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ORIGINAL ARTICLE

Restraint practice in the somatic acute care hospital: A participant observation study

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Abstract

Aims and Objectives: We aimed to describe daily restraint practices and the factors which influence their use, from an outsider's perspective.

Background: A reduction in restraint use is recommended in health care. However, somatic acute care hospital settings currently lack effective reduction strategies. Thus far, hospital restraint practice is described in terms of quantitative assessments and the 'insider' view of healthcare professionals. However, as factors such as routine or personal beliefs seem to play a relevant role in restraint use, these approaches might be incomplete and biased.

Design: A qualitative observation study design was employed.

Methods: Fieldwork with unstructured participant observation was conducted at a department of geriatrics and a department of intensive care in Switzerland between November 2019 and January 2020. Data were recorded as field notes. The analysis was conducted iteratively in two coding cycles using descriptive coding followed by pattern coding. We adhered to the Standards for Reporting Qualitative Research (SRQR).

Results: A total of 67 hours of observation were conducted. We found that daily restraint practice can be described in three categories: the context in which restraints are used, the decision-making process on the use and continued use of restraints, and the avoidance of restraint use. Most processes and decisions seem to take place unconsciously, and their standardisation is weak.

Conclusions: The lack of standardisation favours intuitive and unreflective action, which is prompted by what is also known as heuristic decision-making. To transform daily restraint practice, a technical solution that leads restraint management in line with ethical and legal requirements might be useful.

Relevance to clinical practice: The outsider perspective has allowed daily restraint practice to be described independently of existing routines, departmental cultures

and personal attitudes. This is important to comprehensively describe restrictive practices, which is a prerequisite for the development of effective restraint reduction strategies.

KEYWORDS
decision-making, evidence-based practice, hospitals, qualitative research, restraint

1 | INTRODUCTION

Restraints are used in health care with the intention of providing safety for patients, professionals and/or third parties (Kong et al., 2017; Muir-Cochrane et al., 2019; Perez et al., 2019). Prevalence rates vary widely depending on (sub)population, country and setting, and may differ depending on the definition of restraint used (e.g. whether only mechanical fixations with belts and seclusion, or also chemical and electronic ones, are considered to be restraints), and the legal situation (Muir-Cochrane et al., 2019). However, due to negative effects on patients' physical and mental health, as well as moral distress and its consequences for health professionals, it is recommended that restraints are used as little as possible, and only for a limited period of time (Lach et al., 2016; Registered Nurses' Association of Ontario, 2012; Swiss Academy of Medical Sciences [SAMS], 2015).

To date, restraint reduction programmes or strategies are mainly known from the mental health setting, and, to some extent, from the long-term care setting (Australian Government Department of Health, 2020; Gulpers et al., 2013; Lombardo et al., 2018). For the somatic acute care hospital setting (henceforth referred to as 'hospital'), effective reduction programmes or strategies are still lacking (Abraham et al., 2020). In order to be able to develop and implement suitable restraint reduction strategies, or to adapt strategies from other settings, it is important to gain insight into actual daily hospital restraint practice and its influencing factors. Therefore, this study has focussed on the observation and interpretive description of daily restraint practice in hospitals.

What does this paper contribute to the wider global clinical community?

- The broader understanding of restraints, which includes any restriction of personal freedom, is still poorly established in hospitals, leading to a wide variation of how restraints are dealt with, depending on the type of restraint.
- Heuristic decision-making is used in daily restraint practice, but seems to have more of a negative impact, as health professionals lack the appropriate knowledge and expertise in restraint use.
- Promoting consistent implementation of guidelines in combination with expanded and targeted application of existing prevention approaches could positively change restraint practice in hospitals.

2 | BACKGROUND

Restraints are defined as 'interventions that may infringe [on] a person's human rights and freedom of movement, including observation, seclusion, manual restraint, mechanical restraint and rapid tranquillisation' (National Institute for Health and Care Excellence [NICE], 2015, p. 17). Obviously, restraint use affects human rights, and thus might have a legal and ethical dimension, which further underlines the importance of using restraint only when necessary. In the hospital setting, the use of the following types of restraint is described: mechanical (incl. bed rails, belts, chair tables), electronic (incl. sensor mats, video surveillance, motion sensor), pharmacological, physical (keeping someone restrained with human physical force), one-to-one supervision, and locked wards or buildings (Thomann, Zwakhalen, et al., 2021).

Restraint use in the hospital setting is often justified by health professionals in terms of patient safety (e.g. to prevent falls or therapy interruption); however, to date, evidence for its effectiveness is lacking (LeLaurin & Shorr, 2019; Perez et al., 2019). Several studies indicate that, in addition to patient-dependent factors like cognitive impairment (Thomann, Zwakhalen, et al., 2021), non-objective factors such as routine, local habits, intuition or personal beliefs/opinions seem to play an important role in restraint use (Goethals et al., 2013; Lach et al., 2016; Teece et al., 2020; Thomann, Hahn, Bauer, et al., 2021). In the decision-making process regarding the use or non-use of restraints, a lack of knowledge, assessment tools and interprofessional support is reported (Li & Fawcett, 2014; Perez et al., 2019). As a result, the decision-making of nurses (as the key decision makers) is often based on intuition and personal perceptions rather than objective (evidence-based) factors (Freeman et al., 2016; Teece et al., 2020). Moreover, restraints sometimes seem to be such ordinary nursing interventions that alternatives are not even considered (Möhler & Meyer, 2014).

Once the decision to use restraint has been made, it is important that its use is documented, and that a regular evaluation of necessity and harm/benefit takes place to ensure that restraints are used only for as long as necessary. However, even these processes are not systematically implemented, and therefore documentation is often lacking; in addition, regular evaluation rarely occurs (Beysard et al., 2018; Perez et al., 2019; Thomann, Zwakhalen, et al., 2021).

In summary, a complex interplay of multiple factors influences restraint use, with nurses playing a decisive role. So far, research has focussed on quantitative assessments of restraint use, and on the 'insider' view of healthcare professionals on restrictive practices within the hospital. However, since factors such as routine or personal beliefs seem to play a relevant role in restraint use, these approaches might be incomplete and biased against adequately reflecting daily practice and in order to identify the most important influencing factors. Therefore, it seems important to include an 'outsider's' perspective (that of someone who is not involved in the daily practice, and whose perception is therefore not shaped by routine, institutional culture, etc.) on restraint use to comprehensively describe the restrictive practice, as a prerequisite for the development or adaptation and implementation of effective restraint reduction strategies. Consequently, we aimed to describe daily restraint practices and their influencing factors from an outsider's perspective.

3 | METHODS

3.1 | Study design

A qualitative observation study design was chosen to investigate daily hospital restraint practice, independent of restraint type. Fieldwork with participant observation was performed, since this method is known to be suitable for examining 'everyday activities in context' (Allen, 2010, p. 353). The methodological approach used Thorne's interpretive description (Thorne, 2016) as orientation. Interpretive description is an applied inductive research approach designed to investigate clinical health and illness phenomena. Using interpretive research strategies, the phenomenon of interest can be described in its context and associations, allowing relationships and patterns to be discovered. The strength of Thorne's interpretive description lies in its focus on applied, practice-oriented knowledge production in the context of healthcare provision (Thorne, 2016). The Standards for Reporting Qualitative Research (SRQR; O'Brien et al., 2014) have been used to ensure high-quality research and transparency in reporting (see File S1).

3.2 | Setting and sample

The participant observation was conducted at the department of geriatrics and the department of intensive care medicine of a public multisite university hospital in Switzerland that treats around 60,000 inpatients annually. The selection of the departments was purposive and data-driven: departments with a higher restraint rate based on a prevalence measurement were selected, as this increased the possibility of observing daily hospital restraint practices. The department of geriatrics operates 40 beds at the corresponding site for the acute-geriatric care of patients over 70 years of age. The department of intensive care medicine has 37 beds at the corresponding site for intensive care and 20 beds for high-dependency care.

In Switzerland, the 'adult protection law regulates the use of coercive measures in specific areas, i.e. in connection with an involuntary committal or the detention of patients admitted voluntarily, or during stays in residential or nursing institutions; in particular, it includes provisions designed to strengthen legal protection for the persons concerned' (SAMS, 2015, p. 8). For the hospital setting, there are no clear legal regulations. However, there is a national guideline on the use of coercive measures in medicine, which also contains recommendations for restraint use in general (incl. all restraint types, e.g. also electronic restraints, recommendations on processes to be fulfilled, etc.; SAMS, 2015).

Each observation period consisted of shadowing, as an outsider, a nurse during their shift (full shift = 8.4 h). The nurse and shift to be monitored were determined by the unit manager and were mainly driven by organisational possibilities and the availability of the observer. For example, there was no requirement that a particular restraint type must be in use during an observation. To ensure anonymity, no personal data of healthcare professionals (age, work experience, etc.) were registered. From our point of view, explicitly assuring anonymity to participants was important to foster the observation of authentic daily restraint practice without anyone having to fear doing something supposedly wrong in this ethically and legally loaded arena. Thus, there is no closer description of the sample available. In addition, no patient-related information was collected. This would have required the consent of the patients or their legal representatives. Since obtaining consent can be difficult, and the practice could therefore not have been observed comprehensively, this was dispensed with in favour of an unlimited insight into the restraint practice.

3.3 | Data collection

For data collection, the first author (ST) conducted an open, unstructured participant observation of nurses in their daily practice in November and December 2019 in the department of geriatrics, and in January 2020 in the department of intensive care medicine. The data collection was based on the procedure described by Allen (2010): data generation and data analysis were carried out in parallel in an iterative process. At the beginning, a very broad observation of as many aspects as possible potentially related to restraint practice (e.g. spatial/material aspects or communication among professionals and with patients) was made. Subsequently, during the data collection process, it was increasingly better differentiated which aspects were related to restraint use and needed a special focus. In addition, it was brought out more clearly who was being talked to and what questions were being asked. These interactive conversations (also known as ethnographic interviewing) with nurses and with other involved staff were used to deepen what was observed or get insight in aspects that would have been difficult to observe directly, such as existing documentation. The data on the various aspects of the daily restraint practice (e.g. environment, staff, restraint type, processes of documentation and evaluation), as well as information on date and

place, were recorded as field notes in a logbook. The role of the observer was reflected throughout the entire data collection and field note writing process. Thus, it was, for example, documented when a situation seemed to be influenced as a result of an observation. In addition, all the interpretations of the observer were clearly identified as such in the field notes, which were written out in continuous text shortly after the observations to ensure their richness of detail. It was established that no observations would be carried out after data saturation had become apparent.

The observer (ST) is a nurse with professional experience in acute psychiatry and outpatient care. She has a Master of Science degree in nursing and is a PhD student in health science. In preparation for the observation, the observation process was defined in detail together with an expert in qualitative research and aspects to be considered (behaviour, communication, involvement, etc., during the observation periods) were reflected upon with the expert.

3.4 | Data analysis

As described, a first data analysis step took place concurrently with the data collection. This first data interpretation was noted as such in the field notes. After the data collection was completed, a systematic data analysis was performed. The analysis was conducted iteratively in two coding cycles guided by Saldaña (2016). For the first cycle, a descriptive coding was used. The topic of a passage was summarised in one word or a short phrase. Subsequently, pattern coding was used for the second cycle. This allowed the summary of the first cycle codes into meaningful units (see Figure 1). Data analysis was conducted using the MAXQDA software (VERBI Software, 2019).

A quarter of the data was independently analysed by a peer researcher (SSD) familiar with the research topic in order to control for potential bias in the interpretative lens of the first author/observer. The results of the independent analysis were then discussed, and differences clarified. As a consensus was predominantly found in the results, the remaining data were only analysed by the first author. In addition, the entire second cycle coding was validated with another co-author (SH), as well as some randomly selected codings from the first cycle.

3.5 | Ethical considerations

The responsible ethics committee declared that the present study did not fall under the Swiss Human Research Act (April 2019, BASEC-Nr: Req-2019-00259). Therefore, applying for ethical approval was not required. The nursing and medical management of the respective departments and units were informed about the study in advance and gave their consent. For ethical reasons, the nursing teams were informed about the study too. The nurses of the acute geriatric unit were informed about the study by the first author at a team meeting. In the intensive care area, the nursing teams were informed by the nursing expert. Written information about the study and contact details for questions and queries were made available to the nursing teams. Additional staff members were directly informed during the observation if they would be involved in the observed situations. Patients potentially involved in participant observations were informed that a researcher would accompany the responsible nurse to examine their work processes, but that no personal data would be documented. As no personal data was collected, no written consent was necessary.

For transparency, the observer introduced herself; this included mentioning her own background as a registered nurse and researcher, and she explained (again) the aim of the observations to the nurse she was accompanying on their shift at the beginning of each observation period. Nurses were explicitly informed, for example, that with respect to restraint practice, notes would be taken as to whether and how restraints were used, but not on which person said or decided what. All nurses agreed to be accompanied by a researcher for this study.

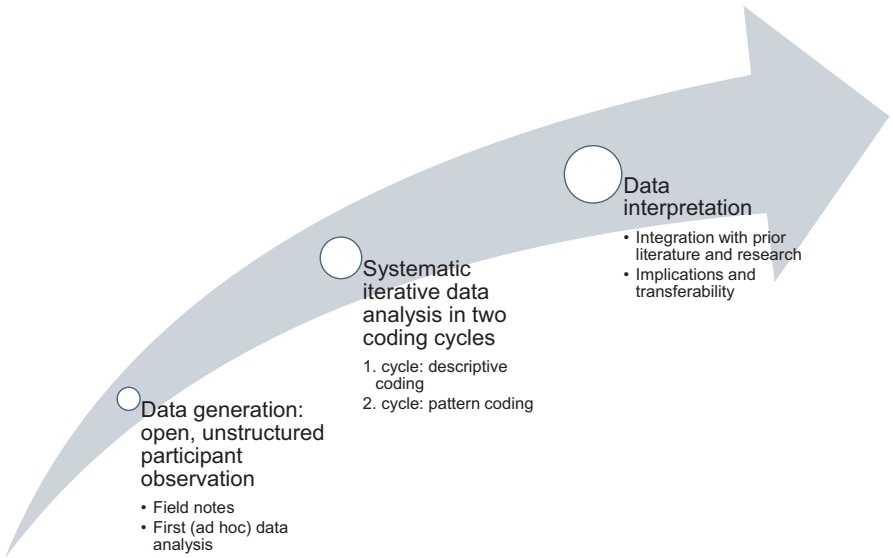

FIGURE 1 From field notes to conclusions—data generation and analysis processes

4 | RESULTS

A total of around 67 hours of observation during eight observation periods were conducted to examine daily restraint practice in two different departments of a university multisite hospital. Three observation periods took place in the department of geriatrics (two dayshifts from 7 a.m. to 4 p.m. and one late shift from 3 p.m. to 11 p.m. [observations 1–3]) and there were five observation periods in the department of intensive care medicine (two dayshifts in the area of high-dependency care [observations 4–5], and two dayshifts and one late-shift in the area of intensive care [observations 6–8]). During the observations, the use of the following restraint types could be observed: mechanical restraints including fixation with different kinds of belts, wheelchair tables and bed rails; electronic restraints; and pharmacological restraints. Two-part bed rails were frequently used, where the bed had rails at the head and the leg part, with a gap between them. On these units, restraints were mainly used in cases where there was a fall risk, confusion (e.g. delirium), cognitive impairment and/or psychiatric disorders. In the area of intensive care, an additional reason for restraint was the risk of therapy interruption (e.g. self-extubation). The following field note describes the start of an observation period:

> Today, I [the observer] am accompanying a nurse who is responsible for a delirious patient with a new tracheostoma after a period of intubation. At the beginning of the shift, the patient's hands are mechanically (physically) restrained because the nurse is afraid of a disconnection of the tracheostoma when the patient is getting agitated. Next to the patient, there is a room divider where the date and the place where he stays are noted and a clock has been hung up (the utensils seem to be part of the equipment of the intensive care unit [ICU]). In addition, there are photos of children, probably the grandchildren.
>
> (Observation 7)

Based on analysis of the field notes, three categories emerged to describe daily restraint practice in the two departments from an outsider's perspective: the context in which restraints are used, the decision-making process on the use and continued use of restraints, and the avoidance of restraint use.

4.1 | The context in which restraints are used

While observing the daily restraint practice on the units involved, several aspects of the context in which this practice takes place became apparent. In our analysis, we identified these as standardisation of processes, architectural/environmental factors, the staff's skill and grade mix, and the availability of restraint equipment.

> In the opened patient file, we [the nurse and observer] could see that the motion sensor was prescribed today by the physician. However, yesterday the motion sensor was already in use. For this patient, there were also a wheelchair table and bed rails in use. Both were not documented anywhere in the patient file. The nurse explained that all applied restraints should be visible in the patient file. However, this is not implemented rigorously. The prescription by the physicians is often only carried out upon request by the nursing staff.
>
> (Observation 2)

Differences could be observed in the standardisation of processes, depending on the restraint type. For mechanical restraints with belts, practices involving documentation and prescription were perceived as consistent across units and between health professionals. For the other restraint types, such as bed rails or electronic monitoring, hardly any standardisation of processes could be observed. Irrespective of the restraint type, the observations showed that the indication for restraint use was often missing from the patient file or was only imprecisely recorded. For example, in the intensive care area, the electronic patient file only offered the possibility of selecting between self-harm and harm to others as a justification for the restraint.

In addition to prescription and documentation, it remained unclear to an outsider when an evaluation of restraints should take place in daily practice, who should be involved in this evaluation, and what form the evaluation should take. The only thing that became apparent was that discussions about restraints were mostly initiated by nurses. However, the fact that it was the nurses who were accompanied during the observations may have influenced this impression. There was also a wide variation in how restraints were reported and discussed during a handover report, or at rounds (mono- or interprofessional); the reporting (or lack of it) ranged from not addressing it, to clearly explaining why the restraint was still necessary and why other measures would be less suitable.

Other influencing contextual factors on restraint practice were observed in these departments. Architectural or environmental conditions, for example, seem to make alternatives to, or prevention of, restraint more difficult. A nurse very aptly described the difficulties on the ICU and high-dependency unit, summarising them as follows:

> It's always beeping somewhere. It is never quiet. The other patients are only behind curtains [on the high-dependency unit]. I.e. one hears everything that is going on there. When they moan, cry, scream … Or the reactions of the families. There is also a lot of motion around the patient. For example, the curtains that always flutter when someone passes by on one side or the other. In addition, one is regularly awakened for monitoring [of vital and/or neurological parameters], which is not beneficial. For the patients,

> there is hardly an opportunity for orientation anywhere. There are devices, cables, infusions, feeding tubes, etc. everywhere.
>
> (Observation 4)

This contrasts with the need of stimulus reduction for patients with delirium. Daylight is important for orientation and especially for the day–night rhythm. However, in some areas of the participating ICU, there was no daylight.

At the staff level, the relevance of the skill and grade was evident, as this observation of the reactions of a young physician reflects:

> A young patient with a psychiatric disorder is restrained and sedated for most of the time. As the sedation eases, she screams and is very agitated. A young physician approaches the patient's bedside but does not seem to know how to react. He is speechless and seems completely overwhelmed with the situation.
>
> (Observation 8)

Staff turnover, which is linked to skill and grade mix, also influences restraint use:

> A nurse explained that she used to work full-time in the high-dependency unit and knew most of the team members and their strengths well. However, due to staff turnover during her maternity leave and now working part-time, she no longer knows the strengths of all team members. Accordingly, it is much more challenging for her to efficiently use the strengths of the team members in the daily shift planning, for example in dealing with delirious patients.
>
> (Observation 5)

According to the nurses, a psychiatric consultation focussing on nursing issues is newly available in the ICU and high-dependency unit to provide support in challenging situations; the consultation is seen as very promising by the nursing staff. However, during the observations, no such consultation took place.

The availability of the restraint equipment played a role too. The two-part bed rails were permanently installed on the bed. From an outsider's perspective, this encouraged their use, as they were often pulled up intuitively rather than consciously. There was a sign on the cupboard containing the restraining belts saying that they were not to be used on regular units or outside the intensive care area. Thus, no mechanical fixation with a belt could take place on a regular unit. According to the nurses' explanations, pharmacological restraints were more often used in the intensive care area than in regular units, as they facilitate the continuous monitoring of vital parameters.

4.2 | The decision-making process on the use and continued use of restraints

Analysis of the field notes has shown that a crucial factor in the decision-making process is whether healthcare professionals are even aware that they are using measures that have an ethical and legal dimension. Furthermore, the analysis revealed that the decision to (continue) using restraints was influenced by the expected benefits of the restraints; the nurses' attitude and perception of safety, as well as work experience; routine; the patients' judgement ability; a lack of knowledge; overwhelming demands and health professionals' emotional condition in the situation; and the level of inhibition of healthcare professionals for using restraints.

> A motion sensor is installed in a patients' room because he showed signs of delirium. The nurse evaluated that the patient has always behaved calmly and, therefore, the motion sensor is no longer needed. She removes it. The nurse says she is aware that the motion sensor is an electronic restraint.
>
> (Observation 2)

Among the accompanied nurses, the first association they made with the topic of restraints was usually mechanical fixation with belts. However, in conversations during the observations, it became clear that they were aware that bed rails, medication or electronic monitoring might be restraints. Our analysis showed that this awareness of restraints among nurses was a basic prerequisite for being conscious of the decision-making process in the first place. We found that it was not only a matter of deciding whether or not to use a restraint, but often also about whether to continue using a restraint based on a conscious and purposeful evaluation (e.g. whether or not the expected benefit was achieved). For example, electronic monitoring was often used in acute geriatrics. However, it could be observed that due to limited staff resources, there was sometimes a certain delay in the response to an alarm generated by the electronic monitoring. This led to patients moving independently from the bed or chair despite electronic monitoring; 'A patient with electronic monitoring installed is standing alone in the corridor looking for the restroom.' (Observation 3) Thus, from an outsider's perspective, the benefit was not always obvious. Similar observations were made with regard to the mechanical fixations, for instance, in the case of the delirious patient with a tracheostoma mentioned at the beginning, whose hands were mechanically restrained: 'The tracheostoma repeatedly disconnects during mobilisation and positioning in the morning. The patient becomes increasingly agitated but has no influence on the repeated disconnection of the tracheostoma.' (Observation 7).

In general, nurses played an important role in the decision-making process, with individual attitude and perception of safety, as well as work experience identified as being influential. The following example illustrates the differences between nurses:

> [On the ICU] Nurse B looks after nurse A's patient because nurse A has to leave for a moment. When nurse A returns, her patient has his hands on the tube. Nurse A is immediately a bit nervous and not pleased, Nurse B has no worries.
>
> (Observation 6)

Differences could be observed, for example, at the start of a shift: sometimes the bed rails were raised for (almost) all patients, while at other times when a shift started all bed rails were down. Some mentioned during the observations that bed rails were raised without reflection and because of routine, as also illustrated by the following example:

> The nurse has raised the bed rail almost completely and then asks the patient if he wants the bed rial to be raised. The patient hesitates for a moment and then says he does not really care but no, actually, it is fine without the bed rail. I [observer] suspect that my presence prompted the nurse to ask.
>
> (Observation 1)

Such patient involvement in the decision-making process was only rarely observed. A reason for this could be that patients' judgement was often perceived as limited, and this was partly combined with a language barrier. Whether a standardised assessment of patients' judgement ability takes place at a certain point in the treatment (e.g. at admission) was not observed.

A feeling of being overwhelmed and a lack of knowledge was found to be related to restraint use. Tranquillising medication was regularly discussed, especially for agitated patients, but hardly any other measures were taken to counteract this agitation. From outsider's perspective and assessment, these medications were a pharmacological restraint. However, it should be mentioned that, even for the outsider, the restlessness/agitation of patients was sometimes hard to bear. Additionally, the health professional's emotional condition in the situation appeared to influence the decision-making. Thus, on a stressful day, it seemed that restraints were more likely to be used to prevent self-extubation, for example, because the additional stress could not be endured.

From the perspective of an outsider, differences were perceived in the decision-making process according to restraint type. Potentially less drastic restraints seem to be used more easily, in other words, the inhibition level seemed to be lower. In acute geriatrics, this perception was particularly gained in connection with electronic restraints, and in the ICU in relation to equipment that appeared to be 'loose fixation straps'. These still allowed the patient a certain freedom of movement, and could be perceived to be less drastic, compared to a mechanical fixation with the appropriate belts. Pharmacological restraints may also be viewed as less drastic than mechanical fixations, as the following observation implies:

> In the morning report among the nursing staff in the ICU, it is mentioned who is mechanically restrained with belts/ straps. In passing, the comment is made that 'the others are sedated'. I [observer] think this was meant in a rather exaggerated way. On this day, many patients were mechanically restrained with belts/straps. It is difficult to judge to what extent sedation is in the consciousness as a restraint.
>
> (Observation 8)

Interestingly, multiple restraints were often used simultaneously: 'The patient is restrained in bed with an abdominal belt. At the same time, the two-part bed rails are raised.' (Observation 4).

4.3 | The avoidance of restraint use

During the observations, various approaches to prevent the use of restraints, as well as alternative strategies to their use, were observed. They mostly addressed the basic problem (e.g. the risk of falling due to confusion) and were summarised in our analysis as follows: patient-orientation approach, proactive communication, promotion of orientation and self-awareness, relatives' involvement, a need-oriented approach, the distraction and occupation of the patient, and a lack of documentation.

> The nurse tries to provide verbal guidance and touches the delirious patient's hands and shoulder while talking to him, which seems to be helpful. The patient reacts positively to being addressed directly by name and to the physical contact and calms down.
>
> (Observation7)

On the units involved, patients often (nonverbally) expressed anxiety and feelings of being overwhelmed, presumably due to the unfamiliar situation in the hospital and, in some cases, confusion or delirium. In such situations, a patient-oriented approach in combination with proactive communication was observed as valuable attempts to reduce the patient's agitation, as well as to promote orientation and self-awareness, as is illustrated in the following observation: 'The tracheotomised patient touches his face with his hands. The nurse seems a little tense but allows it to happen in order to promote the patient's self-awareness.' (Observation 7) Orientation-promoting approaches were part of the environmental design. In the acute geriatric unit, for example, clearly visible clocks were installed in each room, and the names of the responsible nurse and physician were noted next to each patient's bed. In the intensive care area, specific considerations were made as to which patients would benefit most from a place directly by the window, so that they could experience the benefit of daylight. During the observations, it became apparent that relatives usually had a positive effect on the patient's orientation, but a systematic approach to the involvement of the relatives could not be identified.

A needs-oriented approach was clearly observable, too. For example, attention was directed towards adequate pain management. Moreover, the need for potentially intrusive devices, like the peripheral venous catheter, was regularly evaluated.

In addition, it was repeatedly observed on the units involved that distraction and occupation were used, or that the patients were placed near the responsible nurse, as illustrated in the following observations:

> [On the acute geriatric unit] The nurse has placed the confused patient, who is at risk of falling, next to her at a table as she works on the documentation. The patient is calm. This gives the nurse the opportunity to react immediately if the patient wants to get up.
>
> (Observation 3)

> A nurse reported that they once had a patient with dementia who was often restless. For many years, this patient had played brass band music. So, they let him watch YouTube videos with brass music on a tablet. He enjoyed it, was calm and busy.
>
> (Observation 2)

In general, attempts were made to address the basic problem with regard to prevention of, and alternatives to, restraints. Many good approaches were observed, but difficulties emerged too. For example, in the case of a patient with a language barrier who was at risk of falling, 'the nurse suspects that smoking cigarettes tempts the patient to walk away' (Observation 4). However, due to the smoking ban in the hospital and limited staff resources, it was not possible to fulfil this need for the patient. Additionally, it was observed that alternatives were often insufficiently documented, or not at all, so that the next shift, or at least the one after that, did not know which alternatives had been useful.

5 | DISCUSSION

Participant observation was used to examine daily restraint practice in the field of university acute geriatrics and intensive care medicine. Findings showed that from an outsider's perspective, restraint practice can be classified primarily into three areas: (1) the context in which restraints are used; (2) the decision-making process on the use and continued use of restraints; and (3) the avoidance of restraint use.

The observations showed that the awareness of nurses and other health professionals that certain measures entail a restriction of the patients' freedom, and that this restriction has ethical and legal aspects, is a basic prerequisite. To promote this awareness, clear definitions of what is and what is not a restraint are necessary (Bellenger et al., 2019; Teece et al., 2020). However, thus far, most research activities have been conducted on physical (mechanical) restraints, and attempts to develop an internationally uniform definition have only been undertaken for this type of restraint (Bleijlevens et al., 2016). During the observations, the first association that nurses had with the topic of restraints was fixation with belts. On the one hand, this could be an indication that nurses' awareness has been created and focussed on belt use due to longer existing research activity and related practice development projects compared to other restraint types (e.g. Hall et al., 2018). On the other hand, it is known that restraints with belts are perceived as much more restrictive, and cause greater discomfort than other restraints (e.g. bed rails, electronic monitoring) (Ferrão et al., 2021; Hamers et al., 2009), which is probably why they are more memorable for health professionals. The relevance of a uniform understanding of restraints was shown in this study too. The accompanied nurses mentioned, for example, that they knew that sensor mats are restraints. However, the processes (such as the decision for or against restraint use, evaluation and documentation) seemed to be less consciously considered and systematically implemented for these kinds of restraints than for fixation belts.

Although various definitions of restraint include any restriction of personal freedom and human rights (NICE, 2015; SAMS, 2015), in clinical practice, it is evident that a broader understanding of restraint has hardly been established yet. A difficulty in this respect could be that the existing definitions offer room for interpretation, and also depend on how a person is involved (e. g. whether they are a health professional, patient or family member). Furthermore, it can often depend on the circumstances how a person perceives an individual restriction. Even as an outsider, it was difficult in some situations to assess whether a particular measure was a restraint or not. For example, the two-part bed rails could be considered a restraint for a poorly mobile patient, as it would be impossible for this patient to get out of bed through the gap between the two parts without assistance. For a physically mobile patient, however, this would be possible without any problem, and thus, it would not be a restraint in this situation. Due to the limited insight in patient files, it was also difficult to assess whether medication (e.g. psychotropic drugs) was used for sedation/tranquilisation (restraint), or for treatment of a specific disease (no restraint). Our findings underline the importance of having a uniform understanding of restraints in order to enable staff to reflect on the potential restriction of a measure in any situation, and to act in accordance with ethical and legal requirements in cases of measures restricting personal freedom.

Regarding the decision-making process, it was observed that decisions on the use and continued use of restraints are primarily made by nurses. This is consistent with previous findings (Perez et al., 2019; Teece et al., 2020). The results of our study further support previous findings that the decision-making process is based on personal views, intuition and attitudes rather than on a standardised, comprehensible assessment or reflections (Freeman et al., 2016; Li & Fawcett, 2014). When balancing safety and (promoting) patients' independence (e.g. in performing activities of daily living, mobilisation, body- and self-awareness/ orientation), we found that patients' security seemed to be given greater importance in a rather unconscious decision-making process, despite the lack of evidence for the effectiveness of restraints (LeLaurin

& Shorr, 2019; Perez et al., 2019). In the situations observed, the benefit was sometimes hardly recognisable to an outsider. The lack of the effectiveness of restraints might be linked with a kind of false sense of security on the part of the health professional, which can lead to less attentiveness and consideration of alternative measures. For example, if the nurse relies on being alerted by the motion sensor when the patient leaves the bed, she might visit the patient's room less often. Additionally, in the case of electronic restraints, alarm fatigue has been described as a recognised phenomenon (LeLaurin & Shorr, 2019). This can lead to a delayed reaction to the alarm, which is why falls (and other reasons for using this kind of restraint) cannot be prevented. Thus, the benefit of the electronic restraint becomes questionable.

Reflecting on this false sense of security may be hampered by routine and institutional culture (e.g. 'everyone does it this way' or 'we have always done it this way'), which is known to contribute to restraint use (Goethals et al., 2012; Lach et al., 2016; Thomann, Hahn, Bauer, et al., 2021), along with health professionals lacking knowledge about restraint and its consequences for patients (Cui et al., 2019; Eskandari et al., 2017; Perez et al., 2019). In addition, as shown in this study, restraints are often used in acute situations that are overwhelming and/or when the emotional burden is high. In the context of the lack of standardisation found in our study, intuitive and unreflective action is likely to be favoured, which is prompted by what is also known as heuristic decision-making (Li & Fawcett, 2014; Whelehan et al., 2020). Although this type of decision-making is often useful in daily clinical practice, it can also have a negative impact on patient safety, as shown here with restraint use (Whelehan et al., 2020). Lack of appropriate knowledge, qualifications and professional experience, as described in this and other studies on restraints, particularly in relation to nurses (Cui et al., 2019; Farina-Lopez et al., 2014; Perez et al., 2019) further promotes a negative result when using heuristic decision-making. However, in the case of restraint use, it remains unclear in our view as to whether more professional experience would favour better heuristic decision-making. On the one hand, increasing experience can lead to a better assessment of which situations require restraint, and which do not. On the other hand, with increasing experience, routines are consolidated, and the institutional culture is internalised, which may, in our view, reduce critical reflection on restrictive practice. Moreover, the evident influence of institutional culture on daily restraint practice carries the risk of fears of repercussions if the common view is contradicted (this is known as the bandwagon heuristic (Whelehan et al., 2020)). Nonetheless, since there is no evidence to date for the effectiveness of restraint but only for its risks, heuristic decision-making in the case of restraint use needs to be reflected upon and transformed. The moral distress that nurses feel when they use restraint offers a starting point, but so far, the (false) sense of security has prevailed (Möhler & Meyer, 2014; Perez et al., 2019). It is therefore essential to improve the evidence on restraint use in hospitals, to teach it, and to systematically implement the findings in practice.

Besides health professional related factors, infrastructural conditions were also shown to influence restraint practice (Teece et al., 2020). For example, it could be shown that permanently installed bed rails increase their use (Hignett et al., 2013). On the observed units, the bed rails were permanently installed, and the impression was gained that this fixed installation favours an intuitive, unreflective raising, instead of a conscious decision to raise them. In some cases, the bed rails were raised even for persons who were hardly physically mobile, because it seemed to be such a routine procedure for patients who were care dependent. Thus, the permanent installation was interpreted as being associated with a lowering of the inhibition threshold for their use. Also, with regard to the 'fixation straps' previously described, which leave more room for movement than fixation belts and can thus be seen as a potentially less drastic measure in terms of ethical decision-making, the question arose as to whether an inhibition threshold is lowered here as well. On the one hand, from an outsider's perspective, it remained questionable as to whether the same number of patients would have been restrained if only fixation belts had been available. On the other hand, it is possible that the regular use of the 'fixation straps' reduces the inhibition threshold to use fixation belts.

Besides the use of restraints, this study also identified various measures that could be potentially associated with the reduction of restraint use. These measures mostly addressed the underlying problem that led to restraint, such as patients' confusion, but did not seem to be systematically and specifically applied in terms of restraint reduction. A more conscious and systematic use of such measures might, therefore, lead to a further reduction of restraint use. This assumption is in line with Möhler and Meyer (2014) who found that alternatives are not considered sufficiently often. It could be beneficial to highlight these associations, and the obligation that restraint should only be used when no other way is possible. Based on the observations, there seems to be great potential for communication and involvement of patients' relatives in the reduction of restraint use. As described, it can be a challenge for patients to feel (locally) oriented in a hospital, and this can lead to anxiety and the sense of being overwhelmed. It is important that these feelings are recognised by nurses and other health professionals, and alleviated by providing orientation through communication and infrastructural modifications. The systematic involvement of relatives could further encourage orientation, and help to reduce fear and the sense of being overwhelmed. Given that older people are more often affected by restraint use (Thomann, Zwakhalen, et al., 2021), it can be assumed that relatives might be over retirement age, and therefore would be potentially available.

In order to move from routine use to a more reflective restraint management, a central element should be the promotion of documentation and evaluation according to certain criteria, for example by means of technical solutions. This means that the documentation system automatically reminds staff of the evaluation, and requests a justification for the continuation. A technical solution that leads restraint management in line with defined processes could also address the known lack of adherence to existing protocols (Perez et al., 2019). For example, the need for proper documentation, including the reason for restraint use, alternative methods

tried and reassessment of the need for restraint use, is undisputed (Joint Commission and American College of Emergency Physicians in Guerrero & Mycyk, 2020). In the intensive care department observed, the system offered a standardised recording of the reason for restraint use. However, the only distinction made for the reasons for restraint was between self-harm and harm to others. From an outsider's perspective, this distinction appeared unhelpful for a profound evaluation or, in particular, for the consideration of alternatives and preventive measures (e.g. in the case of self-harm due to the risk of falling vs. the risk of therapy interruption, other preventive measures would probably be used). Better documentation quality would further improve monitoring and thus enable data-based reflection, and later on evaluation of measures taken. Bellenger et al. (2019) recommended the involvement of a team of specialists for the reduction of restraints in nursing homes, which may also be relevant for the hospital setting. It is conceivable that a technical solution could trigger the direct notification of a team of specialists according to certain criteria, so that an evaluation of the restraint use could also be carried out by these specialists. This, in turn, would lead to a shift from decisions made by individuals according to their personal preferences to standardised decision-making that builds on a constant team, and can thus relieve individuals of sole responsibility for restraint decisions. In the mental health setting, shared decision-making approaches have been shown to be beneficial (Barbui et al., 2021). Such an approach not only relieves health professionals of sole responsibility for decision-making, but also leads to more patient involvement. Based on our findings, patient involvement seems to be rather low, whereby cognitive impairments and language barriers may have made patient involvement more difficult. In our view, better patient involvement might be conceivable in the sense of a prospective approach, that is that the possibility of restraint use is already discussed at the time of admission. This can ensure that the patient's views and wishes are known (and documented), so that some kind of patient consent can be obtained in this way.

Based on the findings of this study, the following three core recommendations for clinical implications can be derived:

- The promotion of conscious decision-making including a clear definition of restrictive measures, interprofessional staff education, reflection vessels, and support through a technical solution.
- 'Walking in the patient's shoes': providing staff training to enable nursing staff, physicians and other involved health professionals to reflect and acknowledge the unfamiliar situation for patients and their feeling of fear and being overwhelmed in the hospital setting; to communicate more proactively (e.g. addressing the patient by name, purposeful touching, regular interactions to proactively pick up on patients' needs, experience for oneself what it feels like to be restrained) in order to convey orientation and security, thus counteracting fear and feelings of being overwhelmed; and to actively and intentionally involve relatives to further promote feelings of security and orientation.
- Systematic monitoring regardless of measures (not) taken, in order to conduct a data-based and objective discussion on restraint practice and culture at departmental and institutional levels (ongoing auditing of restraints); generating a baseline of data for profound evaluation of future reduction measures; the standardisation of processes, since monitoring requires a definition of what needs to be documented and how that in turn is likely to have a beneficial effect on conscious restraint management, as decisions must be documented accordingly.

In our view, these recommendations can be implemented even within the context of scarce (human) resources, and can serve as a kind of preliminary stage for more complex interventions to reduce restraint use. Since elderly and mentally ill people are particularly affected by restraints in hospital (Thomann, Zwakhalen, et al., 2021), it might be worth considering concepts from the long-term care and mental health fields to reduce restraint use in hospitals and to develop alternatives. These concepts are unlikely to be applicable one-to-one in the hospital setting due to different basic conditions, but could provide important information on effective and potentially adaptable approaches to restraint reduction. In addition, there appears to be a need for policy makers to revise the legal framework regarding restraint use in the hospital setting, as changes in the law have been shown to positively influence clinical practice in the psychiatric setting, for example (Barbui et al., 2021; Steinert et al., 2020). Furthermore, it should be examined on a macro level whether restraint use should be established as a (national) quality indicator for the hospital setting, as measuring and benchmarking restraint use in other settings has proven to stimulate quality improvement (Newton-Howes et al., 2020; Thomann, Hahn, Schmitt, et al., 2021).

6 | LIMITATIONS

The following limitations must be considered: first, the participants were informed that the restraint practice would be observed. In addition, the nurses to be accompanied were allocated by the unit management. It is therefore possible that only exemplary restraint practice was observable. However, the participants were very interested in the topic, and the impression was gained that there was a great openness to show the restraint practice as it is because the participants seemed to be aware of the potential for improvement. In some cases, it was suggested that other nurses should be accompanied, as more restraints were in use with their patients. During one observation period, this offer was taken up, as the nurse who was supposed to be accompanied had to spend a large part of the shift with the patient in examinations, and thus, the restraint practice on the unit could not be observed. If a situation seemed to have been influenced by the observer, it was also recorded in the field notes. Furthermore, no night shift could be accompanied, although more restraints are often used at night (Teece et al., 2020). For future studies, it would be interesting to investigate whether restraint practice differs between day and night shifts. However, the recommendations derived from this study may also lead to an improvement in restraint management at night.

Second, in addition to nurses, other health professionals are involved in restraint management. In particular, physicians have an important role, as in the Swiss healthcare system they primarily bear the legal responsibility for the treatment of patients. Thus, their attitude is crucial in relation to daily practice. However, as nurses were accompanied during the observations, the description of restraint practice in this study is primarily based on the view of the nurses. For future studies, it would be advisable to direct more attention towards the interprofessional aspect of restraint practice, as this has generally been barely explored so far. Furthermore, patients with restraints are also cared for by nursing assistants, whose role is only partially represented in this study, although there were indications that qualifications play a role in restraint practice.

Third, due to reduced insight into the patient file, the indication for measures and medications could often not be determined. Particularly in the case of medications, lack of access made it difficult to distinguish between whether a medication was used for restraint or for therapeutic purposes. In future studies, an analysis of the patient file could contribute additional evidence. Furthermore, it became apparent that the distinction of restraints from involuntary treatment, if there is one, was also a challenge. For example, a patient was compelled to go to bed because of low blood pressure and the resulting danger of syncope, even though he did not want this, and medication was mixed with food and administered in this way.

It is also important to reflect on the role of the observer. For the data collection, an open, unstructured perspective was intended to enable the description of restraint practice as comprehensively as possible. As the observer had prior knowledge of restraint, and had worked for some time in a mental health setting, which gave her experience in dealing with restraints, in this respect, there could be a bias. However, the observer's prior knowledge and practical experience were perceived as more beneficial, as it enabled certain aspects to be recognised as being related to restraints, which would hardly have been assessed as relevant without this prior knowledge and practical experience. This was particularly the case because the observer's practical experience was gained in a mental health setting, where dealing with restraints, and especially their avoidance, is more advanced.

Different approaches were taken to ensure the trustworthiness of the data. First, data saturation became apparent during data collection. Second, the observations were discussed with the participants at certain points, thus deepening the insights, and so that a kind of participant validation took place within this process. Third, parts of the analysis were conducted independently by a co-author, and the final analysis was discussed with the co-authors. Finally, the results were supported by field notes.

7 | CONCLUSION

The daily restraint practice in a hospital setting shows potential for improvement in terms of the standardisation of processes for restraint management in accordance with ethical and legal requirements. Digitalisation could be used to guide the processes, and at the same time raise awareness and conscious decision-making among healthcare professionals. In combination with targeted and proactive communication, this could be a contribution to restraint reduction that could be integrated into daily practice with little additional investment.

8 | RELEVANCE TO CLINICAL PRACTICE

While the benefits of restraints have not yet been proven, there is evidence for their risks, which is why a reduction in their use is recommended. This study is relevant to clinical practice because it brings a new perspective to a topic dominated by routine and attitude. The outsider perspective allowed daily restraint practice to be described independently of existing routines, departmental cultures and personal attitudes. It was shown that the restraint practice in the hospital can be positively changed by demanding and promoting consistent implementation of guidelines, in combination with expanded and targeted application of existing prevention approaches.

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CONFLICT OF INTEREST

All authors declare no conflict of interest.

AUTHORS CONTRIBUTION

Study design, data collection, data analysis, data interpretation and writing of the manuscript: ST; data analysis, data interpretation, and reviewing and editing the manuscript: SSD; study design, data interpretation, reviewing and editing the manuscript, and supervision: SZ; study design, data interpretation, reviewing and editing the manuscript, and supervision: SH; all authors read and approved the final manuscript.

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