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Title: The relationship between workforce characteristics and perception of quality of care in mental health: A Qualitative Study

ABSTRACT

Background: Mental health services worldwide are under strain from a combination of unprecedented demand, workforce reconfigurations, and government austerity measures. There has been relatively little research or policy focus on the impact of staffing and skill mix on safety and quality in mental health services leaving a considerable evidence gap. Given that workforce is the primary therapeutic intervention in secondary mental health care this constitutes a major deficit.
Objective: This study aimed to explore the impact of staffing and skill mix on safety and quality of care in mental health inpatient and community services.
Design: Exploratory, qualitative methodology; purposive sampling.
Settings: Inpatient and community mental health services in the United Kingdom.
Participants: 21 staff (including nurses, occupational therapists, psychiatrists, social workers, and care co-ordinators) currently working in mental health services.
Methods: We conducted semi-structured telephone interviews with a purposive sample of staff recruited via social media. We asked participants to describe the staffing and skill mix in their service; to reflect on how staffing decisions and/or policy affected safety and patient care; and for their views of what a well-staffed ward/service would look like. We conducted thematic analysis of the interview transcripts.
Results: The participants in this study considered safestaffing to require more than having 'enough' staff and offered multiple explanations of how staffing and skill mix can impact on the safety and quality of mental health care. From their accounts, we identified how the problem of 'understaffing' is self-perpetuating and cyclical and how its features interact and culminate in unsafe care. We conceptualised the relationship between staffing and safety as a 'vicious cycle of unsafestaffing' which comprised: (1) understaffing (the depletion of resources for safe care provision); (2) chronic understaffing (conditions resulting from and exacerbating understaffing); and, (3) unsafestaffing (the qualities of staffing that compromise staff capacity to provide safe care).
Conclusions: Continued policy focus on safestaffing is clearly warranted, especially in mental health as staffing constitutes both the principal cost and main therapeutic driver of care. This paper provides compelling reasons to look beyond regulating staff numbers alone, and to consider staff morale, burden and the cyclical nature of attrition to ensure the delivery of high quality, safe and effective services. Future research should investigate other mechanisms via which staffing impacts on safety in mental health settings.

Keywords
Mental health services, patient safety, qualitative research, quality of care, staffing, workforce

What is already known about the topic?

- Demand for mental care health has increased significantly in recent years. Evidence suggests that the workforce has not kept pace with this demand.
- Robust evidence is needed to understand how workforce issues impact on the safety and quality of mental health care.

- There is limited evidence on the role of the mental health workforce and impact on quality of care, this is largely contained to acute mental health wards.

What this paper adds

- Provides a summary of how workforce issues negatively impact on the safety, quality, and timely access to care, and subsequent outcomes for service users.
- Identifies priorities for future workforce research across mental health services including the relationship between skill mix and safety across inpatient and community mental health settings.

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INTRODUCTION

Considerable political attention has been given worldwide to the implications of staffing and skill mix for the safety and quality of healthcare. Debate has focused largely on the relationship between academic qualifications, staff numbers, and related clinical outcomes in medical and surgical wards and emergency departments. Research has clearly identified that patient safety outcomes can be improved by enhancing nurses' skill mix, for example by increasing the proportion of unqualified to qualified graduate practitioners (Ball et al., 2018; Coster et al., 2018; Kane et al., 2007; Needleman et al., 2002). Consequently, Wales and some states in the United States and Australia have introduced legislation to determine patient to clinician (including nurses) ratios (National Assembly for Wales, 2016; RCN Policy and International Department, 2012). There has been relatively little research or policy focus on the impact of staffing and skill mix on safety and quality in mental health services leaving a considerable evidence gap. Yet no recommendations have been made for staff patient ratios in mental health services.

Mental health services worldwide are under strain from a combination of unprecedented demand, workforce reconfigurations, and government austerity measures. In England, an estimated 1.8 million people were in contact with specialist NHS services during 2015/16, and these numbers are predicted to increase (NHS Digital, 2016). Funding, however, may not have kept pace and may have even been reduced (McNicoll, 2015). This leaves secondary care mental health services, particularly acute inpatient wards and community mental health teams, to manage the growing number of Mental Health Act detentions, reduction of acute beds and rising acuity (Department of Health, 2018). The mental health workforce has undergone extensive restructuring in recent years. The delivery of large-scale interventions in primary care (Improving Access to Psychological Therapy) necessitated the development of new roles, for example, Psychological Wellbeing Practitioners (PWPs). Social workers have been recalled from the National Health Service back into Local Authorities (social care) and no longer work in generic care co-ordination roles. A modest increase in psychologists and psychiatrists has been offset by rising demand and increased case complexity (Centre for Workforce Intelligence, 2014). Additionally, both professions have aging workforces and face difficulties recruiting and training subsequent generations (Centre for Workforce Intelligence, 2014). The most significant change is the estimated 15% reduction (Campbell, 2017) in the number of mental health nurses who have left the profession, or had their roles downgraded or substituted (Royal College of Nursing, 2014). Consequently, mental health services have some of the highest vacancy rates in health care: approximately 10% of all mental health clinical nursing posts (Nuffield Trust, 2018).

The Care Quality Commission (CQC) (2015a) report on the crisis in mental health services concluded that "local providers and commissioners have to ask serious questions about whether the services they provide are safe". Similarly, other organisations have repeatedly expressed concerns about the safety and quality of services for staff and service users (CQC, 2015b; Royal College of Nursing, 2014; National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (NCISH), 2015). There is clear evidence that having registered nurses on wards reduces the use of coercive practices and improves the quality of care (NCISH, 2015). Evidence also suggests a direct relationship between appropriate levels of registered nurses and patient safety, quality of care, and the mentorship of the next generation of students. Emerging evidence suggests that continuity of care,

in particular low turnover of non-medical staff in the community improves safety and reduces suicide risk (Kapur et al., 2016). Despite the negative consequences for patient and safety outcomes, mental health nurses in acute inpatient settings are increasingly working longer shifts (up to 12 hours) with fewer other qualified staff (National Nursing Research Unit, 2013).

Several high-profile planning exercises and a review of reviews highlighted the lack of current research in the area of mental health workforce and outcomes (Durcan et al., 2017; Health Education England, 2017; Gilburt, 2018; NHS Improvement, 2018; Lawes and Pilling, 2017). Despite these high-profile publications and recent efforts to undertake workforce reviews by NHS England/National Co-ordinating Centre for Mental Health, NHS Improvement/England and Health Education England, the absence of evidence continues to frustrate informed decision-making and strategies to address the problem are not apparent. Given that workforce is the primary therapeutic intervention in secondary mental health care this constitutes a major deficit.

This study aimed to contribute to understanding in this area by exploring the impact of staffing and skill mix (ratio of qualified to unqualified and experienced to inexperienced staff) on safety and quality of care in mental health inpatient and community services.

METHOD

We employed qualitative methodology to gain an understanding of mental health services staff' perspectives and experiences of workforce issues and how they were connected to safety. This required an exploratory approach that valued subjectivity and permitted inductive enquiry.

Recruitment and ethical procedures

We devised a purposive sampling approach to recruit staff currently employed in the United Kingdom (UK) mental health services with adequately diverse characteristics to be broadly representative of the UK mental health workforce (Teddlie and Yu, 2007). We recruited the sample primarily via social media (Twitter), capitalising on its ability to gain reach into social communities (Gu et al., 2016), in this case mental health professionals. Tweets invited potential participants to participate in a telephone interview which focused on mental health staff' experiences of safestaffing. We provided everyone who contacted us with electronic versions of the Information Sheet and Consent Form which outlined the study purpose, interview recording and transcribing procedures, data use and anonymisation, and the limits to confidentiality. We asked participants for verbal consent prior to commencing the interview and recorded their responses. We supplemented the social media recruitment strategy with snowball sampling. The study was approved by the Faculty Research Ethics Committee, University of Leeds (HREC15-045).

Data collection

We devised a semi-structured interview schedule based on our previous work and an externally organised *wecommunities* Tweet chat (an online discussion with 91 participants) that we co-facilitated. The topic guide was kept purposefully broad and open-ended to allow participants to freely describe their experiences. We asked participants to describe the staffing and skill mix in their service; to reflect on how staffing decisions and/or policy affected safety and patient care; and for their views of what a well-staffed ward/service would look like. We also asked participants to

compare inpatient and community services. JB (male) or KB (female) conducted a one-off telephone interview. We supplemented our notes by digitally recorded the interviews to maximise rigor (Newell and Burnard 2006). We continued to collect data until we agreed saturation had occurred, at which point two further interviews were conducted to ensure this was the case (Francis et al., 2010).

Data analysis

An external company transcribed the interviews *verbatim*, and we checked the transcripts against the original recording for accuracy (Bazeley, 2007; Newell and Burnard, 2006). Participants were not asked to review their transcripts. We undertook a thematic analysis that would support a theoretically flexible, deductive and inductive approach (Braun and Clarke, 2014). All authors immersed themselves in the data by repeatedly reading the transcribed interviews (Burnard, 1991) and then independently conducted 'open coding': applying the constant comparison technique to assign codes (labels) to sections of text (Strauss and Corbin, 1998). As our analysis evolved, we organised our codes into higher level categories, some of which were raised to conceptual level, e.g. understaffing, chronic understaffing. We also identified cross-cutting themes, e.g. vicious circle of unsafestaffing. The analysis was informed by the authors' research interests and experience in the areas of workforce and safestaffing: all authors hold a PhD; JB is a registered mental health nurse and Professor of Mental Health Nursing; KMB and KC are senior health services researchers.

Participants

We conducted 21 interviews lasting between 24 and 63 minutes. All participants were from the UK, 66% were female, and most were nursing staff of various levels (although other professions were included; see Table 1). No participants withdrew from the study. We did not routinely collect information about employment history or employers to protect participants' identities in this sensitive area.

Table 1. Sample description

Description	Number (n=21)
Female	14
Male	7
Community	11
Inpatient	10
Clinical Role: Nursing	**(13)**
Ward/Community Service Manager	4
Registered Nurse (Staff Nurse/Band 5 inc. Learning Disabilities)	3
Senior Registered Nurse (Charge Nurse/Team Leader/Band 6)	3
Nursing Assistant	1
Senior Nurse Manager	1
Student Nurse	1
Clinical Role: Other	**(8)**
Care Co-ordinator Community Mental Health Team /other services	2

Occupational Therapist	2
Social Worker / Approved Mental Health Practitioner	2
Consultant Psychiatrist	1
Trainee Psychiatrist	1

RESULTS

In this paper, we report staff' perceptions of 'safestaffing', 'understaffing' and the causes and consequences of understaffing to improve our understanding of how workforce pressures affect the safety and quality of mental health care. Our analysis suggests the presence of a vicious cycle of staffing-related problems that interact and ultimately culminate in what we term '*unsafestaffing'*.

The "vicious cycle" of unsafestaffing

In our analysis of participants' accounts, we identified the recurring theme of a 'vicious cycle of unsafestaffing' (see Figure 1), the essence of which is captured in the following excerpt:

> *I think it's a vicious cycle, and I've seen it happen. You have a good ward where, for whatever reason, staffing levels drop and all of a sudden people are stretched, people are stressed, people can't understand the patients as well as they'd like, people are more short-tempered and frustrated. That makes things even harder. It becomes an even less positive place to work. They decide they don't want to work there. More bank staff appear, or even worse, no more staff appear. The remaining staff feel more pressured and frustrated that they can do a less good job. They leave. It becomes a real cycle of disappointment. (Trainee Psychiatrist)*

Participants in both community and inpatient services described a similar pattern whereby various workforce issues interact and compound with, as the next excerpt illustrates, implications for safety:

> *With a short-staffed ward, there is no time to reflect, even in the moment, on things that are going on. And people are too emotionally vulnerable to do it, because they're so busy and burnt out. There's no time to reflect formally, so in supervisions or in ad hoc debriefs, there's no time to have teaching sessions on a ward, there's no time to get external people in, to share experiences, and there's no time for people to take time off to attend courses, groups and to take, even, optional learning opportunities, like leadership courses. Or, they don't want to, because they're disillusioned and cynical about the whole thing. I think it's absolutely a vital part of safestaffing. We could not run a safe ward here, without the time to be reflective and develop as professionals. (Trainee Psychiatrist)*

The major components of this vicious cycle, then, are: (1) understaffing (the depletion of resources for safe care provision); (2) chronic understaffing (conditions that result from and exacerbate understaffing); and, (3) unsafestaffing (the qualities of staffing that compromise capacity to provide safe care) (Figure 1). We examine these components in turn below.

1. Understaffing

It was apparent that for participants, being understaffed meant more than simply inadequate staff numbers, although this was a significant component. The following excerpt illustrates how it is possible to have "enough" staff but still be *under*staffed:

> *There's a really high staff turnover in acute. We have got five vacancies just now for registered nurses (Band 5 staff nurses). So, we're almost half our complement down. When the students finish we hopefully will recruit five. But then* that means that we've got five people who are newly qualified that don't have as much experience*. (Senior Registered Nurse 2; emphasis added)*

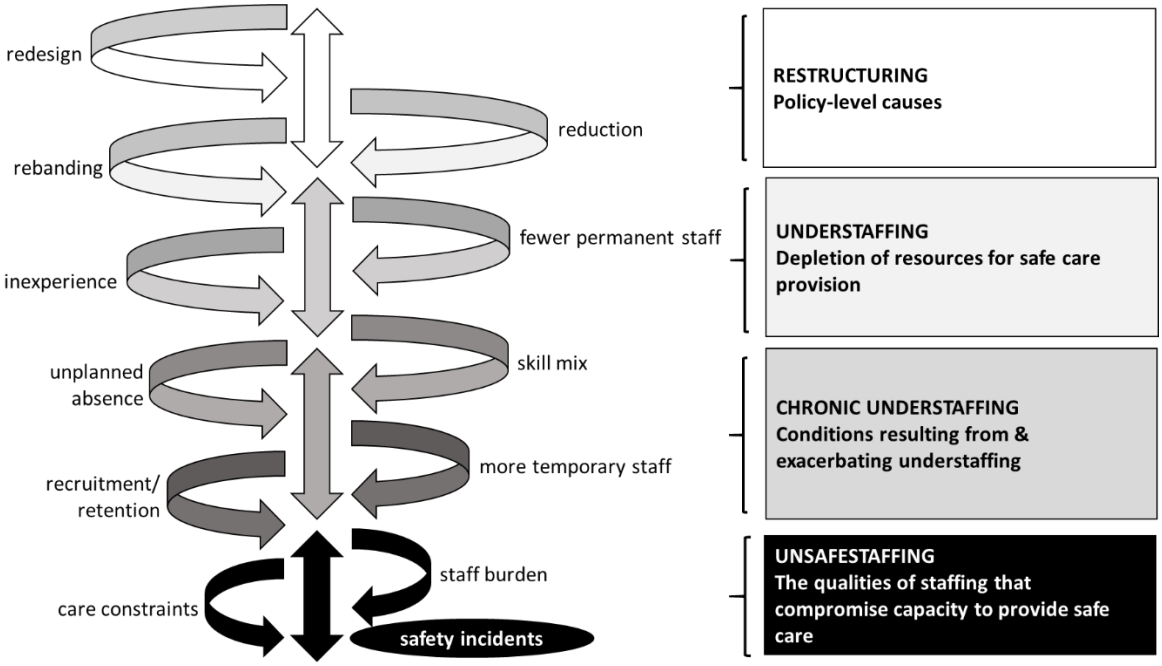

Figure 1: The vicious cycle of unsafestaffing

For our participants, understaffing was the interdependent relationship between inadequate numbers of staff, inappropriate distribution of skills, and inexperience. Experience in this context refers to staff time in role, in the service, ward or team and their knowledge about individual patients.

Participants made a clear connection between this multifaceted conceptualisation of understaffing and the consequences for safety. We identified a consensus in participants' accounts that "safestaffing" involved more than maintaining patients' physical safety:

> *Safestaffing means that there are a number of staff on the ward, an adequate number, and that those staff are adequately skilled for dealing with the ward, which means that there is a mixture of skills and that they know the ward, or at least some of them know the ward. Well in practice… it's not so much about number or the level of the profession, it's often about the quality of that person. (Consultant Psychiatrist)*

This participant's assertion that safestaffing necessitates adequate numbers of skilled and experienced staff offers a stark contrast to what characterises understaffing.

2. Chronic understaffing

According to participants' accounts, understaffing (staff numbers, skill mix and experience) caused the chronic understaffing they were experiencing in mental health services. Chronic understaffing is characterised by staff sickness, poor recruitment and retention, and reliance on temporary agency workers:

> *The situation in the community teams is just awful. They are just so short of staff, so overworked and the turnover of staff has just been appalling. Staff feel demoralised. (Consultant Psychiatrist)*

Several participants highlighted how the rise in temporary staff compounded the difficulties of gathering information about patients:

> *When I go on to wards these days they're mainly dominated by agency staff, which is a massive change. There are times when you go on the ward and you don't know the nursing staff at all. It's difficult to find people that know that individual [patient] well enough to give me the background information about what that person has been like since being admitted. You know, the staff used to know a great deal about them. (*Social Worker / Approved Mental Health Practitioner *1)*

The cyclical nature of these staffing issues was made apparent by participants' conceptualisation of sickness absence and staff turnover as both resulting from and exacerbating understaffing. The following excerpt illustrates how understaffing might lead to and perpetuate chronic understaffing in a cycle of pressure, sickness absence and staff shortages:

> *It causes immense distress. We've had some staff who stayed on extra hours because they felt that it was understaffing. I can think of one staff member who did that a lot and she has now just resigned because I think she got so burnt out. We've had enormous problems with our filling a rota to get fully staffed up. (Consultant Psychiatrist)*

The increased burden on staff is epitomised by their appropriation of responsibility to address the shortfall in services and the impact this had on them personally:

> *It's like spinning plates. And so you spin them and then all of them are wobbling all at the same time, and then they end up just falling over, and it all breaks. And that's kind of what it feels like, to be burnt out really. And it affects my sleep horrifically, there's just so much to do, and so many people to work with and worry about, sometimes, that it's […] having a real effect on your own health. And then I think what happens in teams, is that people become tighter on what they will and what they won't accept [in terms of referrals]. (Community Mental Health Team, Care Co-ordinator, Occupational Therapist)*

Participants frequently used the term “burnout” to describe the effects of feeling overstretched and unable to provide “good enough” care on their physical and emotional health and some said that these working conditions had undermined their confidence in their abilities:

> *I think staff become very stressed and very frustrated… that kind of feeling of not being able to do enough. Nothing is ever good enough and that nothing you do was ever enough and it’s just kind of firefighting really, sometimes it feels like. That, kind of, stirs up feelings of inadequacy I suppose in your abilities as a nurse… (Senior Registered Nurse 3)*

3. Unsafestaffing

Participants described the cumulative effects of understaffing and chronic understaffing and how these compromised their day-to-day work and interactions with patients and other team members with implications for safety.

a. Staff burden

Participants described a range of growing burdens that depleted their time and energy with implications for care and safety. Unsurprisingly, participants said their workloads had increased as a result of reduced staff numbers due to sickness absence and recruitment and retention issues:

> *We had six Senior Registered Nurses (Band 6 Charge Nurse) nurses maybe 18 months ago. As soon as people’s jobs are put at risk, they start applying for other jobs. There was one point where I was the only Senior Registered Nurse (Band 6) on the ward, because of other people being off work and leaving posts. And, for me, it got down to the point where I felt like I was attempting to do the job that six people had done previously. (Senior Registered Nurse 1)*

Some suggested that mandatory administrative requirements such as assessment, care plans and maintaining daily records did not directly contribute to patient care:

> *I think that we do a lot of paperwork, a lot of forms, assessments, risk assessments, care plans, et cetera, and I think a large proportion of it is a complete waste of time. It doesn’t have any direct impact on the patient’s care. (Trainee Psychiatrist)*

Others described how inefficiencies in the system exacerbated their administrative burden. For example, how ineffective IT system interfaces led to unnecessary duplication of tasks and how the fragmented nature of care provision necessitated communication between multiple providers:

> *My team have to spend a lot of time communicating with external agencies and organisations to make sure that the care that’s going in is what they’ve contracted them to do and what they're doing is safe and appropriate and that any concerns are fed back. So it's quite a complex way of doing it. (Clinical Lead Community, Occupational Therapist)*

Many viewed administrative tasks as displacing “therapeutic time” with patients:

You can either see people and manage the risk and treat people, or your paperwork can be up-to-date. There's kind of nothing in between with the amount of people that you're working with. (Community Mental Health Team, Care Co-ordinator, Occupational Therapist)

Participants working in inpatient services often described ratios of staff to beds and minimum numbers per shift that would be augmented with bank or agency staff if there were not enough permanent ward staff. Participants from the community perceived that they were under a greater burden from unplanned staff absence compared to inpatient staff, where minimum staffing numbers would always be covered by temporary staff:

On the ward if somebody doesn't turn up for a shift, if they phone in sick, they've got bank staff, they bring them in. It's just not that simple in the community. And actually we work with far more people and to prevent deterioration, that's where you want to focus resources, I would have thought. So that's bound to have an effect on patient safety. (Community Mental Health Team, Care Co-ordinator, Occupational Therapist)

Paradoxically, participants identified coverage of staff vacancies and absences by agency and bank staff as adding to, rather than relieving their burden (a consequence of chronic understaffing). This was attributable to temporary staff being restricted in what tasks they could perform, lacking ward- and patient-specific knowledge, and varying in quality and commitment:

It can actually make things worse sometimes having a bank nurse, because a bank nurse doesn't know the patient, doesn't know the ward. Of course they are going to feel out of their depth and a bit nervous and I think, you know, patients might pick up on that quite possibly to their advantage. Also, as well too I think it's sometimes kind of nervous being the other staff, because then they are like right, okay, I have to make sure this bank nurse knows everyone, you need to make sure the bank nurse can't be just left on their own on the floor, the bank nurse can't maybe bring such a person out – there are certain things that they can and cannot do. Sometimes the quality of bank staff are very variable quality shall we say, particularly if you are on night shift. They take the shift because they think they can sleep throughout the whole night or put their feet up and read a book. (Senior Registered Nurse 3)

Similarly, understaffing and chronic understaffing put a strain on multi-disciplinary team working by seemingly reinforcing divisions of labour across traditional service boundaries and subsequently adding to the nursing burden. For example, participants reported that nursing staff time was drained as they continued to service other staff groups:

I think some of our medics still feel that it is a nursing role to come in, sit in the ward reviews for hours to feedback all of the patient handovers and then take the decision-making from the discussion back out again back onto the shop floor. So for me, there is no kind of multi-disciplinary team in that, really. (Senior Nurse Manager)

Meanwhile, participants described how nurses had to manage without help with "nursing" tasks sometimes with implications for staff and patient safety:

With the medics we were having the conversations with about an incident that we had, a really, really difficult incident that needed the whole team to restrain, plus extras, and actually the doctors didn't get involved. They were trained in proactive prevention and interventions but they didn't get involved in it. They didn't really feel that it was part of their role that they should have done, and people got significantly hurt and that could have been prevented, I think, had they have been involved or supporting the rest of the team. Yes, so the doctors really struggle with supporting nursing duties. (Senior Nurse Manager)

b. Care constraints

As illustrated throughout this paper, the implications of understaffing and chronic understaffing for the provision of care are numerous. Participants provided a wealth of examples of how various interdependent constraints on the type of care they could provide jeopardised the safety of staff and patients. For example, participants described how, despite targets for assessments to be conducted within a specified timeframe, delays in access to services meant that some patients waited months for further contact:

We have until recently had a waiting list for care coordination, it was over a hundred people. People who have been referred into services, have been assessed as requiring secondary care mental health treatment. Some of those people have been waiting for nine months. (Community Mental Health Team, Care Co-ordinator, Occupational Therapist)

The service went through various transformations which meant that once the service boundaries became tighter and more clear, by the time people got to us they were very, very ill. So had we have caught them a bit sooner, they might not have needed necessarily our level of input but because of clustering and Payment by Results, we just ended up with very unwell people. My caseload of 50, probably about 25-26 were very, very ill, but there were a few colleagues where they had caseloads of between 30-40 and all 30-40 were very, very unwell. (Registered Nurse 2)

It was recognised that delayed access could put a patient's safety at risk:

Somebody is saying that they're going to harm themselves we're referring them to the community team, but they're not getting followed up for days. (Nurse Specialist, Community)

Participants also suggested that continuity of care was disrupted by the conditions of chronic understaffing, again with implications for patient safety:

Being introduced to three care coordinators in a year isn't helpful and I think it increases the demand on duty, because people are ringing up needing support. The duty support's not as intense as what a care coordinator could give. It feels like you're firefighting. (Community Mental Health Team, Care Co-ordinator, Nurse)

If that person's off for a number of months then what happens to their caseload? Because they don't get a bank member of staff in to help out or agency. I suppose that's what makes

it feel unsafe, that if you have long term sickness or people leave and they're not replaced straight away. (Community Mental Health Team, Care Co-ordinator, Nurse)

Related to this lack of continuity was the lack of opportunity to develop therapeutic relationships. Inpatient and community-based participants emphasised how crucial therapeutic relationships were to the care process and promoting recovery:

Mental health is therapeutic work. It's getting to know someone and getting to know what they need and being able to develop trust and rapport with people. If people are seeing a different nurse come in every other day, you know, somebody knocks and their door and says: "Hi, I'm here to do you a one-to-one". And the patient just looks at them and goes, "I don't even know who you are. I'm not going to open up and talk to you." (Student Nurse)

I have three allocated patients and finding time to actually spend prolonged periods with them is difficult, so I suppose I'm not being able to build that relationship that I would like to if we were fully staffed. (Registered Nurse 1)

Some described contact with patients as consequently limited and perfunctory:

When I was working in the crisis team there was just so much going on and there would only be two of us on the shift. We would go to people's houses and literally do a, "Are you alive? Yes, you are. Are you taking your medication? Great, here's some more, okay, we have to go." (Registered Nurse 2)

I think they get very stretched. You get very disheartened very quickly 'cause you don't feel like you're being effective. You are just, you know, handing the pills out at medication time and doing the observation. And I think sometimes that can be frustrating, certainly on the acute ward. (Ward Manager 1)

Many participants viewed the replacement of therapeutic relationships with such tokenistic contact as a threat to safety:

It's having the staff to be able to not just physically keep everybody safe but actually look at the things that go along with that, and for me a big part of that is activity and the other health professionals on the ward. So there's a requirement about observations and how many staff we need to do the job, but actually a bigger part of that is being able to occupy people and be able to have a therapeutic relationship with people rather than just tick a box to say you've looked at them every ten minutes for the last seven hours. (Ward Manager 1)

You can staff a ward with nurses, enough nurses so that the nurses will know where the patients are, and be able to fight fires, and be able to dole out medication, but I wouldn't call that safe. I think you need enough nurses so that patients get their one-to-one time every day and more if needed. And I think that's quite a lot of staff, but that's what you need to run a good ward, and a safe ward ultimately. (Trainee Psychiatrist)

Linked to continuity of care and therapeutic relationships was the ability to provide proactive care, which again, participants viewed as an important part of maintaining safety. For example, participants described how working proactively can prevent incidents:

> *From my experience of working on good wards, if you're adequately staffed during the day, you can be proactive about tackling problems that are brewing, and about planning for problems that might occur out-of-hours. So that when out-of-hours happens, things don't seem that reactive. If anything does come up, less will come up out-of-hours, and if anything does come up, people will feel capable of, either dealing with it themselves on the ward, or knowing what to ask a duty doctor, so they feel like they're not having to be so reactive either. (Trainee Psychiatrist)*

One participant alluded to a connection between the number of completed suicides among patients and the impact of staffing on care:

> *I'm going to be in Coroners' Court three times this year. I've never been in Coroners' Court once before this year, and that, you know, might be coincidence but it kind of speaks volumes to me as well. (Clinical Lead Community, Occupational Therapist)*

DISCUSSION

In this paper, we present staff' experiences and views of the impact of the workforce crisis across mental health services. Participants consistently described what we termed 'unsafestaffing': a vicious cycle of workforce issues which interact and compound to threaten staff and patient safety. We can identify three key messages from our data.

(i) Safestaffing: having enough of the right staff

Staff consistently told us that safestaffing is not just about having a minimum number of staff but about achieving an appropriate mix of skills and experience of the specific service setting and patients' past and recent histories. In acute inpatient mental health settings, it is often custom and not clinical need that drives the minimum number of nurses required for containment activities relative to the budget. More focus is required on community settings, where most mental health care is provided (although staffing data is often not reported or collected here). When assessing safestaffing in mental health services, our findings suggest that the question is not only how many staff are required to promote safety, but how many of each type of staff and in what proportion. In general nursing, experience mix has been identified as a factor for safestaffing by emergency care staff (Wolf et al., 2017) and an association has been found between appropriate skill mix and medication errors (Frith et al., 2012). Our study confirms that the relationship between skill mix and safety across inpatient and community mental health settings is worthy of further investigation in terms of safety, patient outcomes and costs. This is particularly important because it suggests that policy makers, the regulators (i.e. Care Quality Commission), and trust boards are only partially informed by mandatory reporting of inpatient staffing data. Indeed, the participants in this study were open about the limitations of recording, for example, the number of patient observations or home visits. Many suggested that recording perfunctory tasks did not capture the deterioration in the quality of patient contact and therapeutic care that they had witnessed.

(ii) Staffing has implications for safety in mental health settings

Our findings demonstrate that staffing has clear implications for patient and staff safety in inpatient and community mental health settings, just as in other areas of healthcare. Participants described how increased workloads, administration, unplanned staff absence and supporting bank and other staff groups amounted to a burden that displaced therapeutic and proactive one-to-one work with patients. It seemed that staff were expected to service medical and psychological professionals' needs, by for example, holding ward rounds regardless of staffing levels and the drain on nursing resources. Participants also highlighted constraints on care provision which could be delayed, perfunctory and lack continuity. They described care that was reduced to its most basic components or resulted in patients being signposted or referred to other services, with long waiting lists for access to care coordination and subsequent therapy. Many described the loss of one-to-one work that built trusting relationships in which patients open-up to staff and which could subsequently prevent safety incidents. Our qualitative findings echo those of Berzins et al.'s (2018) survey which found that staff identified factors such as burnout, inexperience, lack of therapeutic relationships, waiting times, low staffing levels, high use of agency staff, and caseload size as safety concerns. They also reinforce findings from other studies reporting the impact of rising caseloads and reduced morale on the quality and safety of mental health care provision (Simpson et al., 2016), including broader survey research that has shown how understaffed services lead to disrupted care and less than adequate visits from a constantly changing team (CQC 2017).

Participants also reported that understaffing lead to reduced clinical supervision, reflection and continuing professional development: factors known to reduce burnout and depersonalisation (Johnson et al., 2018). The burdens of administrative duties on staff and their consequences for care provision and staff health (including burnout) in general health settings are well-documented. Burnout – defined as emotional exhaustion, disengagement from patients, and low personal accomplishment (Maslach & Jackson 1981) – is a risk factor for sickness absence and high staff turnover (Sherring and Knight 2009, Fagin et al., 1996) and has also been linked to poor care provision (Hannigan et al., 2000) and patient safety (Hall et al., 2016, Welp and Manser 2016). While similar associations with patient and staff safety in mental health settings are evident, they are less established (Johnson et al., 2018). For example, Brady et al.'s (2012) finding that a stress reduction intervention reduced the frequency of patient safety incidents only implies a link but is concerning given the potential scale of the problem. It has been estimated that burnout affects 21-67% of mental health nurses (Morse et al., 2012). Staff working in mental health settings report some of the highest levels of stress and sickness in the NHS with recent evidence suggesting a 22% increase in absences due to poor mental health (Greenwood 2017).

(iii) Understaffing is self-perpetuating and cyclical

Our analysis provides an insight into how different staffing-related factors interact, accumulate and perpetuate themselves. We found that the features and consequences of understaffing are self-perpetuating and cyclical, leading to a state of chronic understaffing where holes in a workforce depleted by sickness absence and poor recruitment and retention rates are plugged by temporary staff. Participants repeatedly alluded to the chronicity of staffing problems. The chronicity of this

workforce crisis appears to be such that it is difficult to reverse. Paradoxically, the interdependent nature of the factors illustrated in the understaffing and chronic understaffing levels in Figure 1 suggests that policy or practice solutions that focused on a single factor might be ineffective. This is borne out in our findings: although staffing issues seem to disproportionately affect services without access to regular bank and agency staff (unless sanctioned as a replacement for long-term sickness or vacancies), participants were very clear that reliance upon temporary staff only addressed the shortfall in the number of staff and that this came at the cost of the knowledge and experience of service specifics and patients. Focusing on this single factor – staff numbers – works counterintuitively to contribute to chronicity, not alleviate it.

Relationship between staffing and safety

We know that in general nursing there is a relationship between skill mix and safety, and between burnout and sickness absence, staff turnover, poor care, and patient safety respectively. In mental health, there is an implied relationship between stress and patient safety, between understaffing and disruption of care, and between burnout and clinical supervision, reflection and continued professional development. What is less understood is *how* these factors impact on safety in the mental health setting. One mechanism that has been proposed is conservation of resources theory (Hobfoll 2002) whereby an individual cannot perform their expected role due to inadequate resourcing. Others argue that safety is compromised by poor decision-making cause by fatigue (e.g. Linden et al. 2005). These explanations, however, focus on individuals' actions while minimising the role of broader influences on and consequences of staffing issues. Such explanations are therefore at odds with participants' explanations of the relationship between staffing and safety in this study that we conceptualised as *unsafestaffing*. We suggest that unsafestaffing occurs when the burden and constraints on staff resulting from chronic understaffing compromise mental health services' capacity to provide safe care.

We propose that the relationship between staffing and safety, and therefore our findings, are better understood within a systemic framework such as the Yorkshire Contributory Factors Framework (YCFF) (Lawton et al. 2012). The YCFF is derived from a synthesis of factors contributing to patient safety incidents in general hospital care and comprises 20 domains placed in a hierarchical framework on concentric circles. At its centre is '*active failures*' (e.g. errors, violations), then moving outwards are '*situational factors*' (e.g. variations in teams, staff and patients), '*local working conditions*' (e.g. workload, equipment and staffing levels), '*latent/organisational factors*' (e.g. physical environment, organisational policies and procedures), and '*latent/external factors*' (e.g. external policy context). The YCFF has been adapted for use in mental health services with the addition of two sections '*social environment*' (to the *local working conditions* domain) and '*service process*' (to the *latent/organisational factors* domain) (YCFF-MH) (Berzins et al., 2018).

The YCFF-MH provides a useful lens through which to view our findings and to assess their validity and generalisability. The YCFF-MH supports our assertion that understaffing and its relationship with safety are systemic issues resulting from interaction between factors in different domains at varying proximity from a potential safety incident. While participants identified individual-level (*situational factors* in the YCFF-MH) such as skills, inexperience, burnout, and attitude these were portrayed as related to *local working conditions*, including management of staffing levels through reliance on

agency staff, staff workload, and feelings of responsibility. Similarly, when participants described the implications of understaffing (*local working conditions*) they identified consequences within the *local working conditions* domain (e.g. for nursing workload), as well as consequences for *situational factors* (e.g. multi-disciplinary team working, patient characteristics) and *latent/organisational factors* (e.g. discharges, transfers and waiting lists). Additionally, the factors that participants identified as risks to safety can be located within and across these three domains.

The participants in this study did not identify factors within the *latent/external domain* such as policy as contributing to safety or staffing issues but given that it was not the purpose of this explorative study to test the YCCF-MH, we would not expect to identify all factors/domains in our data.

Beyond presenting the various factors that contribute to safety incidents within a systemic framework, the YCCF-MH is not explicit about how these various factors interact to produce safety incidents. In our analysis, we identified a mechanism whereby cumulative burdens on staff displace and constrain care provision. We conceptualised this mechanism as unsafestaffing. Importantly, this mechanism incorporates interaction between factors in the same domain in the YCFF-MH, as well as between factors in different domains. Moreover, our analysis indicates that the implications of these interactions may travel not only inwards to produce safety incidents (*active failures*) but also outwards in a ripple effect on *local working conditions* and/or *latent/organisational factors*. For example, we found that management of staff and staffing levels in the *local working conditions* domain impacts on service process and training and education in the *latent/organisational factors* domain. Again, the systemic approach captures and accommodates such interactions and their multi-directional consequences.

Strengths and limitations

To our knowledge this is the first qualitative study to examine contemporary issues associated with mental health service staffing. Compared to other clinical areas there is a paucity of research into the consequences of staffing issues for safety in mental health services, especially in community settings. Although data for early intervention and crisis resolution teams are collected, they are usually not publicly available. Our findings have the potential to contribute to an improved understanding of these issues. We report the deterioration in the quality of patient contact and therapeutic engagement resulting from understaffing and identified as a risk to safety by front-line staff. By considering our findings within a systemic framework we can hypothesise that policy and practice interventions that address a single factor (such as staff numbers) are unlikely to improve the quality or safety of care. We also provide a much-needed insight into the impact of staffing issues in community mental health services.

Our use of social media (Twitter) to recruit participants is a potential limitation. Although the 'Tweet Chat' focused on safestaffing primarily in mental health, it was organised through a nursing forum, which may have limited the involvement other professional groups. We offset this risk with targeted recruitment tweets at thought leaders and Royal Colleges from other professional groups, resulting in recruitment of a multidisciplinary sample from a range of mental health services. This method of recruitment was arguably a strength in this study because it facilitated recruitment in a sensitive

area where whistleblowing is perceived as a risk to employment. We did not require participants to provide any personally identifiable data, affording them complete anonymity.

It is a criticism of any opt-in study (and not only one using social media for recruitment) that only those with a vested interest in the issue might volunteer. It is important to stress that a qualitative study such as this requires a purposive sample of people who can describe a specified experience, in this case, mental health staffing and safety. That the central theme of a vicious cycle permeated participants' accounts regardless of their profession, service or community/inpatient setting adds validity to our findings. Moreover, this method enabled us to collect first-hand accounts of frontline staff which enabled us to understand in a way that would be impossible to capture by examining staff numbers alone. Furthermore, by situating our findings in the YCFF-MH, we build on an empirically grounded theoretical basis which makes our work generalisable beyond the mental health setting while simultaneously providing a more nuanced understanding of the role of staff management and staffing levels.

CONCLUSIONS

The lack of research in this area has arguably diminished the ability of organisations to establish and maintain safestaffing arrangements with clear implications for the quality of care provision.
The continued policy focus on safestaffing is clearly warranted, especially in mental health as staffing constitutes both the principal cost and main therapeutic driver of care. This paper provides compelling reasons to look beyond regulating staff numbers alone, and to consider staff morale, burden and the cyclical nature of attrition to ensure the delivery of high quality, safe and effective services. Future research should investigate other mechanisms via which staffing impacts on safety in mental health settings.

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