

ORIGINAL ARTICLE

Understanding the decision-making of critical care nurses when restraining a patient with psychomotor agitation secondary to hyperactive delirium: A 'Think Aloud' study.

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E-mail: a.m.teece@leeds.ac.uk**Abstract**

Aims & Objectives: This study aimed to explore the decision-making processes undertaken by critical care nurses when considering restraint to manage a patient with psychomotor agitation secondary to hyperactive delirium.

Background: Psychomotor agitation is frequently cited as clinical rationale for initiating chemical or physical restraint. Despite the presence of clinical guidance for restraint in critical care, wide variations in nursing and prescribing practice are evident. Nurses are the primary decision makers when initiating restraint, but little is known about this process and influencing factors.

Design: A pragmatic qualitative approach was used to explore critical care nurses' decision-making processes.

Methods: A 'think aloud' approach was undertaken. Audio-visual vignettes featuring simulated patients were used as stimulus to elicit decision-making processes from thirty critical care nurses and practitioners. The COREQ checklist was followed.

Results: Five themes relating to restraint were identified: Intrinsic beliefs and aptitudes; Handover and labelling; Failure to maintain a consistent approach; Restraint might be used to replace vigilance; The tyranny of the now.

Conclusions: Restraint was more frequent when staffing ratios were reduced below 1:1 and opportunities for vigilance reduced. Participants described physical and psychological exhaustion when caring for a patient with delirium and how this might lead to restraint to create 'space' for respite. Variations in practice were evident and restraint use appears rooted in custom and culture rather than objective assessment.

Relevance to clinical practice: The lack of pre-emptive management for hyperactive delirium and reduced staffing ratios lead to the decision to restrain to preserve safety in acute agitation. The struggle to manage agitated behaviour is associated with nurse burnout and reduced engagement with therapeutic management methods, suggesting the need for psychological and educational support for clinical staff. Delirium is an important and debilitating form of organ dysfunction which should be collaboratively managed by the multi-disciplinary team.

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1 | INTRODUCTION

Delirium is a rapid onset, reversible, fluctuating condition characterised by inattention, changes in cognition, disordered sleep-wake cycle and increased or decreased psychomotor activity (American Psychiatric Association, 2013). Delirium has a prevalence of 20–50% amongst ventilated critical care patients (Krewulak et al., 2018). Of the three delirium subtypes (hyper and hypo-active, mixed), hyperactive delirium is the least common presentation, yet causes the most disruption to clinical practice. (Krewulak et al., 2018). Hyperactive delirium presents as psychomotor agitation, hypervigilance, a disordered sleep-wake cycle and the presence of hallucinations and delusions (Cavallazzi et al., 2012). Patients with hyperactive delirium risk disrupting life-sustaining treatments through agitated behaviour. Chemical and physical restraints are widely used in critical care with the primary rationale of preserving patient safety (Via-Clavero et al., 2018). However, restraint practice varies widely despite the presence of international guidance and appears to be influenced by culture and usual practice within specific units (Teece et al., 2020). This study aims to explore factors which influence the nurse's decision to apply restraint.

2 | BACKGROUND

In the United Kingdom (UK), restraint is defined in section 6(4) of the Mental Capacity Act (Department of Health, 2005) as the use of force, or threatened force, to make a person do something that they are resisting; or the restriction of freedom of movement. More explicitly, Martin and Mathisen (2005) define physical restraint in critical care as 'all patient articles, straps, bed linen and vest, used as an intervention to restrict a person's freedom of movement or access to their own body' (p. 134). Padded gloves limit the patient's ability to grasp lines through covering their hands. Chemical restraint in the form of continuous sedation is necessary to enable tolerance of interventions such as endotracheal intubation. However, the use of additional pro re nata (PRN) or bolus sedation at a higher dose is used as chemical restraint with the aim of reducing agitation and distress. In this case, sedation would be used in excess of standard therapy (Bray et al., 2004).

An integrative review undertaken as background for this study found large variations in restraint use. Variations were evident in practice in different countries, but also between nurses working on the same unit. There was an absence of precise language to describe restraint, and it was difficult to objectively quantify the point at which restraint became clinically appropriate (Teece et al., 2020). This can lead to feelings of burden and uncertainty amongst nurses tasked with making decisions about restraint (Freeman et al., 2021). The primary given rationale for restraint use was to maintain patient safety (Via-Clavero et al., 2018); however, both chemical and physical restraint have been linked to poor short and long-term outcomes and dehumanising the critical care patient (Nin Vaeza et al., 2020). The decision to restrain appeared rooted in culture and custom

What does this paper contribute to the wider global community?

- Patients with hyperactive delirium are labelled as unpopular and disruptive by critical care nurses. Their behaviour disturbs clinical routines and places additional psychological and physical demands upon nurses.
- The primary rationale for restraint is to preserve patient safety, especially when vigilance is reduced due to reduced staffing ratios. However, participants acknowledged that they were aware that evidence did not support restraint for patients with delirium. Restraint was a 'last resort', which could be used to create respite or space to think critically and avoid mistakes.
- The decision to restrain is primary made by nurses. They expressed resentment towards medical staff who were able to 'just walk away' and did not prioritise collaborative care planning to pre-empt and manage psychomotor agitation.
- There are wide variations in how and why restraint is used. Its use appears to be rooted in custom and routine rather than evidence-based practice. Some factors leading to restraint appear to be modifiable, suggesting that improved support and education may lead to reduced reliance on restraint.

rather than a strong evidence base (Teece et al., 2020; Via-Clavero et al., 2018).

Therapeutic or non-pharmacological management is recommended by NICE (2019) as the first-line method of managing agitation stemming from hyperactive delirium. Therapeutic management may include reorientation, clear communication, facilitating sleep, mobilisation, management of reversible risk factors and open visiting (Herling et al., 2018; Wilson et al., 2019).

Critical care practitioners are bound by law and professional codes of conduct when engaging with delirious patients. Published clinical guidance for chemical and physical restraint was issued in the United Kingdom (Bray et al., 2004; Intensive Care Society, 2021) and the USA (Maccioli et al., 2003). The guidance emphasised that restraint should only be used where there is a clear clinical necessity and if other non-restrictive approaches to managing psychomotor agitation had failed. More recently, Devlin et al., (2018) and Grounds et al., (2014) emphasised that potential exacerbating factors, such as withdrawal or deliriogenic drugs, should be addressed before restraint was considered.

Despite being the primary decision makers (Freeman et al., 2021; Teece et al., 2020), little is known about how nurses arrive at the decision to restrain and how this decision is influenced by external clinical factors and intrinsic beliefs held by nurses themselves. This study aims to explore and understand this decision-making process.

3 | METHODS

3.1 | Aim

This study aimed to explore the decision-making process of critical care nurses regarding restraint whilst caring for a patient with psychomotor agitation secondary to hyperactive delirium.

3.2 | Design

A pragmatic approach was taken. Pragmatism does not align itself with any individual philosophical approach or tradition (Ormston et al., 2014), rather the researcher is encouraged to take a hybrid view and to choose the method most suited to the research question.

'Think Aloud' was chosen to explore how nurses made the decision to apply restraint. This method was proposed by Ericsson and Simon (1980) and enables the capture of sequential thought processes, as participants talk through their decision-making process in respect of a specific simulated clinical scenario. For this study, short audio-visual vignettes were used to present scenarios and thought processes were recorded during telephone interviews. Think Aloud has been previously used in studies based in critical care (Aitken et al., 2009; Han et al., 2007). The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was followed (Tong et al., 2007) (included in Data S1).

3.3 | Sampling

A sampling frame was developed prior to commencing recruitment. The sampling frame aimed to reflect the spectrum of nurse experience commonly found in a critical care unit. Nurses were sampled from novice (newly qualified or under one year critical care experience) through to expert level (senior charge nurses and advanced

critical care practitioners (ACCP). The frame reflected the United Kingdom critical care nurse competences (Critical Care National Network Nurse Leads Forum, 2016). Participants were labelled as novice, proficient or expert depending on the level of critical care experience they gave when recruited (Table 1).

Snowballing via social media was undertaken to recruit participants working in UK-based critical care units. Recruitment was active between July 2019 and February 2020. A total of thirty participants were recruited with critical care experience ranging from 3 months to 30 years. Participants worked in general or cardiothoracic intensive care (ICU) or high dependency (HDU) areas. Demographic data were collected (Table 1). As a previous critical care nurse (AT), the interviewer shared an understanding and experience of the speciality with their participants.

3.4 | Ethics

This study was given favourable review by the University of Leeds School of Healthcare Research Ethics Committee (HREC 18-003) and approval from the Health Research Authority (19/HRA/3341).

3.5 | Data collection

A total of six three-minute-long fictitious audio-visual vignettes (videos), featuring simulated patients with varying levels of risk inference and hyperactive delirium, were developed to provide the stimulus for participants to 'Think Aloud' (Table 2). The 'cues' which could potentially lead to the application of restraint were identified via previous work (Teece et al., 2020) and included medical devices and specific patient behaviours such as attempting to get out of bed. The case histories were representative of patients admitted to critical care units in the UK. The vignettes were reviewed by clinical

TABLE 1 Overview of participant demographics.

Participant group	Number of participants recruited	Mean duration of critical care experience in years	Role
Novice (N)	6	1 year	Band 5 Staff Nurse ^a (n = 6)
Proficient (P)	11	9 years	Band 5 Staff Nurse ^a (n = 6) Band 6 Sister/Charge Nurse ^b (n = 4) Trainee Advanced Critical Care Practitioner ^c (ACCP) (n = 1)
Expert (E)	13	19 years	Advanced Critical Care Practitioner (ACCP) ^c (n = 8) Band 7 Senior Sister/Charge Nurse ^d (n = 4) Practice Development Nurse ^e (n = 1)

^aIn critical care, a band 5 nurse will be involved in bedside patient care. As they gain experience, they will undertake additional skills such as managing complex organ support devices.

^bBand 6 staff are senior nurses with specialist skills and/or management responsibilities.

^cA practitioner who has undertaken extensive post-registration study. Extended skills including advanced physical assessment and prescribing.

^dA senior nurse with management responsibilities such as unit manager.

^eA senior nurse responsible for clinical education.

TABLE 2 Summary of vignettes.

Name and age of simulated patient and identifier.	Handover	Environment	Behaviours	Devices
1. Michelle Paterson (V1) Female, 55 yrs	Subjective. Previous alcohol excess. Labelling 'unpleasant', 'aggressive'.	Nurse also allocated to a further patient. Unit is busy.	Agitation (physical and verbal) Anxiety Restlessness Delirium Device interference Trying to get out of bed	Oxygen via nasal cannulae. Non-invasive monitoring (BP cuff, SpO2 probe). Peripheral venous cannulae.
2. Philippa Edmonds (V2) Female, 50 yrs	Objective. Use of validated tools to describe behaviours. History of attempting device removal.	Nurse also allocated to a further patient due to be admitted.	Agitation (physical and verbal) Anxiety Restlessness Delirium Thrashing Device interference Trying to get out of bed	CPAP mask with high oxygen requirement. Peripheral venous lines. Naso-gastric tube. Arterial line.
3. Jack Simpson (V3) Male, 45 yrs	Subjective Slow wean, high sputum load (disconnecting from vent) Biting & kicking Labelling—he knows what he's doing.	Start of a long day. 1:1 nurse to patient ratio.	Agitation Restlessness Delirium Device interference Trying to get out of bed	Tracheostomy (established) Peripheral venous lines Naso-gastric tube Arterial line.
4. Roger Lakeland (V4) Male, 68 yrs	Objective Day 4 post emergency AAA-repair Sedation hold failed previous day due to agitation.	Second long day. 1:1 nurse to patient ratio.	Restlessness Sedation hold Device interference	Oral endotracheal tube (but due to extubate) Peripheral venous lines and central venous catheter. Ryles tube on free-drainage. Arterial line.
5. Sarah Robinson (V5) Female, 45 yrs	Subjective Poly-pharmacy overdose and previous deliberate self-harm. Labelling—'frequent flyer'	First long day of two. 1:1	Anxiety Restlessness Sedation hold Device interference	Oral endotracheal tube (but due to extubate) Ryles tube on free-drainage. Peripheral venous lines. Arterial line.
6. Sharon Dobbs (V6) Female, 47 yrs	Objective New percutaneous tracheostomy (failed trial of extubation). History of COPD and smoking.	Afternoon of a long day. 1:1	Agitation Anxiety Restlessness Delirium Device interference Trying to get out of bed	New percutaneous tracheostomy Naso-gastric tube. Peripheral and central venous lines Arterial line.

expert to ensure they reflected practice and could capture clinically realistic decision-making processes.

Each vignette began with a verbal handover which provided background details for the patient. Handover was either subjective, offering personal judgements about the patient, or objective, where validated tools, such as the Richmond Agitation and Sedation Scale (RASS), were used to describe behaviour. This intended to explore whether the content of handover influenced patient management. The vignette then proceeded to follow the patient's behaviour as it developed over three minutes.

The vignettes were hosted on an unlisted YouTube channel which was set up for this study. Unlisted channels can only be accessed via a direct URL which was provided to participants approximately ten minutes prior to the interview. Vignettes were assigned via the pre-completed sampling frame to ensure each vignette was watched by participants across levels of experience.

On recruitment, participants were provided with an electronic copy of the consent sheet which provided details of confidentiality and data storage. All data would remain confidential unless a risk of harm was disclosed. Verbal consent was taken and recorded prior to the interview beginning. Participants were assigned pseudonyms.

Telephone interviews were a pragmatic approach as participants were drawn from across the UK and were undertaking shift work. Face-to-face interviews are often regarded as the ideal way to conduct interviews (Braun & Clarke, 2013). However, they can be time-consuming and the lack of anonymity can lead to reluctance to discuss sensitive issues (Braun & Clarke, 2013).

During the telephone interview (AT), participant and researcher watched two or three vignettes. The interviews lasted approximately one hour each. Overall, thirty participants watched a total of sixty-nine vignettes. All interviews were audio-recorded. Data were pseudo-anonymised using a reference number for each participant and stored in a secure password-protected drive.

Whilst the participant was watching the vignette and 'thinking aloud', verbal prompts were provided to encourage further exploration of their decision-making and rationales. Prompts included 'what would be going through your mind now?' or 'could you explain your thought process there?'. Pause points were inserted to facilitate 'thinking aloud' and avoid the participant missing details in the vignettes (Ericsson & Simon, 1980).

3.6 | Analysis

A seven-stage reflexive thematic analysis was undertaken (Braun & Clarke, 2013). Trustworthiness was promoted through following this process and accurately recording decisions made throughout analysis. The context for the vignettes was clearly defined, facilitating transferability of the results to other similar clinical environments and situations (Elo et al., 2014).

The first stage was transcription. 19 of the 30 interviews were transcribed by the researcher, and the remainder were completed by

a transcription service allied with the University and then checked for accuracy (AT). Data familiarisation is the process of iterative reading through which the researcher becomes immersed in the world of the data. Coding was the third step and was undertaken using Nvivo software. Aspects of the transcribed data were identified that could be used to answer the research question (Braun & Clarke, 2013). Groups of codes with shared meanings formed candidate themes which were reviewed through the analysis process. Five themes were identified and named (AT, reviewed by JB and HS). Writing is the final part of the analysis (Braun & Clarke, 2013). This must represent the dominant patterns from the data and define the scope of each theme whilst addressing the research question (Braun & Clarke, 2013).

In terms of reflexivity, the researchers and their role in knowledge production was central to this process of analysis (Braun & Clarke, 2019). The researchers (AT & HS) have a background of critical care nursing, and qualitative research (HS & JB) and kept a diary of reflections throughout data collection and analysis, and JB offered expertise on restrictive practices from a mental health perspective.

4 | RESULTS

Five themes relating to the decision to apply restraint were identified: Intrinsic beliefs and aptitudes; Handover and labelling; Failure to maintain a consistent approach; Restraint might be used to replace vigilance; and The tyranny of the now. The themes and associated sub-themes are presented in Table 3.

TABLE 3 Themes and sub-themes.

Themes	Sub-themes
Intrinsic beliefs and aptitudes	Restraint should always be the last resort Discomfort with restraint Restraint can exacerbate delirium There's a 'right' person for delirious patients
Handover and labelling can influence nurses' decision-making	
Failure to maintain a consistent approach	Inconsistent nursing management of delirious patients Inconsistent medical management Protocols
Restraint might be used to replace vigilance	Delirium requires constant vigilance 'Being doubled' makes restraint more likely
The tyranny of the now.	Repetition can lead to losing patience It is relentless and brutal The doctors can just walk away

4.1 | Intrinsic beliefs and aptitudes and their influence on the decision to restrain

This theme focussed on beliefs held by participants about restraint and delirium and explores how these beliefs inform and influence their decisions. The theme also described how practitioners are not comfortable with the term 'restraint' and how this can lead to confusion where restraint use in practice is not fully acknowledged.

4.1.1 | Restraint should always be the last resort

Participants felt that all forms of restraint should be a last resort and only used if therapeutic management methods have failed repeatedly to reduce psychomotor agitation. Communication was the first-line approach for all participants:

... just talking to patients sometimes does work. Who'd 'ave thunk it? It does work because giving them support through this process is not just like fixing their ribs or you know curing their infection, or just banging them with Lorazepam. (E4 V1)

This participant used humour to express concern that, in their experience, communication could be neglected when managing delirious patients in favour of 'banging' them with sedation to control psychomotor agitation.

4.1.2 | Discomfort with restraint

Participants regardless of level of clinical experience had an instinctive reaction that the use of restraint was considered poor practice, and something they felt was morally uncomfortable. Even the word 'restraint' caused discomfort:

I don't like using that word, but it is what we do isn't it? 'Cause it conjures up all sorts of things!' (E4 V1)

The reluctance to talk about restraint lead some participants to describe chemical and physical restraints as sleep and mittens, respectively. In addition, 'something' was used to refer to the decision to administer sedation:

I probably would just give her something to take that edge off and orientate her again to time and place and where she is. (E9 V5)

Rather than to restrain or control, participants described aims such as 'to chill her out just from a safety perspective' (E11 V2), and 'to keep her calmer and a bit more comfortable' (P3 V2).

A minority of participants gave responses which suggested confusion regarding what constitutes restraint in critical care practice.

I mean, we don't do physical restraint per se, I mean we still use the old boxing gloves as we call them but that's not... well, it is a form of restraint but it's something that enables the patients to not to do any further harm to themselves by pulling lines out or climbing over the cot side. (E4 V1)

Gloves were recognised as a 'form of restraint' but not 'physical restraint per se', suggesting that this participant sees only 'hard' restraints, such as cuffs, as actual restraint.

4.1.3 | Restraint may exacerbate delirium

Manual restraint in the form of firm hand holding or moving the patient's hands away from devices was considered to add to patient distress and feelings of being 'trapped' (E12 V4). Padded gloves were thought to cause annoyance to patients, leading to them 'just concentrating on trying to get the gloves off... it's just more distressing for them' (N3 V2). Participants considered chemical restraint ineffective in dealing with the root causes of delirium. For example, Haloperidol was described as 'a symptom blocker or masker... rather than addressing the underlying problem' (N2 V1).

4.1.4 | There's a 'right person' for delirious patients

There was a belief that some nurses are better at coping with delirious patients than others. Attributes associated with being 'the right person' were good communication skills, patience, thinking creatively, engaging actively with rehabilitation and avoiding restraint use. Nurses who are 'good' with delirious patients seem to have abilities which were admired:

But you'll see some nurses who are great, they'll get them up, walk them about, spend hours talking to them. On HDU, they're just better at managing those patients. (E1 V4)

Nurses perceived to be 'good' in this role were allocated more frequently to delirious patients. Such nurses were described as having higher levels of 'tolerance' (E9 V1) than other members of staff. Participants also described colleagues who were unwilling to care for a patient with delirium:

And some people just can't handle it. You know, no matter how many times they come to look after the patients. (E4 V6)

Being unable to cope with agitated behaviours and unable or unwilling to engage with therapeutic management was associated with restraint use. A newly qualified nurse observed that some colleagues were very quick to apply restraint:

... whereas others are a bit more quick to maybe rush ahead and maybe say, oh we need to put gloves on this patient, just a bit quick to rather than look at other ways to try and manage them. (N5 V6)

They noticed that for these colleagues, restraint was not a last resort. Rather it was quick and an easier solution than spending time engaging in therapeutic delirium management.

4.2 | Handover and labelling can influence nurses' decision-making

The second theme explores how preconceptions held by the nurse or generated through handovers can influence the way the patient is approached and how decisions regarding restraint are made.

Handover seemed to play a role in activating stigma which may have influenced participants' decision-making. An agitated and delirious patient with a history of alcohol excess was depicted in vignette 1. Handover reported aggression overnight and concluded by advising staff to discharge her to the ward as soon as they could. This personal judgement-driven handover triggered negative responses:

I think as much as we all kind of go in with a positive mind-set, she's clearly quite well known as a potential, for want of a better word, trouble maker patient who nobody's really going to enjoy, she's got that reputation so it's going to affect how you deal with her. (P3 V1)

Labelling can be a powerful act in nursing and is perceived to be commonplace in handover. This was noted by a senior ACCP in response to a further subjective handover given for vignette three:

I think invariably we negatively label these people because they are a difficult management problem, nobody wants to stand at the bed all day long managing these patients and not feel as if they are getting through. So often we label them negatively and often for the wrong reasons. (E13 V3)

For this participant, labelling has a role in coping and helping the nurse to feel that they have done what they can and that the patient's behaviour is a fault intrinsic to the patient rather than related to the nurse. The act of placing the fault with the patient seemingly positions nurses in opposition to a 'difficult' patient.

4.3 | A failure to maintain a consistent approach

In this theme, participants describe the variety of approaches they used or have seen in practice to manage hyperactive delirium. It

also explores the frustrations experienced by nurses at inconsistent medical management decisions such as deviations from protocols.

4.3.1 | Inconsistent nursing management

Participants discussed the difficulty of objectively quantifying levels of agitation and treating them consistently: 'One person's agitation for another isn't, so you don't know' (E1 V4). Although tools such as the Richmond Agitation and Sedation Scale (RASS), which aim to objectively quantify agitation levels, exist, there remained a degree of subjective interpretation:

...so what you would classify as a safe RASS to be able to double up with these patients might be very different to what I classify as a safe RASS. (E8 V2)

Subjectivity might impact on the RASS level assigned to the patient, but also to the level of agitation at which is it appropriate to 'double up' the patient and reduce the nurse to patient ratio to 1:2.

4.3.2 | Inconsistent medical management

Inconsistencies in the way delirium and psychomotor agitation were managed by medical or prescribing staff were described. Participants commented on differences in prescribing practice and use of a 'drug of choice' rather than a clear evidence-based choice. Several participants were ACCPs and able to prescribe drugs as part of their role. Differences were noted in their practice:

...it's just obviously what you see fit. I've got a colleague who prefers olanzapine to Haloperidol and he's had some good results with it. (E11 V2)

Drugs were described as passing in and out of favour in response to the 'preferences' (P9 V1) of senior medical staff. In addition, doctors could over-rule protocol and select a favoured drug. Such inconsistencies led to confusion amongst the nursing staff who were responsible for administering medications:

So I think sometimes it can vary from shift to shift and I know I've had it where they've said 'we're not going to give any more Lorazepam' and then the next night I've come on and they've prescribed Lorazepam. I'm like, 'okay, so what is it we're actually doing? What is the sort of like goal?' Sometimes I feel like it's a bit, it can be a bit, up and down with what decisions are made. (P6 V2)

Inconsistency can lead nurses to lack confidence in seemingly contradictory medical decisions.

4.3.3 | Protocols

Protocols have the potential to reduce variations in practice through implementing standard operating procedures. Protocols provided some participants with 'peace of mind' (P10 V6):

...the protocols that we have are quite good. It's just telling you like, do the test if they are CAM-ICU or not, and if they are, you do these things, and if it doesn't work, go to the next step, if that step doesn't work just try the next one. (P8 V6)

A senior critical care staff nurse felt that using a protocol and being able to evidence that they had tried steps involving therapeutic approaches would enable her to approach medical staff and request chemical restraint:

You like show them and tell them like 'I've been doing this and this, it hasn't worked, it hasn't helped the patient. Next step is this one... What do you think?' (P8 V6)

However, the majority of participants had no experience of working with protocols to guide the management of psychomotor agitation or felt that such protocols were not appropriate for critical care:

I rely a lot on intuition. Like how I feel the patient is gonna be or not gonna be. But as I say, that's because I've been experienced with these sort of patients for a long time now. (P8 V6)

This participant felt able to accurately predict patient behaviours from experience and use this knowledge to manage them appropriately. Where protocols existed, they might be modified by expert practitioners:

And there is a protocol and the pharmacist is very good and he'll look at all the drugs and he'll say 'we don't want them to have that, we'd like them to have this'. (P6 V2)

Deviations from protocol were couched within the need to provide patient-centred care 'because again it has to be down to the patient doesn't it? Rather than any particular protocol' (P9 V1). This critical care charge nurse felt that a protocol for physical restraint would not be useful as this was primarily a nursing decision and would be dependent upon the patient and circumstances.

4.4 | Restraint might be used to replace vigilance

This theme focussed on the challenges experienced by nurses who are asked 'double up' with a delirious patient. 'Doubling-up'

described a situation where a nurse was tasked to care for two patients of lower physiological acuity, rather than nursing a patient 1:1.

4.4.1 | Delirium requires constant vigilance

Participants emphasised the need for vigilance when caring for patients who are delirious. They described the unpredictability of delirious behaviours and the need to be close by the patient 'because if I turn my back on her, god knows where she could end up' (E3 V1). Ensuring patient safety was the dominant rationale for vigilance. The nurse assumed full responsibility:

You can't leave someone like that, you can't leave their side. And that's the way it is. If somebody wants you to go to break, then you have to get somebody to replace you. (P4 V4)

Over a long shift, typically twelve hours, maintaining such a level of concentration was draining. A busy shift was associated with a reduction in available support and 'eyes' to watch a patient: '... there's physically less people on the unit just to keep an eye...' (P6 V2). Lack of vigilance was linked to poor staffing and the use of restraint. An ACCP described discomfort in this situation:

I really don't like sedating people or giving them chemical restraints, it just doesn't seem the right thing to do. And then it's simply because we haven't got enough staff or the experience to sit there with the patient. (E13 V1)

A further expert participant described feelings of being 'trapped' and that 'options are limited' whilst watching vignette 2, which depicted a highly agitated CPAP-dependent patient:

...so you're increasingly reaching for chemical restraint, for sedation, because it's often the only way that you can manage a patient like that, because there physically aren't enough... you know, ideally you'd have like two nurses there in a brilliant kind of utopia. (E6 V2)

In contrast, requesting chemical restraint to manage a patient if an additional member of staff is not available appeared to be the logical next management step for some participants:

And if I can't get a staff to do the specialising, I would be asking the doctor to give me something so that I could settle her down so that she won't try to get out of the bed and cause any harm. (N1 V6)

This participant does not articulate feelings of frustration at the need to request sedation to manage a situation which could

have been prevented through allocating someone to sit with the patient.

4.4.2 | 'Being doubled' makes restraint more likely

Vignettes 1 and 2 depicted single organ failure HDU patients. Participants were told that would be nursed 2:1 or 'doubled' with another patient. These patients caused the greatest reported stress to participants and were the most frequently restrained. It was acknowledged that delirious patients are more time-consuming than sedated and ventilated patients:

...We will often nod sagely to each other and say 'you know, they're almost a level three patient aren't they?'. With this delirium, they're taking up so much of our patience.' And when we are asked to add up the numbers in our dependency, they are still half a patient. (E3 V1)

This participant introduces the idea of a 'hierarchy of organ failures', where delirium is less frequently than other organ dysfunctions when assessing patient acuity.

4.5 | The tyranny of the now

This theme focussed on how it feels to be the nurse caring for a patient with delirium. Participants described the emotional and physical labour involved with attempting to ensure patient safety whilst simultaneously undertaking other nursing tasks.

4.5.1 | Repetition can lead to losing patience

The experience of nursing a patient with hyperactive delirium was consistently described as emotionally and physically exhausting by participants of all levels of expertise. Participants attributed this exhaustion to the repetitive nature of nursing a patient with delirium:

And you kind of almost dread your day with a delirium-positive patient because it's going to be quite monotonous... you're going to be saying, don't pull that, get back in bed, don't do this, don't do that. (E11 V3)

Participants described how repetition of instructions to patients who were described as having 'memories like goldfish' (E4 V6) led to loss of patience as the shift progressed:

I think it gets tiring as the day goes on, like initially when you're coming on a shift you're like, oh, you

know, it's fine, but then by the end of the day you just get really tired and you get tired of repeating yourself and explaining the same thing. (N3 V3)

The nurse's therapeutic engagement with the patient becomes increasingly limited as they lose patience:

I think we would start becoming a bit short tempered and probably less patient, less tolerant, and looking for a solution. (E9 V1)

For some participants, this 'solution' involved chemical or physical restraint. However, an ACCP explained that she did not believe delirious patients should be punished:

... you can be infuriated but you can't take it out because they're not doing it intentionally, like, they don't know where they are, they don't know why they're there, and that's how I feel about that. (E5 V3)

This participant demonstrated empathy for the patient and was able to step back and consider the clinical reasons behind their agitated behaviour.

4.5.2 | It is relentless and brutal

A small number of expert participants gave detailed descriptions their emotions and experiences whilst caring for a patient with hyperactive delirium in response to the vignettes:

...looking after a patient like that, especially when you're doubled, is brutal... you can't concentrate, you can't rest in terms of allowing your thought processes to go on. There's the constant worry and stress and strain that you know, the patient will have an accident and hurt themselves, for which you will be directly responsible for, there's the stress and strain that you'll miss something next door. (E6 V1)

The loss of control seemed linked to the situation as a whole rather than the patient's behaviour in isolation. The nurse is unable to see beyond the moment, and risks making mistakes because 'you can't maintain that level of intensity for that long' (E6 V1). They likened the feeling to the 'worst moment' which lasts forever:

... 'the tyranny of the now', cause it just goes on, you know. You have no control over it. It is just the situation you find yourself in. (E6 V2)

Senior participants described how they felt that restraint, especially chemical restraint, was often used for the benefit of the nurse rather than the patient:

We do still use Haloperidol unfortunately, it does work in the short term, not quite sure how helpful it is in the long term but when you're the nurse in that bed space and you're completely frazzled and you can't get anything done and the patient's a danger to themselves sometimes you're not left with any alternatives. (E3 V6)

A tension between evidence and practical need is articulated.

Senior nurses played an important role in recognising when nurses needed a break. Breaks facilitated the maintenance of high-quality care: 'you feel a bit more refreshed and you can give the same care again' (N3 V2). One sister described how she considered offering a change of patient to staff during allocation:

I don't think it's fair on staff to look after the same kind of agitated patients on shift and shift and shift like they are on three nights. I don't think it's fair on me, because it would give burnout to myself. (P10 V2)

A considerate team was seen as essential to complete challenging shifts: 'you can manage anything with a really good team can't you?' (P6 V2). In contrast, poor support from nursing colleagues was associated with increased anxiety and frustration, and reduced opportunities for vigilance:

I think again it does depend on who you're working with. It doesn't matter if you're short staffed if you've got a really good team there, but we've all had it where... they literally just look at their patients and their eyes won't leave them. (P6 V2)

Greater collaboration and team working amongst nurses could help to enable breaks, vigilance and reduce the use of restraint.

4.5.3 | The doctors can just walk away

Participants described a lack of support from doctors when managing agitation. They were able to walk away, whilst the nurse was 'stuck there' (E6, V2). This was linked to a lack of empathy and appreciation:

I don't think they appreciate how much of a challenge an agitated patient can be... obviously they see when the patient is like really aggressive, and they can maybe accept that as a challenge, and prescribe you something. But then they still walk off. (P1 V3)

The division of roles between nursing and medical staff was articulated. An expert participant noted that the doctor's reaction would be very different if the agitation impacted on their safety:

...as soon as they (*doctors*) get hit, the patient gets sedated. And literally, immediately the medical staff

are in any danger, bang, sedated, tubes, you name it, security, police, everything else. But they'll quite happily stand at the end of the bed and watch as you're wrestling... an 18 stone guy who's determined to punch your face off, you know, 'oh yeah, might just have to ride this out.' (E6 V2)

A critical care outreach sister described how she believed that doctors fail to fully appreciate her experience or the patient's distress:

They'll prescribe you some Haloperidol. They'll prescribe you some Lorazepam, but no, when you've got a patient that's smacking you and obviously really distressed, they don't want to know. (E2 V4)

Doctors were also criticised for their lack of engagement in decisions regarding the use of physical restraint, which was largely agreed to be a nursing responsibility:

The doctor's play a role in signing the sheet... It's the nurse who decides, let's get the boxing gloves, let's put them on... (P1 V3)

The divide between nursing and medical staff is emphasised, together with a lack of respect for their non-engagement in decisions. The same participant described the sort of support she would like to receive:

Because I think the doctors could help support the nurses, in terms of like saying, oh well, why is he agitated? Why's he got delirium? Kinda like more of a conversation, and a decision together to say what the best management for them would be. (P1 V3)

Collaborative decision-making was thought to promote improved patient care, a more cohesive team, and reduced reliance on restraint.

5 | DISCUSSION

This study builds on previous research exploring physical restraint in critical care which have found that nurses experience the decision-making process as stressful and that it is difficult to challenge a clinical culture which accepts restraint as part of safe practice (Freeman et al., 2021; Kassew et al., 2020; Via-Clavero et al., 2018). This study differs from previous research through considering both chemical and physical restraint and how nurses make use these methods in combination. An innovative data collection method was used to explore the decision-making process in a simulated clinical situation which aimed to reproduce the time pressures of clinical practice.

Our results suggest that the sampled nurses and ACCPs view restraint as a negative intervention and are keen to avoid it. However, they consider that restraint has a role in ensuring patient and device

safety, especially when vigilance is not possible due to reduced staffing or 'being doubled'. For some participants, this caused moral distress. Caring for a patient with hyperactive delirium was consistently described as physically and emotionally exhausting. Some participants expressed that they would use restraint to create space to think critically and avoid making mistakes.

Participants described how they perceived there to be a hierarchy of organ failure, with doctors considering delirium to be of low importance. This was in direct contrast to the nursing experience of caring for a patient with psychomotor agitation secondary to delirium, which was described as relentless in its repetition and caused considerable stress to the nurse. Previous studies have suggested that nurses perceive delirium as having a low priority amongst medical staff (Zamoscik et al., 2017). Both vignettes 1 and 2 depicted self-ventilating patients who were agitated. Such patients are breathing without the assistance of an artificial airway and could therefore be seen to be lower acuity. Although both patients represented a nursing challenge due to their behaviour, it was suggested that medical staff would be more attentive towards a CPAP-dependent patient, who was at higher risk of physiological deterioration. Participants believed that delirium and psychomotor agitation alone are a nursing responsibility, whilst other forms of organ failure are of greater interest to medical staff. This difference in experience and priorities caused some participants to express resentment towards their medical colleagues, who were able to walk away. The nurse's experience of managing delirium was downplayed. Such resentment can erode team cohesion and promote divisions between medical and nursing staff (Palacios-Cena et al., 2016; Unoki et al., 2020). Delirium is an important form of organ dysfunction which has profound short- and long-term impacts on patient recovery (Salluh et al., 2015). As such, its management is the responsibility of the multi-disciplinary team, including interdisciplinary support at the bedside to facilitate optimal care and minimise reliance on restraint.

Patients with hyperactive delirium were unpopular amongst participants. They were described as more challenging to nurse than a sedated patient, and their 'untidy' appearance caused nurses to experience stress. Nursing in critical care units is governed by routine. Cardiovascular observations are taken and charted on the hour, pressure area care is provided 2–4 hourly, and drugs and infusions are maintained. Psychomotor agitation presents a challenge to nurses' power and disrupts routine (Michaelsen, 2012; Rytterström et al., 2011). Restraint can offer the opportunity to regain control and re-establish routine. This study, alongside others, suggested that restraint is embedded in critical care nursing culture as it is perceived to facilitate safety and the appearance of a neat and well-cared-for patient (Via-Clavero et al., 2018). Similarities can also be seen with mental health nursing practice. Walsh et al., (2020) studied nurse decision-making when administering psychotropic medications to patients with dementia. Rationales were again embedded in preserving safety and maintaining a routine.

Nursing handover facilitates the sharing of judgements of dysfunctional or deviant patient behaviour (Carveth, 1995). Subjective terms such as 'mad', 'not a proper ICU patient' and 'like a worm on a

pin' were used by a minority of participants to describe behaviours caused by hyperactive delirium. Such descriptors further dehumanise the patient with delirium. Objective tools such as RASS and CAM-ICU were rarely used by participants to describe the simulated patients. Once a decision was made to label a patient as deviant and a consensus was reached between the clinical team, exclusionary measures could be applied (Carveth, 1995). Such measures include physical and emotional avoidance (Michaelsen, 2012) and lead to un-supportive nursing care. This is in direct opposition to compassionate and patient-centred care which forms the foundation of nursing practice and therapeutic delirium management (Jones et al., 2016). When a nurse's behaviours begin to contradict their professional and moral values, for example, if they avoid interacting with a vulnerable patient or use restraint to control their behaviour, distress and compassion fatigue can result (Jones et al., 2016).

Labelling is one way nurses can regain emotional control or power over patients exhibiting behaviour deemed to be deviant (Smith & Hart, 1994). Faced with the emotional labour of caring for a patient with delirium, nurses repress their own feelings, and engage in 'surface acting', to ensure any unprofessional feelings are not evident in their practice (Michaelsen, 2012). In critical care, this might cause the nurse to suppress their feelings of disappointment and frustration at being allocated to care for a delirious patient. This act further drains the nurse emotionally. In the event of prolonged patient behaviour which deviates from that of a 'normal' or 'proper' ICU patient, nurses can detach from the patient physically and emotionally in order to cope (Michaelsen, 2012). Such behaviour might involve requesting a colleague to take over care of the patient, not being 'present' during interactions or using restraint to control the patient's behaviour. Effective therapeutic management of delirium requires the nursing presence. Regular reorientation to time and place, restoring the sleep/wake cycle, early mobilisation and reduced sedation are cited as methods of reducing delirium (NICE, 2019) and humanising the ICU experience. Senior nurses and doctors have a duty to emphasise the value of effective therapeutic management of delirium and work to dismantle the stereotype of the unpopular patient. Stereotyping minimises the experience of the patient and further dehumanises them and reduces the quality of care provided.

5.1 | Strengths and limitations

This study aimed to recruit participants whose experience was representative of nursing staff employed on critical care units to explore how they made management decisions when caring for patients with hyperactive delirium. The study used a 'Think Aloud' approach. Audio-visual vignettes featuring simulated patients were used as stimulus. Although care was taken to ensure the vignettes were as true to life as possible, some participants remarked on elements that they perceived as unrealistic. This disrupted their decision-making through breaking their immersion in the vignette. Additionally, the vignettes had a linear structure. The scenario proceeded as filmed regardless of any decisions made. This was

experienced by some participants as frustrating and again broke their immersion. These limitations may have been avoided if direct clinical observation had been undertaken. However, that approach risked disrupting clinical care and a remote method was deemed more pragmatic.

Strengths of the study included its remote approach. Telephone interviews and internet-hosted vignettes offered flexibility to both researcher and participant. In addition, the vignettes were a novel and innovative data collection method which aimed to recreate the situations where clinical decision-making would occur without disrupting practice.

5.2 | Implications for practice

The findings support that the safe and effective management of hyperactive delirium in critical care requires greater clinical support and education. Hyperactive delirium presents challenges to both the bedside nurse, clinical managers and doctors. Psychomotor agitation risks disrupting life-sustaining devices and treatment and also disturbs routine and compromises patient safety. Participants expressed concern that psychomotor agitation was not proactively managed by doctors and had less importance than other forms of organ dysfunction.

There was confusion as to what constitutes restraint and when it is clinically appropriate. This was further complicated by the lack of precise language to describe restraint in critical care, with restraint referred to as 'sleep', 'mittens' or 'something'. This suggests a discomfort from clinicians around using restraint and a need for greater support and education.

The COVID-19 pandemic has led to reduced staffing ratios (UK Critical Care Nursing Alliance, 2020) in the UK and internationally and considerable psychological pressure on nurses (Alharbi et al., 2020). This study linked burnout to increased reliance on restraint. Therefore, sustained clinical education and refreshed guidelines are indicated to ensure that restraint is not used inappropriately or to excess.

6 | CONCLUSION

This study demonstrated critical care nurses' decision-making processes when applying chemical or physical restraint to manage hyperactive delirium. A number of potentially modifiable influencing factors leading to restraint were identified. Restraint was more common when a nurse was 'doubled' and opportunities for continuous vigilance were reduced, suggesting that the provision of additional support could reduce reliance on restraint. Participants described the physical and psychological exhaustion which resulted from long shifts caring for a patient with delirium. Restraint appeared to play a role in creating space for the nurse to think critically and re-establish routines seen as essential to patient safety.

7 | RELEVANCE TO CLINICAL PRACTICE

The results of this study emphasise the need to develop a consistent approach to restraint in critical care. Participants highlighted the need for collaborative decision-making between the nursing and medical teams which could pre-empt dangerous psychomotor agitation and potentially reduce the need for restraint. The results also highlighted the physical and psychological challenges encountered by nurses when caring for a patient with hyperactive delirium. A need for support from senior nursing and medical staff was identified alongside the role of reduced staffing ratios in the perceived need to restrain.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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