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A qualitative analysis of stressors affecting 999 ambulance call handlers' mental health and wellbeing

ABSTRACT

Design/Methodology

A single interview case study approach applying qualitative methods was undertaken. Participants were identified through a purposive sample of 999 ambulance call handlers with the Yorkshire Ambulance Service NHS Trust (UK). Participants were interviewed via telephone between July 2019 and September 2019.

Purpose

The 999 ambulance call handler is critical in responding to emergency patient treatment, however they are often a hidden component of the healthcare workforce and an under-researched group. The objective of this study is to understand stress triggers experienced by 999 ambulance call handlers, that could lead to burnout and examine personal and organisational mechanisms and strategies which reduced the risk of burnout.

Findings

18 staff participated in this study. Societal factors including public incivility and media representation and organisational factors, such as a demanding environment, lack of appreciation and career progression, training issues and protocols were key stressors. Organisational wellbeing services were helpful for some, but for others lacked accessibility and appropriateness. Positive public feedback and speaking with peers bolstered wellbeing. 999 ambulance call handlers suggested that sufficient breaks; co-design or feeding back on training and protocols; and creating more informal opportunities to discuss ongoing everyday stressors, as methods to reduce stress and burnout.

Originality/value

This paper explores a previously under researched area on stressors and potential burnout in 999 call handlers. It highlights the need for improved organisational support services and appropriate public and sector peer recognition of the role of ambulance 999 ambulance call handlers.

INTRODUCTION

The role of the 999 ambulance call handler is critical in emergency call management and related processes within the UK National Health Service (NHS) Ambulance Service. This staff group is frequently overlooked and under-researched (Coxon *et al.*, 2016; Sharp *et al.*, 2020). Their role is complex by nature and requires analytical, multi-tasking, interpersonal and crisis management skills (Coxon *et al.*, 2016). To deliver safe and effective healthcare, systems need to create high quality working environments for staff, particularly when job demands and complexity are high (Hickam *et al.*, 2003). Job characteristics, staffing levels and perceived support levels have been associated with risk to patient care. Emergency department professionals have been shown to have high levels of work-related strain and emotional exhaustion (Weigl and Schneider, 2017). Focus on the health and wellbeing of healthcare staff is critical to reduce the risk of 'occupational burnout', a syndrome arising from poorly managed workplace stress leading to exhaustion, cynicism or negativity and lower professional confidence levels (World Health Organisation, 2020).

Burnout in individuals can be identified by three dimensions: emotional exhaustion, a sense of being drained to the point of being unable to work; depersonalisation, having a negative attitude towards colleagues; and lack of accomplishment, a sense of failure at achieving goal (Maslach and Jackson, 1981). Staff working in NHS ambulance services have the highest rates of sickness absence within the NHS (Asghar *et al.*, 2021). Whilst reasons for absence are not well understood, absenteeism has been associated with burnout within the nursing profession (Dyrbye *et al.*, 2019). Data collected in 2018 in a single UK ambulance service indicated that more than 50% of ambulance crew respondents were experiencing signs of burnout and high levels of depersonalisation were identified in the workforce (Beldon and Garside, 2022).

Verbal abuse from callers (Sprigg, Armitage and Hollis, 2007; Armstrong, 2015), stigma surrounding poor mental health (Mind, 2019) and concerns about access to, availability of, and nature of support mechanisms have all been shown to affect 999 call handlers. Cumulative stressor impact and informal coping strategies can affect their performance of their role (Mind, 2019). Call handlers report being marginalised, invisible and hidden (from peers, patients and the public) leading to feeling undervalued. Some experience 'vicarious trauma', with constant or acute experience of trauma and feelings of lack of control (Adams et al., 2015). Supporting staff through such vicarious trauma can be a catalyst for positive change leading to posttraumatic growth. In a single American ambulance agency a study of burnout found that medical dispatchers had significantly higher levels of burnout than paramedics and technicians, but that this was not associated with exposure to potentially critical incidents (Boland *et al.*, 2018).

The potential contributors to burnout amongst this group are under-explored. Studies on burnout among healthcare professionals have focused largely on doctors (McKinley *et al.*, 2020), nurses (Adriaenssens, De Gucht and Maes, 2015), pharmacists (Higuchi *et al.*, 2016) and paramedics (Stassen, Van Nugteren and Stein, 2013). Excessive workload, interpersonal conflict and lack of emotional support are major factors contributing to burnout among emergency personnel in hospital settings (García-Izquierdo and Ríos-Rísquez, 2012). It has been reported that more than 40% of emergency call handlers exhibit signs of burnout, yet these staff are the point of entry for patients into urgent and emergency care. They make critical decisions in assessing the type of emergency responses required (Golding *et al.*, 2017).

Organisational culture and management staff can exacerbate stress levels (Willis *et al.*, 2020). Staff have reported that, despite handling traumatic calls, they needed to remain

productive (Adams, Shakespeare-Finch and Armstrong, 2015; Mind, 2019) with managers failing to reduce stress (Unison, 2014). A reported 'Big Brother' workplace culture led to emergency dispatch staff not approaching their managers for help and covering up mistakes (Adams et al., 2015). Wellbeing can be enhanced through three different approaches; primary intervention to prevent mental health problems; secondary intervention to enhance responses to stressors; and tertiary approaches, treating those with mental health problems (LaMontagne *et al.*, 2014). Studies have advocated for changes in organisational culture, management and personal support (Willis *et al.*, 2020) such as buy-in from senior staff focusing on wellbeing and training, co-designed briefings with 999 ambulance call handlers, face to face training with experts and a team approach to promote peer support (Mind, 2019).

This study aimed to understand how 999 ambulance call handlers in a single NHS ambulance trust experience job stressors which may lead to burnout and how these stressors could be reduced based on modification of job and personal factors. The key objectives were to:

(i) explore the potential sources of burnout amongst 999 ambulance call handlers working within a single NHS ambulance Trust;
(ii) explore the organisational resources available to mitigate the risk of burnout; and
(iii) explore personal resources available to mitigate the risk of burnout.

METHODS

Research Design

A qualitative single case study design was considered appropriate to understand sources of and interventions to reduce burnout for Yorkshire Ambulance Service NHS Trust (YAS) staff. The protocol and topic guide were developed post review of existing literature and in consultation with healthcare professionals from YAS, service users and the research team from the University of Bradford. Data were collected via interviews.

Participant selection

Yorkshire Ambulance Service NHS Trust provides urgent and emergency care to over 5 million people across a diverse geography in Yorkshire and the Humber. In 2019-20 YAS received over 1 million emergency and routine calls and provided an on-scene response or telephone advice to over 800,000 incidents, with 468 staff employed in the emergency operations centre (999 call management) at the end of March 2021 across two sites.

We approached YAS staff using homogenous purposively sampling to ensure we recruited only those who operated the 999-call service. The inclusion criterion was call handers who had been in their role for six months or longer. The exclusion criterion was call handlers leaving the organisation but not through retirement.

The target sample size was 20 participants, recruiting participants until data saturation was reached, i.e., the point at which no new information or insights are identified and data begins to repeat so that further data collection is redundant

Information sheets were circulated via internal communication channels to all 999 ambulance call handlers, providing details of study goals and reasons for the research. Staff

were given three days to consider participating, allowing opportunity for discussion with other colleagues, employers, or research staff. If they agreed, they signed and returned a consent form to the researcher. Participants were informed that all information collected would be anonymised and kept confidential.

Data collection

Once informed consent was obtained, CP conducted one telephone interview with each participant at a time of their convenience. CP had no relationship with participants prior to study commencement and was motivated to learn about issues around wellbeing for health care professionals. Interviews lasted between 30-60 minutes, with only the interviewee and interviewer on the call. All interviews were conducted between July 2019 and September 2019. Interviews were digitally recorded, and field notes were made.

CP used a semi-structured interview guide to explore issues relating to the job role as a 999-ambulance call handler; the potential sources of burnout within the job role, such as emotional exhaustion, personality traits and organisational factors; how these sources of burnout were handled individually; and how the risk of can be mitigated within the job role. The interview topic guide was developed based on Maslach and Jackson's (1981) definition of burnout and extant research.

Analysis

All interviews were transcribed verbatim. A password protected NVIVO 12 (NVIVO, 12) database was used to code, manage and analyse the data. All participants were offered the opportunity to review their own transcript for comment and alteration however none did. Interviews were analysed thematically (Braun and Clarke, 2006). A preliminary coding frame was inductively created from the interviews on sources of burnout, and personal mechanisms and strategies which reduced the impact of stressors. Senior research fellows CP and KL, who are experienced qualitative researchers, coded every transcript independently to ensure reliability with any disagreement resolved through discussion with each other and the wider project team.

Ethics

This study was reviewed by RES Committee and the University of Bradford Research Ethics and Governance Committee (Ethics Application E731) and approved by the Chair of the Humanities, Social and Health Sciences Research Ethics Panel at the University of Bradford on 17/04/19.

RESULTS

Participants

18 YAS full-time 999 ambulance call handlers participated in the study. Figure 1 shows the recruitment process. Table 1 describes the participant characteristics.

Figure 1: Recruitment process

Table 1: Participant characteristics

Potential sources of burnout and personal response

999 ambulance call handlers reported how their wellbeing varied, with some self-reporting periods where they felt they had experienced burnout, others reporting feelings of stress, and others reporting no experiences of stress or burnout. The potential sources of burnout and personal response to these as described in the study are reported at three levels (Societal - Meta, Organisational – Meso and Personal – Micro) as shown in Figure 2.

Figure 2: Potential sources of burnout and personal mechanisms and strategies which reduced the impact of stressors

Societal and Organisational factors

A demanding call environment, lack of appreciation for 999 ambulance call handlers, and lack of appropriate training and protocols within the organisation were sources of stress and burnout.

999 ambulance call handlers described the call environment as intense, with peaks and troughs in call demand and acuity. Frequent abusive calls and a sense of injustice at 'real' emergencies being delayed by inappropriate calls were sources of stress.

"key stressors are when it's really busy… people waiting to get through on 999…Other stressors…being shouted at…it does wind me up…there's a difference between swearing because your caller is stressed and something horrendous is happening versus somebody just doing it." P17

Despite such stressors, they were required to keep a calm composure during calls, concealing the emotional intensity they may be feeling internally.

The intensity and inconsistency of shifts was stressful. Breaks were important in allowing time to detach, but the quantity and quality were sometimes insufficient. Quiet and outdoor places for breaks were needed, some on non-working time to recover from work stress.

The organisation was regarded as lacking appreciation for its 999 ambulance call handlers due to a lack of understanding of the role, financial reward, and career opportunities.

"you're getting all this abuse, so maybe compensate us for this abuse, because it's not in the job description…emotionally and mentally it's very, very different to what you would expect." P4

Training and protocols used during calls aimed to ensure ambulance 999 ambulance call handlers had sufficient skills and knowledge. Yet protocols did not reflect the balance between clear systematic policies and the emotional 'human side' that were an inevitable part of the role.

"[T]he system is very black and white, and obviously callers and patients are not black and white, and that's what can make it stressful…sometimes you do feel out of your

depth because you're relying on…this protocol… but that doesn't bring into like the human aspect of life." P3

At the time of interview, YAS was unique in having mental health nurses on-site at the time of interview, yet 999 ambulance call handlers felt they as call handlers lacked the knowledge and skills to address the frequent mental health and clinical calls.

"I'm not particularly trained in mental health…we do get our training but we don't get overly in depth training on how to talk to suicidal people." P12

Public recognition for 999 ambulance call handlers demanding role was felt to be lacking, with staff reporting handling calls that were unrealistically demanding, perceived to be outside the remit of the service, or abusive. The media was thought to be partly responsible for unrealistic expectations for both the public and staff.

"[We need] more of a recognition to the public as well. An advert on TV…that states how the process works…they just expect an ambulance there and then straight away." P4

Personal strategies and mechanisms

Primary, secondary and tertiary interventions underpinned personal strategies and mechanisms for support (LaMontagne et al., 2014). Primary intervention included speaking to management through informal conversations. Such relationships offered trust and a source of empathetic support. This informal mechanism propped up a formal management support system.

"*I dealt with a gentleman who was suicidal…I had an extremely good clinical duty manager, I had a really good dispatcher …And…team leader who was literally there with me…We listened back to the call." P7*

Services existed for when there was a mental health problem or an extreme situation but there was a lack of daily support. The Post Incident Care (PIC) system was there to support the traumatic emotional but not frustrating calls, which were regarded as a normal part of the role.

When reflecting on personal mitigation strategies and mechanisms, staff referred to their own experience but also offered suggestions for organisational improvement. Staff valued the opportunity to be involved in giving feedback to the organisation about their role. One individual suggested that 999 ambulance call handlers could be more involved in designing protocols. Whilst there was evidence of this being actioned e.g., introduction of mental health first aiders, there was still some doubt as to whether feedback was acted upon.

Secondary interventions to improve handling of stress included speaking to colleagues and emotional control. Close relationships and informal conversations meant colleagues could recognise when help was needed.

"We're lucky that we have that close-knit circle around us...You've got four other people around you who could probably pick up on what's going on and step forward and say, 'Right I'll deal with that.'" P7

Burnout was sometimes described as a loss of emotional control.

R: "How would you describe burnout working as a call handler?"

P11 Tired, as in I can be so exhausted at the end of a shift, I can get in my car and just burst into tears 'cause I'm so tired or something's upset me or something's wound me up."

Many call handlers developed emotional control to prevent stress and burnout, enabling them to calm themselves for the next call. 'Being tough', 'having armor', 'patience' and 'assertiveness' were respected as core practices.

"So you have to really like control your emotions, it's really hard to… when you move on, as well, for the next call, you have to really control how you're talking." P10

A persona was required to carry out tasks required; personalities had become 'hardened' to cope, derived from personal life experiences, role experience and learning from colleagues. Thus, new starters were particularly vulnerable to burnout. Call handlers were often motivated by knowing that they made a difference, and positive public feedback supported this.

When preventative strategies were not enough and 999 ambulance call handlers experienced stress, some sought support from tertiary interventions such as organisational support services or developed their own self-care strategies, such as exercise and watching TV. A range of organisational support services included occupational health, referring staff on to services such as counselling and physiotherapy; PIC, a button 999 ambulance call handlers could press to gain support and a break during shift; a helpline; peer support from managers and mental health first aiders. Such services were helpful for some but lacked accessibility.

Support services provided often required staff to make themselves publicly known to be needing support. The visibility and potential stigma made some reluctant to reach out.

"[A] lot of people don't like…selecting that button because it creates too much attention and I'll put my hand up – I've used it once in the 12 months I've been here but there's been numerous times when, instead of clicking that button, I've clicked on a comfort break…because I just don't want the attention…sometimes we're that busy with call stacking, I'd feel a bit guilty…I'm a bit of an old-fashioned kind of guy…I don't really talk about mental health." P14

Anonymous support systems such as messaging were thought to be a possible route to increase accessibility to services.

DISCUSSION

In this study we sought to explore the potential sources of burnout amongst 999 ambulance call handlers working within a single NHS ambulance Trust; explore the organisational resources available to mitigate the risk of burnout; and explore personal resources available to mitigate the risk of burnout. 999 ambulance call handlers experienced varying levels of stress and potential burnout during their roles, stemming from societal and organisational factors. The median length of service of two-three years in participants, along with the identified lack of career progression, indicates issues with staff turnover. In 2015, a Unison report showed a leaver rate among EMD/emergency operations 999 ambulance call handlers of 19.5%. Enhanced support could reduce turnover and promote staff retention (Unison, 2015).

As with previous findings (Adams, Shakespeare-Finch and Armstrong, 2015; Coxon *et al.*, 2016; Willis *et al.*, 2020), our study shows that 999 ambulance call handlers can feel hidden

and marginalised. Being perceived as ‘just a call taker’ (Armstrong, 2015), undermined morale and purpose in the role. Abusive callers and perceived “inappropriate calls” were stressors. Ambulance crews have also reported a perception that the general public ‘misuse’ the ambulance service (Beldon and Garside, 2022). Media reporting of 999 ambulance call handler skewed their own and the public’s perception. Unrealistic role expectations led to stressful, demanding call environments with limited reward. 999 ambulance call handlers developed personal strategies to enhance their wellbeing ranging from self-care to organisational support. Yet developing and utilising such strategies were not open to all. Experience, personal motivation, service appropriateness, and the organisations responsiveness to feedback impacted on support realisation.

People in mental health crisis represent approximately 10% of all 999 callers (Mind, 2019). We found that 999 ambulance call handlers are highly skilled in their emotional agility, dealing with emotional situations. Call handling protocols and policies were felt to be out of touch with and lacking in recognition for the human side of their role. If left unsupported this could lead to emotional exhaustion. 999 ambulance call handlers may experience constant relentless vicarious trauma due to constant exposure to stressors (Adams, Shakespeare-Finch and Armstrong, 2015). In our study, individuals described becoming emotionally hardened over time.

Managers and peers were important sources of support. However, there was a lack of consistency and sustainability, which has been described as a source of burnout in other ambulance staff (Beldon and Garside, 2022). Others suggested the creation of an anonymous messaging system to flag the need for support may reduce burnout. Similar systems of support (external policy, management, peer and individual) could work alongside one another (Collaborative Coalition for International Public Safety (CC:IPS), 2020). We identified multiple sources of organsational support. For some, these sources of help had enhanced their wellbeing. Yet others felt that services were inappropriate or inaccessible as systems did not prevent or reduce the social stigma of reaching out for mental health support; and did not reflect the real experience of the role. There was an acceptance of ‘everyday’ stressors and a social stigma of reaching out for help. Some 999 ambulance call handlers are afraid to be labelled with a mental health condition (Adams, Shakespeare-Finch and Armstrong, 2015). Research carried out by the mental health charity Mind, has found that the culture around mental health within ambulance services continues to become more open, ambulance services should continue actively engage with national and local campaigns such as these to break stigma at organisational levels (Mind, 2021).

Two recent explorations of burnout in ambulance staff working on frontline vehicles identified that improving patterns of work including rotas or finish times, providing clear career pathways and reducing job demands could mitigate the effects of burnout in contrast to this study (Miller, 2021; Beldon and Garside, 2022). There was a desire to see more management support across both groups in terms of recognition for the role and emotional support, indicating a strong cultural association within the ambulance service as impacting on burnout.

To affect systemic change at micro, meso and meta levels, a comprehensive appraisal of the role, management and support strategies/mechanisms are needed. Communication about the role between 999 ambulance call handlers, the organisation, external affiliated/regulatory bodies and the public needs to be enhanced. 999 ambulance call handlers had developed techniques and had suggestions for how the organisation could better support them. Internal and external validation on the importance of their role enhanced their wellbeing and ability to persevere. Representations of 999 ambulance call handlers need to originate from themselves as individuals or a group (Sharp *et al.*, 2020) facilitated by NHS ambulance Trusts themselves and in collaboration with national bodies such as the Association of

Ambulance Chief Executives. Staff reported feeling isolated, being invisible at both an organisational and social level. Even where support was available some chose not to access it based on their personal experience and reluctance to have this recognition. There appeared to be some evidence of feeling powerless to address this on a personal level. 'Belonging Affirmation' could be a strategy to reduce burnout amongst frontline staff who feel devalued (Linos, Ruffini and Wilcoxen, 2022).

This self-selecting group of participants may not be representative of the workforce within the control centre of this organisation and transferability of the findings is further limited by 17 of the 18 participants working in one of the two emergency operations centre sites, and data being collected from only a single organisation. Emergency services vary across the country, a key recommendation from Lord Carter's review of unwarranted variation in ambulance services is to optimise workforce, wellbeing and engagement within the two key areas of ambulance operations and control by evidence-driven workforce planning (NHS England, 2021). Since COVID-19 the landscape of urgent and emergency care has shifted, with a significant drop in Emergency Department visits (57% reduction in April 2020 compared to April 2019), and during 2021-22 a significant increase in demand coupled with intense NHS system pressures creating challenge for its staff in the safe and timely delivery of care (Devine, 2021).

Further research could consider experiences of 999 ambulance call handlers across different NHS trusts who may have alternative organisational structures. Research with 999 ambulance call handlers could take a primary preventive approach, as outlined by LaMontagne et al. (2014), to co-develop specific interventions to support them in their role. The intervention could be focused on awareness for the public on 999 emergency services and the role or seek to address concerns in scripts and protocols.

CONCLUSION

999 ambulance call handlers have a challenging role. They feel unsupported and undervalued in their role. Whilst they attempt to cope with this by personal mechanisms and strategies, systemic changes need to take place to ensure 999 ambulance call handlers are supported in their role. Meso and macro-organisational and societal factors have the potential to cause burnout but also can better support 999 ambulance call handlers, through the creation of a more positive working environment and culture, to reduce risk of burnout. A sea change effect is required as 999 ambulance call handlers need to feel appreciated by external bodies, their organisation, their peers, and the public; and to ensure they are not harmed in their role.

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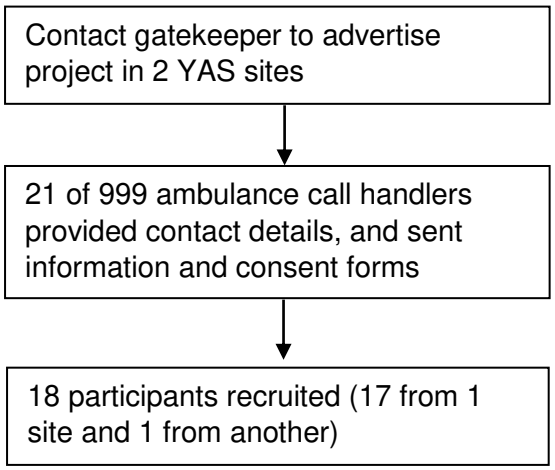

Figure 1: Recruitment process

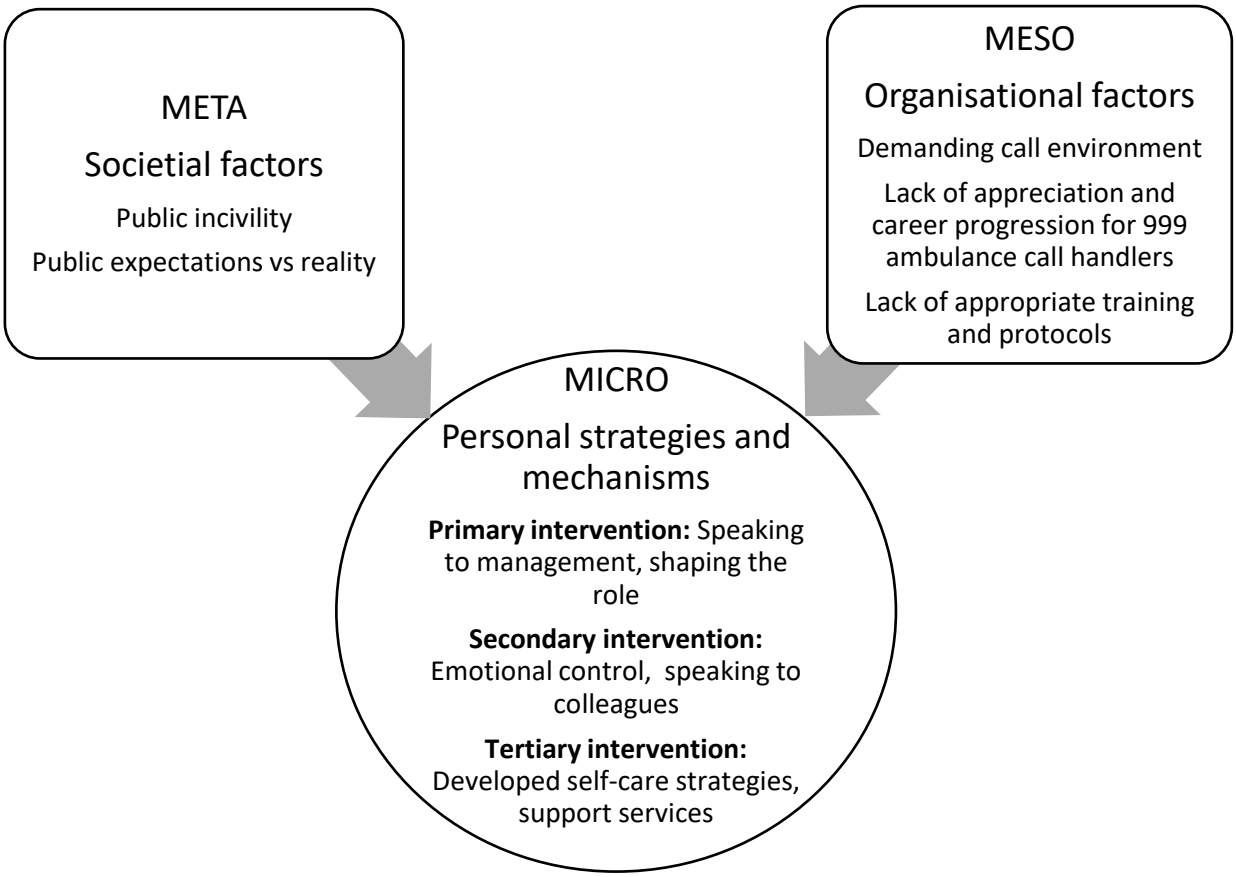

Figure 2: Potential sources of burnout and personal mechanisms and strategies which reduced the impact of stressors

Table 1: Participant characteristics

Age	Gender	Ethnicity	Education	Experience
20-55 years	Female:13 Male: 5	White:2 White British:12 British Pakistani:2 British:2	A Level:8 Undergraduate degree:6 Secondary school/GCSE:4	1-23 years