Abstract

Staff retention is a significant challenge for ambulance services across the globe. Exploratory research, although minimal, indicates stress and burnout are particular influencers to attrition within the paramedic profession. To begin to effectively manage attrition, we need to understand these concepts further to address the potential impact that morale and burnout may have upon retention within the service.

Aims: To determine the presence and contributory factors for burnout in the ambulance service thereby informing recommendations for positive change in paramedic practice.

Methods: A two phased survey approach was adopted utilising an adapted Maslach burnout inventory and Copenhagen self-assessment burnout questionnaire, thus supporting measurement of levels of *burnout, depersonalisation* (cynicism) and *personal achievement* of paramedics. Open ended questions explored preceding factors. Demographic and comparative analysis identified trends followed by thematic analysis for the qualitative data retrieved.

Results: Ninety four percent of ambulance staff in this study (n=382) highlight a sense of personal achievement within their professional role; however, over 50% were found to be experiencing differing levels of burnout with 87% displaying moderate or high levels of depersonalisation towards their work. Causes of stress were complex: themes attributed were *perceived lack of management support*, the *publics' misuse of the ambulance service, involuntary overtime* and *challenging work-life balance*.

Conclusions: Burnout poses a very real threat attrition in the ambulance service and in order to improve staff retention and service delivery these concerns need addressing. Proactive screening, improved communication between practice staff and management is recommended and access to counselling services are needed. This problem is beginning to be acknowledged; however, further evidence is needed to understand this phenomenon further to develop effective solutions.

(Word count: 274).

Whole article 3,246

Introduction

In August 2019, there were 28,308 registered paramedics in the United Kingdom (UK) (Health and Care Professions Council (HCPC), 2019); however, retention of these professionals is an increasingly significant issue with attrition rates rapidly increasing (National Health Executive, 2015; Iliffe and Manthorpe, 2019). The broad skills set of the paramedic finds that staff not satisfied with their employment are increasingly finding their professional contribution in demand within other healthcare sectors. Indeed, Egan (2017) argues that less than 80% of registered paramedics are employed by the NHS ambulance services.

Retention, attrition and associated concepts are complex, with many contributory factors to sickness and staff motivation. For example, the ambulance service is experiencing increasing public demand: the National Audit Office (NAO) (2017) reports a 5.2% increase in annual call-outs recorded since 2012 with ambulance services receiving 11.7 million 999 calls between April 2018 and March 2019 (Association of Ambulance Chief Executives - AACE, 2019). This results in increased workloads and a negative impact on the achievement in response targets;

A study of 1332 ambulance workers found causes of stress to be tight targets, long hours and physical demands (Unison, 2014). Similarly, Egan (2017) cited constant demand, lengthy and extended shifts but also bullying or harassment and the lack of development opportunities as factors responsible for staff decisions to leave the ambulance service.

The reported personal impact on the individual indicated that 91% of ambulance personnel have experienced low mood or poor mental health whilst working for the ambulance service (MIND, 2016). Interestingly, stress and anxiety was cited as the highest reason for sickness days across all staff groups in the NHS at 25.3% but attributed as the reason for absence in 28% of ambulance workers (NHS digital, 2019). Ambulance staff were also found to have the highest sickness absences across the whole of the NHS staff groups (NHS digital, 2020).

Despite stress related illness being a major factor for absence in the ambulance service, there is a paucity of research in this area (Hegg-Deloye et al., 2014). Of the available research, paramedics were found to be more likely to suffer from post-traumatic stress disorder (PTSD) than any other emergency service workers which can have a profound

detrimental impact on personal and professional life (Drewitz-Chesney, 2012). Much research around paramedics and PTSD argues that it is not always caused by major incidents, but regular 'smaller everyday events' that triggered illness or symptoms (Lateef, 2005). Donnelly (2012) concurs, highlighting that 'normal' stress was shown to be damaging to staff wellbeing. Conversely, 52% of clinicians indicated traumatic events as triggering stress responses, other factors such as; excessive workload (68%), pressure from management (60%), and changing shift patterns (56%) were rated much higher and left staff feeling fatigued and exhausted (MIND, 2016). Fatigue is also associated with burnout, sick leave, attrition, work disability, impaired performance and reduced physical and mental health (Courtney, Francis and Paxton, 2013). Stress and fatigue significantly have consequential negative impacts on clinical performance and increased incidents of drug and documentation errors (Leblanc et al., 2012). The Larrey Society (2015) identified managing injury, violence and death as the main contributing factors to stress for ambulance staff. However a paucity of quality research is available to explain reasons why staff are stressed (Mildenhall, 2012).

In more recent years the concept of occupational burnout has begun to be investigated as a leading cause of poor employee mental health. Particularly, this has been noted within the 'helping professions' contributing to absenteeism and lack of staff retention (Zeng et al, 2020, Adams et al, 2017). Burnout has been frequently reported in higher levels with the emergency services (Thyer, 2018, Adams et al, 2017). According to MIND (2021) ambulance service staff reported lower levels of mental health in comparison with police and fire employees. Ambulance staff were also the most likely to say their mental health had deteriorated since the pandemic.

'Burnout' is a term used to encompass many of the negative effects of stress and is defined as a psychological syndrome involving: *burnout* (emotional exhaustion), *depersonalisation* (cynicism), and a diminished sense of *achievement* (Maslach, 1982). Burnout is the term used to describe exhaustion and involves fatigue, trouble sleeping and physical problems which are caused by work alone. Depersonalisation refers to cynicism with a reduction in empathy and excessive detachment towards patients and colleagues. Personal achievement relates to the sense of inefficacy and measuring the extent to which participants assess themselves negatively and feel their efforts bring about no positive change; this is seen as a consequence of burnout and depersonalisation (Maslach, Jackson and Leiter, 1997).

Methodology and Design.

A two phase survey was designed explicitly to address the research aims (Cresswell, 2013). The validated Maslach Burnout inventory and Copenhagen self-assessment burnout tools informed part 1 (Maslach, Jackson and Leiter, 1997; Kirstensen et al, 2005). Part 2 utilised qualitative open questions informed by the literature review.

The Maslach Burnout inventory was used in its entirety; questions from the Copenhagen burnout tool were selected by their relation to the literature review with respect to topics such as fatigue, work/life balance and the causes of stress. The questionnaire was piloted to a test group of 11, with changes suggested by pilot participants negotiated with the authors. Statistician input was received to inform the questionnaire design to ensure effective data analysis strategy.

The study setting was a large ambulance trust in the north of England. Ethical approval and permissions gained from the Trust and the University. The electronic questionnaire was distributed to all frontline staff of any grade working on emergency response vehicles

Nominal data was collected directly from Smartsurvey and exported into Microsoft Excel to retrieve quantitative information for descriptive and inferential statistical analysis. Scores were analysed using the Maslach Burnout Self-Test scale (Hudson, 2015). Quantitative data was analysed as a whole and across demographic sub-groups . Qualitative data involved phased coding, developing a coding frame based upon key themes displayed later.

The data gained was transferred to word frequency graphs and then copied into a word cloud programme to create a visual representation of the frequency of words used in comments.

Findings

Demographics

495 staff responded to the survey. 382 fully completed questionnaires were included in the analysis.

Table 1.0 presents the overall demographics of the 382 participants and data from part one. Clinicians are defined as those in a qualified clinician role such as paramedics (including those with specialisations), emergency care practitioners and qualified emergency medical

technicians. Non-clinicians are those who are in assistant practitioner, emergency care assistant and emergency medical technician 1 (EMT1) roles who are based upon a double crewed ambulance and support the clinician as their crew mate. Participant demographics were compared to the overall Trust workforce. The sample group are broadly comparative to the organisation population although, non-clinicians are slightly under-represented. The identified place of work relates to the vehicle on which the respondent attends 999 calls for the majority of their shifts; either the rapid response vehicle (RRV) or the double crewed ambulance (DCA).

Table 1.0: The table below shows all the results for each category and their prevalence in each demographic represented in percentages.

Demographic			Burnout			Depersonalisation			Personal Achievement		
	Total respondents	% of total	High	Mod	Low	High	Mod	Low	High	Mod	Low
All staff	382	100%	15%	38%	47%	67%	20%	13%	94%	5%	1%
Role	-										
Non-clinicians	80	21%	10%	46%	44%	55%	21%	24%	93%	3%	4%
Clinicians	302	79%	17%	36%	47%	71%	20%	9%	95%	0%	5%
Gender	-										
Female	157	41%	13%	53%	34%	70%	22%	8%	96%	3%	1%
Male	225	59%	17%	42%	41%	65%	19%	16%	93%	6%	1%
Age	-										
18-24	14	4%	0%	57%	43%	43%	43%	14%	100%	0%	0%
25-34	90	24%	9%	42%	49%	56%	27%	17%	98%	2%	0%
35-44	135	35%	15%	50%	35%	73%	17%	10%	90%	9%	1%
45-54	119	31%	24%	45%	31%	74%	17%	9%	97%	2%	1%
55+	24	6%	8%	50%	42%	63%	17%	20%	88%	8%	4%
Time in role	-										
Less than 5 years	87	29%	5%	40%	55%	47%	31%	22%	86%	11%	3%
6 - 10 years	99	26%	18%	48%	34%	70%	22%	8%	96%	4%	0%
11 - 15 years	73	19%	15%	53%	32%	84%	12%	4%	96%	3%	1%
16 - 20 years	56	15%	23%	56%	21%	82%	11%	7%	98%	2%	0%
21 - 30 years	32	8%	28%	47%	25%	72%	16%	13%	100%	0%	0%
31+ years	12	3%	33%	25%	42%	75%	25%	0%	92%	8%	0%
Place of work	-										
Ambulance	286	75%	13%	38%	49%	66%	20%	14%	95%	4%	1%
Rapid Response Car	96	25%	21%	39%	40%	72%	20%	8%	93%	7%	0%

0-25%
26-50%
51-75%
76-100%

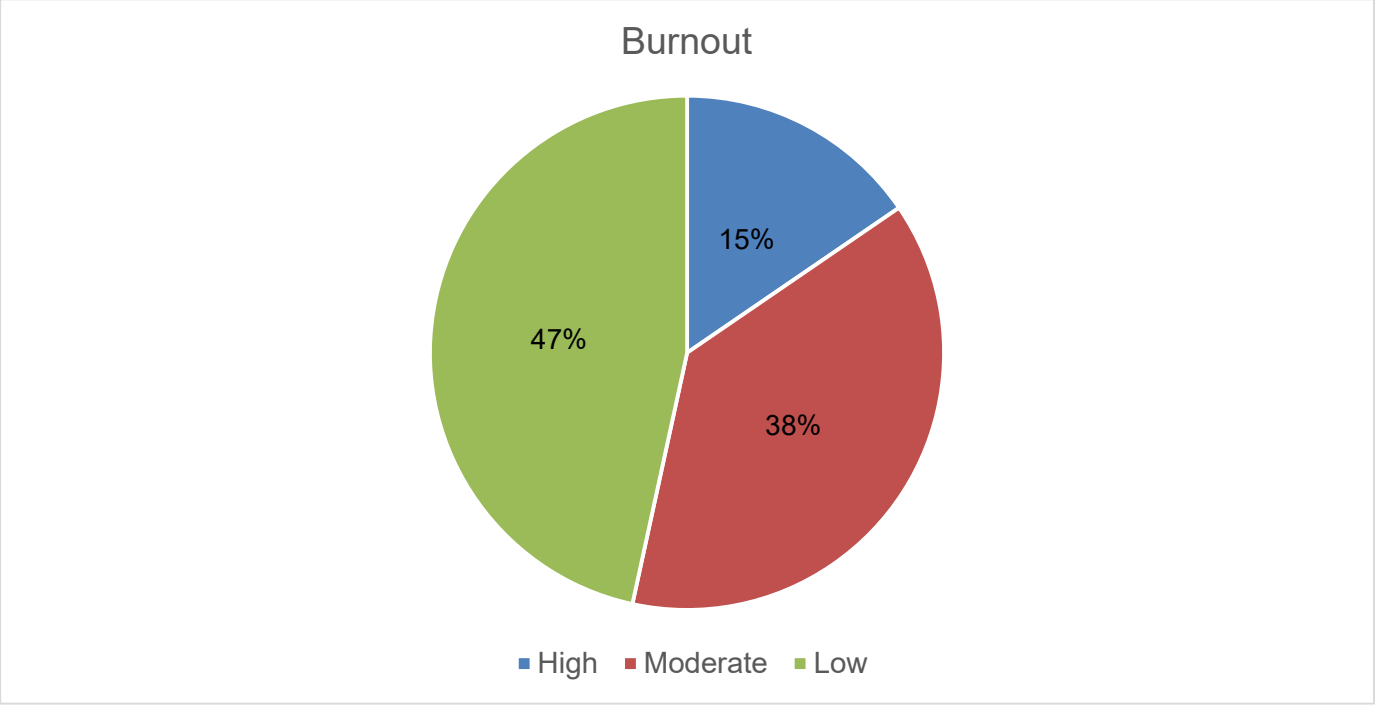
Phase One: quantitative findings

Three categories of questioning included: *Burnout, Depersonalisation and Personal Achievement.*

Burnout

Of the 382 respondents 47% (n=180) showed low level risk of burnout but more concerning 15% (n=57) showed high levels of burnout and over 38% (n=145) had moderate burnout translating to over 50% of ambulance staff surveyed demonstrating symptoms of burnout including exhaustion and fatigue.

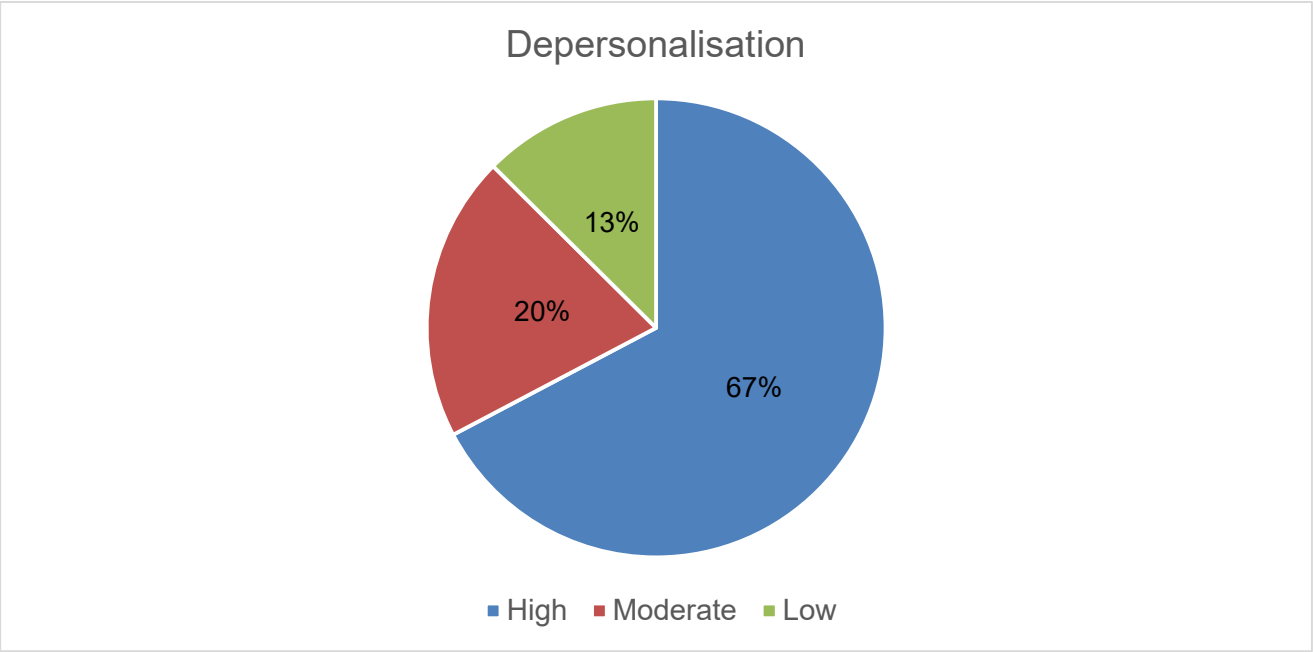
Table 2.0 Burnout in general (%)



Depersonalisation

High levels of depersonalisation were found for 67% (n=256) of respondents. Moderate levels were 20%, indicating that almost 90% of ambulance staff were displaying depersonalisation, i.e. cynicism and reduced levels of empathy and detachment whilst at work.

Table 3.0 Depersonalisation in general (%)

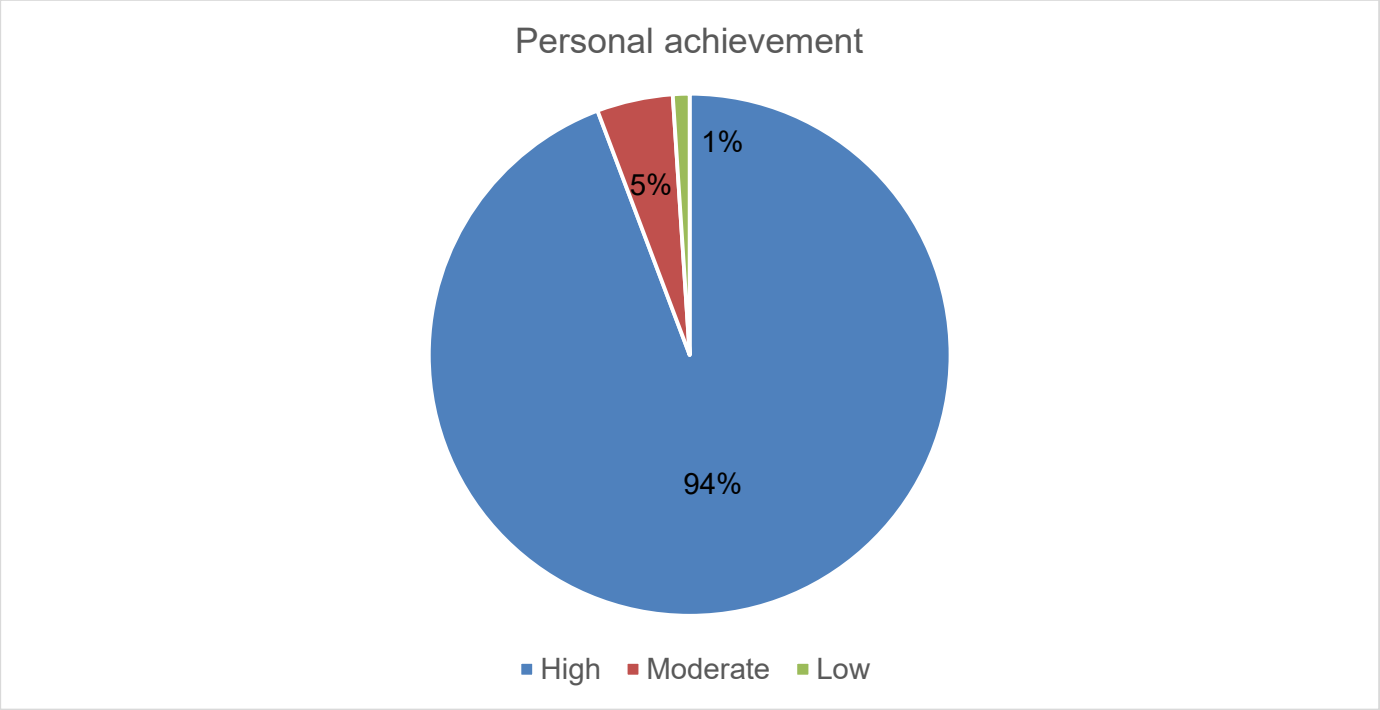


The results as a whole reveal a negative relationship between depersonalisation and burnout but no association with personal achievement. Depersonalisation and burnout were then considered by comparing each individual's responses for both data sets. Using a Pearson Correlation coefficient to analyse the data the coefficient was found to be 0.6026. This indicates that someone who feels burnout are more likely to also feel depersonalised (to an equal or greater level).

Personal Achievement

Interestingly, despite high levels of burnout and depersonalisation, 94% (n=359) of respondents showed high levels of personal achievement, with only 10% demonstrating low levels. These results clearly show that a significant majority of the participants felt they could still achieve positive change in their daily work. However, the 10% (n=38) of respondents showing low levels of personal achievement also had high levels of burnout and depersonalisation.

Table 4.0 Personal Achievement in general %



Key Findings from demographics:

- Despite high levels of burnout, 94% (n=359) of respondents showed high levels of personal achievement
- Fifty-one clinicians (17%) showed higher levels of high burnout compared to 8 non-clinicians (11%)
- Men are more at risk of burnout; 38 men (17%) vs 29 women (13%).

- High levels of burnout were not shown at all in the youngest category but then burnout results increase proportionally with age until the over 55-year-old category, where a significant reduction is seen.
- High levels of burnout increased with time in role. Moderate burnout showed a steady increase until the 16-20 years category, followed by a small reduction.

Phase two: Qualitative findings

Job enjoyment and satisfaction

One of the key themes to emerge was that ambulance staff clearly enjoy helping people and feel they pursued a career in the ambulance service to make a positive impact. '*Making a difference*' seems to be one of the most rewarding aspects of the job and is a phrase used by 24% of respondents. This is a recurrent theme in the qualitative feedback. Indeed, job satisfaction appears to be highest when a participant's positive expectations of the role are fulfilled.

Many of the participants place a great deal of value in the caring and supporting aspects of their role:

> I enjoy patient contact. I went into this job to try & help people 11 years ago.

> I enjoy using my skills and treating genuine patients that require our assistance.

> Genuinely helping people in their time of need.

> Even after 12.5 years I enjoy helping people and trying to make a difference to their lives when they are at their most vulnerable.

Clinical variation was recurrently sighted as a reason for staff to enjoy their job. Many participants referred to '*proper jobs'*, i.e. jobs where their clinical skills and training could be utilised. This reflects a common frustration that a lot of time and energy is spent responding to non-emergencies.

> I enjoy the actual jobs where you know you've made a difference.

> Genuine jobs, although it requires someone to be ill or worse case scenario, that's why we are there. They are the genuine reasons we should be deployed, to help real patients.

> I enjoy the 'cut and thrust' of emergency medicine and thrive on 'proper jobs'.

Understanding the aspects of the job people value and enjoy the most is key to discovering the motivation for people to join, and remain working for, the Ambulance service. Similarly, we need to find the pain points and problems that cause stress and demoralise the people working on the front line.

Frustrations

Many of the frustrations raised in the qualitative feedback stemmed from shift planning, meal breaks and finishing shifts on time. Our study showed that some ambulance service staff feel they are thought of as '*dots on a screen'*, rather than people.

Finishing work late was highlighted as a problem by 34% of staff in the qualitative feedback, who felt it was a daily occurrence. When combined with a lack of proper meal breaks or rest periods between jobs (mentioned by 22% of respondents), late finishes contribute to the feeling of de-personalisation and further alienate those who feel a work/life balance is not being achieved.

> I am not a dot on a screen. I am a person who has studied hard and long for a job I believe in, and where I think I can make a difference.

> Working far away from home on a very poor rota doesn't allow me any work/family life balance.

> 12 hour shifts can turn into 13/14 hour shifts with only one break.

> It feels like we are not people, we are a number and a dot on a screen...

High workload was also referred to by 27% of the participants, staff felt they were unable to spend time reflecting with colleagues, had no 'down time' or time to keep up to date with training. A perceived lack of support from management and the misuse of the emergency services where staff felt their skills were not utilised. Inappropriate coding of jobs was overwhelmingly highlighted as frustrating to 24% of ambulance staff; causing unnecessary delays to seriously ill patients, misuse by other healthcare professionals and abuse by the general public. This also related to 23% of staff believing that they were unsupported or put in danger on a regular basis.

> The service is being abused, leaving staff vulnerable to fatigue, illness and mental health problems.

> Its unhealthy to attend job after job after job during a shift as we do with no down time to reflect or rest.

> [We don't get the time] within work to do training whether it's e-learning, or time with a CS to run through practicals.

> If we have a quiet period (very rare), crews are sent on standby rather then to station for a rest and to catch up with colleagues. The closeness and comradeship is being lost and morale is at an all-time low.

Another source of frustration that came through in the qualitative data was around triaging from 111 services and dispatchers/comms. A major disconnect between management and NHS trusts and the front-line staff was highlighted by 52% of respondents – specifically a perceived lack of support or pastoral care. Feeling undervalued and a lack of positive feedback were among the main reasons cited for management-related stress.

> This job is the best job in the world but the stress and heartache comes from management, bad vibes and being completely undervalued and disrespected by a so called 'family friendly' and 'caring' employer.

> No staff consultation has taken place regarding the increase in 111 non urgent work. The majority of these calls are inappropriately triaged with no improvement.

> It would be a lot better if management didn't use bullying techniques to hit irrelevant targets that don't actually help patients or staff.

> 111 needs a massive overhaul and to be run by more clinicians 24/7, not just call handlers.

> Get comms to understand and treat us as people. Stop sending us way out of area near to finish time.

Recommendations

Staff wanted to feel valued and receive positive praise, which they felt was lacking. Proactive health screening for physical and mental problems was suggested. The word ‘late’ was mentioned 131 times (34%) and related to finishing work late on a regular occurrence. Work-life balance was also discussed; where staff felt improved and flexible rotas, along with finishing their shifts on time would have a positive influence on this. Participants also wanted time to complete CPD whilst at work, with a clearer career framework for progression in place. Training and development was cited (n=30, 8%) as something staff would like to receive more frequently.

Some of the suggestions around how morale could be improved would be fairly simple and straightforward to implement. Our research seems to suggest that small gestures could go a long way to improving wellbeing.

> NHS colleagues have protected learning time to complete academic courses in order to develop themselves, a concept which seems a distant dream within the ambulance service.

> Improve the learning portal and provide access to training courses.

> At end of shift, a proper thank you would go a long way.

I have worked for YAS for over 6 years, I feel like there could be a massive improvement on staff morale if there was some genuine care and compassion from top management all the way down to front line staff.

Something as simple as providing tea, coffee and milk at stations could raise front line morale.

Discussion

Burnout and its associated causes are complex and a significant challenge for ambulance services across the globe. The results of this study go some way to understand the concept further. The results found that over 50% of the staff were experiencing signs of burnout; concerningly 15% of these individuals reported that they were suffering from high levels of burnout in connection with work. Moderate levels of burnout have not been distinctly defined; however, it would be reasonable to conclude that these staff are exposed to some of these symptoms and negatively affected by work. Staff experiencing burnout are not simply exhausted or overwhelmed by their workload but have lost their psychological connection; which has implications for their motivation and their identity, as well as service delivery as a whole (Leiter and Maslach, 2016).

A positive relationship was found between burnout and depersonalisation staff who displayed high levels of one is more likely to show high levels in the other. The results revealed high levels of depersonalisation was much more commonplace than high levels of burnout. High levels of depersonalisation were found in almost 70% of staff, and high or moderate levels in almost 90%; indicating a strong level of cynicism. This can have a negative impact upon staff morale and service delivery, as it can cause staff to negatively connect in patient care (Leiter and Maslach, 2016).

Reassuringly, personal achievement was shown to be very high in the majority of participants, with 94% of all respondents reporting high levels. It would therefore appear that ambulance staff; despite feeling burnout, are still able to have a high sense of efficacy. Furthermore, those at risk of burnout tend to show high scores in burnout and depersonalisation sections and low scores for personal achievement (Maslach, Jackson and Leiter, 1997). This was not the case for the majority of respondents in this study as only 38 scored low; although these individuals were noted to have scored highly for burnout and depersonalisation. Thus 38 of staff (10%) have shown scores suggesting that they may be particularly at risk of exhaustion, cynicism and inefficacy. Clinicians, males, those aged over 35 years, people who have been in the same role for over 6 years and people who work upon the RRV were found to be most at risk from burnout.

The high levels of personal achievement indicate that our participants appear to enjoy their jobs and thrive when helping others. A major frustration however, is finishing late on a regular basis and resources not being utilised effectively due to their perceived misuse of the

ambulance service. Participants also want improved resources and staffing levels. The current workload appeared to be overwhelming and negatively affects their mental health and work-life balance. Participants also wanted a clear career pathway for them to follow and a chance for more training to aid career progression. Indeed, participants suggested they would benefit from more time with their clinical supervisors and regular training opportunities. Hamilton et al (2008) suggested that interdisciplinary support and professional education are mechanisms for recruit and retaining paramedics.

Intense and busy workloads, as well as increasing staff exhaustion, result in less chance for discussion and reflection between calls, an important part of processing traumatic events. Debriefing is beneficial and can only occur in 'downtime'; allowing reflection following difficult calls (Qualie, 2016). Consideration made to the possibility of more person-centred shift patterns may also have a positive effect on staff. Overwhelmingly participants struggled with feeling disengaged from management, not feeling valued and wanting more positive feedback and support. Regehr and Millar (2007) recommend a reduction of organisational stressors, which can be achieved by increasing support for staff, and providing a sense that their skills and contribution are valued.

Considering the potential impact that burnout can have upon the productivity of the ambulance service and retention of staff the following recommendations for improved support may aid a reduction of these negative effects; addressing work-life balances and burnout of ambulance crews should be a priority (The Larrey Society, 2015). To effectively support staff, there is the need to reduce the stigma of mental health problems (MIND, 2016) found that 80% of ambulance staff thought that their employer did not encourage them to talk about mental health, suggesting a huge barrier in talking about this problem. Respondents also appeared concerned about their physical health and felt it was suffering due to work demands. Indeed promotion of wellbeing can produce increased commitment, job satisfaction and improved staff retention (The Health and Safety Executive, 2008).

Limitations

This study was undertaken in one large ambulance trust but may not represent the workforce as whole. However, many of the findings and themes will certainly be transferable to other ambulance staff. This study relied exclusively on participants being able to self-report their own levels of burnout which could raise issues of measurement error (Sharma and Cooper, 2017).

This research was conducted before the emergence of the Covid-19 pandemic and therefore does not take into account the added pressures of frontline work during a health crisis.

Conclusion

Ambulance staff are reassuringly passionate about their role. However, burnout is a significant and very real issue that decreases staff efficacy and reduces quality of patient care. The issue needs addressing by modern ambulance services. Certain staff groups appear more vulnerable to burnout; male clinicians, lone responders; those aged over 34 or have been in the same job for over 6 years. Support from senior management needs to be increasingly felt, including communication and increasing sense of wellbeing. Further research is needed to gain more insight into this problem and create more effective solutions to combat burnout.

Key points:

- 50% of ambulance staff are experiencing signs of burnout
- Almost 90% displayed levels of cynicism towards their roles contrasting to high levels (94%) of personal achievement
- Causes of stress were attributed to perceived lack of support, misuse of the ambulance service, enforced overtime and work-life balance.
- Occupational stress in paramedics revealed that there was a paucity of quality research in this topic to explain why staff are stressed
- Promotional of mental health and wellbeing and post-incident care requires higher priority

Legends for Illustrations:

Table 1.0: This table displays all the results for each burnout category and their prevalence in each demographic represented in percentages.

Table 2.0: This graph displays the levels of burnout across all categories (high, moderate and low) and is represented in percentages.

Figure 3.0: This graph displays the levels of depersonalisation across all categories (high, moderate and low) and is represented in percentages.

Figure 4.0: This graph displays the levels of personal achievement across all categories (high, moderate and low) and is represented in percentages.

Figure 5.0: Word cloud to represent responses to question “What do you enjoy/excites you the most about your job?”

Figure 6.0: Word cloud to represent responses to the question “what are the top three things which cause you the most stress at work?”

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