


# Restraining patients in acute care hospitals—A qualitative study on the experiences of healthcare staff

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## Abstract

**Aim:** The focus was to explore the perceptions and experiences of healthcare workers with respect to the use of restraints in acute care hospitals.

**Design:** The study followed a qualitative design.

**Methods:** Three topic-based focus group interviews were conducted, involving 19 participants from the fields of nursing, physical therapy and medicine. For data collection and analysis, the method of mapping techniques for rapid qualitative data analysis was used. After discussing and validating the individual mind maps, all data were condensed to identify the key findings.

**Results:** Participants described restraints as safety measures for the patients. The implementation of most restraints was led by nurses. The use of restraints differed significantly, even in the interprofessional team. Attitudes and experiences were the main determinants for restraint use. Nurses asked for more discussion about restraints in the team, for more support at an interprofessional level and for better guidelines to help with the decision-making process.

## KEYWORDS

acute care, general hospital, healthcare workers, interprofessional collaboration, qualitative research, restraints

## 1 | INTRODUCTION

Physical and mental integrity is a fundamental human right, but physical restrictive measures are used in all healthcare settings (Barbui et al., 2021; Gunawardena & Smithard, 2019; Jacobsen et al., 2017; Scheepmans et al., 2020). Even though they are often employed for patient safety, restraints violate patients' rights and therefore require careful consideration (European Union, 2012). Internationally, there are as yet no universal guidelines on this topic (Restraint Reduction Network, n.d.). However, in few situations, do restraints serve to protect other, and there are guidelines and standards at national level in the individual countries that address

the issue of restraints, which are based on the legislation of those respective countries (American Medical Association, n.d.; National Institute for Health & Care Excellence, 2015; Swiss Academy of Medical Sciences, 2015). Although the national guidelines are often adapted individually at organizational level, there is a lack of clear guidance for the interprofessional decision-making process of health professionals when assessing the application of restrictive measures in the different acute care hospital settings (Teece et al., 2020). In contrast to the psychiatric setting or long-term care, currently in the acute care hospital setting restraints are often based on unwritten rules passed on within hospitals or units either verbally or by example (Freeman et al., 2016). As a result, there is wide variation in

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the use of restraints in different acute care hospital settings (Luk et al., 2015). This variation can pose a risk to patient safety. In order to reduce the use of restraints and eradicate inconsistent and unsafe use, the views of healthcare staff (nurses, physicians, physiotherapists etc.) are relevant and must be taken into account in the context of the lack of clear guidelines.

## 2 | BACKGROUND

The use of restrictive measures in psychiatric and long-term care settings has been the subject of many studies and initiatives designed to reduce use of restraints and to improve the safety of services for patients and staff alike (Cusack et al., 2018; Freeman et al., 2016; Scheepmans et al., 2020). In contrast, in acute care hospitals, the topic is less discussed and the number of studies is much lower (Gunawardena & Smithard, 2019). This seems astonishing because the rapid turnover of patients in acute hospitals, increased multi-morbidity and the higher age of the patient population mean more complex care is required and volatile situations arise more frequently, for example due to delirious patients, to which healthcare staff must respond (Aiken et al., 2017). Staff shortages and high staff turnover lead to staff members having limited experience (Van Staden, 2017). Taken together, these factors result in greater use of restraints in acute care hospitals (de Bruijn et al., 2019).

Restrictive measures in acute care hospitals include physical (mechanical), chemical (pharmacological) and environmental restraints (Registered Nurses' Association of Ontario [RNAO], 2012). Physical restraints restrict the direct, physical freedom of movement of a patient by means of belts, fixed chairs, bed rails or by being held by a member of staff (Möhler et al., 2016; RNAO, 2012). Chemical restraints include all sedative medications that are administered with the sole aim of preventing violent agitation or other disturbing behaviours (RNAO, 2012). Environmental restraints, such as locked wards, one-to-one supervision and electronic measures (cameras, sensor mats or sensors that alert when a certain area is vacated), monitor and limit the mobility of a patient (RNAO, 2012). The prevalence of restraints varies widely between the different wards in the acute care hospital, with intensive care units being clearly in the lead when it comes to using restraints (Krüger et al., 2013; Mion, 2008). There is also a variance between different countries and different studies, which can be explained by, on the one hand cultural and legal conditions and, on the other hand, by different definitions of restraining measures (Krüger et al., 2013; Lockwood et al., 2018; Martin & Mathisen, 2005).

The most commonly cited reasons for the use of restraints include self-endangerment of patients through falls and the injuries associated with them, and to prevent the interruption of potentially vital treatment, through unplanned pulling of catheters and tubes in acutely confused or otherwise cognitively impaired patients (Ang et al., 2015; Hofso & Coyer, 2007; Luk et al., 2015; Thomann et al., 2021). In few situations, exrestraints serve to

protect others (Evans et al., 2003). The most common physical restraints in hospitals are bed rails, wrist fixations, mittens and body vests (Gunawardena & Smithard, 2019; Thomann et al., 2021). Analgesic sedatives, anxiolytics and, rarely, neuromuscular blockers are used as chemical restraints (Hofso & Coyer, 2007). Thomann et al. (2021) indicated that electronic restraints were used even more frequently than chemical restraints. Previous studies could not prove that restraints have the intended effect. Instead, they were found to be an unreliable and ineffective method, e.g. to prevent self-extubation on ICU when used as the sole method (Chao et al., 2017; Perez et al., 2019). Falls also do not appear to be prevented by environmental restraints such as alarm sensors or by physical measures (LeLaurin & Shorr, 2019). In fact, there is evidence of significant physical and psychological health risks posed by restraints (Gunawardena & Smithard, 2019; RNAO, 2012). Physical restraints and prolonged sedation can result in a variety of negative consequences ranging from medical to psychological adverse events (Evans et al., 2003; Kandeel & Attia, 2013; Warlan & Howland, 2015). Nevertheless, restraint practice in acute care hospitals is mainly seen as a safety measure for patients, and healthcare workers can often see no other way to ensure patient safety (Cunha et al., 2016). Healthcare workers described an ethical dilemma in deciding when to apply restraints because they had to choose between protecting the patient and other patients or staff by restraining the patient or respecting the patient's autonomy by not restraining him or her (Goethals et al., 2012). It was also shown that healthcare staff's perception of patient behaviour and their assessment of the overall situation had an important influence on the practice of restraint use (Goethals et al., 2012).

Given the lack of evidence, the established risk factors, the insufficient standards at hospital level and the frequent use of restraint in acute care hospitals, it is of great importance to investigate the use of restraints from the perspective of the healthcare staff applying these measures. To reduce restriction in this setting it seems important to know attitudes, beliefs, experiences with restrictive measures and reasons for these measures from the viewpoint of staff. Accordingly, the aim of this study is to describe how healthcare staff in acute care hospital settings define restrictive measures, what typical situations they describe for the use of restriction and their experience in the application of restraints.

## 3 | METHODS

### 3.1 | Design

In order to investigate the perceptions and experiences of healthcare staff about the use of restraints in the acute care hospital setting, a qualitative study was conducted that included three topic guide-based focus group interviews with healthcare staff. The data collection and analysis were carried out through the method of mapping techniques for rapid qualitative data analysis, based on Burgess-Allen and Owen-Smith (2010).

### 3.2 | Participants, sampling and setting

All healthcare staff (i.e. nurses, physicians, physiotherapists) with experience in restraining patients were invited to participate in the study. There were no other inclusion or exclusion criteria. Participants worked on the acute geriatric unit (AGU), the intermediate care unit (IMC) and the intensive care unit (ICU) in a university acute care hospital in the German speaking part of Switzerland. These units were selected because they recorded a high frequency use of restraints. The clinical nurse specialists of the units recruited the participants by distributing invitations. These information materials described the purpose of the study and the proposed interview procedure. Participation was voluntary.

### 3.3 | Data collection and analysis

In accordance with Burgess-Allen and Owen-Smith (2010), the first step in data collection and analysis was to develop a topic guide. Table 1 shows the main subjects of the topic guide, which was based on literature by SSD and IB and discussed among all members of the study group.

The second step was a face-to-face focus group interview with each unit involved, using the topic guide. The interviews were held in German and took place from 4 February 2020 to 11 May 2020. Each interview involved between five and eight participants (Table 2). The interviews were mainly conducted by the authors SSD and IB, both female, both with a background in nursing, i.e. they hold clinical experience in the settings analysed but work solely in research today. The interviewers did not have a personal relationship with any of the participants. Author KUS (male), author ST (female) or a research assistant supported the interviewers by writing the mind maps on flip charts. A mind map was created for each subject of the topic guide. Participants' statements and contributions during the interviews were noted and summarized on the maps to visualize connections and correlations between the themes and to synthesize the discussion. Eventually, one map per main subject from the topic guide was discussed and complemented and validated by the

group. In this way, the themes were already clustered and related to each other during the interview session. For verification, the study participants directly assessed whether the statements and correlations had been captured according to their intentions and ensured that all relevant information was included in the mind maps. This contributed to the reliability of the data collected. Additionally, all interviews were digitally audio recorded. In the third step, the analysis was completed. The researcher listened to the recordings to ensure that the entire content of the discussion in the focus groups was captured. To enhance trustworthiness, the results were supported with direct quotes from the recordings. From the content of the three mind maps, the topics were summarized, and the correlations were elaborated and described by means of graphs and tables. The study procedure was assessed using the COREQ checklist (Tong et al., 2007).

## 4 | RESULTS

The themes that were identified from the analysis, and which are described in turn below, were *description of applied restraint measures; reasoning for use of restraints; many different influencing factors on the decision-making process; initiating person for restraint use; responsibilities and interprofessional work; lack of documentation; limited communication with relatives; lack of standardized evaluation and reflection on restraint use; quick transfers restrict debriefing with patients.*

The participants of each focus group are described in Table 2. All groups included participants from different medical fields.

### 4.1 | Description of applied restraint measures

In all three interviews, the restraints used in the respective units were mentioned (Table 3). There were broad individual definitions by participants as to what constitutes a restraint. For example, some participants did not consider electronic monitoring systems to be a restraint. However, those systems do restrict the freedom of

TABLE 1 Topic guide for the interviews

Topic	Main questions
Before applying the restraint	<ul style="list-style-type: none"> <li>• How do you define a restraint?</li> <li>• For which patient groups are restraints used?</li> <li>• In which situations do you consider restraints to be an option?</li> <li>• If restraints are being considered, what is discussed and reflected on?</li> </ul>
While the patient is restrained	<ul style="list-style-type: none"> <li>• What happens when the decision for restraints has been made?</li> <li>• Who is involved in the implementation of the restraints?</li> <li>• Is the use of restraints discussed in your team?</li> <li>• What is the process for deciding whether to remove a restraint or leave it in place?</li> </ul>
After the restraint has been removed	<ul style="list-style-type: none"> <li>• What helps you deal with restraints?</li> <li>• Are there any problematic or ambiguous areas for you in the use of restraints?</li> <li>• What tools would help you in the decision to use and the application of restraints?</li> <li>• How do patients and their relatives experience the restraint? Do they comment on it? If so, what do they say?</li> </ul>

TABLE 2 Focus groups

	AGU (Focus group 1)	IMC (Focus group 2)	ICU (Focus group 3)
Moderation	1 moderator, 1 co-moderator, 1 min taker	1 moderator, 1 co-moderator, 1 min taker	1 moderator, 1 co-moderator, 1 min taker
Participants	3 Registered Nurses 1 physiotherapist 1 physician	6 Registered Nurses 1 physiotherapist 1 physician	4 Registered Nurses 1 clinical nurse specialist 1 physiotherapist
Duration	90 min	90 min	90 min

Abbreviations: AGU, acute geriatric unit; ICU, intensive care unit; IMC, intermediate care unit.

TABLE 3 Restraints mentioned in the different interviews

	AGU	IMC	ICU
Restraints mentioned in the interview	Motion sensor, tracker, fixations, bed rails, tables fixed to wheelchairs, lockable windows, one-to-one supervision, sedative or psychotropic medication	Fixations, mittens, bed rails, extended vest restraint (i.e. vest restraint also covering the lower body), tables fixed to chairs, analgesedative or psychotropic medication	Five-point fixations, hand fixations, mittens, bed rails, extended vest restraint (i.e. vest restraint also covering the lower body), tables fixed to chairs, verbal or environment restrictions, analgesedative or psychotropic medication

Abbreviations: AGU, acute geriatric unit; ICU, intensive care unit; IMC, intermediate care unit.

movement of the persons concerned, which brings them under the definition of a restraint according to legal provisions.

## 4.2 | Reasoning for use of restraints

The participants described how restraints were introduced in complex patient situations when multimorbid patients were agitated, delirious, mentally distressed or suffered from dementia and therefore posed a danger to themselves or others. The participants from AGU mentioned transferring delirious and agitated patients whose safety they could no longer ensure to the ICU, where they could be treated and monitored more appropriately. The measures were sometimes used after an event, e.g. a fall or the pulling of invasive catheters and, sometimes preventively, to avoid those events. The participants from ICU noted that nowadays patients are not as deeply sedated as in the past; therefore, physical restraints have to be used more often. In general, restraints were considered a safety measure for patients. Participants described how restraints often had to be used in acute or emergency situations, which meant they could not be discussed in advance with the patient or their relatives. However, participants said that there was often too long a delay before the measures were implemented, and frequently medications and fixations were applied at the same time.

## 4.3 | Many different influencing factors on the decision-making process

Many factors were mentioned as having an influence on the process of deciding whether or not to use restraints. The participants talked about the influence of time pressure and a high work load

on restraint use, noting that restraints are more likely to be omitted when the nursing staff have more time to deal with the patient. Decisions are also made differently depending on the time of the day. During a night shift, for example, when less staff are present, a new restraint might be installed more quickly and an unnecessary one might be removed less quickly as otherwise staff said safety could not be assured. Participants said that sympathy for the patients played a role, as did whether they were already familiar with the patients and could assess their behaviour. They mentioned that empathy was more likely to emerge for young patients with psychiatric disorders or with cognitive impairment. They said that older patients were often simply in the wrong place. If they were not in ICU or IMC, restraints would not be necessary. They indicated that their own mental condition had an influence on the decision as well, for instance, that it is more difficult to be patient at night than during the day. They emphasized that the individual staff members' attitudes towards restraint differed greatly in the teams and played a major role in the decision to use restraints.

It is also a bit a personal attitude of the nurses. Some almost never restrain and try it in other ways. And then there are those who, at the first movement [of the patient] towards the face, immediately call for mittens or hand restraints. [...] [With some nurses] you meet patients almost always restrained and others they almost never restrain. I feel that this is also a bit of a personal opinion.

(FG 3, 12'30")

Participants described the impact of work experience. They mentioned that staff who had a lot of experience on the job were more likely to refrain from using restraints. On the other hand, experiencing

an episode of patient aggression could lead to more frequent restraint use.

#### 4.4 | Initiating person for restraint use, responsibilities and interprofessional work

In all interviews, it was noted that the initiative to use restraints and the lead in their implementation was taken by the nursing staff.

The moment someone starts tearing [at the lines], you [the nurses] start reacting. Then you start to tie [the wrists] [...] or put on mittens [on the patient] or a mask [on yourself] if you are spit on. So then you protect yourself, you protect the patient, only then do you go to the physician, and then comes the matter of the medication. That happens very quickly.

(FG 2, 20:30)

But we [the nurses] are often the ones who approach the physician during rounds or otherwise and say, this [restraint] is not enough or this is too much for the patient, can we reduce it a little bit? We are primarily the people who initiate this. Because the physician just has a brief moment of interaction [...]. But we are the person standing next to the bed and we see the patient, how he is reacting and what he is doing.

(FG 3, 26:21)

In all the units where the participants worked it was common for some restraints to be used by nursing staff without a physician's prescription, although this is required under Swiss legislation. On AGU, those restraints included motion sensors, trackers, bed rails, mittens and tables fixed to wheelchairs. On ICU, all measures except the mechanical five-point fixations were authorized to be implemented without consulting a physician. On all units, all medications administered had to be prescribed by physicians.

Associate degree nursing staff operated on delegation from the Registered Nurses. Physiotherapists were allowed to remove the restraints for the duration of the therapy, if necessary. Physicians were consulted in challenging or extraordinary situations. While restrained, patients were provided with ongoing explanations as to why restraints were currently necessary for them.

One team stated that communication with each other when applying restraints had improved since they had attended communication training. In general, however, restraints were rarely addressed in the (interprofessional) team. During their shifts, the nurses made decisions on how to proceed with regard to restraints. If questioned during shift change, the nurse justified her or his decision, but no in-depth discussion took place. The study participants said that they did not want to seem patronizing towards their colleagues at work. Since situations around patients could change quickly and someone else would be in charge for the next shift, they did not want to impose any particular treatment for their colleagues to follow.

It can be frustrating at times. [...] If I have time and don't have to do anything else, then I can sit with them [the patients] and spend time with them and don't have to tie them up. And then the late shift comes and says that's not possible at all. Then it takes ten minutes and everything is installed. And that's when I sometimes get very frustrated. [...] I can't address that, not at all. On the contrary, I just keep quiet about it. I think that otherwise it is perceived as paternalism. I can't say to the nurse who is replacing me, you actually have time now, just sit there.

(FG 2, 36:10)

Participants stated in the interviews that restraint was just one of many issues they faced in their daily work and that it tended to receive little attention. Nurses commented that among physicians, interest in restraints varied widely and depended on their own experiences. The use of restraining measures would usually not be questioned by the physicians. A physiotherapist stated that she had a mixed opinion on restraints because they severely restricted patients' movements and thus could lead to muscular atrophy.

#### 4.5 | Lack of documentation

Participants described that the documentation of restraints was handled very inconsistently because there were no precise hospital guidelines. In most cases, only the type of restraint was recorded but not the effect of the restraint on the patient's behaviour. This meant the progression of the situation, for better or for worse, was not clearly recognized or recorded. Physician's orders were not completed for all restraints. They were often provided retrospectively, at the request of the nurses.

#### 4.6 | Limited communication with relatives

Participants mentioned that restraints were in general justified to relatives as a safety measure. However, relatives were not always informed automatically; sometimes they had to actively inquire about the restraints before they received adequate information and explanation. In the ICU, the relatives were informed and accompanied to the patients by the nursing staff. Relatives asked many questions about restraints, in particular about fixations. If possible, hand fixations were released when the relatives were present at bedside.

#### 4.7 | Lack of standardized evaluation and reflection on restraint use

According to nursing staff, there is a lack of clear guidelines for evaluation. It is up to the individual nurse to decide if and when to employ a restraint measure. Usually, it is evaluated at least once per shift, but most of the time the evaluation is not documented. Study

participants described making independent evaluations about and reflecting on restraint use as being “easy” to “very difficult,” depending on the situation.

It also depends on how much knowledge you have about delirium and how well you can assess [the patient's behaviour], [...]. I think, the more experience you have, the more you can listen to your gut. It certainly makes a difference whether you recently graduated [from nursing school] or you have been in the profession for 10 years.

(FG 1, 49:50)

[...] it has a lot to do with the experience of the nurse [responsible for the patient]. New staff who don't have the security yet, they don't dare as much as fully trained nursing staff. I don't mainly see that when it comes to applying the measures, but when it comes to removing them. With evaluation and all that you very often see how experienced the nurses are and what kind of previous experience [with restraints] they have [...]. Some have also had negative experiences. Nurses who had been exposed to [violence], they take a completely different approach to [evaluating and removing restraints].

(FG 3, 10:27)

Study participants said that fixations or medications were discussed with the physician during daily rounds but that other restraints were often not mentioned. Nurses indicated that overall there was too little interprofessional evaluation and reflection on use of restraints, both during implementation and after termination. In general, a need for more knowledge about restraints among the teams was identified. Participants said that individual reflection on the use of restraints was dependent on each respective person. They criticized the lack of a defined format for interprofessional exchange and said that interprofessional should include not only nurses and physicians but also, for example, physiotherapists. After violent incidents requiring restraints, there was sometimes an interprofessional debriefing, but the focus was usually on how to protect the staff rather than on discussing the events around the use and effectiveness of the restraints employed.

Study participants mentioned preventive factors for not using or for reducing restraints, such as involving relatives and their views and experiences with the patients. It was also important to trust the patients sometimes. They found that measures were generally started too quickly because of a lack of trust between staff and patients. For example, one patient attempted to scratch his nose but as he had a feeding tube, his hands were fixed immediately. Participants noted that false alarms, especially with motion sensors and trackers, led to some desensitization, with a less rapid response in the event of an alarm sounding. They further stated that a harm/benefit risk assessment was rarely performed.

As participants reflected on the current process around restraints, they said conflicting opinions. One attending physician said that the existing directive was sufficient as a support and that further aids were not necessary. Nurses thought that delirium management was not yet at an optimum level, and that treatment was too inconsistent, leading to a higher use of restraints. Study participants said that more discussion in the team would help them to become aware of or to challenge their own attitudes. They also said that it would be helpful to have more knowledge about mental illness. On the ICU and IMC units, collaboration with a psychiatric nurse was found to be helpful and a welcome relief from individual assessment and responsibility. In general, they wished for more standards and guidelines.

#### 4.8 | Quick transfers restrict debriefing with patients

A debriefing with the patients involved almost never occurred. Patients were usually transferred quickly once they were feeling better, especially from the ICU, therefore there was no chance to discuss the restraint events with them. The physical therapist was often the only person who continued to see the patients. Study participants mentioned episodes with patients that showed some were ashamed of what had happened and that there was a will to express gratitude at the end. Other patients commented to healthcare staff that they had experienced worse things than restraints in the ICU, such as the light or the noise. In the experience of the study participants, most patients had no memory of the restraints. If a reappraisal of the stay did take place for individual patients on the basis of the documentation, the focus for the patients was on their behaviour during delirium and not on the restraints. However, this was not found to be true for patients with mental illness.

## 5 | DISCUSSION

This qualitative study aimed to explore how healthcare staff in acute care hospital settings describe the current practice of restrictive measures and to investigate their perceptions and experiences of using restraints. The engagement of the participants during the interviews indicated that the subject of this study is of high relevance for them. The study participants described the types of restraints to be expected on their wards and that they were viewed as safety measures for the patients. Implementation of most restraints was led by nurses, supported by physicians in particularly challenging situations or when medications were involved. Study participants told of significant differences within the team in the use of restraint and that these were mainly caused by different attitudes and experiences. Nurses wished for more discussion about restraints in the interprofessional team and for better standards and guidelines to help with the decision-making.



In the settings involved in this study, there appeared to be considerable differences between the restraints used on different units. Due to better monitoring and more staff, ICU and IMC units had a wider range of options for the use of restraints than the AGU. Nurses seemed to be aware of what measures were available in their units and adapted to that. Acute geriatric unit staff knew about the opportunity of transferring patients to the ICU if they could no longer manage the situation with their resources. Mechanical restraints were mentioned more frequently in the study participants' narratives and were unanimously considered to be restrictive of freedom. Study participants said that mechanical restraints likewise made the biggest impression on the restrained patients' relatives. It is hardly a coincidence that this form of restraint is also the most researched internationally (Perez et al., 2019). Due to demographic changes with an increase in older and multimorbid patients (Kingston et al., 2018), these measures will be used even more frequently in the coming years as this patient population is more likely to experience restraints in acute care hospital settings (Thomann et al., 2021). This shows the urgency of finding new ways to reduce the use of restraints.

Study participants justified the use of restraints as necessary for patient safety, as do participants in international studies (Cunha et al., 2016). This may explain why, while intensive efforts have been made to reduce restrictive practice in mental health settings, fewer initiatives are conducted in acute care hospitals. The study participants described a lack of knowledge about restraints in their teams. International studies link poor knowledge about restraints to unsafe practice and patient injury (Teece et al., 2020) and recommend education and training for nurses, since they appear to be the primary decision-makers in the application and removal of restraints (Perez et al., 2019). However, the participants in the present study seemed to be aware of their important role and their limited knowledge and expressed a desire for more discussion about restraints in the interprofessional team and for better standards and guidelines to help with the decision-making process. As also described by participants in the present study, restraints are often implemented by nurses and applied unprescribed (Ertuğrul & Özden, 2020; Teece et al., 2020).

Research has found that decision-making among nurses, especially in challenging situations, is often based on experience and intuition (Li & Fawcett, 2014). Study participants stated that individuals with more professional experience were more confident about trying to manage a situation could be handled without restraint measures. A study conducted by Cui et al. (2019) confirmed that nurses with more professional experience tend to use fewer restraints. On the other hand, there were also individuals who had experienced violent situations and as a result were more likely to resort to restraints, indicating that the type of experience influences whether more or less restraints are used. In line with international studies, high workload and the time of day, with fewer staff in the evening and at night, were mentioned as contributing factors to the use of restraints (Balci & Arslan, 2018; Cui et al., 2019). However, if a nurse already knew the patients and could therefore better assess their behaviour, fewer restraints were used; this was also described by Goethals et al. (2012). Similarly, the study participants stated that

sympathy or antipathy towards a patient could influence the use of restraint. Internationally, it is described that caring for patients with delirium can be very challenging emotionally and physically and can lead to an unwillingness amongst staff to engage and care (Teece et al., 2020). To prevent this, it is important to be aware of the opportunity of such reluctance, to address it openly and to relieve and support all team members in caring for these patients.

Our findings confirmed the results from other studies that the individual attitudes of healthcare staff appear to play an important role in the decision-making process to use restraints or not (Goethals et al., 2012). Although the study participants stated that the team members' own attitudes were often decisive in the choice to use restraints, different attitudes in the team and different ways of dealing with restraints were rarely addressed. Participants indicated that because they were concerned that fellow team members might feel patronized, the different ways of addressing restraint were not discussed at all. Here, a change in team culture needs to be introduced to promote increased communication in the intra- but also the interprofessional team, a factor identified as significant by Langley et al. (2011). Since nurses are most directly dealing with the patients, it may happen that they are blamed by physicians and relatives when patients injure themselves, while there are no restraints in place (Langley et al., 2011). But to date, it has not yet been demonstrated that restraints do protect patients' safety (Chao et al., 2017; Kiekkas et al., 2013; LeLaurin & Shorr, 2019). On the other hand, evidence has shown that sufficient well-educated staff and the associated reduction in workload offer protection against adverse medical events such as self-extubation (Kiekkas et al., 2013). These are essential points that need to be addressed by the interprofessional team.

It must become the norm for team members to talk about restraints and to exchange different opinions on the best solution for the patient without individual team members feeling criticized. When a situation is reviewed by several people, it can be assessed more comprehensively and people with less experience can benefit from those with more experience. Different views are not a disadvantage, they can be valuable if discussing them broadens one's horizons and encourages viewing certain situations from a different perspective. Thus, responsibility is shared among several people, ideally from interprofessional areas.

With such an important and impactful issue as restraints, it is of great importance that the decisions of team members can be based on guidelines and do not depend solely on the attitude and the experience of individuals (Li & Fawcett, 2014). These guidelines must be precise and comprehensive enough to support the interprofessional team in identifying the optimal treatment, with the least amount of restraint use. The national guidelines (American Medical Association, n.d.; National Institute for Health & Care Excellence, 2015; Swiss Academy of Medical Sciences, 2015) must be broken down to hospital level in a way that is understandable to individual team members and that gives clear guidance on using restraints as rarely as possible. Since our findings show that there are no defined formats for interprofessional discussion in the units involved in the interviews, these must be defined in the guidelines and implemented. Possible

formats include daily ward rounds and shift changes. For challenging situations, interprofessional case discussions are an appropriate option to find solutions and to reflect on experience. In addition, the guidelines must set clear rules for evaluation and documentation as these areas are often deficient (Thomann et al., 2021).

The legal and ethical aspects play a prominent role in restraint decisions and must be known and taken into account given that restraints affect the personal autonomy of patients. The lack of knowledge described by the study participants, seems to include the legal background, as neither the staff of the ICU nor IMC units mentioned that incapacity to judge is required for a restraining measure to be applied (Schweizerisches Zivilgesetzbuch [ZGB], 2013). Staff must also be informed of the other conditions that must be fulfilled before a restraint can be applied. Restraints may only be used as a measure of last resort and only after other, less intrusive measures have been considered and rejected (American Medical Association, n.d.; National Institute for Health & Care Excellence, 2015; Swiss Academy of Medical Sciences, 2015). By law, the measures must be prescribed by a physician (American Medical Association, n.d.; Swiss Academy of Medical Sciences, 2015). The aim is to create guidelines that help to achieve joint responsibility in decision-making, so that the nursing staff are better supported in this aspect.

As mentioned, our findings indicate that participants actively want more knowledge about restraints. To be able to perform an adequate harm/benefit risk assessment, staff need to be informed about possible side effects of restraining measures. Then, the least stressful measure for the patient must be chosen (National Institute for Health & Care Excellence, 2015; Swiss Academy of Medical Sciences, 2015). This decision also contains a careful balancing of the classical ethical principles of non-maleficence and beneficence, on the one hand, and the protection of the patient's autonomy, on the other (Beauchamp et al., 2001).

In order to avoid restraints being used as a means of last resort, it is important to know and to consciously use preventive measures. One important factor in avoiding restraints is delirium prophylaxis. However, these measures also require appropriate knowledge, preferably uniform standards and, above all, time to apply them, three conditions that are often not present in acute settings (Palacios-Ceña et al., 2016). The study participants mentioned only a few preventive measures for delirium and restraints. They also stated that delirium management was inconsistent and dependent on the physician present.

In this context, it is important to mention that restraints are an additional risk factor for the development or exacerbation of delirium (Kandeel & Attia, 2013; Pan et al., 2018). This further shows the importance of avoiding restraints whenever possible.

Studies have shown that, in addition to lack of knowledge, time pressure due to a heavy workload seems to prevent consideration of alternatives to restraint and preventive measures (Ertuğrul & Özden, 2020; Möhler & Meyer, 2014). This could be one reason why preventive measures were not mentioned more often in the

interviews. It is therefore of great importance that time-effective preventive measures are made present and quickly available in the everyday work routine. A checklist with clearly defined measures—alternatives and restraints—should be available to identify the most suitable measure in a specific situation.

A major goal must be to involve relatives throughout the process, whenever possible (Freeman et al., 2016). They can give support in dealing with patients and often have a calming effect on restless patients provided, of course, that the situation is acceptable to the relatives and they wish to be present (Freeman et al., 2016). Legally, they must consent to the restraints on behalf of the patient if they are to be used for longer than a brief emergency (American Medical Association, n.d.; Swiss Academy of Medical Sciences, 2015).

## 5.1 | Limitations and strengths of the study

Although the interviewers had the impression that data saturation was reached during the interviews, the limited number of participants from just three different settings naturally restricts the generalizability of the results. A selection bias cannot be excluded since the participants were approached by the clinical nurse specialist of the corresponding units. Furthermore, it must be kept in mind that the use of restraints is, to some extent, also subject to national or local guidelines, which limits comparability to other studies. Our study primarily considers the views of the nursing staff and some physiotherapists; few physicians participated due to limited availability. Participants from different hierarchical levels in the hospital organization were represented in the interview groups. It cannot be ruled out that this influenced individual statements but, on the other hand, it can be assumed that the interviews gained substance from including the views of staff at different levels of responsibility.

The inclusion of direct quotes from the original interviews enhances the integrity of our analysis and ensures traceability. During the interviews, feedback from the study participants was continuously requested to validate the focus group illustration maps. This ensured that the statements were correctly understood and categorized. The fact that it is efficient and comprehensive is a strength of the knowledge-mapping technique and was used advantageously here. However, it must be acknowledged that the condensation of the data is limited as the interviews were not transcribed.

## 6 | CONCLUSION

Based on the results of this study, it is clear that currently the decision-making process about the use of restraints in acute care hospitals occurs at the individual level. The attitude and level of experience of nurses are the main factors determining in which situations restraints are used. Although this leads to restraints being applied differently in a single team, that fact is rarely discussed intra- and



interprofessionally. A new team culture of discussion and exchange must be established among the interprofessional teams, with the aim of identifying the best solution for the patient, with consideration of possible preventive measures. In addition, interprofessional cooperation, especially between physicians and nursing staff, must be strengthened, with the aim of establishing joint decision-making to relieve the pressure on nursing staff. This requires clear guidelines at hospital level to ensure that restraints are used more consistently than and as rarely as possible, along with defined formats for interprofessional exchange. Knowledge of the various aspects of restraints use (scientific, legal, ethical etc.) and possible preventive measures needs to be provided in training courses and in continuing education for all professional groups in the medical field.

## 7 | RELEVANCE TO CLINICAL PRACTICE

The potential use of restraints becomes an even more relevant issue as hospitals face a future scenario where there is an increase in the number of complex multimorbid patients combined with staff shortages. It cannot be the case that the use of restraints is solely decided by individual attitudes or habits. Healthcare staff need support in this decision-making process, which they should receive through evidence-based guidelines, patient-specific assessment and institutional values of care. It is important to address the subject on an interprofessional basis. The professions involved must develop a common understanding and attitude towards the use of restraints.

## 8 | ETHICAL CONSIDERATION

The study protocol was submitted to the relevant committee, i.e. the Ethics Commission of the Canton of Bern. It was confirmed that the study does not fall under the Swiss Human Research Act (Req-2019-00259). The study participants gave informed written consent. The names of the participants were not listed in any written documentation in order to guarantee their anonymity.

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### CONFLICT OF INTEREST

No conflict of interest.

### AUTHOR CONTRIBUTIONS

All authors created the study design and provided critical feedback at all stages of the study. SSD, IB, KUS and ST conducted the interviews. SSD, IB, KUS, SH and ST analysed the data. All authors contributed to the conception of the article and critically revised the article.

### DATA AVAILABILITY STATEMENT

Requests for data shall be addressed to the corresponding author.

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### REFERENCES

- Aiken, L. H., Sloane, D., Griffiths, P., Rafferty, A. M., Bruyneel, L., McHugh, M., Maier, C. B., Moreno-Casbas, T., Ball, J. E., Ausserhofer, D., & Sermeus, W. (2017). Nursing skill mix in European hospitals: Cross-sectional study of the association with mortality, patient ratings, and quality of care. *BMJ Quality & Safety*, 26(7), 559–568. <https://doi.org/10.1136/bmjqs-2016-005567>
- American Medical Association, A. (n.d.). *Use of Restraints*. <https://www.ama-assn.org/delivering-care/ethics/use-restraints>
- Ang, S. Y., Bakar Aloweni, F. A., Perera, K., Wee, S. L., Manickam, A., Lee, J. H. M., Haridas, D., Shamsudin, H. F., & Chan, J. K. (2015). Physical restraints among the elderly in the acute care setting: Prevalence, complications and its association with patients' characteristics [Article]. *Proceedings of Singapore Healthcare*, 24(3), 137–143. <https://doi.org/10.1177/2010105815596092>
- Balci, H., & Arslan, S. (2018). Nurses' information, attitude and practices towards use of physical restraint in intensive care units. *Journal of Caring Sciences*, 7(2), 75–81. <https://doi.org/10.15171/jcs.2018.012>
- Barbui, C., Purgato, M., Abdulmalik, J., Caldas-de-Almeida, J. M., Eaton, J., Gureje, O., Hanlon, C., Nosè, M., Ostuzzi, G., Saraceno, B., Saxena, S., Tedeschi, F., & Thornicroft, G. (2021). Efficacy of interventions to reduce coercive treatment in mental health services: Umbrella review of randomised evidence. *The British Journal of Psychiatry*, 218(4), 185–195. <https://doi.org/10.1192/bjp.2020.144>
- Beauchamp, T. L., Beauchamp, P. P. S. R. S. T. L., Childress, J. F., Childress, U. P. H. P. E. J. F., & Fund, H. H. M. I. E. L. (2001). *Principles of biomedical ethics*. Oxford University Press. [https://books.google.ch/books?id=\\_14H7MOW1o4C](https://books.google.ch/books?id=_14H7MOW1o4C)
- Burgess-Allen, J., & Owen-Smith, V. (2010). Using mind mapping techniques for rapid qualitative data analysis in public participation processes. *Health Expectations*, 13(4), 406–415. <https://doi.org/10.1111/j.1369-7625.2010.00594.x>
- Chao, C. M., Lai, C. C., Chan, K. S., Cheng, K. C., Ho, C. H., Chen, C. M., & Chou, W. (2017). Multidisciplinary interventions and continuous quality improvement to reduce unplanned extubation in adult intensive care units: A 15-year experience. *Medicine (Baltimore)*, 96(27), e6877. <https://doi.org/10.1097/md.0000000000006877>
- Cui, N., Long, M., Zhou, S., Zhang, T., He, C., & Gan, X. (2019). Knowledge, attitudes, and practices of Chinese critical care nurses regarding physical restraint. *The Journal of Continuing Education in Nursing*, 50(3), 121–126. <https://doi.org/10.3928/00220124-20190218-07>
- Cunha, M., André, S., Bica, I., Ribeiro, O., Dias, A., & Andrade, A. (2016). Chemical and physical restraint of patients. *Procedia - Social and Behavioral Sciences*, 217, 389–399. <https://doi.org/10.1016/j.sbspro.2016.02.109>
- Cusack, P., Cusack, F. P., McAndrew, S., McKeown, M., & Duxbury, J. (2018). An integrative review exploring the physical and psychological harm inherent in using restraint in mental health inpatient settings. *International Journal of Mental Health Nursing*, 27(3), 1162–1176. <https://doi.org/10.1111/inm.12432>
- de Bruijn, W., Daams, J. G., van Hunnik, F. J. G., Arends, A. J., Boelens, A. M., Bosnak, E. M., Meerveld, J., Roelands, B., van Munster, B. C., Verwey, B., Figuee, M., de Rooij, S. E., & Mocking, R. J. T. (2019). Physical and pharmacological restraints in hospital care: Protocol

- for a systematic review. *Frontiers in Psychiatry*, 10, 921. <https://doi.org/10.3389/fpsy.2019.00921>
- Ertuğrul, B., & Özden, D. (2020). Nurses knowledge and attitudes regarding physical restraint in Turkish intensive care units. *Nursing in Critical Care*, 26(4), 253–261. <https://doi.org/10.1111/nicc.12541>
- European Union. (2012). *Charter of Fundamental Rights of the European Union*, 26 October 2012, 2012/C 326/02. <https://www.refworld.org/docid/3ae6b3b70.html>
- Evans, D., Wood, J., & Lambert, L. (2003). Patient injury and physical restraint devices: A systematic review. *Journal of Advanced Nursing*, 41(3), 274–282. <https://doi.org/10.1046/j.1365-2648.2003.02501.x>
- Freeman, S., Hallett, C., & McHugh, G. (2016). Physical restraint: Experiences, attitudes and opinions of adult intensive care unit nurses. *Nursing in Critical Care*, 21(2), 78–87. <https://doi.org/10.1111/nicc.12197>
- Goethals, S., Dierckx de Casterlé, B., & Gastmans, C. (2012). Nurses' decision-making in cases of physical restraint: A synthesis of qualitative evidence. *Journal of Advanced Nursing*, 68(6), 1198–1210. <https://doi.org/10.1111/j.1365-2648.2011.05909.x>
- Gunawardena, R., & Smithard, D. G. (2019). The attitudes towards the use of restraint and restrictive intervention amongst healthcare staff on acute medical and frailty wards—A brief literature review. *Geriatrics (Basel)*, 4(3), 50. <https://doi.org/10.3390/geriatrics4030050>
- Hofso, K., & Coyer, F. M. (2007). Part 1. Chemical and physical restraints in the management of mechanically ventilated patients in the ICU: Contributing factors. *Intensive & Critical Care Nursing*, 23(5), 249–255. <https://doi.org/10.1016/j.iccn.2007.04.003>
- Jacobsen, F. F., Mekki, T. E., Førland, O., Folkestad, B., Kirkevold, Ø., Skår, R., Tveit, E. M., & Øye, C. (2017). A mixed method study of an education intervention to reduce use of restraint and implement person-centered dementia care in nursing homes. *BMC Nursing*, 16(1), 55. <https://doi.org/10.1186/s12912-017-0244-0>
- Kandeel, N. A., & Attia, A. K. (2013). Physical restraints practice in adult intensive care units in Egypt. *Nursing & Health Sciences*, 15(1), 79–85. <https://doi.org/10.1111/nhs.12000>
- Kiekas, P., Aretha, D., Panteli, E., Baltopoulos, G. I., & Filos, K. S. (2013). Unplanned extubation in critically ill adults: Clinical review. *Nursing in Critical Care*, 18(3), 123–134. <https://doi.org/10.1111/j.1478-5153.2012.00542.x>
- Kingston, A., Robinson, L., Booth, H., Knapp, M., Jagger, C., & MODEM project (2018). Projections of multi-morbidity in the older population in England to 2035: Estimates from the Population Ageing and Care Simulation (PACSIm) model. *Age and Ageing*, 47(3), 374–380. <https://doi.org/10.1093/ageing/afx201>
- Krüger, C., Mayer, H., Haastert, B., & Meyer, G. (2013). Use of physical restraints in acute hospitals in Germany: A multi-centre cross-sectional study. *International Journal of Nursing Studies*, 50(12), 1599–1606. <https://doi.org/10.1016/j.ijnurstu.2013.05.005>
- Langley, G., Schmolgruber, S., & Egan, A. (2011). Restraints in intensive care units—a mixed method study. *Intensive & Critical Care Nursing*, 27(2), 67–75. <https://doi.org/10.1016/j.iccn.2010.12.001>
- LeLaurin, J. H., & Shorr, R. I. (2019). Preventing falls in hospitalized patients: State of the science. *Clinics in Geriatric Medicine*, 35(2), 273–283. <https://doi.org/10.1016/j.cger.2019.01.007>
- Li, X., & Fawcett, T. N. (2014). Clinical decision making on the use of physical restraint in intensive care units. *International Journal of Nursing Sciences*, 1(4), 446–450. <https://doi.org/10.1016/j.ijnss.2014.09.003>
- Lockwood, C., Stannard, D., Munn, Z., Porritt, K., Carrier, J., Rittenmeyer, L., Bjerrum, M., & Salmond, S. (2018). Experiences and perceptions of physical restraint policies and practices by health professionals in the acute care sector: A qualitative systematic review protocol. *JBIR Database of Systematic Reviews and Implementation Reports*, 16(5), 1103–1108. <https://doi.org/10.11124/JBISIR-2017-003460>
- Luk, E., Burry, L., Rezaie, S., Mehta, S., & Rose, L. (2015). Critical care nurses' decisions regarding physical restraints in two Canadian ICUs: A prospective observational study. *Canadian Journal of Critical Care Nursing*, 26(4), 16–22.
- Martin, B., & Mathisen, L. (2005). Use of physical restraints in adult critical care: A bicultural study. *American Journal of Critical Care*, 14(2), 133–142. <https://doi.org/10.4037/ajcc2005.14.2.133>
- Mion, L. C. (2008). Physical restraint in critical care settings: Will they go away? *Geriatric Nursing*, 29(6), 421–423. <https://doi.org/10.1016/j.gerinurse.2008.09.006>
- Möhler, R., & Meyer, G. (2014). Attitudes of nurses towards the use of physical restraints in geriatric care: A systematic review of qualitative and quantitative studies. *International Journal of Nursing Studies*, 51(2), 274–288. <https://doi.org/10.1016/j.ijnurstu.2013.10.004>
- Möhler, R., Nürnberger, C., Abraham, J., Köpke, S., & Meyer, G. (2016). Interventions for preventing and reducing the use of physical restraints of older people in general hospital settings. *Cochrane Database of Systematic Reviews*, (12). <https://doi.org/10.1002/14651858.CD012476>
- National Institute for Health and Care Excellence (2015). *Violence and aggression: Short-term management in mental health, health and community settings*. Retrieved 20.05.2021. <https://www.nice.org.uk/guidance/ng10>
- Palacios-Ceña, D., Cachón-Pérez, J. M., Martínez-Piedrola, R., Gueita-Rodríguez, J., Perez-de-Heredia, M., & Fernández-de-las-Peñas, C. (2016). How do doctors and nurses manage delirium in intensive care units? A qualitative study using focus groups. *British Medical Journal Open*, 6(1), e009678. <https://doi.org/10.1136/bmjopen-2015-009678>
- Pan, Y., Jiang, Z., Yuan, C., Wang, L., Zhang, J., Zhou, J., Tao, M., Quan, M., & Wu, Q. (2018). Influence of physical restraint on delirium of adult patients in ICU: A nested case-control study. *Journal of Clinical Nursing*, 27(9–10), 1950–1957. <https://doi.org/10.1111/jocn.14334>
- Perez, D., Peters, K., Wilkes, L., & Murphy, G. (2019). Physical restraints in intensive care—An integrative review. *Australian Critical Care*, 32(2), 165–174. <https://doi.org/10.1016/j.aucc.2017.12.089>
- Registered Nurses' Association of Ontario [RNAO]. (2012). *Promoting Safety: Alternative Approaches to the Use of Restraints*. <https://rnao.ca/bpg/guidelines/promoting-safety-alternative-approaches-use-restraints>
- Restraint Reduction Network. (n.d.). Like-minded organisations in pursuit of restraint-free services. The Network's Patron is Sir Norman Lamb. <https://restraintreductionnetwork.org/>
- Scheepmans, K., Dierckx de Casterlé, B., Paquay, L., Van Gansbeke, H., & Milisen, K. (2020). Reducing physical restraints by older adults in home care: Development of an evidence-based guideline. *BMC Geriatrics*, 20(1), 169. <https://doi.org/10.1186/s12877-020-1499-y>
- Schweizerisches Zivilgesetzbuch [ZGB] (2013). *Schweizerisches Zivilgesetzbuch und Obligationenrecht online*. [https://www.fedlex.admin.ch/eli/cc/24/233\\_245\\_233/en](https://www.fedlex.admin.ch/eli/cc/24/233_245_233/en)
- Swiss Academy of Medical Sciences (2015). *Coercive measures in medicine. Medical-ethical guidelines*. <https://www.sams.ch/en/Publications/Medical-ethical-Guidelines.html>
- Teece, A., Baker, J., & Smith, H. (2020). Identifying determinants for the application of physical or chemical restraint in the management of psychomotor agitation on the critical care unit. *Journal of Clinical Nursing*, 29(1–2), 5–19. <https://doi.org/10.1111/jocn.15052>
- Thomann, S., Zwakhalen, S., Richter, D., Bauer, S., & Hahn, S. (2021). Restraint use in the acute-care hospital setting: A cross-sectional multi-centre study. *International Journal of Nursing Studies*, 114, 103807. <https://doi.org/10.1016/j.ijnurstu.2020.103807>

- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6), 349–357. <https://doi.org/10.1093/intqhc/mzm042>
- Van Staden, E. (2017). High staff turnover - can it be reduced? *Professional Nursing Today*, 21(4), 54–56.
- Warlan, H., & Howland, L. (2015). Posttraumatic stress syndrome associated with stays in the intensive care unit: Importance of nurses' involvement. *Critical Care Nurse*, 35(3), 44–52, quiz 54. <https://doi.org/10.4037/ccn2015758>

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