scores, the participants mostly talked about the physical risks that might lead to bodily pain, injury, illness, and/or death rather than the psychological risks due to exposure to human tragedy, pain, misery, and suffering (Jermier et al., 1989). The physical risks they mentioned were related to explosions due to human error or terrorism, fires and collapse in various structures, traffic accidents, emergencies such as natural disasters, and the like. The firefighters' perceptions of such risks can be grouped in two,

which can be stated as *risks towards self* and *risks towards others*. The high-PTSS group reported more concern about the risks towards self: *'I remember two firefighters got into a traffic accident and died while driving to a fire incident; these are likely events in our profession, or your air tank can malfunction and you can die . . . '* (*p*-1), *' . . . I was thinking whether we would have an accident while going to the incident or whether there would be an explosion at the scene of fire . . . I thought of everything, like whether we would be wounded or dead . . . '* (*p*-3). The low-PTSS group seemed to be focused on preventing or reducing risks towards others: *'Regulations for firefighters state that we have the duty to save all living things, not only human beings. We just sent our vehicles to a risky spot to save a bird today . . . There had been some big fires when we sincerely hoped that no one would get hurt and we told ourselves that it would be quite a big success for us. We did our jobs, and in the end, we came out of that with great success.'* (*p*-5), *'God forbid, there can be explosions in a house, and the building may collapse. There are lives of people at stake, and we go in there in a state of readiness mentally.'* (*p*-4).

The risk of self-perception being more pronounced can be a factor in the high scores of PTSS among firefighters. The risk perception of the high-PTSS group towards themselves might be an impeding factor for them to perform effectively in their professional lives and take relevant risks to rescue others in emergency situations.

The difference between the two groups continued when talking about the personal protective equipment (PPE) they use to minimize risks during interventions in emergency situations. We asked whether the protective suit had a protective effect psychologically: *'In the past there wasn't any quality equipment, and it would be medically dangerous to touch a dead body. So, we are thrilled about using these new gears.'* (*p*-5), *' . . . psychologically, when I touch the dead body with my bare hands, I shiver, I feel fear. When we had gloves on our hands . . .* (shifts to a memory from a bombing event) *there was a male body. We grabbed him with one of my friends and delivered him to the paramedics, but he was already dead. Wearing gloves is preferable.'* (*p*-8).

As it is seen from the discourses above, the low-PTSS group approached the topic of protective equipment in a technical sense, which was focused on the physical protection it provided and the feeling of relief this protection brings. But for the high-PTSS group, the equipment's psychological protection was at least as important as the physical protection it provided. Based on this finding, we can conclude that the use of PPEs is important for reducing the high-PTSS groups perception of risk to themselves.

Administrative problems

There were two main aspects of the administrative problems of the fire department. The first was the internal functioning of the fire department, and the second was the public perception of the profession. The first issue of internal functioning was the characteristics of functioning, and the second was favoritism within the ranks of the fire department. Although both groups expressed these problems, the high-PTSS group mostly evaluated these issues as stemming from the acts of individuals, while the low-PTSS group saw these issues as structural problems of the department.

The tendency of centralized functioning of the fire department harmed the firefighters: *'I don't want to go into politics, but our mayor never treasures the fire department. He ignores us and only visits the scene if there is a major event. Even if he comes, he just*

watches the fire and leaves as soon as the higher bureaucrats leave the scene.' (*p*-3), '*The holder of the municipal office is our top manager, so whatever he says counts. For example, if he wants us to clean somewhere, we do it, and that's it*.' (*p*-2). Studies on administrative structures (Kohn, 1971; Matheson, 2007) consistently state that a highly centralized bureaucracy frustrates the inner workings of institutions and creates alienation among the workforce, which was a common concern between both groups of the participants.

The participants' negative perception about internal functioning was consolidated by the fact that the legal framework for the firefighters was not accurately structured: '*We are not in the category of a profession legally. We are in the general administrative services category, which makes us look like doing a desk job . . . . They give us things ASKİ (Ankara Water and Sewerage Administration) should do*.' (*p*-2), '*Being a firefighter is all well and good, but we are not legally considered as a member of a profession*.' (*p*-11).

Although the two groups expressed some common topics related to the internal functioning of the department, the high-PTSS group talked relatively more about problems stemming from some administrative processes. They perceived administrative functioning issues in terms of their results in individual lives rather than as structural issues to be solved in the long term. '*In the past, the vehicles didn't have any insurance. If one of the firefighters had an accident with the fire truck, they would have to pay the expenses. Some are still paying the installments of their debt . . . I don't think medical screenings are appropriately made. We used to go to the doctors, and they would just sign the papers just like that. Now they make a contract with some hospitals and pay tons of money to them, but I don't see any changes in anything. People here are going down like ninepins, but I didn't hear any one of us being told about an illness or a precaution that we should take against any illness that they are supposed to detect during screenings*.' (*p*-3), '*Medical screenings are superficial; they are mostly about physical aspects, but psychological aspects are not taken care of that much*.' (*p*-1). It is obvious from the above quotes that the high-PTSS group was not satisfied with the administrative policies of the fire department.

The other major problem related to bureaucracy was favoritism in the fire department. Since the fire departments functioned under municipalities in Turkey, they were also considered sources that the patronage mechanism was built on. This problem was commonly mentioned by both groups, but the high-PTSS group provided much more detailed explanations of the issue: '*It is not good that the fire department is operating under the municipalities. There shouldn't be politics involved here. Whoever comes to power opens up new positions in the fire department for their supporters*.' (*p*-8), '*. . .we work very hard, but there are tons of people who are not working as firefighters. The fire department managerial center is filled with at least 150 people. They took these people from the ranks and put them behind the desk . . . but we lack people here. I have to use three different vehicles due to the low number of personnel*.' (*p*-3), '*The stress is not about the risky aspects of the job. It is rather the technicalities of it, like the rotation system . . . I can't take a bright view of the system. The ones who are not merit holders rise up the ladder*.' (*p*-2), '*There are some advancing in the ranks of the department, but it is not through an examination or a central selection system but rather by municipal consent. I mean people who receive the consent of the municipal administration rise through the ranks*.' (*p*-4). As it is seen in the expressions that the high-PTSS group had a perspective focusing on the people while talking about favoritism, the low-PTSS group was more prone to seeing the problem from a structural point of view.

Due to these problems, even simple administrative requests of the participants could not be fulfilled due to the limitations of personnel count: '*The dead people don't cause stress in us; the administration does. Even when you want your yearly leave of absence, you can't be due to the shortage of personnel. That's the main cause of stress*.' (*p*-8).

These problems in the administrative structure and favoritism seemed to be creating an environment where the application of technical rules veiled competitions, criticisms, and injustices in the department. Such an administrative atmosphere is considered to be producing bureaucratic violence (Norberg, 2021). The administrative mechanisms were used for and against different groups among the firefighter's department. The expressions of the participants clearly showed that there was a strong influence of bureaucratic violence on the personnel working in the field at the time of our field study. Most of the complaints about these issues came from the high-PTSS group. So, bureaucratic violence could be a significant factor that augmented the feeling of traumatization in high-PTSS participants.

Public perception was another aspect of the administrative problems, which can be examined on two different levels. The first one pictured the general perception of people towards firefighters, which can be called the prestige of the profession. The second one was rather related to the behaviors of the public toward firefighters during their professional activities, which can be called day-to-day perception. Both groups of participants were worried about the public perception of firefighters at both levels.

According to the participants, the prestige of firefighters in the public was quite low due to organizational ambiguity and the lack of support from the state administration. Both groups of participants mentioned an overall organizational inconsistency in different institutions of emergency relief. They mentioned an ambiguity in coordination among emergency relief institutions. Non-governmental organizations (NGOs) like AKUT (Search and Rescue Association) and state institutions like AFAD (Disaster and Emergency Management Organization) were mentioned commonly that were functioning in similar areas of activity. The participants were concerned about their prestige in the eyes of the public since they were the ones kept in the background in the general organizational structure: '*. . . we are doing a huge amount of work. These incidents include traffic accidents, floods, fires, and various types of rescues . . . But then AFAD or AKUT comes out of nowhere. They appear at an incident maybe once a year, but they* (i.e. AFAD) *have much more prestige; they are internal to the prime ministry. . .*' (*p*-1), '*. . . every incident we encounter is like war, but we have no prestige in Turkey*.' (*p*-4).

Another factor participants highlighted as the reason for the low prestige of the profession was the lack of support from the state in terms of proper publicity and general support: '*Just like they make sure the police and health care providers have good public perception; the government should also make a program about us and show it to the public*.' (*p*-10), '*. . . we get over the difficulties of the job, but knowing that we are worthless in the eyes of the people, the institutions, and the state wears us down*.' (*p*- 4).

As it is seen in the above quotes, different emergency and rescue institutions are organized differently. AKUT is an NGO specialized in rescue missions, while AFAD is a state institution under the Ministry of Interior with a similar function. However, fire departments function under municipalities in Turkey, making them open to political influences and fluctuations, which affect public opinion about the profession. According to the participants, the public view towards their profession was negatively affected by the

ambiguity of the general organizational problems and lack of administrative support to improve the public view, which propagated feelings of loneliness as a member of the profession.

In line with the above views, the participants had observations validating their views on public perception of the profession in their day-to-day professional activities. The participants mentioned their encounters with the public during emergency interventions, giving them an idea of the public perception towards firefighters: '*We went to a village far from the city, somewhere you won't even pass by normally. Strangers can come and yell at you all lose their temper while you work there... We don't have any value in the eyes of the citizens... public sensitivity is nonexistent, and there is no cooperation. While we are driving to the incidents, people roll down their windows and curse at us. We go to fires in four vehicles, and people get offended since they must change lanes and make way.*' (*p*-4), '*The moment they open their mouths, curses begin: The dogs of the mayor, where have you been?...*' (*p*-10). Statements like the ones above indicate that the daily perception of firefighters is largely influenced by the political climate rather than their actual work performance. The politicized environment of the fire departments was perceived as the grounds for patronage, where the positions were given to people with similar views of the local government (Sayarı, 2014). This situation appeared to disturb the relationship between citizens and firefighters.

As a result, both groups reported low levels of prestige and negative public perception towards the profession. The only difference was that the high-PTSS group brought up the subject on their own, while the other group confirmed the existence of such a tension only after they were specifically asked about it. This might be the indicator that high-PTSS group was relatively more sensitive to such issues.

Occupational belongingness

Psychological difficulties the participants experienced had two main sources, as discussed previously. The first source was difficulties in the field. The second was the bureaucratic violence they experienced in the workplace. Despite all these negative circumstances, there were also some factors the participants depended on to endure those difficulties.

The statements of the participants were mostly negative about the conditions under which they had been serving. Yet, most of the members from both groups reported satisfaction and belongingness to the profession, which seemed to be in line with the argument of Firmin et al. (2018) about altruistic motivation: '*I like my job despite everything; I am glad without any remorse. There were painful moments, but there were good ones also. When you come out of the fire doing your job, people applaud you and give their blessings... Such things brought me to this day. If I were born again and they were to ask me to be a firefighter, I would do it. It is difficult, but it is still a good job.*' (*p*-7), '*It is the only thing keeping us here. The feeling that comes with helping people, that keeps you alive.*' (*p*-1), '*I see myself as a conscientious person, and I am very happy to be doing this job. Before you came, we went rescuing a bird, for example. We delicately took the animal from the tree and freed it to the sky. Such things motivate us immensely.*' (*p*-4), '*Rescuing any life gives us peace, which is the best aspect of this job.*' (*p*-5).

Despite the poor conditions in the field and bureaucratic violence they face, the moral satisfaction of firefighting seemed to be the strongest aspect in both groups. The positive feelings of satisfaction and happiness that they experience while performing their jobs can

also be viewed as protective factors against the negative conditions they previously discussed. This can be considered an intrinsic motivation as an inner factor to continue working as a firefighter despite all its negative aspects. Additionally, there were some outer protective factors, which might have made it easier to endure all these difficulties, which will be examined below.

Support

Support from various sources against the difficulties and problems might be considered one of the main reasons that made the participants continue their profession. These were family support, colleagues' support, and institutional support. Although both groups mentioned them, their perception of support from these sources differed clearly.

Family support

All participants talked about their perception of support from their family members. There were some differences between the two groups in terms of their attitude towards having support from family members as well as differences within high-PTSS group. The high-PTSS group sought support from their families, especially after traumatic events like bombings: *'I don't take stress from the events home as much as possible. But after the bombing event and the events of the 15th of June, I was quite distressed. When my wife asked about it, I cried. It was relieving. She was sorry to hear it all and tried to console me.*' (*p*-10), '*When I come from my shift, I feel stressed and reflect it negatively on my family. My child is only three months old, but I still did it . . . My wife said that I could resign if I wanted. She always supported me, which had an effect on me talking my manager, and they transferred me to a desk job so that I could continue working.*' (*p*-1).

The low-PTSS group stated relatively less need for family support by talking about their experiences in daily working life: *'I don't tell them anything generally. There is no reason, actually; I just don't need to*'. (*p*-9). Even if they share their experiences with family members, it was not for support for dealing with traumatic experiences but as an informative act: *'I talk about the job with my wife only to make sure she knows the conditions of my work. I try not to take my difficulties home, such as the ones with the administration.*' (*p*-4). So, they showed higher resilience in the face of stress and avoided detailed conversations about the negative aspects of their professional life.

Colleagues' support

According to the participant's expressions, colleagues' support had two main functions. The first one was expressed by the high-PTSS group. According to their statements, colleagues act like an additional source of support for them: '*If I have a problem, I talk to my friends at work, and it helps me generally.*' (*p*-8), '*We have an association for firefighters; I go there, and we sort things out together with colleagues.*' (*p*-10).

Secondly, colleagues provide a sort of brotherly support against the difficulties of firefighting as a high-risk job, which was pointed out by the low-PTSS group: '*We usually share the events with each other. Because firefighters have their own language, they have a feeling for what they do.*' (*p*-5), '*We support each other, and we ask each other whether we had necessary protective gear with us, whether we were wearing helmets and gloves while working . . .* ' (*p*-4).

As can be seen from the participants' statements, colleagues provide an additional source of support for both groups. The low-PTSS group mentioned a reciprocal supportive relation within their professional group, while high-PTSS group pictured a unidirectional relation through which they receive support without necessarily giving any.

Institutional support

Despite the negative aspects of working as a firefighter, the fire department as an institution has some mechanisms for providing psychological support to their members. According to the statements of the participants, the fire department provided routine yearly psychological evaluations alongside the physical examinations mandated by law. Besides, they provided seminars on how to deal with psychological trauma and organized moral support events. These were found to be generally insufficient by both groups. But the two groups approached it differently. The high-PTSS group talked about the insufficiency of such services along with a pronounced need for these services: *'The psychologist called us to talk once and never called again.*' (*p*-8), *'They organize morale-boosting dinners, but I don't attend them.*' (*p*-3), *'We had a psychologist in the central station. In my 32 years, I only went there a couple of times. We talked for 15 minutes, and that was it.*' (*p*-9), *'We used to have a psychologist, but I heard she left. Now there is a practitioner instead. He just looks at our papers and signs the documents for the sake of appearances.*' (*p*-10).

There seemed to be a consensus on the insufficiency of such services of the department, but the high-PTSS group mentioned the insufficiency of these activities while they underlined the need for such services. This was obvious when we asked about whether there was a need for regular psychological support in the department: '*. . .from my perspective it would help me tremendously; there are people with 30 years under their belt, but they don't accept that they need it.*' (*p*-1), *'It would be very good . . . The things we can't talk about can be talked about in front of a psychologist.*' (*p*-3). The low-PTSS group found the existence of institutional support positive in principle, but they found it insufficient like the high-PTSS group, as stated above. Their difference from the high-PTSS group was that they did not prefer or need to benefit from these services: *'In 32 years of my service, I just saw a psychologist one or two times for 15 minutes. I haven't experienced anything making me go and see a psychologist.*' (*p*-9), *'No, I didn't* (when asked about if he ever used institutional psychological support), *but our presidency organized some conferences on these subjects from time to time.*' (*p*-5). So, the low-PTSS group stated less need for institutional support mechanisms despite recognizing its existence.

Discussion

This study sought to determine the perceptions of a sample of Turkish firefighters with high and low-PTSS who were selected from the sample of a previous study (Bastug et al., 2019) about various aspects of their profession and explore the similarities and differences in their perceptions.

The high-PTSS group displayed higher rates for symptoms such as re-experiencing, avoidance, and hyperarousal, which significantly impeded their daily functioning and occupational performance. Poor self-efficacy is a significant predictor of PTSD symptoms in firefighters (Heinrichs et al., 2005), requiring an extended investigation of the potential long-term impact of negative work performance within the high-PTSS group. This may also act as a signal to identify firefighters who need assistance in improving their self-efficacy to lower the risk of developing PTSD. The low-PTSS group recognized these symptoms as a natural component of their career and asserted that they did not experience prolonged effects in comparison to the other group. The research (Kyron et al., 2021; Nichter et al., 2020) indicated that community integration and social support serve as protective factors against mental health disorders; both groups in this study received social support from their families and colleagues. Even though the participants believed that work experience helped protect them, experienced firefighters, especially those who faced more severe natural disasters, showed a greater risk of having higher PTSS which supports earlier research (Chen et al., 2007; Chung et al., 2015; Katsavouni et al., 2015). This study indicated that additional factors contributed to the differences between the two groups regarding the presence of PTSS. One explanation stated by the two groups was burnout resulting from emotional exhaustion. The groups varied in that the high-PTSS group discussed emotional exhaustion more frequently and focused on the effects of bureaucratic violence in a more individualized manner, whereas the low-PTSS group addressed emotional exhaustion less often and viewed administrative operations as a structural issue rather than being dependent upon individual actions. Depersonalization appeared to be reported by both groups as another aspect of burnout. The high-PTSS group employed maladaptive stress coping mechanisms such as alcohol intake and excessive labor, whereas the low-PTSS group utilized techniques focused on interacting with their families. This emphasizes the significance of formulating psychological intervention programs designed to reduce PTSS. The firefighters' perspective of administrative concerns appears to be crucial in the creation of intervention initiatives. This may necessitate not only psychological intervention programs but also an evaluative process that could lead to modifications in administrative procedures to meet the needs of firefighters. The participants identified the processes of task assignment and staff promotion within the fire service as the most important aspects. Furthermore, the inadequate coping mechanisms prevalent in the high-PTSS group can be enhanced through the implementation of superior techniques, facilitated by mental health professionals in collaboration with the families of firefighters and their social environment. Mental health intervention programs for firefighters include individual counseling, psychoeducation, group studies, and self-administered assessments, which have shown favorable outcomes for their mental well-being (Choi et al., 2017; Won et al., 2020). Intervention programs for firefighters with PTSD can be advantageous, as emphasized by a recent study (Kang et al., 2021).

Regarding the main topic of occupational circumstances, both groups' risk perception focused on physical risks rather than psychological threats. The high-PTSS group exhibited greater concern for personal physical risks during professional interventions, whereas the low-PTSS group focused more on the physical dangers faced by the victims of the emergency incident. The literature indicates that the perceived threat of events significantly contributes to PTSD symptoms in firefighters (Pinto et al., 2015). This study revealed that the high-PTSS group expressed numerous remarks that distinctly demonstrated their heightened perception of danger and the threat of harm and mortality. Such statements may serve as a criterion for identifying firefighters eligible for mental health intervention programs. The third topic concerning differences between the groups was the perception of risk mitigation through the utilization of PPEs. The low-PTSS group perceived PPEs primarily as a means of physical protection, whereas the high-PTSS group acknowledged both physical and psychological protective effects equally. A tendency to utilize PPEs was observed to rise with peer support (Maglio et al., 2016), which illustrates the importance of friendship among firefighters, a phenomenon also evident in the low-PTSS group in this study. Extending the reach of such a fraternal attitude toward the high-PTSS group may effectively ensure their utilization of PPEs during all procedures. The perception of administrative issues constituted a point of divergence between the groups. Firefighters' perceptions of administrative issues were correlated with occupational stress and depression in certain studies (Duran et al., 2019; An et al., 2015). The firefighters' views in this study coincided with earlier research findings, emphasizing the stress associated with the operations of the fire department administration. The high-PTSS group viewed the administration's functioning as linked to individual activities, whereas the low-PTSS group regarded it as a structural issue. Both groups held an unfavorable impression of the profession's prestige, despite studies indicating a more favorable public mood toward firefighters in other nations (Jelenewicz, 2008; S. Lee & Olshfski, 2002). These findings may stem from the administrative issues referenced throughout this study, which might be addressed through a more participative administrative strategy instead of a centralized one. The heightened sensitivity to physical damage in the high-PTSS group may contribute to the development of PTSS, particularly for the hyperarousal symptoms they experience. The elevated risk perception in the high-PTSS group is associated with the protective factor of PPE. The availability and utilization of PPEs are essential for preserving the psychological integrity of the high-PTSS group. Such precautions are significant in mitigating the consequences of PTSS and enhancing firefighters' functionality.

Addressing the main topic of support, the high-PTSS group exhibited a greater necessity for assistance and actively sought support from diverse sources in contrast to the low-PTSS group. Family support appeared sufficient for the low-PTSS group through traditional leisure activities, whereas the high-PTSS group required more assistance; however, some was offered by their families. Collaborative support was more frequently employed than institutional help, which was considered insufficient for the high-PTSS group and unnecessary for the low-PTSS group. The high-PTSS group actively looked for help because studies show that feeling less supported by others is linked to more severe PTSD symptoms (Meyer et al., 2012). This data suggests that the high-PTSS group sought social assistance from multiple sources to manage their PTSS, as they deemed each source insufficient for their requirements. This evidence establishes the foundation for asserting

the necessity of developing an improved support network for firefighters through mental health intervention programs and administrative initiatives. The need for such an intervention became evident when it was discovered that the support from colleagues resembled a fraternal and reciprocal relationship for the low-PTSS group, but it was unidirectional for the benefit of the high-PTSS group. The difference in support between the two groups may lead to long-term complications.

It is known that experiences such as 'coming face to face with death', which change the self-perception of individuals and which firefighters frequently experience, are caused by traumatic experiences. While the Posttraumatic Growth (PTG) model (Tedeschi & Calhoun, 2004; Tedeschi et al., 1998) states that individuals can emerge from such experiences stronger, the concept of Posttraumatic Depreciation (PTD), which is a relatively new concept in the literature, also refers to the negative changes that can occur in individuals (Baker et al., 2008). Firefighters' sentences such as 'If you erase the memory of an event in two or three days in the first years, you erase it faster as you progress . . . ', 'I just sat somewhere staring at emptiness' indicate PTD.

Problem-focused coping and positive reappraisal are generally associated with PTG, while strategies such as avoidance and emotional suppression can increase the risk of PTD. In addition to individual factors, occupational factors are also effective in determining the direction of these processes. In particular, regular supervision, in-service training, and structured support systems have been shown to alleviate the negative effects of secondary PTSD and support PTG. However, the relationships with PTD are more complex and uncertain (Dursun & Söylemez, 2020).

A limitation of the study was the absence of data collection from the participants' family members. This could enhance the study by offering an alternative perspective on firefighters' lives, which may be considered in the future research. Another limitation of this study is that the participants live and work in an urban area. This creates a limitation in terms of transferability, which is an important criterion in qualitative studies. A further limitation was the absence of earlier studies on PTSS among Turkish firefighters. This constrained the ability to compare results with other studies, including Turkish firefighters. The final limitation was that the findings may not be applicable to a broader population of firefighters, according to the characteristics of qualitative research.

Conclusion

Based on the findings, intervention programs that provide different kinds of support and enhance the reciprocity of firefighters' relationships in receiving assistance to reduce the severity of PTSS may be recommended. Through family-focused psychoeducation programs, informative seminars and workshops can be organized for firefighters' families on coping with traumatic events, communication and support in times of crisis. Family counseling services can be provided to firefighters to give guidance and support on issues such as communication problems within the family and the reflection of stress brought about by the profession on family life. Social connectedness and sense of belonging can be strengthened with structured peer support group meetings, where firefighters with similar experiences can come together and share their feelings. Sense of belonging can

also be increased with regular social events (picnics, cultural trips, sports matches, etc.) for firefighters and their families.

Psychological resilience, burnout prevention, and coping with stress should be addressed as strategic priorities at the institutional level. Mental health standards in the workplace should be improved. Periodic mental health screenings, confidential psychological support mechanisms, and crisis intervention teams should be included in the institutional structure. A democratic work environment where firefighters' opinions are heard, they have a say in management processes, and they engage in decision-making would enhance mental well-being.

With regular training and simulations on the use of PPEs, not only the usage techniques but also how the equipment increases the sense of psychological security should be explained. In these trainings, information should be given that the feeling of protection reduces anxiety and that security supports psychological resilience.

Emotional intelligence and empathy training should be provided to managers to increase their capacity to recognize and support the mental state of firefighters. An open communication culture within the organization should be encouraged. A communication environment should be created where firefighters can comfortably express their feelings and difficulties.

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