

# Work–family enrichment of firefighters: “satellite family members”, risk, trauma and family functioning

Work–family  
enrichment

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## Abstract

**Purpose** – Traditionally, research exploring the work–family interface has focussed on two perspectives: the organisation and the employee. The third perspective of the family has been largely neglected. This has also been the case with emergency responders. Arguably, the social support that emergency responders receive from their families maintains the health and well-being of the emergency responders. There has been more literature focussing on family members of police and ambulance staff, but less is known about the experiences of the families of firefighters. This study, therefore, aims to explore the occupation-related consequences for families of firefighters to establish what could be done to preserve this important source of social support.

**Design/methodology/approach** – A qualitative approach was needed to understand the perspective of relatives of firefighters. Grounded theory was used to analyse interviews of family members of firefighters.

**Findings** – Important concepts to families of firefighters include the management of emotional contagion from their firefighter, their sophisticated perceptions of physical and emotional risk, their ability to make things work around a satellite family member, detail of the sacrifices they make and the social support from other firefighters' families.

**Research limitations/implications** – The findings highlight the rich understanding and benefits offered when fire and rescue services and researchers consider the family perspective of the work–family interface within this context to develop a rich supportive dynamic between the organisation, the employee and their family.

**Practical implications** – Findings from this study are considered to inform the development of a positive resource ecology within fire and rescue services. Where work–family enrichment positively informs the interventions and practical approaches organisations can use to enhance the wellbeing of their employees, by acknowledging other life domains.

**Originality/value** – The contribution to theoretical perspectives on the work–family interface, as well as the informed understanding of occupational consequences of the firefighting occupation on relatives, offers a unique contribution to the literature.

**Keywords** Risk, Family, Fire, Secondary traumatic stress, Work–family interface, Satellite family member

**Paper type** Research paper

The literature examining the relationship between work and family has built substantial theory and understanding (Greenhaus, 2008; Liao *et al.*, 2019) but has traditionally focussed on the impacts on organisations (Ackers, 2003; Behson, 2005) and the individual employee (Demerouti *et al.*, 2005; Heller and Watson, 2005), with the family of the employee typically defined as a source of stress that the employee attempts to buffer from their employment role. This focuses on just two perspectives within the work–family interface: that of the organisation and the employee. This ignores the third perspective within that buffering/balancing dynamic, which is the family perspective.

Such research treats the family as an external force (a resource consumer), taking time and energy away from the employee (Grzywacz and Marks, 2000; Matthews *et al.*, 2006). An alternative view of the family acting as a resource supplier has been proposed in the literature, enabling coping and providing work–family enrichment (Carlson *et al.*, 2019; Ilies *et al.*, 2020; Adams *et al.*, 1996).

Studies examining family dynamics within risk occupations are limited in exploring the work–family interface (Johnson *et al.*, 2019; Smith *et al.*, 2019). A small number focus on



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emergency responders, but mainly focus on the family providing social support following occupational (Beehr *et al.*, 1995) or traumatic stress (Firoozi, 2019; Linkh, 2005; Pfefferbaum *et al.*, 2006). What has been done on spill-over in risk occupations in the UK (see Conway and Waring, 2020; Crank and Caldero, 1991; He *et al.*, 2002; Youngcourt and Huffman, 2005) is mainly restricted to police, or only approaches families as a resource drain or only focusses on giving support in terms of stress management (Morman *et al.*, 2020).

This study aims to explore the family perspective within the work–family interface of the firefighting occupation in the UK. The research will explore the bidirectional enrichment, cost and spill-over between the occupation of firefighting and the family.

## Method

### *Analytic process*

The qualitative method of the grounded theory (Glaser and Strauss, 1967) was used to generate relevant, accurate and highly specialised conceptual constructions of the data, enabling possible development of a new theoretical framework in the absence of the existing theory.

Abbreviated grounded theory (Willig, 2001) was used for increased, detailed, line-by-line analysis. This ensures that theory generation is unrestricted by researcher bias and as true to the data as possible. As outlined by Charmaz (2006), line-by-line coding was subject to a comparative method to establish category distinctions. Focused coding and axial coding then enabled categories to be linked and processes to be identified within the data. Properties and dimensions of categories were then examined to ensure developing categories kept a “fit” with the data. Constant comparison and negative case analysis were used to challenge the initial analytic analysis. Category and theory development was developed through the use of memos.

### *Participants*

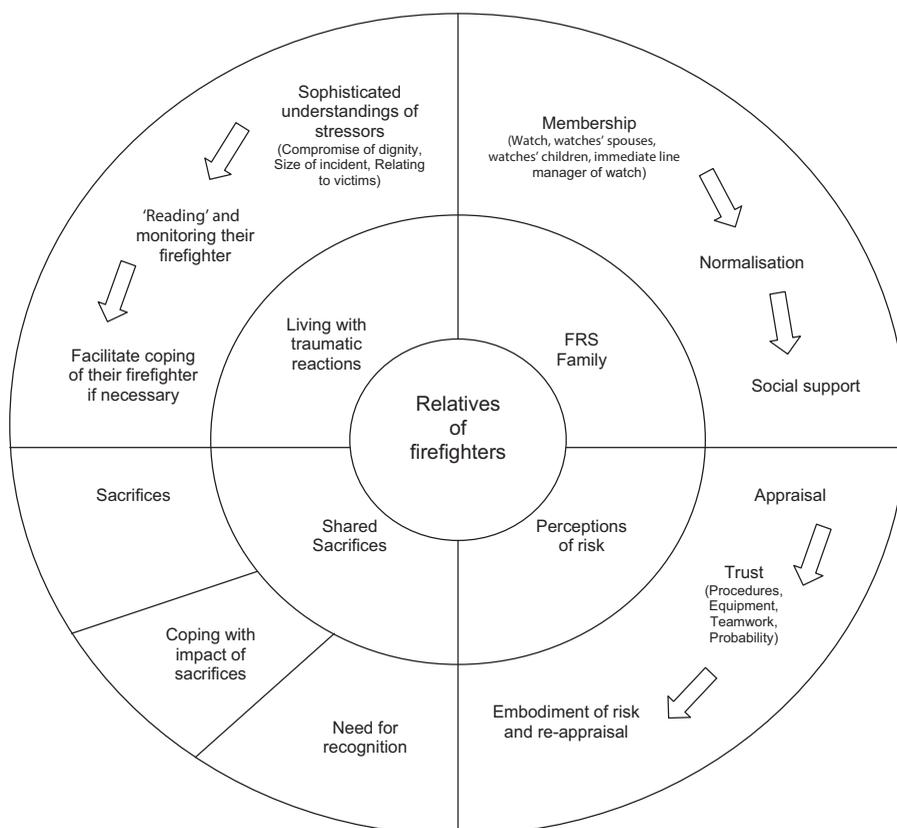
Ten participants who are family members of the fire and rescue services (FRS) personnel and who had lived with a serving firefighter took part in the interviews. Ages ranged from 26–58 years (mean = 39.4 years). One participant was male (a sibling of a firefighter who lived with them for a number of years), the other nine relatives were spouses (mean = 16.3 years as spouses). The working patterns of their fire personnel were varied; five were flexi-duty managers, one was a community firefighter, two were retained, one was both retained and working a shift system and one is now retired. Three relatives were in full-time employment, four had full-time caring roles, two had part-time employment and one was retired following full-time employment. Nine spouses within the sample shared parenting roles with their fire personnel spouse.

### *Procedure*

Participants were recruited through a national fire charity. Semi-structured interviews were primarily conducted face-to-face, and four interviews were conducted via telephone due to the large geographical recruitment area. All interviews were audio recorded, transcribed and analysed. Ethics process was completed in line with the British Psychological Society. Interview topics explored positive and negative day-to-day impacts on the family from FRS work, the practical and emotional impacts from FRS work on family life.

### *Analysis*

Four main categories emerged along with a number of peripheral categories. These peripheral categories feed in and combine to support the core categories. An overall schematic of the findings can be seen below in Figure 1.



**Figure 1.**  
Findings following the  
grounded theory  
analysis

### *Main category: shared sacrifices*

The main category of shared sacrifices is comprised of three peripheral categories; participants' identification of sacrifices they have made for their relative's job, how they cope with the consequences of those sacrifices and the expectations they have for the FRS to recognise their sacrifice. This category highlights the engulfing nature of the FRS, reflecting the intrusive but sometimes beneficial spill-over. The spill-over is a result of the organisational structure, the culture and the compromises that relatives feel compelled to make, given the community service that the FRS provides.

### *Sacrifices: accommodating and flexible social time*

Participants' talk reflected two main clusters; sacrifice made in relation to the culture and nature of the FRS and sacrifice made in response to the work patterns. However, both clusters had the same outcome, i.e. the FRS is a lifestyle rather than just a job their relatives undertake. Lisa's excerpt demonstrates this:

You absolutely get engulfed . . . you sort of get sucked in and become part of it if you see what I mean? It's . . . more than just a sort of job thing it's a way of life thing (Lisa).

Relatives frequently described the job as a lifestyle or a way of life, mostly this was in relation to time spill-over, but other sources of spill-over were identified. A sense of shared identity

between organisation, employee and employee's family was consistently repeated in the data. Reflecting their shared sense of belonging to the FRS, relatives used other references such as "our", "we", "all of us", "the group" when referring to their relative's organisation. Alongside the explicit inclusive language, emerging from this excerpt is a second reflection of the shared identity that all relatives demonstrated, i.e. the awareness of FRS complexities. Relatives repeatedly showed a detailed knowledge of political and community agendas, policy, procedure (both on and off the fire ground), interactions with local government bodies, changes to governance structures, terminology and equipment.

The culture and nature of the organisation made family life secondary to the needs of the FRS. Prioritisation of the FRS meant family life was built around the needs of the organisation; this is openly acknowledged and considered by the relatives, as can be seen in Fiona's data:

It's just shaped absolutely everything (laughs) I cannot, although I'm looking forward to us retiring ... I find it quite hard to imagine him without the fire service because it has been so much of our lives (Fiona).

One way that the needs of the FRS permeate the lives of relatives is by the FRS being the clear priority of the family. One illustration of this is the spill-over of time, which impacts on the support for other employment within the household and career progression of the family members. This could be through relatives giving up their commitment to their own careers to facilitate the family life as the firefighter cannot, or compromising their employment due to accommodating FRS activities. Relatives reported that social time and personal arrangements were frequently disturbed through attendance at fire calls (for on-call or flexi-duty). However, non-attendance could still be as disruptive, with shifts isolating relatives. Lisa describes the limitations put on her own activities and those of her children from the work patterns:

Sometimes if he's on a 24, which he's on what 2 or 3 times a week, it means that ... I cannot go do something and leave the kids with him ... so I cannot have and regular activities ... often the kids miss out on things because ... we cannot physically both take you know, one in this direction and one in the other direction because I cannot leave the kids with him (Lisa).

Relatives describe committing to socially isolated hobbies instead of social activities to accommodate the work patterns. Relatives also pointed out that shared activities with their firefighter were compromised, particularly for flexi-duty or on-call personnel. Shared time is organised differently, as any activity has to support the possibility that a call could happen unexpectedly. However, the impact of working patterns was also celebrated and seen as a positive for the family. This is because the shift system in particular was identified as facilitating both parents as primary care givers or dual care givers, with firefighters fulfilling the role of primary care giver for their children as the shift system gave them time at home. Relatives reported this was seen as galvanising their family unit, bringing them closer together as a family. The flexi-duty system was seen as more intrusive, despite technology facilitating the ability to work at home, reflecting similar observations in other occupations.

#### *Coping with sacrifices: creating a satellite family member*

Participants were accepting of the sacrifices they were making and reported ways in which they had overcome the impact of their firefighter's work. One way in which all relatives attempted to resolve the disturbances on their shared family and social time was by planning to expect the unexpected. All relatives discussed this conscious decision to plan flexibly at certain times. Relatives actively planned for the unexpected as well as deliberately planning to do nothing while their firefighter is on call. They achieved this by trying to keep everything "normal", as can be seen in the next excerpt:

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I think I've got a complicated life because of the Fire Brigade you know we're trying to organise everything and keep, keep a sense of normality and get to everything (Fiona).

Relatives' decisions to try and achieve a "normal" life was driven by a rejection of the alternative of more separate lives. This can be seen in Ella's excerpt, in which she talks about going alone without her husband to social activities, as he would possibly be late or too physically or emotionally tired to attend:

"I know that if I wanted to go he would have said 'Just you go along' . . . But I did not particularly want that type of life, where we live different things" (Ella).

Relatives, therefore, rejected the possibility of living separate lives to their firefighter, as they wanted to achieve a "normal" life with shared activities. Instead, they developed a family routine, separate to, but accommodating of, the FRS routine, which is defined by relatives as an ever-changing "non-routine". Adapting family life to cope with the effects of FRS work, but which could accommodate the firefighter when they were available. In this way the family continued with their family activities and routines independent or accommodating the firefighter, "normalising" the family life by the firefighter acting as a satellite to the family.

Participants feel they should be recognised for this sacrifice, as clearly shown in Lisa's comment:

Making it much more family friendly and family orientated, so that, that there is not this "well your family, they're used to it, they'll just wear it, you know, they married into it and can get on with it" sort of, do you know what I mean (Lisa).

The absence of recognition from the FRS of the sacrifices the family makes for FRS employment is taken a step further by relatives. They suggest that the FRS should have a support mechanism in place for the families and spouses of FRS personnel, as relatives facilitate their firefighter to be more effective for the FRS; this can be seen in Emily's comment:

I know they need something obviously because as I say the wife is as much apart as the husband and we're making a lot of the sacrifices (Emily).

Some of these calls for further support by participants were motivated by the awareness of risk associated with their firefighter's occupation.

#### *Main category: perceptions of risk*

All relatives discussed the perceived dangers of their firefighter's occupation, and a process of identifying and evaluating the risk could be identified through the analysis. Relatives do engage with the perception of risk and fear the risk becoming a reality; this can be seen in Anna's data below:

Well I suppose always at the back of my mind I've always (. . .) that fear (. . .) there might be a knock on the door you know that something's happened that, that is definitely always there, erm but you, I mean it's a day to day thing (Anna).

Although the perception of risk (i.e. physical: injury or death, and/or emotional: traumatic reactions or occupational stress) permeates throughout family life, it does not engulf it for relatives to live day-to-day with the threat of those risks. They describe putting it to the back of their mind and not allowing themselves to think about it. However, their perception is altered, and they are forced to re-evaluate their perceptions of risk when confronted with the embodiment of the realities of their firefighter's operational duties. This could be the preparation, attendance or effects of operational incidents. For some, this was seeing their firefighter leave the fire station on blue lights to attend an incident. For others, it was seeing

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the incident they knew their firefighter was attending from afar. For some, it was simply seeing the immediate physical effects of operational incidents on their firefighter (e.g. their firefighter covered in residue from the incident, looking sweaty, physically exhausted and hungry). With this seemingly constant threat, data revealed the process that enables relatives to appraise the risk and manage this within their life.

This process was for relatives to trust that training procedures, equipment, experience of their firefighter, decision-making ability of the firefighters and teamwork would protect their firefighter from threats to their well-being. This can clearly be seen in David's data:

I think wherever possible people are trained for every eventuality and they're wrapped up in cotton wool with health and safety and risk assessments and everything else, really got to be something fairly unexpected and significant for, for you know a firefighter to be injured (David).

It is this trust in the occupational processes and procedures that enables relatives to minimise the threat of harm to their firefighter. The data were unsupportive of a reduction in the perceived level of risk to their firefighter; instead, the trust in procedures, people and technology enabled them to manage a constant perceived level of risk. It is labelled as "trust" as relatives had very limited knowledge of these protective factors beyond the terminology. This trust in protective factors then fed in to their trust of probability; relatives trusted that the risk was so small of something happening to their firefighter at work, they took reassurance from that.

*Main category: living with traumatic reactions*

The emotional risk involved in having a relative in the FRS was discussed by all participants and framed as being a part of family life. Data outlined the emotional consequences and impacts on participants from their firefighter's FRS work. Relatives reported that exposure to serious, or gruesome, incidents for their firefighter meant they lived with their relatives' traumatic reactions to these incidents. These were initially confusing to relatives, but with more experience, they became accustomed to "reading" their FRS firefighter and took their lead from them to try and deal with the reactions. Relatives explained that their main concern was not the effect this had on their family life, but more the impact it was having on their firefighter. Relatives detailed the types of reactions, both physical and emotional, including the reactions that their firefighters themselves might not be aware of; this can be seen in Fiona's data:

for months afterward he (. . .) was dreaming about it you know jumping on the bed and screaming at people that he was coming to get them and everything like that (Fiona).

Fiona was not alone in reporting these types of behaviours in their firefighter. All relatives demonstrated an awareness of traumatic reactions and reported that it was something they consciously thought about and, in all cases, acted upon. Emerging from these data is the process in which relatives actively managed their firefighter's emotional spill-over from their job to try and keep them emotionally healthy; this can be seen in Jane's data below:

we've been very fortunate that any of the accidents that (HUSBAND) has attended, yes there has been fatalities, but nothing that has caused him erm problems with stress because as soon as he comes in I make sure he talks about it (Jane).

Relatives talked about monitoring reactions and mood states after every incident that their firefighter attended; this was mostly done through initiating discussions of the incidents. Although relatives reported that their firefighter "edited" the discussions to protect them from distressing detail, the relatives had a sophisticated understanding of possible distressing incidents; relatives spoke of different sorts of incidents being distressing for

different reasons. Relatives reported that the scale and nature of the incident influenced reactions. More complex reactions came from bigger incidents where the dignity of people involved was threatened or where the deceased were unrecognisable as human, or where firefighters could relate to victims (such as having children of a similar age).

Once the reactions had been noted by relatives, they then facilitated known coping strategies of their relative. This could be through further conversations to diffuse the firefighter, or other emotional and practical ways of coping. Relatives selected the strategy most used or most effective for their firefighter and encouraged that process. Ella gives an example of this facilitation below when describing how her husband talks to her about traumatic incidents:

I think er it made me understand sometimes when he came home erm (.) that why, he wanted to just say hello, drink coffee and go and have a dig in the garden . . . 'cause he evidently wanted to get some things straight in his mind (Ella).

Relatives would support their firefighter by giving them the flexibility to process their reactions in the most effective way for them. All relatives reported that their main priority is to give their firefighter the security and freedom to process their emotional reactions.

By monitoring, facilitating and managing their firefighter's reactions, relatives hope to process the reactions and keep their firefighter emotionally healthy. This active process reflects the emotional spill-over from their firefighter's role in the FRS, and family members actively encourage their firefighter to share with them. The following comment from Ella evidences this:

I think because of his job, and because he shared certain aspects with me, I think we have got a closer relationship (Ella).

This emotional contagion from the firefighter to the relative could be seen as re-enforcing the previous calls for support for FRS relatives because of the emotional spill-over from the role. Social support was frequently discussed as helping to manage this by relatives, including the support offered by the wider FRS network, commonly referred to in the data as “the FRS family”. This is seen as a positive spill-over from their firefighter's FRS work and will now be discussed in detail.

*Main category: the fire and rescue services family (support)*

Relatives explained that a “work family” emerges as an inevitable outcome of the teamwork structure and sacrifices made for the job, and that the “work family” and real family then overlap to form a whole. This wider collective group was sometimes referred to as “the group”, “the family thing” or “the fire service family”, and relatives defined who was included: the immediate FRS colleagues of their firefighter, their spouses, their children and the immediate layers of management. The membership is supported by the absence of this phenomenon in David's data; he is the brother of a firefighter.

The main function of this network is support; it was referred to frequently when talking about difficult or stressful times. The support is provided and expected within this family mainly focusses around a social support network and friendships. Support was reported as being a pivotal way to normalise the spill-over and lived experience of families. This can be seen through the following data from Anna:

As well as being out and socialising you're actually benefiting quite a lot from just speaking to other people who have similar issues (Anna).

The reassuring role of the FRS family allowed relatives to speak of both emotional and practical difficulties and share experiences of ways of coping.

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The rationale of the expectation of support from the FRS family is captured in Lisa's comment:

I mean that's what you grow to expect I mean because you you live your life in the Service, therefore you expect a level of . . . sort of help and support back (Lisa).

All participants who were spouses of FRS personnel expected the FRS family and the formal FRS to offer practical and emotional and informal and formal support through difficult times (such as injury, recovery or bereavement). Relatives spoke of the recent decline of FRS encouragement for families to attend station open days and social events compared to previous years and the negative impact this had on their ability to make and develop this beneficial network of peer support.

### Discussion

This empirical study has offered insights to the research question; what are the occupational impacts on relatives of firefighters?

Four main categories of shared sacrifices, perception of risk, traumatic reactions and the FRS family have offered a valuable insight to this group, as well as offering theoretical and practical applications. The findings of this research can be summarised as follows.

Identifying the process of the satellite family member provides insight of the practical ways in which families cope with the physical and social limitations of shift work. Sacrifices made by families provide insights to family functioning and the processes used by families to manage the impacts of unpredictable work on their family routines and structures. Relatives avoid engaging with the perceived occupational risk of firefighting (including both physical and emotional harm), and when confronted with cues of this risk, their coping is facilitated by their trust in training, equipment and teamwork. This is threatened when they are presented with a physical embodiment of harm. The FRS family provides a shared identity and support network (both emotional and practical) for relatives, providing the function of normalising spill-over. This in turn provides family enrichment for the family. Families of firefighters engage in processes to actively monitor and manage their firefighter's well-being, using their sophisticated understandings of the impact of certain typologies of incidents will have, then facilitating coping mechanisms used by their firefighter. This attempts to maintain the emotional health of both their firefighter and consequently the family.

This work has found resonance with previous findings, e.g. the conservation of resource theory (COR) developed by [Hobfoll \*et al.\*, \(2018\)](#). This suggests that an individual (firefighter) is nested in a family (their kin family), nested in an organisation (the FRS), nested in wider society (their community or society). These layers can accumulate, store and share resources of time, energy, coping. When this accumulative processes of "resource gain" stops and a threat overwhelms the individuals, it can also cause a "resource spiral", which drains the collective resources. This has been found to be reflective in other studies of firefighter relatives such as [Hill \(2014\)](#); [Cowlishaw \*et al.\* \(2010\)](#) and [McMahon \(2010\)](#). The findings have also been similar to those in an FRS context in different cultures ([Rundmo, 1996](#) and [Kirschman, 2004](#)), suggesting that the overall conclusion that the important and effective social support offered to firefighters by this group comes at a price and the wider support system of the relatives should be considered. This call to support relatives is echoed elsewhere in the literature ([Kirschman, 2004](#); [Regehr \*et al.\*, 2005](#); [Matsakis, 2005](#); [Antonellis and Mitchell, 2005](#)).

The strong sense of FRS identity reflected within the category of sacrifices has been evidenced in other literature ([Lasky, 2004](#); [Hill and Brunsden, 2007](#)). This literature has recognised that the occupation of firefighting necessitates a common sense of belonging between both employees (firefighters) and their families.

Data also identified that shift patterns facilitate both parents as primary or dual care givers. This has been evidenced within literature focussing on other occupations using shift patterns (Marcucci, 2001; Day and Chamberlain, 2006). Literature also demonstrates how work and family schedules are negotiated (Barnett *et al.*, 1999). This was seen within the shift system but not as easily completed with the flexi-duty system. Instead, the flexi-duty system came with a specific challenge for families. This was that more senior positions should have more flexible hours, given the use of technology to facilitate “smart” working (working where ever and whenever is optimum for the employee). Instead, this facilitative technology facilitates intrusion of work in to the family domain through unintended consequences. This also has been identified in other occupations (Lewis and Cooper, 1999; Voydanoff, 2005). These sacrifices have been captured in the limited literature that focusses upon relatives of FRS personnel and also calls for recognition of the relative’s sacrifices (Rundmo, 1996; Kirschman, 2004; Matsakis, 2005; Antonellis and Mitchell, 2005).

The perception of risk and physical harm being minimised due to the trust in occupational processes and procedures supports research focussing on high-risk occupations (Conchie and Burns, 2008; Flin *et al.*, 1996; Leiter *et al.*, 2009). The subtle differences in risk estimation of different activities reflected in this study demonstrates the inoculating factors relatives use to buffer against the probabilities of their firefighter completing work that carries a higher proportion of risks. This risk estimation supports work completed by Slovic (1987) and Rundmo (1996) who suggest that risk appraisal is challenging when it is anchored to something outside of the individual’s experience. Their perception of risk to their firefighter and their constant activity in appraising those risks supports existing literature examining the representation and processing of this risk (Noran, 1995; Matsakis, 2005; Kirschman, 2005; Rundmo, 1996).

Living with traumatic reactions detailed the sophisticated understandings that relatives have of their firefighter’s reactions to their work. Relatives’ speaking with their firefighter about incidents that they have attended has received criticism in the literature (Parkinson, 1993). This is because the talk is assumed to be diffusing rather than debriefing. However, this study has evidenced that a more sophisticated process is occurring between firefighters and their relatives. The relatives monitor, facilitate and manage their firefighter’s reactions. By doing these activities, relatives hope to process the reactions and keep their firefighter emotionally healthy. This has been noted by other research (Rundmo, 1996; Rundmo, 1996; Cowlshaw and McLennan, 2006).

Whether this is a transmission of emotion or an emotional reaction causing a second emotional reaction is debated. Some literature suggests it is the passing on of emotional content from firefighter to their relative (Matsakis, 2005; Antonellis and Mitchell, 2005; Manguno-Mire *et al.*, 2007; Pfefferbaum *et al.*, 2006; Menendez *et al.*, 2006). Secondary traumatic stress (Motta *et al.*, 1999) suggests families have a traumatic reaction to the symptoms of the traumatic reaction the firefighter is having. Symptoms such as mood swings, grumpiness, un-warranted aggression and unpredictability (see McFarlane, 1987, for examples) are sufficiently disturbing to warrant some level of traumatic reaction within their relatives (Repetti *et al.*, 2009).

Future research could offer insights into existing work in this area (Rowland-Klein and Dunlop, 1998; Lombardo and Motta, 2008; Suozzia and Motta, 2004; Scaturro and Hayman, 1992), focussing on disaggregating the causation of the conflict and the traumatic aetiology (such as social or cognitive impairments). In summary, resolving the nature of the impact of traumatic reactions (emotional contagion or secondary trauma) would advance knowledge in this area.

With different shift systems and types of employers in the UK FRS, this will alter the needs and the necessary support systems for families. This calls for more exploration of the organisational differences across the UK to establish a suitable, and flexible, range of models of support. Families are facilitative, promoting the well-being and capability of their

firefighter. Sources of social support for the families, rather than the employee, should also be considered to support the wider support system. The findings indicate that future research should establish how a resource enriching family dynamic (including facilitation of support, coping and time) could be achieved through the support of an organisation. A “positive resource ecology” (Hobfoll *et al.*, 2018) would bring benefits to all three domains: the employer, the employee and the family. This would be relevant to firefighters, their families, their employers and support organisations.

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