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“The Profession Is Just Different”: Why Noncareer and Career Firefighters Have Different Experiences With Critical Incidents, and the Role of Informal Peer Support in Processing Them

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The differences between noncareer firefighters and career firefighters are unclear when it comes to experiencing critical incidents and the role of informal peer support in the processing of such incidents. To investigate these differences, data were collected by means of 20 participating observations and 72 interviews with Dutch noncareer and career firefighters from 37 different fire stations. The mindset with which they ride to an incident, the local bond between the involved firefighters, and previous experiences with critical incidents vary for noncareer firefighters and career firefighters, influencing how they experience and process critical incidents. During their service, career firefighters get support from their peers more readily than noncareer firefighters, who meet less often and for shorter periods. Management has less oversight on noncareer firefighters, making it harder to determine whether they need aftercare. The personal environment plays a larger role in the processing of incidents among noncareer firefighters than among career firefighters. It is concluded that incidents are experienced as critical by both categories of firefighters, albeit for different reasons. Both impact and processing of incidents are related to the social ecology in which firefighters work. Insight into these differences helps optimize the help and aftercare for these first responders.

Public Significance Statement

This study illustrates why a noncareer or a career capacity influences firefighters' experiences with critical incidents and the role of informal peer support in processing them. These insights enable mental health professionals to gain a better understanding of the unique work culture of the fire service and its assistance and aftercare in order to be more attuned to the needs of firefighters.

Keywords: career firefighter, noncareer firefighter, informal peer support, fire service culture, social ecology

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Most studies on the mental health of firefighters and the experiences of firefighters with critical incidents—incidents that are specific, related to personal loss, unplanned and unexpected, life-threatening, and take place within a particular period of time (Bacharach & Bamberger, 2007; De Soir et al., 2012; Fraess-Phillips et al., 2017; Lewis, 2003; Monnier et al., 2002)—are limited to career (e.g., professional) firefighters (Brazil, 2017; Milligan-Saville et al., 2018). However, in many Western countries, most firefighting personnel consists of noncareer (e.g., volunteer) firefighters.

Studies focusing specifically on noncareer firefighters' experiencing of critical incidents (e.g., Brazil, 2017; Bryant & Harvey, 1996; Milligan-Saville et al., 2018), or on the impact of the firefighting profession on both career and noncareer firefighters (e.g., Dyregrov et al., 1996; Pennington et al., 2022; Petruzzello et al., 2016; Stanley et al., 2017), expose important differences between the two (Brazil, 2017). Dyregrov et al. (1996) concluded that, in specific incidents, Norwegian noncareer firefighters experience higher levels of posttraumatic stress than career firefighters. In an American study (Stanley et al., 2017), noncareer firefighters reported enhanced levels of suicidal symptoms (suicide plans and attempts), depression, and posttraumatic stress than career firefighters. Additionally, noncareer firefighters experience greater structural hindrances to treatment in the mental health system (like costs, transportation, and availability of resources). By contrast, career firefighters report relatively high levels of problematic alcohol use (Pennington et al., 2022; Stanley et al., 2017). Another American study (Petruzzello et al., 2016) revealed that there are differences in psychological reactions (such as distress and dysphoria) after firefighting duties performed by both noncareer and career firefighters and that occupational status (noncareer or career) influences these reactions. The reason for this, however, remains unclear. There is little evidence that conclusions of research on career firefighters also apply to noncareer firefighters (Blaney et al., 2021). Research into the experiences of noncareer firefighters compared to those of career firefighters is therefore necessary (Sattler et al., 2014).

Both noncareer and career firefighters have to deal with critical incidents. They rely on formal (organized) and informal (organic) support to deal with these incidents. A prevalent example of formal peer support is critical incident stress debriefing (CISD), part of the overall trauma support model critical incident stress management (De Soir, 2012). In this intervention, critical incidents and the stress reactions they induce are discussed collectively by direct crew members (peer group) and colleagues with specialist training in aftercare (Harris et al., 2002). Studies on CISD yield contradictory findings on its effectiveness (Devilly et al., 2006; Johnson et al., 2020; Varvel et al., 2007). Informal peer support involves the natural dialogue with colleagues who were present during the critical incident and involves interaction in pairs or small groups (Jeannette & Scoboria, 2008). This organic dynamic is a regularity among those who face tragedy and disaster uniquely as part of their profession and is connected to the group cohesion they experience (Jeannette & Scoboria, 2008). The Dutch fire service guidelines on peer support make no distinction between noncareer and career firefighters.

Firefighters usually experience critical incidents as a collective because they tend to work in a crew (Haverkamp, 2005). Hence, when processing critical incidents, the social support offered within the crew (peer support) is vital for coping with an incident

(Dangermond et al., 2022a; Kim et al., 2008). Peer support reduces the negative psychological impact of a critical incident (Varvel et al., 2007) and helps firefighters deal better with stress and experience fewer adverse reactions (Bernabé & Botia, 2016). Multiple studies show that informal peer support is the most preferred support modality for firefighters (Dangermond et al., 2022a; Jeannette & Scoboria, 2008). It has not been investigated whether this preference applies to both noncareer and career firefighters.

The fire service culture likewise influences the experience and the processing of critical incidents (Haverkamp, 2005). Fire service culture is complex and dynamic (Thurnell-Read & Parker, 2008) and unique because of its specific duties (Johnson et al., 2020). It is characterized, among other things, by tight cohesion, mutual trust, and strong intragroup bonds (Johnson et al., 2020; Varvel et al., 2007). Another aspect of fire service culture is humor, not only as part of fire service culture in general but also specifically when coping with critical incidents (Dangermond et al., 2022b). The firefighters' brotherhood (Crosby, 2007) can be considered a social ecology: An ecological approach of resilience in which the mutual interaction between person and environment is central. In this approach, resilience develops through a positive bond between individuals and their environment and is dependent on the social ecology of the person is part of (Duyn dam, 2016; Ungar, 2012, 2013). Social ecology is a bond between people who have to work together and be responsible for each other and who display or achieve resilience within this social bond. Achieving resilience means that firefighters within a crew react to internal or external incidents or crises that threaten the cohesion of the crew or community in such a way that this cohesion is restored and perhaps even strengthened. Within a social ecology, individuals draw resilience from this social cohesion, for example, through the support received when processing critical incidents. This concept is relevant for research into firefighters' processing of critical incidents because the social cohesion within a firefighters' crew is an important precondition for the adequate processing of such incidents (Dangermond et al., 2022a). The mutual interaction and connectedness between firefighter peers, therefore, contribute not only to the resilience of individual firefighters but can also reduce or mitigate the impact of critical incidents. The group expectations and the norms within the firefighters' collective play an important role in this process (Jeannette & Scoboria, 2008). The social ecology of noncareer and career firefighters is probably not the same, and intragroup relationships can strongly vary. However, current research makes no distinction between specific and general aspects of the fire service culture of noncareer and career firefighters (e.g., Moran & Roth, 2013; O'Neill & Rothbard, 2017; Thurnell-Read & Parker, 2008; Varvel et al., 2007), or does so only to a limited degree (e.g., Johnson et al., 2020; Ward & Winstanley, 2006).

The few studies that distinguish between noncareer and career firefighters show that differences exist between the two groups when it comes to the impact and processing of critical incidents. Against this background, the present article asks the following question: What are the differences between noncareer firefighters and career firefighters in terms of experiencing critical incidents and the role of informal care support in processing such incidents? This research further elaborates on two studies that describe (a) what makes firefighters experience certain incidents at work as so critical that the incidents impact them as well as the crew they are part of (Dangermond et al., 2022c) and (b) the role that informal peer

support plays in the processing of critical incidents among firefighters (Dangermond et al., 2022a).

Research Method

The study we report on in this article is a part of wider research in the Netherlands into the role of fire service culture in the processing of critical incidents. It consists of ethnographic field research with a strong exploratory character. In the first place, this method is suited to obtain deeper insight into the relationships and the group culture among fire brigades, by participating for extended periods in their reality, building trust, and talking about personal experiences and perceptions. Second, ethnographic field research fits the best because this study is aimed at the processing of critical incidents, which is a sensitive topic that may be considered taboo. Multiple studies describe how cultural stigma can inhibit firefighters from discussing mental health issues (Henderson et al., 2016; Kim et al., 2008; Pennington et al., 2022; Stanley et al., 2017) or talk about their own vulnerability (Wilmoth, 2014). This closed attitude has led to a lack of understanding from the outside world of this group of first responders. Ethnographic field research offers more possibilities to develop trust in the researcher and discuss confidential matters.

An important fact in this context is that the investigator (first author) works at the Fire Service Academy and has several family members who work or have worked in the fire service, so she can be considered as an insider researcher (Green, 2014). Research by an insider eases access of the investigator to the research population. In addition, this investigator possesses a relevant background and current knowledge that facilitates asking questions (Kniffin et al., 2015). A possible drawback of an insider researcher is interviewer bias. The investigator could also have to deal with ethical and moral dilemmas (Floyd & Arthur, 2012), for example, if there is both a personal and a professional relationship with participants (Perryman, 2011; Vass, 2017). The participants in this study were aware of this insider position, and many indicated that they considered the investigator as “part of the family.”

Sample

The fire service system in the Netherlands is made up of 23,570 firefighters (4,357 career firefighters and 19,646 noncareer firefighters), and there are 969 fire stations (Instituut Fysieke Veiligheid, 2020). Of these men and women, 4% work in both a career and a noncareer capacity: In addition to their 24-hr shifts as career firefighters, they also perform noncareer service (in their town of residence). The research population consisted of active firefighting personnel: crew members, crew commanders, and shift leaders. This study included both career and noncareer firefighters: 40 career firefighters (11 of whom had also been noncareer firefighters in the past), 20 noncareer firefighters, and 12 participants who work in both capacities.

Selection of participants for the interviews took place using theoretical sampling (Patton, 2015), a targeted selection based on considerations from the literature: both noncareer and career firefighters because there are important differences between the two groups in terms of the impact and processing of critical incidents (e.g., Sattler et al., 2014); firefighters with various years of service because of the possible effect on the intensity of exposure of critical

incidents and of experiencing social support (Regehr et al., 2003; Sluiter & Frings-Dresen, 2007); and both men and women because female firefighters describe critical incidents differently than their male colleagues (Jacobsson et al., 2015). The participants' group consisted of 5 women and 67 men, with an average age of 43 years and an average of 19 years of service. Participants came from 19 different career stations and 18 volunteer stations. All participants have at least followed secondary vocational education (a requirement to join the fire service). Most participants (66) were married; six participants are single or divorced.

Data Collection

Data collection took place through participating observations and semistructured in-depth interviews. A total of 20 participating observations took place describing open behavior (the visible part of fire service culture): Throughout several 24-hr shifts per crew, the researcher participated in all activities (with the exception of providing aid during incidents for career firefighters) and drill evenings (noncareer firefighters). An observation report was made during and directly after each participating observation. Besides an overview of some factual characteristics (e.g., date, day of the week, description of the fire station/building), this report mainly contains descriptions of the atmosphere during the observation (e.g., Are crew members closed or easygoing?); incidents (if applicable); valuable moments according to firefighters (exercise, cook, watch a movie together); role of management (before, during, and after incidents); group dynamics (hierarchy, role of humor in communication, informal leadership); and informal peer support (when, how, and with whom is the support given).

To delve deeper into this descriptive behavioral level, and to really understand the culture, 72 semistructured in-depth interviews were also held with noncareer and career firefighters. These interviews focused on perceptions, thoughts, feelings, and experiences of the individual (cf. Schein, 1984). The list of topics for the interviews is based on the findings of the participating observations. Main themes of the list of topics are personal characteristics and motivation (e.g., age, marital status, years of service, reason for becoming a firefighter); the fire station (most common incidents); fire crew composition (ages, personalities, member interaction, number of firefighters and crews); sense of community (members' feeling of belonging to the crew and station); role of management (position, quality, responsibility, and influence of the crew leader); critical incidents (which incidents are experienced as critical for what reason and what impact this has on the individual and the crew); formal social support (experiences with CISD); informal social support (support of the crew and/or individual: when, why, and how); and moments when support is given or not (rituals, traditions, barriers).

Participating observations, as well as interviews, were conducted in every selected crew of career firefighters. In this way, results from the observations could be compared with the results of the interviews in order to supplement, delve more deeply, or make corrections. The interviews took place at fire stations, public places or participants' homes, and lasted one and a half to 2 hr. All interviews were taped with a voice recorder and transcribed verbatim. Participants in the observations and interviews signed an informed consent document beforehand.

Analysis

Thematic analysis (Braun & Clarke, 2012) was used to analyze the data set. Themes (patterns of meaning) in the data set were identified and organized in six phases: becoming familiar with the data (Phase 1); generating initial codes (Phase 2); searching for (Phase 3), reviewing (Phase 4) and defining (Phase 5) themes; and finishing the report (Phase 6). The analysis was an iterative process, alternating processes of data collection, analysis, and theory formation. Induction and deduction took place simultaneously. The analysis program Atlas.ti was used to thematically analyze and code the data. Three coding steps were applied: open, axial, and selective (Patton, 2015). Open coding took place primarily when analyzing the participating observations and the open interviews (e.g., the codes “fire service culture,” “critical incidents” and “processing”; Phases 1 and 2). In the subsequent step, the data were axially coded. In this step, codes were validated by splitting, merging and comparing them, and designating new codes. In addition, various codes were clustered into one or several group codes, based mainly on substantive considerations (the analysis of the interview reports, but also statements/observations of participants). These are some of the group codes created: “critical incident: career-specific,” “critical incident: noncareer-specific,” “processing: career-specific,” and “processing: noncareer-specific.” Codes clustered in these group codes related to experiences with critical incidents and their processing which apply specifically to career firefighters (“24 hr-shift,” “bonds with local community”) or non-career firefighters (“other obligations,” “involved with partner/family”). Lastly, based on a comparison of the group codes, the connection between group codes was analyzed (selective coding; Phases 3, 4, and 5), after which the report was completed (Phase 6).

The method triangulation led to further deepening in the research results. The different forms of data collection elucidate various perspectives of the research object: by means of observations, that which is observable on the outside is mapped out, while the interviews gather more in-depth knowledge. After each coding step, the preliminary results were tested during observations and interviews, until the first signs of saturation appeared. The large number of participating observations and the semistructured in-depth interviews, combined with the detailed, structured data collection and analysis method, strengthen the validity and reliability of the study. There was also the researcher’s triangulation. In all phases of the study, the first author worked closely together with a content expert (second author) and two academic noninsiders (third and fourth authors).

Results

Dutch noncareer and career firefighters follow the same training and have the same range of duties: to provide assistance to people and animals in all kinds of incidents and events, such as automobile accidents, fires, and floods. There are however differences between the two capacities. Noncareer firefighters are not in service full-time and have another, main job, whereas for career firefighters, it is their main job. Another difference is that career firefighters usually have 24-hr shifts, while by contrast noncareer firefighters are alerted while at work or during their free time. The composition of the crew a noncareer firefighter serves with varies, as it depends on who can get to the fire station on time; career firefighters go on a call with

their (usually) regular crew. Career firefighters have 24-hr shifts in towns where they do not necessarily reside, noncareer firefighters do live in the areas they service. This information is important when interpreting the differences (between the two groups) that play a role in the experiencing of critical incidents and their processing through informal peer support. The following findings are illustrated by quotes; they have been editorialized to protect the anonymity of participants.

Different Experiences of Noncareer and Career Firefighters With Critical Incidents

There are differences between noncareer and career firefighters when it comes to mindset during the ride to an incident and how and when the mindset switches, the local bond between the firefighters involved, and their previous experiences with critical incidents. These differences offer insight into why noncareer firefighters and career firefighters experience an incident as critical for different reasons.

Mindset and Switching Moments

When there is an alert, career firefighters are normally present at the fire station and get into the fire engine within a few minutes. Noncareer firefighters are alerted at home or at work and rush to the fire station after a call. They subsequently ride to the incident location where the relief is taking place. Because of this, career and noncareer firefighters ride to incidents with different mindsets. The mental preparation for career firefighters is usually shorter than for noncareer firefighters. A difference is experienced in the switching from “rest” or “standby” to “provide help” between the two categories of firefighters. At the start of their 24-hr shift, career firefighters ready themselves to the possibility that “anything” can happen, in contrast to noncareer firefighters, for whom incidents can “hit harder” because of the switch between a “safe environment” and directly getting “into action” [R.40].

As a professional, you say “I’m going to my work” with a specific mindset. I know that things can happen there, but that affects you differently than if I as a regular citizen had to provide first aid all of a sudden. [R.51]

But sometimes switching mindsets can also be hard on those who work in both volunteer and career capacities:

If I’m coming from home I have a few minutes to prepare mentally and I more or less know where we’re going to and can make some kind of plan. But here [at the station] I am in the vehicle within a minute or two, and that’s more difficult. [R.44]

Because noncareer firefighters are more likely to reside in the area where they serve, it happens regularly that, while they are on their way to the station with their own transportation after getting a call, they will drive by the incident for which they have been alerted. Then firefighters face the dilemma: provide rescue services immediately or keep driving to the station? A few participants have experienced this dilemma multiple times.

An accident, an overturned car, nearby the fire station, with a woman and a child in it. I didn’t keep driving, I could not bring myself to do that, I immediately went to help them. At such moments you have to follow your instinct. [R.65]

In such cases, noncareer firefighters switch (even more quickly than usual) from citizen to first responder. The absence of colleagues, preparation time, and the right rescue tools and protective gear are listed as reasons why noncareer firefighters experience these incidents as critical.

The Local Bond: It's a Small Town

Incidents that involve people they know are experienced by firefighters as critical. Because noncareer firefighters in the Netherlands live (or work) in the town where they serve, chances are greater that they will have to deal with incidents in which they know those involved. "You often run into someone you know, or it is their father or mother or grandmother, those are things that really impact you" [R.52]. Such incidents are experienced as critical mainly because of the people they happen to. Career firefighters are not required to live in the town where they work as firefighters, therefore they do not know most of the victims.

Noncareer firefighters are also confronted with the incident location much more often than career firefighters, both during the performance of their firefighting duties and in private situations. Sometimes an incident makes such an impression that the responder avoids the location afterward, also in their private time. "I have not gone back to the location in months, maybe almost a year. We once had an outdoor fire in the neighborhood. And so we of course had to go there. It was crazy" [R.51]. There is an added impact if casualties are commemorated at the site. "There are flowers and a RIP in that tree. If we pass by that scene as part of a drill . . . it was really terrible with that fellow. That we couldn't do anything" [R.42].

Experience and the Cumulative Effect

The first time a firefighter is confronted with a certain type of incident or with a fatality, or goes on call working in a new function, is experienced as critical. Career firefighters usually experience more incidents than the average noncareer firefighter, and this has both positive and negative consequences. What is positive is that the previous experience can be useful in a new situation. Thanks to such experiences career firefighters state that they are calmer when riding to the incident location and are less prone to experience incidents as critical. "Because you're a professional and have already gone through so much, you experience the work differently. I notice that you stay calmer or relativize things more easily, you are less rattled in the engine, because you have more baggage" [R.68]. The negative is that this is experienced as critical when several (serious) incidents take place within a certain amount of time. This is known as the cumulative effect. Those who are both career and noncareer firefighters end up dealing with this cumulative effect sooner—they simply have to deal with more incidents in both capacities.

After completing service at the incident location, the firefighting crew goes back to the station. Normally speaking, career firefighters continue their duties and noncareer firefighters go back to their private or work situation, unless this was a critical incident and there is a need for informal peer support and/or CISD (formal peer support).

Different Experiences of Noncareer Firefighters and Career Firefighters With Informal Peer Support When Processing Critical Incidents

Noncareer and career firefighters have different experiences when it comes to informal peer support. These differences relate to the number of contact moments and the degree to which people know each other, visibility to management, and the role of the personal environment. Such differences explain why informal peer support is experienced differently by noncareer and career firefighters.

Contact Moments and Knowing Each Other

Both career and noncareer firefighters attach great value to having a good rapport with their peers. Career firefighters usually work with a more or less steady, relatively small team of colleagues, whereas noncareer firefighters often serve with a changing composition of colleagues from the station. Career firefighters also have 24-hr shifts, in contrast to noncareer firefighters. These shifts strengthen relationships. "You are with each other for 24 hours straight, you sleep, you eat, you take a shower and play sports with each other. You run into each other once every three days" [R.18]. When processing incidents, the combination of a steady crew of peers and spending longer periods of time with each other is experienced by career firefighters as having added value.

You are with each other a lot, you have a lot of time to talk to each other. And because you work with each other so much, at a certain point you get to know each other really well. So you really know what someone is about. [R.78]

Although most noncareer firefighters admit to knowing each other fairly well, they tend to see each other less often.

It's easy to say that "we keep an eye on each other," but you only see each other on drill nights and occasionally when there is a call. You don't get to see how someone sleeps. You don't get half of the story. Someone can put on a happy face for an hour and then be completely down in the dumps. That's the difference with being a career firefighter, and that you are breathing down each other's necks 24/7. [R.13]

In addition, specifically for noncareer firefighters—although incidents and the postincident talks for both career and noncareer firefighters can take place at "inconvenient" times (e.g., in the middle of the night)—formal or informal talks cannot always take place, at least not immediately. Whereas a career firefighter can be more or less obligated to participate in a postincident talk later in the shift, this is less binding for noncareer firefighters because they have to go or return to their job, or may have other personal obligations. The talks are thus postponed to a different moment. "Then you think 'okay we're going home', but that actually isn't so good" [R.69].

Visibility to Management

Together with the crew, management determines whether aftercare is needed and what type. This is established during the incident, although it can also take place based on the atmosphere during the ride back to the station and/or after arriving there. Management acknowledges that with noncareer firefighters, it is more difficult to gauge whether someone needs aftercare, certainly if the person

does not indicate so herself. This has to do, among other things, with the number of contact moments, which are fewer for noncareer than for career firefighters.

If you don't see it in someone's face or they are good at keeping up appearances, that's something we all do sometimes. But then you don't see each other, and as someone in a leadership position I also feel I'm failing. Because that image isn't there. But for career firefighters it's a different story: you are together, you see each other again, you spend the whole day with each other. You see abnormal behavior, and then as management you can anticipate on that. That is a lot harder for a noncareer firefighter. [R.55]

For the management of noncareer firefighters, it is more difficult to get a feel for how someone is doing, although to some degree this also applies to career firefighters, specifically to those who sub during a shift or are also active in a noncareer capacity. Participants indicate that in such cases, it is important for all those in charge to be brought up to date of the critical incident and its impact—all the more so because career firefighters who also serve in a noncareer capacity can experience a barrier to appearing vulnerable to noncareer firefighters: "It is rather a problem than an advantage. With career firefighters you can be more yourself than with noncareer firefighters, to them you are 'professional', and then status and jealousy come into play" [R.15]. The opposite also applies: "Career firefighters keep an eye on you, because you also used to be a noncareer firefighter. Everything you do gets questioned. As a noncareer firefighter you have to prove to yourself that you can also interact with career firefighters" [R.18].

Role of Personal Environment in Processing Incidents

Most firefighters prefer to discuss critical incidents with their immediate firefighter peers. They use their own crew for informal support because they do not have to explain anything to the crew members, they understand each other better than an outsider would. Firefighters usually do not want to burden their partner, friends, or family with the details of an incident, and only share general details about events. "I don't believe my partner needs to know all the crazy things I get to see. Even I don't feel the need to. I can vent enough with my colleagues" [R.48]. Still, especially for noncareer firefighters the personal environment—such as partner, family and friends, and even victims and their families—play a larger role in the processing.

The personal environment and the local bond impact noncareer firefighters differently when processing critical incidents. First of all, the partner of a noncareer firefighter usually knows that he or she has been called to an incident. "You go out in the middle of the night, and she asks 'what's going on?'. And then you're going to sum things up differently than the way you do with your colleagues" [R.17]. In contrast with career firefighters, noncareer firefighters say that their family or friends sometimes follow the incidents too:

My father follows what we do fanatically. If he has the impression that "oh, that was probably heavy," I get a text message from him. If it's really serious, then I call him. It is more because of their interest than a need of mine. It happens within these four walls [of the station, ed.] and that's enough for me. [R.63]

Partners or family members of career firefighters have less of an insight into their duties.

Second, firefighters can also be confronted with incidents and their aftermath even outside the context of the firefighting service. In addition to the previously described confrontations with the incident location, noncareer firefighters are sometimes approached by people in the neighborhood because of an incident, even if they weren't present. "You run into them the next day at the grocery store—were you there too?" [R.48].

Last, because of their local bonds noncareer firefighters get to find out more—whether they ask or not—about victims' personal circumstances. Such information is experienced both positively and negatively; it depends on the need of the noncareer firefighter and the type of incident.

It was suicide or alcohol or drugs. It lasts a whole week, everyone is talking about it and has an opinion about it. That's what you have in a village. It's how it is. And that is positive, but can also be negative. [R.65]

It also happens that noncareer firefighters run into a victim long after the incident: "I got a severely injured young man about my age out of the car and now I run into him at a party. And I see him walking and I immediately picture how he was lying in the car" [R.63]. Whether people need information about how things turned out varies per individual and situation: "Do you want to know or not? That depends: sometimes I think 'just let me do my work', but sometimes I'm also curious, for example with resuscitation, did they make it?" [R.22]. For both noncareer and career firefighters, things are particularly experienced as critical when they do not want to know that information but receive it nonetheless, for instance, when victims or family themselves contact the fire station. Although this is appreciated—"these are also precious moments in fact, all that appreciation, but also the feeling that we did well together" [R.70] not everyone wants to know this information. "We resuscitated a youngster, who made it. We got a card and some candy. But no one is sitting around waiting for it. We did our best, and as far as we're concerned that's the end of it" [R.56].

Discussion

Most studies on the mental health of firefighters are limited to career firefighters, despite the fact that in many Western countries, the majority of firefighting personnel consists of noncareer firefighters. However, the social ecology and intragroup relationships of these two categories of firefighters differ. This study illustrates why a noncareer or a career capacity influences the psychological reactions of firefighters by describing (a) that noncareer and career firefighters experience incidents as critical for different reasons, and (b) how informal peer support differs between noncareer firefighters and career firefighters.

Although Dutch noncareer and career firefighters both follow the same training, and despite the fact that they usually have the same tasks package and provide assistance in similar incidents, there are different reasons why they experience incidents as critical:

- Mindset and switching moments. The context in which noncareer firefighters and career firefighters receive notice of an incident and then come into action (ride to the incident) is different, thus potentially affecting the impact of an event (stress reaction; Dangermond et al., 2022c). This is in line with the speculation of Stanley et al. (2017)

that the immediate switch from civilian life to the first responder condition may generate a more shocking experience.

- **Local bond.** Noncareer firefighters are more likely to personally know a victim (and their social environment). They also come into contact with the victim, their next-of-kin or acquaintances, and/or the incident location, as a result of which they are confronted with the incident in a private context. Previous research shows that incidents are experienced as critical when, for example, acquaintances are involved in the incident (personal loss; Dangermond et al., 2022c).
- **Experience.** In this study, career firefighters indicate that because of their experience they are less predisposed to experience incidents as critical. Previous research shows that career firefighters have greater exposure rates to critical incidents than noncareer firefighters, which results in fewer stress reactions for career firefighters (Dyregrov et al., 1996). However, incident-related stressors (e.g., type of critical incident) and personal circumstances (both at work and at home) are also strong predictors of mental health problems (Dangermond et al., 2022c; Fraess-Phillips et al., 2017). Repeated exposure to trauma can have a cumulative impact on the psychological well-being of firefighters (Jahnke et al., 2016; Milligan-Saville et al., 2018). There is a tipping point: If several, serious incidents take place within a certain period of time, this can be experienced as critical (cumulative effect; Dangermond et al., 2022c). The present study evidences that career firefighters who are also active in a noncareer capacity are more prone to having to deal with this cumulative effect.

Informal peer support is essential to processing critical incidents (Dangermond et al., 2022a; Jeannette & Scoboria, 2008). A strong mutual bond among the fire crew at the fire station makes the collective a social ecology in which the mutual interaction between person and environment produces informal peer support. This is important to the processing of critical incidents (Dangermond et al., 2022a). However, the emergence and continuation of mutual bonds among noncareer and career firefighters vary, depending on the frequency and duration of meetings and the composition of participants in these meetings. It is usually easier for career firefighters to receive peer support during a 24-hr shift, as they tend to spend longer periods of time with a more or less regular crew of peers that know each other well. Although noncareer firefighters also have a good rapport, they meet less frequently, for shorter periods, and often in different compositions.

Additionally, for both groups, management plays an important role in the processing of incidents. Due to the minimal number of contact moments, it is harder for the management of noncareer firefighters to determine whether someone needs aftercare and how the processing is going, especially if the person in question does not indicate it herself. Last, for noncareer firefighters—more than for career firefighters—their local bond causes the personal environment to play a role both in the experiencing of incidents as critical and in the processing of such incidents. This study likewise reveals that the social ecology, and consequently its impact on

the processing of critical incidents, differs for noncareer and for career firefighters.

Practical Implications

The insights from this study help develop specific interventions that are necessary toward strengthening the mental health of noncareer and career firefighters. Besides incident-related stressors and personal circumstances, organizational stressors (e.g., shift patterns, work culture, and workload) have an impact on the mental health of firefighters (Duran et al., 2018). Organizational distinctions between career and volunteer fire services should therefore be acknowledged (Stanley et al., 2017). Information on the influence of a noncareer or a career capacity on the experiences of firefighters with critical incidents and on the role of informal peer support in processing them provides a better understanding of firefighters' unique work culture. This allows mental health professionals to better tailor their assistance and aftercare to the needs of these firefighters (see also Johnson et al., 2020). Given the importance of peer support in coping with critical incidents, strengthening internal cohesion and support among fire service crews should be stimulated (Dangermond et al., 2022a; Sattler et al., 2014). The focus of interventions needs to lie on specific stressors for noncareer and career firefighters—like mindset, local bond, experience—and on strengthening their social ecology rather than on universal stress reduction interventions and comprehensive measures. To further develop the resilience of firefighters, social-ecological theory should be practiced in resilience programs as well as in empowering firefighters and their station and organization, as previously argued by Ghazinour and Rostami (2021) for increasing the resilience of police officers. Good mental health serves not only firefighters' interests but also organizational and social interests.

Limitations

This study had some limitations. It is not investigated to what degree the participants had developed severe psychological problems as a result of a critical incident and sought professional help for that reason.

Given the small number of female firefighters in this study, it was not possible to describe the potential differences between men and women as to how informal peer support is experienced after critical incidents. Future studies should pay attention to gender, as a previous study (Jacobsson et al., 2015) has shown that female firefighters describe critical incidents differently than their male colleagues. This may have consequences for the way women cope with such incidents.

This study only involved Dutch firefighters. It remains unclear to what degree the results can be generalized to other countries. Other countries—within and outside Europe—have both noncareer and career firefighters, yet there are major differences in training, description of functions, tasks packages, and obligations. Regarding the culture of Dutch firefighters, however, there is no reason to believe that it differs substantially from that of firefighters elsewhere in the West.

Last, it also remains unclear to what degree the results can be generalized to other first-responder organizations that have noncareer and career staff (as is the case with the police in the Netherlands). The desirability of such a comparison is another point of

discussion. Although there is an overlap between the various service functions, there is also large cultural diversity (Jahnke et al., 2016). First responders such as firefighters, police officers, and emergency medical services personnel experience a distinctive range of critical incidents because of their different requirements and tasks (Halpern et al., 2009), their proximity to diverse elements of the incident (e.g., differences in life threat and contact with injured or deceased victims; De Soir et al., 2012) and their work culture. And compared to other first responders—firefighters are confronted with critical incidents more often and more intensively (Lee et al., 2016). A proper evaluation of critical incidents and how people cope with them would require research on the individual professional groups (Halpern et al., 2009).

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