Teams under pressure in the emergency department: an interview study

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ABSTRACT

Objective To identify key stressors for emergency department (ED) staff, investigate positive and negative behaviours associated with working under pressure and consider interventions that may improve how the ED team functions.

Methods This was a qualitative study involving semistructured interviews. Data were collected from staff working in the ED of a London teaching hospital. A purposive sampling method was employed to recruit staff from a variety of grades and included both doctors and nurses.

Results 22 staff members took part in the study. The most frequently mentioned stressors included the '4-hour' target, excess workload, staff shortages and lack of teamwork, both within the ED and with inpatient staff. Leadership and teamwork were found to be mediating factors between objective stress (eg, workload and staffing) and the subjective experience. Participants described the impact of high pressure on communication practices, departmental overview and the management of staff and patients. The study also revealed high levels of misunderstanding between senior and junior staff. Suggested interventions related to leadership and teamwork training, advertising staff breaks, efforts to help staff remain calm under pressure and addressing team motivation.

Conclusions This study highlights the variety of stressors that ED staff are subject to and considers a number of cost-efficient interventions. Medical education needs to expand to include training in leadership and other 'non-technical' skills in addition to traditional clinical skills.

INTRODUCTION

The emergency department (ED) is a challenging environment in which to provide consistently high-quality care for all patients. Little is known about how ED staff respond during periods of high demand and factors contributing to this high pressure environment have not been established.

Experimental research has shown that individuals in other high-stress environments lose team perspective and focus shifts to the individual's own task.[1] As a result, some of the safety functions of the team may be lost, for example, checking each other for errors and monitoring the workload of team members. Excessive demand has also been associated with reduced explicit communication and poorer team coordination.[2 3] One ED study demonstrated that senior medical and nursing staff were susceptible to communication overload at times of increased demand.[4] Other ED research has

identified communication breakdown during periods of high stress and negative effects on decision making.[5–7]

While these studies highlight the negative impact of stress on team function, it is likely that experienced staff have also developed positive strategies to deal with situations of increased demand. The aims of this interview study were to identify key stressors for ED staff, explore positive and negative behaviours associated with working under pressure and consider interventions that may improve how the ED team functions.

METHODS

Design and participants

Semistructured interviews were conducted with staff working in the ED at a London teaching hospital with an annual ED attendance of 98 000. At the time of the study, the unit had seven full-time equivalent emergency medicine (EM) consultants and registrars were encouraged to take on a leadership role for the shift, under the supervision of the duty consultant.

A purposive sampling method was employed to enable recruitment of both medical and nursing staff of varying seniority. Recruitment continued until no significant new themes emerged from the data ('theoretical saturation'). Ethical approval was granted by the National Research Ethics Service and local Research and Development Department.

Procedure

The study was advertised using posters in staff areas and all participants gave written consent. Interviews were undertaken by a sole investigator (LAF) and consisted of open-ended questions on: perceived stressors ('What makes you feel under pressure at work?'), effects of stress on the individual ('Have you noticed that you behave differently when you're under pressure?') and the positive and negative behaviours of other team members ('How does the behaviour of others change when they appear to be under pressure?'), as well as possible interventions ('Do you have any suggestions how the team could work together more effectively during periods of increased demand?'). Previous studies with surgeons revealed their reluctance to admit feeling stressed, so the use of the word 'stress' was avoided.[8 9] Participants were also asked to describe circumstances where high pressure in the ED may have contributed to an error.

Data analysis

Audio-recorded interviews were anonymised and responses were transcribed verbatim. Data were

analysed to extract broad themes from the interviews and responses were coded using the NVivo computer program. Half the interviews were analysed independently by a second member of the research team who had training in human factors research. There were no major disagreements regarding the coding of data. The coded material was subject to member check to reduce investigator bias. This involved showing participants a summary of how their responses had been coded to ensure the true meaning was retained.[10]

RESULTS

Twenty-two participants volunteered to take part in the study, comprising four consultants (C1—C4), seven registrars (R1—R7), five lower grade doctors (L1—L5) and six nurses (N1—N6).

Stressors

All staff members recognised that the ED can be a high-pressure environment at times and over half of the respondents said they worked under pressure most of the time. Figure 1 summarises the stressors mentioned by staff during the interviews.

The most frequently mentioned stressors are linked; for example, high workload combined with staff shortages makes the 4-hour target (a government target which requires patients to be admitted or discharged from the department within 4 h of arrival) more difficult to achieve. Lack of teamwork, both within the ED and within the wider inpatient teams, appeared to be a significant contributor to pressure in the ED. Respondents described 'lack of cooperation' and 'various conflicts with team members' as contributing to pressure. One participant said 'I could be fully staffed and have a bad day and I could have less and have a good day. It's obviously about how the team works together' (N2).

Effects of working under pressure

Staff described a multitude of ways their behaviour changed when working under pressure; however, many responses fell into the following three categories.

Communication

During periods of high demand junior staff described communicating less, particularly with senior staff. They gave reasons such as 'I don't want to communicate as much because I know they're

stressed' (L4) and 'I know they're really busy and I attempt to do things myself' (L5). Three junior doctors said this sometimes resulted in discharging or referring patients without first speaking to the registrar, which they would have done under normal circumstances. One doctor said 'I had patients where I might have gone to ask but I thought, no, I know that really' (L3). This suggests that reduced communication may promote more independent and self-assured working, providing doctors know their capabilities and limits. However, four junior doctors said that they sometimes found senior staff 'aggressive' and 'unapproachable' and two stated this meant that they were less likely to ask for help. There were complaints about the rudeness or abruptness of other team members (9/22) as well as staff admitting to being less polite when working under pressure (9/22).

Participants also described being more succinct and direct both with other staff (5/22) and with patients (7/22). Senior staff acknowledged that some communication events are shortened; for example, 'I'm probably not giving the SHOs [senior house officers] enough time to tell me their stories' (R5). However, they increased coordination-related communication. Four participants described more frequent exchanges between the nurse-in-charge and lead clinician to plan and prioritise patient tasks, problem-solve and identify any patients of particular concern.

Departmental overview

During periods of high demand, staff described maintaining an overview of the department using the Patient Tracking System, calling a mini-board round and 'eyeballing' patients in cubicles or the waiting room. Two senior doctors said they were less likely to see their own patients, or lead a resuscitation, to ensure they were free to coordinate and oversee the department. Staff also described the importance of requesting regular updates about the state of the whole hospital, including bed availability and staffing issues. These comments reveal how staff in a leadership role maintain situational awareness, ensuring a good 'mental model' of the current task and the surrounding working environment.

Managing staff and patients

Senior staff described how they monitored team workload to maintain efficient patient flow, for example, by checking how long a doctor had been with a patient. Two registrars said they

Figure 1 Stressors mentioned during interviews with emergency department (ED) staff.
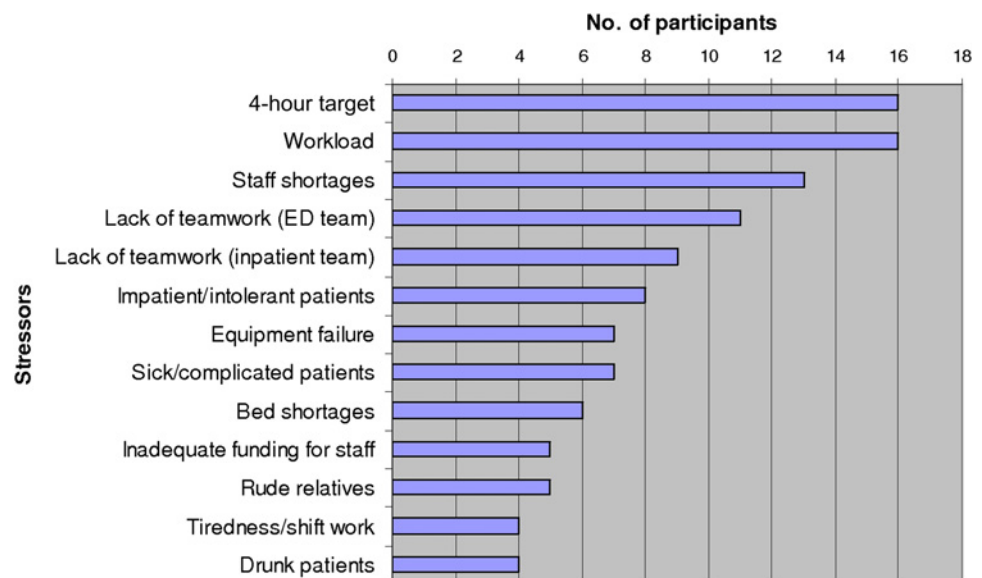
instructed juniors to report back after a specified time and three senior doctors said they were likely to seek out juniors early to discuss a patient plan. Consultants and registrars described explicit allocation of tasks and stipulating a patient's management plan rather than coaching a junior doctor through it. Six participants described exerting authority to get the team working faster. While senior medical staff changed their leadership style to be more direct under pressure (6/10), conversely, two senior nurses commented on allowing nurses to use their own initiative and encouraging them to use clinical judgement. One said 'trust yourself, allocate appropriately, let them get on and have confidence' (N2).

While two registrars said they were less likely to see patients when under pressure, three consultants explained the importance of seeing patients to 'queue-bust'. One consultant said 'I tend to have a quick look through all the cards in the box, see if there is anyone I can see quickly' (C2). Another said, 'My own style is to pick up the card and see the patient… the senior nurse is in charge of how things are organised and my job is to see patients' (C4).

Interventions and advice
Four staff mentioned interventions that focused on increasing resources, such as improved staffing or new equipment. Others described suggestions that would improve team function, as follows.

Leadership and team training
The vital importance of leadership was highlighted in a number of quotes such as 'I think the way the team works under pressure is a factor of how the team leadership works under pressure' (R2). The most common suggestions to help the team function better under pressure were improving team skills and, in particular, leadership skills (7/22). Several participants mentioned specific ways this could be addressed such as mentoring, situational teaching and simulation training. Six interviewees mentioned crew resource management or team building exercises. One staff member felt that improved relationships with ward and laboratory staff would ensure everyone worked together for the common good of the patient. Another suggested returning to set teams for night shifts to improve team cohesion. The general consensus appeared to be that if the wider team functioned well then staff could cope with the high demands of working in the ED. However, respondents also recognised that a simple training course was unlikely to provide long-lasting improvements and two people commented that sustained behaviour change requires a change in attitude at an organisational level. While staff were aware of the financial burdens of some interventions, one staff member reflected 'It doesn't cost anything to build a team' (C4).

Advertising breaks
Taking breaks during periods of high pressure were a source of tension. Five respondents commented on other staff members 'disappearing' for breaks or mistrust about the length of break taken. Interviewees described how time was wasted looking for staff members who had gone on a break. However, four staff highlighted the importance of having breaks for efficient and healthy working. One respondent suggested using a notice board to inform colleagues of the actual start time of a break, avoiding unnecessary searching or mistrust.

Practising back-up behaviour
Twelve (55%) interviewees mentioned that staff not helping out was a source of tension. However, respondents also described examples of back-up behaviour (9/22) such as doctors pushing trolleys and nurses taking blood samples. Interestingly, senior nurses were more likely to take on extra tasks to support colleagues who were struggling while doctors' reasoning tended to focus on the belief it was simply faster or more efficient.

Staying calm
Another common theme that emerged from the data was the importance of staff members remaining calm when under pressure (16/22) and many referred specifically to the team leader (6/22). Staff gave reasons for this such as 'makes the place feel less busy', 'reassuring that things are ok' and 'gives you confidence they know what they are doing'. Half of the respondents commented on the perceived negative effects for people who get stressed and some gave examples such as 'affects decision making' and 'inefficient'. While participants identified that staff should remain calm, there were few practical suggestions for achieving this except taking some 'time out' (2/22) or physical de-stressing techniques (1/22). One respondent simply said, 'People who panic shouldn't be in A&E' (N1).

Motivating staff
Three participants discussed motivation during periods of high demand and two senior staff members commented that they felt junior doctors had no incentive to work harder, especially to achieve 4-hour targets. They believed juniors thought this was not their problem and did not appreciate the potential benefits of the 4-hour target. One junior doctor reflected on the lack of positive feedback and another said that there should be rewards for doing well. These comments reflect the importance of setting team goals and ensuring all staff are motivated to achieve these goals. This can be summarised by a respondent who stated that 'staff will accept stress and working under pressure if there is a sense of fairness from above… you've got to show the troops that you love them' (C4).

Senior versus junior staff
While many senior staff had acquired strategies to deal with high pressure in the department, a 'new' registrar admitted to having very few suggestions despite an induction programme that included scenario teaching for management issues. Staff said they learnt techniques by modelling senior colleagues or by simple trial and error; for example, 'I learned the hard way [that] not escalating things and not involving senior people then led to problems' (C2). However, these learning approaches may be unreliable and without any explicit training in what is 'correct', staff may pick up bad habits. For example, one senior doctor admitted, 'I'm not necessarily there to make friends, so I am prepared occasionally to put noses out of joint and if the SHOs haven't realised that it's a busy day and that they need to up their game a bit then I'm prepared to potentially upset them' (R2). This fits with junior staff commenting on 'aggressive' seniors who are then viewed as unapproachable.

This study also revealed a high level of misunderstanding between different grades of staff. For example, senior doctors may feel obliged to know what is going on with each patient in the department (ie, situational awareness) but one junior described this as 'checking up'. Another junior doctor complained about registrars who 'even go to review a patient in person' although this may indicate good data gathering for decision making. One junior doctor mentioned they would never disagree with a registrar's clinical judgement—highlighting the potential danger of authority gradients. These

examples reveal that some junior doctors lack understanding about responsibilities within the ED team and, indeed, may not fully comprehend the purpose of teamwork and its contribution to safety.

DISCUSSION

This study gives insight into the stressors experienced by ED staff in a London teaching hospital. The two most common stressors, excessive workload and staff shortages, may be considered two sides of the same problem, that is, an imbalance between workload and resources. By definition, stress occurs when a person perceives that demand exceeds available resources.[11] This imbalance is exacerbated by government targets, where time pressure becomes an issue in addition to clinical need. The introduction of a range of quality indicators by the UK Department of Health is likely to produce additional pressure for EM staff. Studies with surgeons in the operating room identified distractions and interruptions as a common stressor.[8] However, interruptions were not mentioned by staff in this study, possibly because it is considered normal in the ED.[12][13] Both groups of clinicians interviewed described team factors as a major stressor.

This study highlights that teamwork, within the ED and with inpatient staff, is integral to smooth running of the department. Furthermore, participants identified that effective team leadership is crucial. This may explain why some days feel stressful even without excessive patient numbers (and vice versa). Leadership and teamwork appear to be mediating factors between objective stress (eg, workload and staffing) and the subjective experience. So, stress is not only dependent on the realities of workload, but also strongly influenced by how a team and team leader deal with it.

These interviews reveal that leadership is a principal component of team function and this is consistent with the published literature.[14–16] Studies have shown that leaders of resuscitation teams working under pressure often choose a more directive style with explicit task distribution.[17][18] Comparable results were found in this study. While resuscitation team leaders were less successful when adopting a 'hands on' approach,[15] interviews with consultants indicated they expected team leaders to see patients as well as manage the department during periods of high demand. Previous research has shown that communication overload may be a problem during periods of high demand in the ED.[4] Interview responses suggest that ED staff adapt by being more concise or having fewer exchanges between senior and junior staff, though it was also clear that other communication events became more frequent, particularly those necessary for coordination.

This paper highlights the importance of addressing the wide range of stressors ED staff are subject to rather than concentrating entirely on staffing, resources and bed availability. Indeed, in times of austerity, alternative interventions may provide less costly options for improving patient safety and enhancing staff working conditions. Leadership and teamwork training should be seen as a priority for ED staff and this should include liaising with inpatient teams in an effort to improve work relations and develop more effective team interactions. While out-sourcing training to external organisations is likely to be prohibitively costly, in-house training programmes can take advantage of the wide range of resources freely available on the internet, such as the US Department of Health Team STEPPS teamwork training initiative.[19] Indeed, improving relations with inpatient teams could be addressed by less formal means, such as social gatherings and staff secondments. Other simple inter-

ventions include clearly advertising staff breaks and developing a culture in the ED where practicing back-up behaviour is encouraged and rewarded. Initiatives also need to focus on methods to help staff remain calm under pressure. Simulation-based crisis resource management courses focus on skills training related to critically ill patients and, while this is one source of potential pressure (sick/complicating patients was rated as the eighth most common stressor), it fails to deal with other causes of stress in the ED. A team of surgeons and psychologists have conducted a needs assessment for stress management training in the operating room[8] and are researching the application of a stress assessment tool.[20] Similar work is needed in EM. The interviews also reveal a fundamental need to provide motivation to staff and ED leadership may need to consider innovative ways to achieve this instead of the bonuses and perks used in commercial businesses.

One respondent commented that 'you don't choose a career in the ED if you want a quiet life' and though this may be true, the effects of long-term stress on health and well-being are well established.[21][22] Furthermore, the sustainability of the specialty requires junior doctors to see EM as a plausible and enjoyable career option. Building a resilient team with strong leadership is integral to being able to withstand the pressures of the ED and it is important to recognise that EM provides unique opportunities to promote vital team skills.

Limitations

Interviews reflect self-reported behaviour, rather than actual behaviour, and this may be limited by incomplete recollection, misunderstanding the question or embarrassment. However, in this study, participants appeared to be relaxed and open and many were willing to admit to less-than-best practice. The sample used in this study was small and represented the views from one London ED; therefore, it is difficult to generalise the findings to other ED staff. Despite this, interviews are a useful tool to uncover issues that may need further investigation and lead to subsequent research using other methodologies, such as observation.[23]

Implications for future research

More than half of those interviewed said they worked under pressure most of the time and yet many ED staff lack training in coping strategies. Research is needed to explore how to train staff to deal with pressure at work, for example, building on self-awareness of stress or time management skills. Many of the comments in this study relate to 'non-technical skills' such as communication, situational awareness and leadership skills. Lack of preparation for leadership, misunderstandings between senior and junior staff and the ad hoc way that staff accrue these skills suggests that medical education should expand to include training in non-technical skills in addition to clinical skills. In particular, the impact on patient safety should be considered, for example, when junior staff feel unable to ask for help or believe it is unacceptable to question senior colleagues. Thus, further research is needed to explore the role of non-technical skills for improving safety and efficiency in the ED.

Conclusions

This study highlights the variety of stressors that ED staff are subject to and considers a number of cost-efficient interventions. Medical education needs to expand to include training in leadership and other 'non-technical' skills in addition to traditional clinical skills.

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