



Nursing Students' Perceptions of the Use of Physical Restraints in Acute Care Hospital Settings

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¹This paper was based on research carried out during the MSc. Nursing course completed in 2019. Isaac Mallia Azzopardi collected the data, analysed it and wrote the paper. Editorial assistance for this manuscript, reviewing of content and substantial contributions were provided by Dr. Paulann Grech.

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Abstract

Attempts to justify the traditional use of physical restraints have commonly centred on the need to enhance patient safety. However, issues have been progressively raised in terms of ethical considerations, human rights and the potentially harmful effects of restraints. In this view, many countries have attempted to move away from the routine use of physical restraint by incorporating alternative methods. Although several studies have explored the perceptions of patients and nurses regarding the practice of patient restraint, knowledge regarding student nurses' perceptions is limited. The aim of this multiple case study was to explore the perceptions of this observed practice among six nursing students in their final year of a four-year undergraduate nursing program. These students had observed (but not participated in) the application of physical restraint to patients in acute care settings. A thematic analysis of the participant interviews and corresponding focus group data revealed the following: the perception that physical restraints are better than chemical restraints; consideration of, and access to alternative and less invasive measures; the need for proper restraining equipment; and training for nursing students in the physical restraint of patients. Recommendations focus on the need for training in the use of physical restraint methods and propose alternative measures to physical restraints.

Keywords: physical restraints, chemical restraints, mental health, acute care, nursing

Introduction

Physical restraints are defined by Gastmans and Milisen (2006) as any equipment or device which is attached to a person's body, with the aim of deliberately preventing the free body movement of the individual being restrained. Different types of physical restraints exist, including vests, hand mittens, straps, and harnesses. The use of patient physical restraint in acute care settings is controversial.

Authors such as Shorr et al. (2019), Lachance and Wright (2019) and Lan et al. (2017) do not agree with physically restraining patients. In their respective studies, the negative effects associated with their application of physical restraints were highlighted. These included abrasions, bruises, oedema, aspiration, contractures of joints and respiratory complications.

Conversely, authors such as Vijayakumar et al. (2014) and Hamers and Gulpers (2004) endorsed the application of physical restraints in the acute setting. These authors stated that such measures help prevent the manipulation of life-sustaining medical devices and facilitate the management of post-operative complications such as delirium. Physical restraints, therefore, protect patients from potential harm. However, there are clear guidelines on this subject and if restraints are really needed, they may only be used for the shortest time possible, in the least restrictive manner, in combination with psychological support and only considered when all other approaches have been exhausted (NICE, 2020; WHO, 2018).

Background

As explained by Abdeljawad and Mrayyan (2016) the widespread use of coercive measures, most notably physical restraints for patients, has become an issue of great concern in nursing practice. The use of physical restraints continues to create a dilemma for health care professionals when it comes to balancing the risks and benefits of their use. For example, there may be a conflict between respecting patient autonomy and acting in the patient's best interests (Salehi et al., 2020). Therefore, nurses must seek to ensure patient safety without negatively affecting the individual's rights or dignity (Janelli et al., 2006). Even though nurses are aware of the physiological and psychological implications associated with physical restraints, in some settings they are still utilised (Gu et al., 2019).

Student Nurses' Attitudes towards Physical Restraints

Studies focusing on the perceptions of nursing students towards physical restraints have been lacking in the literature when compared to studies focusing on the perceptions of nurses and patients. However, recently, a number of studies have been carried out in this aspect. In one of these studies, carried out by Masri et al. (2021), student nurses' knowledge and practice of physical restraints in clinical practice were explored. A descriptive qualitative design consisting of one semi-structured individual interview and five focus group discussions with nursing students (n=24) from two higher nursing institutions was employed. Three meaningful themes were identified namely, the definition of physical restraint, the uses of physical restraint

and concerns towards its practice. Whilst the students acknowledged that physical restraint was justified in the provision of safe and high-quality patient care, they also stated that there are concerns about its practice both for the staff and for the patients. The authors of the paper advocated for the need for further education and support to the students on the use and application of physical restraint. In another study by Ha et. al (2019), factors influencing practices of physical restraint use by nursing students were explored. In this cross-sectional descriptive study, it was found that knowledge was the strongest predictor of the use of physical restraints. Echoing the recommendations by Masri et al. (2021), nursing student education was suggested as being an imperative factor in enhancing the appropriate and effective use of restraints. Interestingly, in a study by Kong et al. (2021), a web-based educational intervention on the use of physical restraints was implemented and favourable results were achieved regarding student perceptions and the use of this practice, In Malta, which is the country where the study took place, only one relatively recent research study has focused on aspects related to physical restraint. This study by Fenech (2016) explored care providers' observations and perceptions regarding the use of restraints in long-term care homes and the older persons' reaction to the use of restraints including the effect on their rights, autonomy and integrity. This was achieved through the use of a questionnaire booklet consisting of quantitative and qualitative questions. The results presented a high observed incidence of physical restraint devices in particular the use of bed rails and harnesses. Furthermore, the participants acknowledged the use of 16 different types of restraint devices. Care providers participating in the study reported restlessness to be the most commonly observed reaction from older persons to the use of physical restraint (87.9%), followed by physical and cognitive consequences (66.7%) and apathy (30.3%).

As students are future healthcare professionals, understanding their perspectives is crucial. Students may value and interpret the use of physical restraints differently from seasoned nursing practitioners, interprofessional practitioners and allied health care workers. As students are developing active roles within health care systems, and developing professional decision making, differences in education and exposure to patient physical restraint may be evidenced. Therefore, by analysing students' perceptions on the use of patient physical restraints, knowledge may emerge which may enhance or enrich patient care and improve education. In order to guide this study, the following research question was set:

What are the perspectives of student nurses when observing the physical restraint of patients during their clinical placements in the acute ward setting?

Materials and Methods

Study design

A qualitative approach was chosen. The reason behind this choice was that it facilitated the collection of in-depth data on the perceptions of final-year undergraduate nursing students. A multiple case study design was selected. This design allows the researcher to analyse the data within each situation and across different situations, unlike single case studies which are limited

to only one case. In this study, each participant was considered a unique case example. Therefore, the researcher was able to understand the similarities and differences across cases, which generates stronger and more reliable evidence when compared to the single case design (Gustafsson, 2007).

The study was of an exploratory nature. To this extent, the focus was on the exploration of the perceptions of final-year nursing students regarding their observed use of physical restraints in the acute setting. Individual interviews followed by a focus group with the same participants were used to collect data during the study. Both the interviews and focus groups were audio-recorded and transcribed verbatim upon completion.

Participants

The target population for this study was all final year undergraduate nursing students following a diploma or degree course with the University of Malta. Final-year nursing students who had been placed in acute hospital settings within the Maltese Healthcare system were sought for participation.

A total of six final-year nursing students over the age of 18 years were found using snowball sampling. Five students were following the (undergraduate) bachelor's course in nursing studies while one student was following the undergraduate nursing diploma course offered by the University of Malta. Students were contacted by an intermediary who emailed the entire target population. In this email, the students were asked to contact the researcher if they were interested in participating in the study. Exclusion criteria were applied to address the unlikely possibility that any of the students had not participated in a placement within the acute setting or had not observed the application of physical restraint throughout the course.

Initially, only three final-year nursing students agreed to participate. Since this was an inadequate number of participants to carry out the study, a snowball sampling method was adopted. Therefore, the three students who agreed to participate were asked to help identify more subjects who had a similar trait of interest. A further four final year student nurses agreed to participate in the study. The first interview was utilised as a pilot interview, resulting in a final sample of six participants. All of the participants had observed restraints being used in practice but none of them had been actually involved in their application. None of the participants dropped out during the study.

Data Collection

Individual interviews were one of the instruments chosen to collect data for this study. As explained by Steber (2017), the use of individualised interviews allows the interviewer to establish rapport with participants, therefore, making them feel more at ease and comfortable which in turn generates more insightful responses, especially when discussing sensitive topics such as the application of physical restraints on patients. Furthermore, interviewers have an increased opportunity to probe for additional information and circle back to previous key questions to generate a rich understanding of participants' perceptions, attitudes, and motivations

(Steber, 2017). Face-to-face interviews also enable the interviewer to focus on body language and the participant's tone of voice which provides important additional information (Steber, 2017).

For the sake of this research, a semi-structured approach was adopted rather than the structured or unstructured approach. This allows for a discussion with the interviewee rather than using a rigorous set of questions, which do not allow the participant to divert. This, therefore, ensures the researcher covers all the necessary topics while at the same time allowing further probing and exploration.

After carrying out the one-to-one interviews, group interviews or focus groups were chosen as the other instrument to collect further data for the study. The process of data collection was carried out over a period of one month. Regarding the individual interviews, the date, time, and place were previously agreed upon between the researcher and the participants. The organisation of the focus group was more complex as it involved finding a date and time slot which suited all six participants.

Ethics

Permission to carry out this study was sought from the Dean of the Faculty of Health Sciences and the University's Registrar. Approval was also granted by the University of Malta's Research and Ethics Committee (FRECFHS_1718_122).

Data Analysis

The process of thematic analysis was used to analyse the data. As explained by Braun and Clarke (2006), thematic analysis involves the identification of patterns or themes within the qualitative data collected.

The first step was the transcription of the data collected through the interviews, followed by immersion into the transcribed data. Immersion allows the researcher to increase familiarity with the data for a more thorough analysis. The second step was data coding, wherein the identification of common themes took place. In this manner, a theme was identified when the same issue was brought up by multiple participants, showing that this was a common experience/issue amongst many of the subjects.

Findings

The analysis of the individual interviews and the focus group led to the identification of seven themes, namely: Physical Restraints vs. Chemical Restraints; Non-Chemical Alternatives to Physical Restraints; Barriers Limiting the Application of Alternative Measures; Lack of Education and Training about Physical Restraints; Lack of Proper Restraining Equipment; Physical Restraints as a Last Resort; Importance of Increasing Awareness About the Use of Physical Restraints. For each theme, a few exemplar excerpts have been provided in an attempt

to describe the emergent theme in the participants' own words. Pseudonyms have been used to protect the participants' confidentiality. The pseudonyms Jan, Robert and Luke were used for those students who identified with the male gender. Sandra, Ella, Lynn were the pseudonyms used for the female participants.

Physical Restraints vs. Chemical Restraints

Physical restraints and chemical restraints are two of the most common types of restraint methods used in the acute care setting. Despite potential consequences, Jan, Robert, Sandra and Ella agreed that they preferred physical rather than chemical restraints for non-compliant patients. These participants stated that using chemical restraints increases risk as sedation can affect the patient's respiratory rate and blood pressure. Additionally, the same students (n=4) agreed on the perception that physical restraints have no life-threatening side-effects, thus the potential consequences are less severe. Jan stated, "It's better to have some bruising after you physically restrain them rather than administering chemical restraints and then being drowsy [...or] their blood pressure goes down and one problem leads to another and ends up worse".

Robert added the following risk: "...propofol affects their CO₂ [Carbon Dioxide]". Sandra stated, "there are a lot of side-effects in chemical restraints more than physical....with chemical restraints you basically don't have communication at all with your loved ones."

Although Ella, Sandra, Jan and Robert agreed that they prefer physical restraints over chemical ones, the use of chemical restraints may be essential. These participants referenced particular settings, such as the Intensive Therapy Unit (ITU), where the use of physical restraints may be inadequate. "When you intubate a patient, you need to use chemical restraints," said Ella. Robert added, "it would be really uncomfortable having something down your throat whilst not being sedated". Jan pointed out that ITU patients "have so many arterial lines, etc. that if patients move around a lot, they may cause trauma to themselves. Therefore, sedation is the only solution".

Non-Chemical Alternatives to Physical Restraints

Despite an acknowledgement regarding the merits of physical restraint use, the data revealed a preference for alternative measures which are more humane and may be of greater benefit to non-compliant patients. These alternative measures, mentioned by four of the participants, included psychological care, pet therapy, and the organisation of activities. As Lynn summarised,

As I told you, psychological care...If you are, for example, in a dementia unit and you know that this patient loves going out in the garden, try to find time to take her out in the garden. If she loves cats or other animals, you go next to the cat or show her pictures or play cards. [...] So you just have to interact with the patient and know the patient well.

Barriers Limiting the Application of Alternative Measures

Four participants affirmed that the use of alternative measures was of great benefit for the patients. However, the same students added that the application of such measures is often hindered by several factors. Jan identified one barrier as the excessive paperwork needed to allow a medically-stable patient to temporarily leave the ward:

Once we took a patient out from the ward, but it took a lot of paperwork and doctors had to ascertain that he was a stable patient. He was going to be transferred to another ward however he wanted to go out for a while, for just a couple of hours. We took him out and it was like a relief for him as he had been stuck in the ITU for fifteen days [...] but a lot of paperwork was involved which makes it so difficult...

Both Lynn and Jan stated that the fear of being held liable for consequences may discourage nurses from adopting such alternative measures. "...people sometimes don't want to take the responsibility," said Lynn, and "if the patient goes out and has a cardiac arrest, whose fault is it?" asked Jan. A lack of human resources may also serve as a barrier in the application of such alternative measures. Four of the participants agreed that organising activities for patients such as short trips outside the unit or distracting techniques may help to limit the boredom and potential disorientation which can result from hospital stays. However, staff presence is required for supervision and safety.

Lack of Education and Training About Physical Restraints

The data unanimously supplied that the nursing studies courses offered at the University of Malta should prioritize education and training in physical restraint methods. Robert expressed disappointment that "it is a subject that is not really talked about" and added, "We never had any lectures about physical restraints in three years". Luke admitted, "we [...] have no idea how to restrain a patient and how it works. Because we have limited knowledge. We have to read by ourselves".

Lack of Proper Restraining Equipment

Another important theme that emerged was the lack of proper restraining equipment available in acute care settings. This issue was identified by five of the participants. Jan stated that during his clinical placement within the ITU, some patients were inappropriately restrained:

There is a huge lack of equipment. Once in ITU I saw them using the bandage and I asked him: "Is there something else you could use"? He told us "They are already using it on the other side" also, the vests that they use to keep them sitting down...there aren't many of them in the wards so if you use one, I cannot use the other one.

Lynn also witnessed the use of bandages when the proper equipment was not available and observed that bandages “damage the skin. ... it causes bruises and even cuts...”.

Physical Restraints as a Last Resort

Most of the participants (n=5) agreed that when they become qualified nurses, they intend to use physical restraints as a last resort after alternative techniques would have been exhausted. The data revealed that communication techniques would be the first option with non-compliant patients. Lynn suggested the simultaneous use of physical restraints and communication:

I think I would start with psychological, if they don't cooperate, physical and then you go psychological while they are physically restrained because you have the time to try and make them understand what is happening and what you are going to do.

Luke agreed that communication would be the first option, followed, if necessary by physical restraint. He stated, “...communication is essential as well. I mean first you must talk to the patient [...] and then if you don't convince him, you may have to physically restrain him. [...] Obviously depending on the setting”.

Importance of Increasing Awareness about the Use of Physical Restraints

The final theme that emerged was the importance of increasing awareness for the general public about the use of physical restraints and the benefits that such awareness may bring about. This was discussed by five of the participants. According to Ella, physical restraints are considered “a taboo”. Lynn emphasised the need to educate the public by putting up posters. She said: “There is nothing wrong about it if you use it [restraint] well, so the public would know that a relative might be restrained because they are confused but it doesn't harm the patient. It is something that needs to be done”.

Jan, Robert and Sandra explained the benefits of spreading awareness about physical restraint use in acute care settings. Consequently, Jan highlighted that with increased awareness, relatives might be better informed about inappropriate use of physical restraints: “They [relatives] have the knowledge to challenge you and tell you why you are using wrist bands with that patient and with my relative you are using bandages”.

Discussion

The emergent themes confirm that the nursing students who participated in this research were able to identify and discuss important issues in relation to the topic of physical restraint. The majority of participants in this study (n=4) agreed that they preferred physical restraint to chemical restraint. Jan and Robert preferred physical restraints due to a reduction in possible side-effects as compared to chemical restraints. Sandra agreed with this statement but did not endorse the use of chemical restraints; “you basically don't have communication at all with your loved ones”, which may negatively affect patient care. This was mirrored by Zeef (2017) who stated that the lack of

communication in the healthcare setting may lead to accidents, detrimental effects on the patient's mood and serious health complications which may negatively affect the patient's general well-being. Conversely, a patient who is already experiencing cognitive challenges may become more confused or agitated if physical restraint is applied, especially if they cannot comprehend why their movement is being limited by restraint. In this view, and in a similar way to chemical restraint methods, this may also alter the person's state of mind, rendering communication difficult. These and other possible detrimental outcomes need to be considered in relation to the use of chemical restraints and regulation of such practices is challenging (McSherry & Tellez, 2016).

Communication was an important issue for many of the participants in the study and in fact, another major theme that emerged focused on the use of alternative measures which centred around communication. Robert and Luke believed that communication and the application of de-escalation measures would be effective to calm a non-compliant patient. Luke stated, "communication is essential as well and then if you don't convince him, you might have to physically restrain him". Robert proposed "firstly using communication and de-escalation techniques, to diffuse the situation. If they are problematic, then I think I would resort to physical restraints". This is in line with guidelines on the topic such as those by NICE (2020).

Some of the students mentioned the use of pet therapy. Sandra stated, "Pet therapy is very good [...]. When a patient gets confused, they can take the dog for a walk, and it calms them down instead of using physical or chemical restraints". These findings were reflected in a study by Klimova et al. (2019) who found pet therapy essential for hospitalised patients in stimulating awareness, promoting interaction, and providing pleasure. Similarly, a study by Coackley et al. (2021) showed that a dog visitation program resulted in a reduction of anxiety levels and decreased heart and respiratory rates. Subjective measures of comfort and wellbeing were also improved. However, ensuring that animal visitation is appropriate may require consideration on a case-by-case basis and adherence to guidelines due to risks to safety and infection control (ACIPC, 2016).

Another alternative measure was the provision of psychological care. Lynn and Luke stated that by offering psychological care, you can "...interact with the patient and know the patient well" (Luke). Lynn added that it can help to keep the patient stimulated and cognitively healthy during their recovery period. The findings correlated with Levy's (2018) study which demonstrated cognitive behavioural therapy (CBT) as beneficial for patients who are anxious, frustrated, or non-compliant. CBT has been shown to reduce anxiety, improve self-esteem and boost confidence during hospitalisation (Darnell et al., 2016). However, it has to be noted that CBT and other psychological therapies are not taught to students during the undergraduate nursing programmes offered by the University of Malta and this type of therapy can only be delivered by trained therapists. These recommendations are in line with clinical and legal guidelines on the use of physical restraint such as those issued by NICE (2020), WHO (2018) and Council of Europe (2017). In these documents and in a recent scoping review by Fernandez-Costa et al. (2020), alternative measures to restraints were identified. These include the enhancement of communication with patients, monitoring of ambient distress levels, and training on and implementation of de-escalation techniques. Furthermore, the use of assessment tools to facilitate the identification of stress triggers, early signs of distress and the timely application of

calming strategies are also recommended. The NICE (2020) guidelines also state that the intervention selected must be proportionate and reasonable to the risk posed by the individual.

In this view, the consideration of alternative measures to restraint is one of the recommendations emerging out of the study. However, the students highlighted certain barriers that may limit the application of these measures. Participants believed that barriers to implementing alternative measures included a lack of staff availability, excessive documentation needed if alternative measures are implemented and concerns regarding accountability and liability during the application of alternative measures in the acute setting. Jan recalled, “a lot of paperwork was involved which makes it so difficult [to merely take a patient outside for fresh air]”. This may demotivate professionals from considering simple alternative measures such as the one mentioned by this student.

However, although one may agree with Jan’s views that documentation is very time consuming, it must be acknowledged that paperwork is vital to ensure quality healthcare as it serves as a ‘bridge of communication’ between health care staff and maybe the only medium for data exchange between members of the healthcare team (Alkouri et al., 2016). Additionally, although Lynn and Jan admitted that excessive documentation and accountability tend to act as barriers for the application of alternative measures, one may argue that they tend to go hand in hand with each other. This is due to the fact that without the necessary documentation, the same lack of professionalism seen in the failure to document care, could be reflected in attitudes towards patient care, thus increasing the risks to patients and the chance of the healthcare professional facing legal action.

Additionally, Lynn stated “...sometimes people don’t want to take the responsibility” for employing alternative measures because they fear being held accountable if the patient is harmed”. This is an example of ‘defensive medicine’ which is increasingly on the rise in Europe, resulting in higher healthcare expenditure whilst not necessarily enhancing the provision of service (Garattini, 2020). In this view, it seems as if the risk of being held accountable and the bureaucracy involved in the application of alternative measures may result in the withholding of activities and therapies which may be beneficial to patients. Thus harsher methods including chemical or physical restraints may become the default. In considering the ethical principle of beneficence, this raises concern and needs further exploration in the setting of the study.

In settings such as the one that features in the study, it may be useful to refer to the International Classification for Nursing Practice since this provides guidance with regards to clinical activity in nursing and can facilitate decision making and policy development (ICNP, 2019).

Another barrier noted by the majority of the participants featured the lack of proper restraining equipment available in the acute settings and resulting concerns for healthcare staff. This highlights the importance of providing professional equipment to ensure that if restraint is still needed after alternatives are exhausted, nursing staff are able to work appropriately within their mandate. The use of authorized equipment specifically designed for mechanical restraint, such as restraining belts is emphasised in guidelines and so the use of any other means may

subject the patient to unnecessary physical and psychological risks (NICE, 2020; WHO, 2018; Council of Europe, 2017).

During the study, it was heartening to note that the participating students had sound ideas on the topic especially with regards to the need for consideration of alternative measures prior to using physical restraint as a last resort. Surprisingly their perception of their knowledge on this topic was less reassuring. In fact, all participants stated they did not receive adequate education from their respective preparatory nursing courses in the application of physical restraints. Luke stated, “we have limited knowledge about the use of restraints”. Ella also admitted, “there should be more knowledge. If you start from knowledge, you will know how to actually restrain a patient”. Even as final year students, they did not feel prepared to apply physical restraints. As summarised by Luke, “We [...] have no idea how to restrain a patient and how it works”. Although study participants had followed either a diploma or a bachelor’s course in Nursing, the type of course followed did not affect the responses given and so the lack of education on restraint use was a commonality between the two courses. Notably, in Malta, the scope of practice does not change with the type of qualification and nurses emerging from both courses can use restraints in the clinical area. These findings were echoed by Ha et al. (2019) and McCalla-Graham and De Gagne (2015) who concluded that although nursing courses offer basic knowledge and training, they may not be thoroughly preparing nurses to function well or pragmatically in the clinical areas. This is concerning since as already explored, inappropriate use of physical restraint can result in numerous detrimental consequences for patients.

Compounding this concern, being confident enough in the application of a particular skill is often the first step to having enough courage and assertiveness to change one’s own practice and to overcome the potential inertia during the initial stages of change (Lauwers & Swisher, 2015).

Implications for Practice and Education

Decisions regarding the use of restraint need to be based on the latest evidence base offered by guidelines such as the ones issued by NICE (2020). This will help to guide nurses towards the effective application of physical restraints in the acute setting.

The introduction of a restraint nurse specialist (RNS) could be important. The role of the RNS would be to serve as the communication bridge for the multidisciplinary team. This may prove beneficial as it will ensure that the patients’ needs along with those of their loved ones are addressed in a timely and professional manner, therefore maintaining continuity of care.

The fact that students felt that they were not provided with any sort of academic training about restraint use warrants for better preparation by both respective nursing courses. Thus, educators must address care for non-compliant patients in the acute care setting. Adequately educated, students would be better equipped to make appropriate clinical decisions, cope with challenges that may arise, and in turn, be aided in their transition to professional life.

Limitations of the study

One of the main limitations of this study was the fact that interviews were carried out only in the English language, on the basis that all students had undergone their respective nursing courses in this language. This could have acted as a possible limitation since for Maltese people, the Maltese language is the one commonly used in informal conversations.

Furthermore, the organisation of the focus group brought about its own potential limitations. The fact that some participants are naturally dominant and extroverts by personality as well as the possibility of coercion, could have affected other participants who are more withdrawn despite the presence of a facilitator. The fact that the participants constituted a small group and that the study was specific to one demographic area may have limited the study in terms of generalisability.

Conclusion

This study has presented further insight into the perceptions of student nurses regarding physical restraint use in the acute setting. When referring to the findings, it is clear that nursing students have sound ideas regarding the appropriate and safe use of physical restraints. In particular, it was evident that whilst opinions on the use of restraints were mixed, all of the students expressed the need to consider alternatives prior to resorting to physical restraint. They were also able to identify the various barriers that exist in the local setting to apply alternative measures. Thus, patients are at an increased risk of being restrained inappropriately which may, in turn, have detrimental effects on their physical and psychological condition. Importantly, the participating students emphasised their need for further education on this topic.

Although implementing change is no easy feat, new ideas, knowledge, and a strong commitment from all parties responsible for the effective functioning of the hospital may lead to the successful implementation and execution of the recommendations mentioned. This would hopefully result in the proper application of restraints as advised by restraint guidelines, in turn providing an enhanced quality of life for non-cooperative patients in the acute setting.

Declaration of interest statement

The authors declare no conflict of interest

Funding sources: None

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