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Nurses' perceptions to physical restraints in medical wards

Metropolia University of Applied Sciences

Masters Degree Programme in Development and Leadership of Nursing

Master's Thesis

February, 2026

Abstract

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Title:	Nurses' perceptions to physical restraints in medical wards
Number of Pages:	34 pages + 4 appendices
Date:	25.02.2026
Degree:	Master of Healthcare
Degree Programme:	Masters Degree Programme in Development and Leadership of Nursing
Instructor(s):	Jukka Kesänen, RN, PhD, Principal Lecturer

This study explored nurses' perceptions of physical restraints' use on patients in medical wards and their understanding of the legal, ethical, and institutional guidelines regulating same with the aim of improving the safety of care when applying physical restraints on patients.

The study was conducted at the medical wards of the internal medicine department of a central hospital in Finland. Using a qualitative research approach, data were collected through an electronic questionnaire completed by practical and registered nurses working in the selected wards. Thematic analysis of the responses revealed 5 themes thus; managing immediate risks through physical restraints; regulation of physical restraints; ethical dilemma in restraint use; ensuring patient safety when using restraints; and nurses' responsibilities to restrained patients.

Findings from the research revealed that physical restraint is viewed as a last resort measure used to prevent harms, falls, or patients interfering with care or treatment. The participants showed awareness of the legal and institutional guidelines regulating physical restraints which required doctor's authorization, proportionality, monitoring, and documentation. The research highlighted nurses' emotional discomfort and ethical conflict due to physical restraints and the practical challenges impacting the decision to restrain.

Keywords: Physical restraints, coercive measures, medical wards.

The originality of this thesis has been checked using Turnitin Originality Check service.

Tiivistelmä

Tekijä(t):	Silas Okuefuna
Otsikko:	Hoitajien näkemyksiä fyysisten rajoittamisien käytöstä sisätautien vuodeosastoilla
Sivumäärä:	34 sivua + 4 liitettä
Aika:	25.02.2026
Tutkinto:	Sairaanhoitaja ylempi AMK
Tutkinto-ohjelma:	Degree programme in development and leadership of nursing
Ohjaaja(t):	Jukka Kesänen, Sh, TtT, yliopettaja

Tämän tutkimuksen tarkoituksena oli kuvata hoitajien näkemyksiä potilaiden fyysisten rajoittamisien käytöstä sisätautien vuodeosastoilla sekä heidän ymmärrystään rajoitustoimia koskevista oikeudellisista, eettisistä ja organisatorisista ohjeista. Tutkimuksen tavoitteena oli parantaa hoidon turvallisuuden kehittäminen potilaan fyysisten rajoittamisien käytön yhteydessä.

Tutkimus toteutettiin Suomalaisen keskussairaalan sisätautien vuodeosastoilla, Laadullista tutkimusotetta hyödyntäen aineisto kerättiin e-lomakkeella, johon vastasivat valittujen osastojen lähi- ja sairaanhoitajat. Aineisto analysoitiin temaattisen analyysin avulla. Analyysin tuloksena syntyi 5 keskeistä teemaa: välittömien riskien hallinta fyysisten rajoittamisien avulla; fyysisten rajoittamisien sääntely; eettiset dilemmat rajoittamisien käytössä; potilasturvallisuuden varmistaminen rajoitteita käytettäessä; sekä hoitajien vastuut rajoitettujen potilaiden hoidossa.

Tulosten mukaan fyysisiä rajoitteita pidetään viimeisenä keinona, jota käytetään ainoastaan vakavan vaaran, kaatumisriskin tai hoitoon kohdistuvan häiriötoiminnan ehkäisemiseksi. Osallistujat osoittivat tuntevansa fyysistä rajoittamista koskevan lainsäädännön ja organisaation ohjeistukset, jotka edellyttävät lääkärin määräystä, toimenpiteen oikeasuhtaisuutta, jatkuvaa seurantaa ja asianmukaista kirjaamista. Tutkimus toi esiin myös hoitajien kokemaa tunnekuormitusta ja eettisiä ristiriitoja rajoittamisen yhteydessä sekä käytännön haasteita, jotka vaikuttavat rajoittamispäätöksiin.

Avainsanat: Fyysiset rajoitteet, pakkotoimet, sisätautien vuodeosastot.

Tämän opinnäytetyön alkuperä on tarkastettu Turnitin Originality Check -ohjelmalla.

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1 Introduction

Restraints, whether physical or pharmacological, are employed by nurses to prevent harm, manage difficult situations, or effect medical treatments. Restraint's use seems contentious as they pose legal, ethical, and clinical implications. (Parkes and Tadi, 2022). Physical restraints' use in healthcare settings may be influenced by patient demographics, institutional policies, cultural dispositions, and healthcare workers' competence. Studies in geriatric and acute care settings report varying restraint prevalence rates. The prevalence rate for restraints' use on patients in acute care settings over a 30-day period has been found to be 8.7%, with mechanical restraint accounting for the majority (55%) of cases. Mechanical restraints commonly include devices such as belt fixations, bed rails, chair-table, etc. The main reason for their use are for fall prevention (43.8%) and the management of confusion or delirium (20.4%). (Thomann, Zwakhalen, Richter, Bauer, and Hahn, 2021, p.4).

Regions with strict regulations and compliance oversight on the use of physical restraints among nursing homes were reported to have lower prevalence rates (Hong Kong 20%, North America 22%) compared to places with less stringent oversight (Europe 37%). In Finland, physical restraints' use were most frequent in geriatric (Saarnio and Isola, 2009) and psychiatric settings (Laukkanen, Kuosmanen, Selander, and Vehviläinen-Julkinen, 2020). Such uses were for improving patient safety, preventing disturbance, and to enable nurses perform care. Despite these noble intentions, nurses reported feeling guilty, uncomfortable, sad, and pity for the elderly patients being restrained. (Saarnio and Isola, 2010, p. 3198).

The purpose of this study was to describe nurses' perceptions to physical restraints' use in the internal medicine wards of a University Hospital.

2 Background

Physical restraint is usually employed where a patient is aggressive with the safety of the said patient, staff or other persons being put in danger. It is also used to facilitate treatment for an uncooperative patient and in situations where the doctor determines that it is essential that the patient gets the said treatment. (Ye J., Wang C., Xiao A., Xiao Z., Yu L., Lin J., Liao Y., Xu Y., and Zhang Y., 2019, p. 344). Physical restraints may be employed in certain situations, especially in medical and geriatric settings where the functional capacity of patients may be limited, to ensure the safety of those patients. Such situations include instances where there is elevated risk of patient falls and there is need to prevent them, cognitive impairments, and behavioural problems like physical agitation and wandering. Physical restraints' use remain prevalent in acute and geriatric wards, despite efforts to limit them, especially among patients who are critically ill or with psychiatric conditions and cognitive impairments. (Yönt, Kisa, and Princeton, 2023, p.2).

Physical restraints' use in healthcare is generally reserved as a tool of last resort complying with strict regulations to safeguard patients' rights and dignity (Maiese A. et al, 2019, p. 68). Applying physical restraints on patients has been shown to worsen patients' prognosis and health outcomes. Physically restrained patients in geriatric settings, for instance, were shown to have a higher risk of experiencing cognitive decline, decreased mobility, muscle atrophy, disorientation and mortality. (Yönt, Kisa, & Princeton 2023, p. 2).

Physical restraints or threats of same violate patient autonomy, freedom of movement, and freedom from bodily harm (Zhou, Qin, Chen, and Zhang, 2024, p.1620). It induces fear in patients, increases feelings of helplessness, and leaves patients vulnerable thereby compromising their ability to truly consent to care (Yönt, et al, 2023, p. 3). Physical restraints are intended to enhance safety, however, its use have been associated with unintended outcomes like reduced quality of care, psychological distress, and physical injuries (Abraham, Hirt, Richter, Köpke, Meyer, and Möhler, 2022). It is important that nurses understand and adhere to those rules regulating physical restraints'

use in their workplace to ensure ethical and appropriate use of restraints devoid of abuse.

2.1 Definition of physical restraint

Restraints in healthcare settings, could be defined as any device or medication applied or given to a patient/ person which is used to restrict the movement or behaviour of that patient/ person (Breen, Wimmer, Smit, Courtney-Pratt, Lawler, Salmon, Price, and Goldberg, 2021, p. 2). Physical restraint, specifically, is any manual intervention, mechanical or physical device, material or equipment attached to or near a patient's body such that the patient cannot easily remove, restricting movement or normal access to their body, and which is intended to ensure patient safety, prevent harm to others, or facilitate essential medical care (Capezuti, Wagner, Brush, Boltz, Renz, and Talerico, 2007, p. 335). Physical restraint is the application of physical force or barrier to limit or prevent patients' body movements with the aim of influencing the patients' behaviours (Yönt, et al, 2023, p. 2).

Physical restraints include devices such as ankle, waist or wrist straps, belts in chairs and beds, bedrails, and tightly secured sheets limiting a patient's freedom of movement (Yönt, et al, 2023, p. 2). Safety devices used in the restriction of patients' movement within the healthcare settings in Finland must be CE-certified medical devices. CE markings are placed on devices that meet the minimum standards concerning safety, health, consumer and environmental protection and which can legally be sold within the European Economic Area (Fimea, 2022).



Figure 1. Waist and wrist straps to secure patients in bed (photo credit: Silas Okuefuna).

In this study, restraint use is limited to only physical restraints which implies the application of physical force or restraining barriers on the body, or close to the body of the patient to prevent them from freely moving their bodies or exiting a particular location. It includes the use of tightly secured sheets and bedrails to prevent patients from getting out of bed; ankle, waist or wrist straps and belts to keep them secured in a place; and hospital jumpsuits to prevent them from removing their clothes or medical items attached to their body. Restraint use, for purposes of this research, does not include involuntary medication like administration of benzodiazepines meant to reduce aggressive agitation or seclusion methods restricting the patients' movement within a particular area.

2.2 Nurses' role in physical restraints' use

Nurses play a central role in the application, monitoring, and evaluation of physical restraints' use within the clinical settings. Nurses assume the responsibility of assessing patient behaviour flowing from their continuous bedside care and identify situations that make the application of physical restraints clinically necessary. They are the first to recognise situations where a patient's behaviour may obstruct necessary treatments, or pose a risk to themselves or to others. In such situations, they undertake an immediate

risk assessment and report to the doctors the challenging behaviours and their assessments. (American Nurses Association, 2020).

Doctors assess the need for physical restraints and make orders, in appropriate cases, mandating the application of physical restraints on patients. It is the duty of the nurses to carry out these orders applying physical restraints on patients and monitoring those patients to make sure there are no complications. (Gökmen and Cerit, 2021, p. 301). Nurses have to comply with the rules regulating physical restraints' use when implementing them by documenting in the patients' record each time it is applied, when it was applied and when the application was stopped (Gökmen and Cerit, 2021). There is need for an adequate understanding of the ethical and legal principles that guide the application of physical restraints by nurses given the responsibilities on them and the important role they play in its' use (Zhou, Qin, Chen, and Zhang, 2024).

It is important that nurses are competent and capable of making ethical and informed decisions when considering the application of physical restraints on patients as they affect the autonomy and dignity of patients. Competency encompasses the capacity to apply critical thinking and wisdom, effective communication with patients and family members, and the ability to advocate for alternative approaches to physical restraints whenever possible. Incompetency affects the quality of care delivery and diminishes patient outcomes. Many nurses lack the requisite training in restraint management thereby resulting in overreliance and misuse of physical restraints (Yönt, et al, 2023, p. 3). This misuse causes emotional and physical damage to patients leading to them distrusting healthcare personnels (Sharifi et al, 2020, p. 4). An exploration of nurses' perceptions to physical restraints and their understanding of rules regulating them is important when balancing the need for safety with ethical considerations for optimal patient outcomes. (Zhou, Qin, Chen, and Zhang, 2024).

2.3 Rules regulating physical restraints' use in Finland

Workplace guidelines, regulatory bodies and national legislations set rules governing the use of physical restraints in healthcare settings. In Finland, the Finnish Supervisory Agency emphasizes the right to self-determination of patients as being a fundamental right that ought to be respected. Right of patients to self-determination is also a legally

protected right under section 6 of the Finnish Act on Patient Status and Rights (785/1992). The agency also recognises that such right could be limited under certain conditions, especially when the health or safety of the patient or other persons are in jeopardy. (Lupa-ja valvontavirasto, 2026). The application of such limiting measures must be a matter of last result, and cannot be due to the patient's condition or illness alone.

The application of physical restraints need to be justified, and poor staffing cannot be a justifiable ground for implementing physical restraints on patients or customers. (Lupa-ja valvontavirasto, 2026). The decision to implement restrictions need to be discussed in advance with the patient, if his or her faculties are still intact, or with family members or legal representatives whereby the patient can no longer make care decisions on their own. Valvira requires that such restriction must be proportionate to the care objective intended to be achieved and cannot be for an indefinite period. (Lupa-ja valvontavirasto, 2026). The decision whether or not to implement physical restraints are made by the doctor, who must document in the patient's records the reasons for ordering the restrictions, the extent and validity of the restrictions, the patient's or family members' position on the issue, and the considerations made, including the appropriateness of alternative non-restrictive methods of achieving the care aim. (Lupa-ja valvontavirasto, 2026).

The Mental Health Amendment Act (1423/2001) provides for involuntary treatment of patients suffering mental health issues in psychiatric wards and allows for the use of physical, mechanical, and chemical restraints when treating them. These restrictions infringe on the right to self-determination of all persons to determine the type of care they need, where and when to access such cares. Justification for allowing restrictive measures and involuntary treatment in mental health cases is rooted in the nature of the patients' illness, which robs them of the ability to understand the import of their actions, thereby shielding them from civil and criminal responsibilities when things go wrong. It is plausible therefore, that the use of restraints are allowed and justified in psychiatric settings to prevent psychiatric patients from causing injury, either to themselves, staff, or to others. Involuntary treatment or restrictive measures may also be allowed in cases of substance abuses, infectious diseases, or in the care of special needs or intellectually disabled persons under the Substance Abuse Care Act (41/1986), Infectious Diseases

Act (1227/2016), and the Act on Special Care for the Intellectually Disabled (519/1977).

The Finnish Constitution (731/1999) in section 7 protects the right to life, personal liberty, integrity and security of every person. The right to personal integrity or freedom may not be interfered with unless in accordance with the provisions of the law (Sec. 7 Constitution 731/1999). Also the Act on the Status and Rights of Patients (785/1992) guaranteed the right to good quality health care and related treatment to patients, providing that treatment must be organised and patients treated in a manner that does not violate their human dignity (Ch 2 sec 3 Status and Rights of Patients Act 785/1992). The consent of the patient, or his next-of-kin, in case the patient is incapable of making decisions or giving consent, must be obtained before initiating treatment, and guarantees giving the patient the necessary treatment to prevent a danger to the patient's life or health (Secs 6 & 8 Status and Rights of Patients Act 785/1992). Additionally, officers are empowered under sections 4 and 5 of the Act amending the Criminal Code (515/2003) to limit freedom of movement of persons for emergency protection. All these provisions taken together, and as outlined in the Parliamentary Ombudsman decision EOAK/5485/2018, provide justification for the application of physical restraints on patients to prevent an immediate and compelling danger on the patients, staff or other persons (Sakslin, 2019, pp. 18-21).

There are still concerns in the legitimate use of physical restraints in Finland despite efforts towards codification of rules and streamlining the guidelines regulating them. Factors like poor staffing, resource constraints, and inadequate training for the nurses contribute to the poor implementation of workplace guidelines and national laws regulating the use of physical restraints. (Saarnio and Isola, 2009, p. 3200). Concerns like these underscore the importance of competency among the nurses and highlights the need for studies probing the understanding and perception of nurses to rules regulating physical restraints' use in their workplace (Zhou, Qin, Chen, and Zhang, 2024; Yönt, et al, 2023).

2.4 Challenges in adherence to physical restraint guidelines

National and international guidelines on restraints' use emphasize the last-resort nature of physical restraints and insist on laid down rigorous procedures to be followed during implementation including assessment, monitoring, and documentation (Kaur & McNamara, 2025; Bleijlevens, Wagner, Capezuti, & Hamers, 2016). The stipulations contained in the different guidelines on restraints' use are reflective of the core ethical principles of autonomy, non-maleficence, and beneficence, whilst seeking to balance safety with dignity (Gastmans & Milisen, 2006). Adherence to these guidelines have been inconsistent as there are persistent gap between recommended practice and observed behaviours, thereby posing direct risks to patients' safety, dignity, and diminishing trust in the healthcare system (Bleijlevens et al, 2016; Kruger, Mayer, & Haastert, 2013). Several factors affect nurses' adherence to rules regulating physical restraints' use in healthcare settings. These factors include ethical dilemmas, workplace constraints, lack of knowledge, institutional culture etc. (Saarnio and Isola, 2009, p. 3200).

Physical restraints' use in healthcare settings violate the fundamental right to personal liberty of patients, and is an infringement on such ethical issues like autonomy and dignity (Yönt, et al, 2023, p. 2). Nurses have a duty to weigh the need to accomplish care aims with respect for patient's autonomy and other ethical considerations, like the principles of beneficence and non-maleficence which advocates for the best interests of the patient and doing no harm to the patient (Salehi, Ghezeljeh, Hajibabae, and Joolae-Jolaei, 2020, p. 600). Nurses face these dilemmas when deciding whether physically restraining a patient is needed in emergency situations or whether a particular treatment care cannot effectively be carried out without applying some form of restraint on the patient.

Workplace constraints that make physical restraints inevitable include increased workload, understaffing, and insufficient time allocation to tasks. Physical restraints can be perceived as a time-saving mechanism by nurses that alleviates anxiety in understaffed and poorly-run units. Chronically understaffed units show a higher propensity to apply physical restraints and shorter documentation times than adequately

staffed units. (Minnick, Mion, Johnson, Catrambone, & Leipzig, 2007). The absence of less restrictive alternative measures like sitter services, environmental modifications, or special observations, due to resource constraints, may leave nurses with the perceived choice between physical restraint and unmanaged risk (Kruger, Mayer, & Haastert, 2013).

Physical restraints' use may be deeply ingrained in practice due to institutional culture in some healthcare settings as team culture exerts strong normative pressure, thereby making shifts to less restrictive alternatives somehow difficult. Where physical restraint use is common and rarely questioned, new nurses joining the team adapt to that norm while workplaces that emphasize minimal restraint use have team members who are more likely to pursue alternative measures than physical restraints. (Goethals et al, 2012). Individual attitudes, shaped by personal beliefs, prior experience, and culture may also influence adherence. There are nurses who may view physical restraints as necessary for rapid risk management without adequate consideration for alternative measures while some others who prioritize autonomy may underuse restraints, even when clinically indicated. (Goethals et al, 2012).

Lack of knowledge is another challenge faced by nurses in the assessment and application of physical restraints. Some nurses are not properly trained in legal, ethical, and practical aspects of the application and implications of physical restraints' use on the patients resulting in either defensive practice or misuse (Yönt, et al, 2023, p. 3). Insufficient knowledge about rules regulating physical restraints and limited clinical skills contribute to poor decision-making thereby leading to non-adherence to the stipulated rules. (Goethals et al, 2012). Many institutions lack periodic, simulation-based trainings that focus on alternative measures to physical restraints like environmental modifications, deescalation techniques, and pharmacologic interventions (Bleijlevens et al, 2016). Poor clinical skills leading to inability to distinguish between agitation due to pain, for instance, from delirium or wilful non-compliance may cause misuse of physical restraints thereby contributing to non-adherence to the laid down rules on restraint use. (Hamers & Huizing, 2005).

The above constraints and challenges leave nurses with fewer alternatives to consider other than physical restraints in emergency or difficult situations often resulting in increased misuse and abuse. (Yönt, et al, 2023, p. 3). These challenges underscore the need for targeted interventions aimed at enhancing nurses' competence and supporting less restrictive care.

2.5 Previous literature on the use of physical restraints in medical wards

A literature search was carried out to identify relevant prior studies on the use of physical restraints in acute care and medical wards in Finland. The essence of this literature search was to obtain recent information on the state of physical restraints' use in medical wards, identify different opinions and dimensions on the said issue to inform the evolution of new hypothesis. Obtaining and reviewing literature on a given topic is an important step in recognising the existing state of research and identifying knowledge gaps that needed filling on that particular issue. This is useful in framing the problem for research, distinguishing what has been previously researched on a particular issue from what needs to be done in the new research. (Hart, 1998, p. 1).

The literature search was conducted through the electronic databases of CINAHL and PubMed. Search terms used were nurses' perceptions; experiences of nurses; attitude of nurses; physical restraint; restraint; coercive; manual; physical intervention; medical wards; inpatient; acute setting; hospital. Boolean search operators used were ("nurses perceptions" OR "nurses experiences" OR "nurses attitudes") AND ("physical restraint" OR restraint OR coercive measures") AND ("medical wards" OR "acute setting" OR hospital). Inclusion criteria for the search included qualitative studies in the above search databases that are free full access, peer reviewed primary study published in English between 2015 to 2025 with abstract and references available, and which dwelt on restraint use in healthcare settings. Exclusion criteria included researches not in English language, quantitative studies, and studies that are not relevant to the research topic.

The initial search on CINAHL using the above boolean operators yielded a total of 228 results. When the inclusion criteria of full text, peer reviewed, articles published in English language within the last 10 years with abstract available are applied, the result

whittled down to 28 results. Subsequent search on PubMed using the same boolean operators yielded 439 results initially. Removing duplicate copies from MEDLINE leaves a total of 415 articles. Using the same inclusion criteria that was applied above in CINAHL and limiting search results to only free full text articles the search result from PubMed reduced to 50.

Reviewing further the titles and abstracts of the search results to ascertain whether they met the inclusion and exclusion criteria resulted in the identification of 2 and 4 articles from CINAHL and PubMed. The excluded articles mostly related to physical restraints' use in emergency departments, intensive care units (ICU), psychiatric wards, and care homes as studies on those areas were outside the orbit of this particular research. An assessment of the full-text articles whittled the selected articles for appraisal to just 3 which were primary studies and closely relates to the research topic. The excluded records after full-text screening includes a qualitative study protocol (Carrero-Planells, Urrutia-Beaskoa, and Moreno-Mulet, 2021); literature review study (Abraham, Hirt, Richter, Köpke, Meyer, and Möhler, 2022); and a qualitative study in psychiatric nursing (Bachmann, Vatne, and Mundal, 2022).

Majority of research on coercive measures, including physical restraints found in the data search above had their settings in psychiatric settings, intensive care units, and long term geriatric settings. Only a few research were conducted in medical or general hospital ward settings (Abraham, Hirt, Richter, Köpke, Meyer, and Möhler, 2022), hence the limited number of articles selected for appraisal.

A total of 3 studies concerning the use of physical restraints in medical wards were identified (appendix1). The studies were conducted in 3 different countries; Taiwan, Iran, and Turkey. The first study employing cross-sectional research method using questionnaires (Tsai, Cheng, and Tzeng, 2022), another study employing cross-sectional descriptive-correlational study using questionnaire (Sharifi, Arsalani, Fallahi-Khoshknab, Mohammadi-Shahbolaghi, and Ebadi, 2020), and the last study being correlational qualitative study through personal information form, survey, and questionnaire (Gökmen and Cerit, 2021).

None of the selected studies were carried out solely in medical wards, as they all had combination of different settings. The study in Taiwan by Tsai et al, 2022 was carried

out in medical, surgical, pediatric, gynecological, and intensive care units; the Iranian study by Sharifi et al, 2020 had its settings in medical, surgical, and intensive care units; and the participants in the Turkish study by Gökmen & Cerit, 2021 were sourced from medical, surgical, emergency, and intensive care units. Applying strict inclusion criteria of only studies conducted in medical wards will eliminate all the selected studies. The data search process is described in figure 2 below.

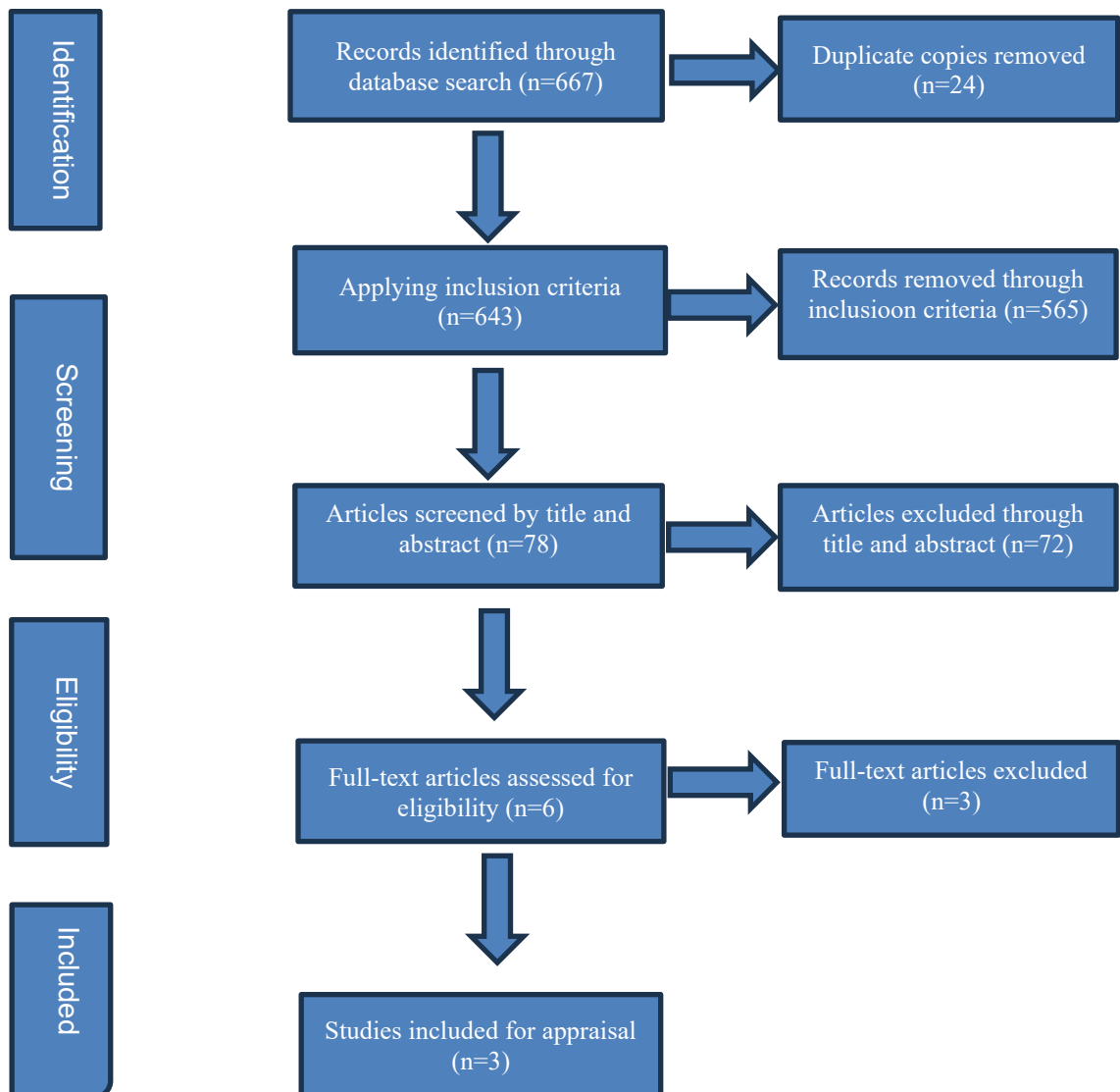


Figure 2. A flowchart of progress through the systematic review

The existing literatures on physical restraints' use in medical wards show that the knowledge and awareness level of nurses regarding restraints' use affect the quality of care patients receive (Gökmen and Cerit, 2021, p. 301). Training and experience are important factors that influence the attitudes of nurses towards physical restraints' use.

Nurses with least work experience have the least knowledge and experience on restraints' use, while more experienced nurses were found to have better attitudes towards it, and are often shown to have greater intent to explore alternative methods. (Tsai, et al 2022, p. 1470). Simulation-based training equips nurses with better knowledge and intent towards restraints' use. There is need for targeted periodic trainings on restraints' use for nurses and placing more emphases on less restrictive healthcare delivery. (Tsai, et al 2022, p. 1474).

The environment in which nurses operate also affects their disposition towards physical restraints' use. It is important to foster an ethical hospital culture to improve patient care. There is a corelation between the ethical climate of nurses and the nurses' perceptions of physical restraints' use as a hospital's ethical climate environments influence nurses' decision making processes regarding restraints' use. (Gökmen and Cerit, 2021, p. 301). Nurses' perceptions of their workplace, colleagues, and the doctors they work with greatly influence their attitude towards restraints' use. A chronically understaffed unit compounding nurses' workloads will have nurses employing physical restraints more often to make their work easier. (Sharifi et al, 2020, p. 4). Nurses working in ethically supportive environments were more aware of patients' rights and alternatives to physical restraints' use compared to nurses working in toxic environments. This is because, positive ethical climate significantly impacts nurses' attitudes leading to more ethical decision-making and reduced physical restraints' use. (Gökmen and Cerit, 2021, p. 301).

Reasons given by nurses for using physical restraints include preventing patient falls or patients pulling out catheters. The nurses were more predisposed to physically restrain hospitalised elderly patients compared to younger patients. (Sharifi et al, 2020, p. 4). Other nurses reported using physical restraints often due to workload pressure rather than the lack of alternative means of de-escalating situations or completing treatments. (Tsai, et al 2022, p. 1474; Sharifi et al, 2020, p. 4).

3 Purpose, aims, and research question

The purpose of this study was to describe nurses' perceptions to physical restraints' use in the internal medicine wards of a University Hospital.

The aim of this study is that the results can be used to improve competence by identifying the training needs of nurses in relation to physical restraints thereby improving quality of healthcare delivery. Furthermore, the results can be used to improve policy and patient safety by highlighting the challenges and potential ethical issues associated with physical restraint's use.

This study seeks to answer the following research questions,

- a. What kinds of experiences do nurses have regarding physical restraints' use in the internal medicine wards?
- b. What ethical considerations do nurses identify regarding the use of physical restraints in the internal medicine wards?
- c. How do nurses perceive their responsibilities to physically restrained patients in the internal medicine wards?

4 Methods

4.1 Study design

This study employed a phenomenological research design to explore nurses' perceptions to physical restraints' use and their understanding of the rules regulating them in medical wards in Finland. Phenomenological research design was chosen because this research seeks to describe and interpret the meaning of lived experiences of nurses relating to the practical, professional, and ethical dimensions of physical restraints' use in their work as nurses in the medical wards. Phenomenological research design is a form of qualitative research approach that explores the subjective, lived experiences of individuals with the aim of discovering the shared meaning of a particular phenomenon as perceived by those who experience it. (Van Manen, 1997). It seeks to explain the nature of things through the way people experience them. (Ayton, 2023). Experiences influence individual views; those experiences and views shape their perspectives of reality (Corner, Murray, and Brett, 2019, p. 2). This research seeks a deeper understanding of nurses' perceptions and experiences by focusing on how they make sense of physical restraints' use; how institutional rules influence their decision-making, and how these experiences shape their professional judgment.

Qualitative research is better suited when studying complex phenomena from non-numerical standpoint (Oranga and Matere, 2023, p. 2). It provides deeper insights on issues by gathering attitudes, behaviours, experiences, and perceptions by seeking understanding into the "hows" and "whys" of a problem rather than the "how much" or "how many" of those problems (Oranga and Matere, 2023, p. 2). Perceptions and experiences are immeasurable phenomena that can only be studied qualitatively as they seek to describe patterns of human behaviour which are not quantifiable (Moser and Korstjens, 2018, p. 12).

This study had its setting at the internal medicine wards of a central hospital in Finland and the target group were registered and practical nurses working in the selected hospitals' wards. Inclusion criteria for the participating nurses include both registered and practical nurses with direct experience implementing or overseeing the implementation of physical restraints on a patient, and who work in 6 of the internal

medicine wards of the said hospital. Nurses without relevant experience and those working in non-clinical roles were excluded. Recruitment of research participants was done through the director of nursing and the ward managers of the respective units within the hospital, who were encouraged to discuss in advance the research proposal with the nurses in their wards. The links to the questionnaire were sent through the ward managers to all nurses in the participating wards encouraging those that met the inclusion criteria to voluntarily participate in the research.

4.2 Data collection

Data collection for this research was done through an electronic questionnaire on e-lomake comprising of open-ended questions prepared in both English and Finnish languages thereby giving participants the opportunity to participate in this research in the language they are most fluent in. Participants were expected to complete the questionnaire during their normal work hours. The questionnaire, which took about 20 minutes to complete, was expected to be returned within 30 days of receiving the survey link. Links to the questionnaire, together with the participants' information sheet, recruitment notice, and consent forms were sent out to about 100 registered and practical nurses working in the medical wards of the hospital on 10th November 2025 inviting them to participate in the research. The links to the questionnaire were valid from 10th November 2025 to 9th December 2025 during which period participants are expected to complete and submit the questionnaire. A reminder was sent out to the nurses in the selected hospitals' wards through the ward managers on 2nd December 2025 encouraging participation in the research in order to get adequate responses before the deadline to ensure progression of the research to the next phase and for data saturation. Data collection ended on the 9th of December 2025. Responses to the questionnaire were 15 in total which were automatically saved on e-lomake and later downloaded in excell-sheet format for analysis.

The research themes covered by the questionnaire in this research include; the perceptions of nurses to physical restraints' use; experiences of nurses employing physical restraints and their understanding of relevant rules regulating physical restraints' use; challenges faced in the implementation, and ethical dilemma encountered in the application of such restraints. The questionnaire also included

questions on trainings, institutional policies, and support systems. The semi-structured open-ended questions contained in the questionnaire are set out in appendix 1 (in English) and 2 (in Finnish).

4.3 Data analysis

Thematic analysis was used to analyse and synthesize data collected during this research. Thematic analysis is usually used to identify and interpret themes or patterns from given data (Elliot, 2018). By repeatedly reading and reviewing the data, recurring themes were identified. Thematic analysis is an interpretive data analysis method that enables researchers to analyze lived experiences, perceptions, attitudes, behaviours, and bring to the fore deeper meanings beyond normal observations. (Braun & Clarke, 2006). It is useful in examining the different research participants' perspectives, their differences and similarities, and highlighting unexpected insights. The flexibility thematic analysis allows accounts for its potential in providing detailed and rich account of data. (Braun & Clarke, 2006).

Thematic analysis is appropriate for this research purpose which seeks to describe nurses' perceptions on the research topic, and inductive thematic analysis approach was adopted to code the collated data into key themes, sub-themes, and abstraction (Naeem M., Ozuem W., Howell K and Ranfagni S., 2023). The thematic analysis for this research is data-driven, and therefore inductive because the identified themes have strong relationship with the collated data and coding was done devoid of the researcher's analytic preconceptions. (Braun & Clarke, 2006). The inductive thematic analysis for this research followed Braun and Clarke's recommended 6 phases of conducting thematic analysis to wit; familiarization with the data; generating initial codes; searching for themes; reviewing themes; defining and naming themes; and producing the report (Braun & Clarke, 2006).

The responses submitted by participants on e-lomake were downloaded in excel-sheet at the end of data collection for analysis. A total of 15 responses were received at the end of the data collection, 14 registered nurses and a practical nurse participated in the study by completing and submitting the survey for analysis. There were invalid responses submitted in English language from 2 registered nurses who lacked the required

experience of physical restraint use which is an inclusion criteria for taking part in this research. The electronic form automatically closed after they indicated they lacked the required experience of physical restraint use. Nevertheless, their attempts at participation were recorded by the e-lomake platform, but their responses are removed and not included in the data analysis.

There were 7 valid responses submitted in English language and 6 responses in Finnish language respectively. Questionnaires returned in Finnish were translated into English language before analysis with the aid of artificial intelligence (Chatgpt) with detailed promptings to ensure the preservation of original structure, levels of details, tone, informality, and uncertainty where present, in order to ensure that participant's words and intentions were not lost in the course of translation. The translations were proofread by the researcher, who understands a certain level of Finnish, and later by the thesis supervisor, who is ethnically Finn. The translated versions were double-checked for accuracy by an English language lecturer at Metropolia UAS. Adequate care was taken in the translations and during proofreading to make sure they were verbatim account of the Finnish version and that there were no alterations or distortion in meaning as a result of the translation.

The responses submitted in English and the English translations of the Finnish responses were read several times by the researcher searching for meanings and patterns. The initial reading involved a cursory glance of the whole responses to get a quick impression about the participants' mindset and the direction the responses were tilting towards. Subsequent readings involved deeper emersions in the responses read at slower rates and making notes on a jotter for references and recollections. The responses were read for atleast 3 times before any attempt was made at generating codes.

The researcher created a mindmap wherein emerging concepts and ideas were identified and labelled with each further reading of the responses. The responses were methodically examined assigning initial codes to parts that captured recurring ideas and phrases related to the topic. The researcher, afterwards, sought to refocus the analysis towards the level of themes by searching through the collated and coded data for potential themes (Braun & Clarke, 2006). This was done by arranging the generated codes into different groups and placing related thoughts and ideas together. This process led to

the generation of 39 codes and 13 sub-themes. Mind-maps, paper jottings, and tables were copiously made use of at this stage to generate potential themes and sub-themes.

The generated themes and sub-themes were reviewed by refining and titrating them to make sure that codes within each set of sub-themes support the generated themes and are internally homogeneous. Some potential sub-themes that had overlapping ideas were merged while others that lacked supporting data were dropped or subsumed into larger themes. Subsequently, the roughly aggregated themes and sub-themes were properly defined and named setting the stage for the final report or discussion of the obtained results. A detailed description of the analysis process from coding to sub-themes and themes is contained in appendix 4.

5 Results

The results will be published as an article.

6 Discussion

6.1 Discussion of key results

Discussion of key results will be published as an article.

6.2 Ethical Considerations

6.2.1 Introduction to ethical foundations

The Finnish National Board on Research Integrity TENK guidelines 2019 on ethical review (TENK, 2019) regulates non-medical research involving human participants by scrutinizing the research plan with the aim of ensuring that no harm befalls the participants due to their participation in the research. This research involved human participants from whom data were gathered through electronic questionnaires. The researcher affirms full compliance with the TENK guidelines in the conduct of this research. The research complied with the European Union's Directive 95/46/EC on general data protection regulation, and Metropolia University of Applied Sciences' regulations on data collection, processing, management, and disposal.

6.2.2 Research approval and ethical review

Ethical review board approval was not necessary in this research as the research posed minimal risks to participants and did not involve interventions that affected the physical integrity of the participants. There was also no data collection from public documents, minors, or patients that will warrant approval from ethical review board in accordance with TENK's directive on ethical review in human sciences (TENK, 2023a). The required research permit for this research was sought for and obtained from the commissioning organization before commencing data collection.

6.2.3 Informed consent and participant information

Participation in this research was anonymous and voluntary, with informed consent obtained from all participants prior to the actual conduct of this research. The information sheet and consent form are available under appendix 4 and 8 in English and

appendix 6 and 9 in Finnish. Participants' recruitment notice is contained in appendix 5 and 7 for the English and Finnish versions. All participants gave their consent electronically through e-lomake before taking part in this research. The participants' information sheet, recruitment notice, and consent forms were sent as attachments for participants to read in advance before answering the questionnaire. When participants opened the questionnaire links, consent-to-participate section appears first, and participants had to either select "YES" or "NO" to signify their consent or non-consent thereof. Other sections of the questionnaire could only display and the survey proceed further when a participant consents to the research by selecting the YES-button, whereas the NO-consent button ends the survey.

Participants had the right to withdraw their participation at any time without suffering any negative consequence. Participants had the opportunity to withdraw from the study even after consent had been given, but before hitting the "submit" button on e-lomake after completing the survey. Once the completed survey was submitted, it was no longer possible to withdraw from the research as personal information that might help in identifying participants were not collected. There were no vulnerable group among the research participants, and so no special consideration was made towards the completion of this research. Participants were informed about this research through their respective ward managers and through the participant information sheet form that included the recruitment notice under appendix 4 (English) and 5 (Finnish). The ward managers discussed in advance with the nurses about this research and made available to them the information sheet and consent form. Although consent forms (appendix 4 and 5) were provided in advance to the participants, a link containing the said consent form was attached on e-lomake for participants to read, and a consent-button provided too through which valid consent was obtained electronically by participants ticking or selecting the said button to signify consent.

6.2.4 Data protection and confidentiality

This qualitative study sourced primary data through questionnaires answered by nurses working at the internal medicine wards of a central hospital in Finland. Besides completing this masters thesis, the researcher confirms that results from this research may

be published as an article in a nursing/ scientific journal and may also be used in the future for further studies by the researcher. Personal identifying information or data was not collected in this research. The collated data was stored in digitally encrypted word format on Metropolia's server located in Myllypuro Campus and in an external hard drive as a backup. The stored data is password protected. The questionnaire/ survey was carried out through E-lomake, Metropolia's secure digital platform. Physical documents pertaining to this research were shredded and the copy saved in an external hard drive will be deleted 3 years post-research, unless otherwise required by the organization which commissioned this research. These measures were taken to ensure compliance with the EU's Directive 95/46/EC on general data protection regulation. The data management plan is contained in appendix 3.

6.2.5 Participants' well-being and risk assessment

It is acknowledged that participants in this research may face emotional and moral distress by recollecting and discussing the use of physical restraints on patients which may trigger discomfort, anxiety, or conflict when reflecting on the topic. To minimize the above risk, support was offered, through the ward managers, for participants who wished to talk to professionals about their feelings and well-being.

Again, due to the sensitive nature of the topic, participants' identities were protected and hidden from the commissioning organization, to ensure that participants were able to freely discuss their opinions on the issue without being affected by external factors, and care was taken too, to ensure that their identity cannot be deciphered through the answers given.

6.2.6 Researcher's role and ethical reflexivity

The researcher is an external party and not affiliated with the commissioning organization. There was no conflict of interest in the conduct of this research. There was no power imbalance between the researcher and the research participants as the researcher holds no authority or supervisory role over the participants. This research, being a phenomenological study, was not intended to evaluate individual practices of the participating nurses, but explored their experiences and perceptions related to the given topic (Ayton, 2023).

Research integrity basic principles of accountability, honesty, reliability, and respect were maintained throughout this research process. Resources used in this research were properly referenced, research presented in a transparent, fair and unbiased manner respecting the rights of research participants, and the researcher assumes responsibility for this research from ideation to publication. (TENK, 2023:12).

6.3 Trustworthiness

The trustworthiness of a research plays an important role in evaluating its worth, and this is achieved through establishing the credibility, confirmability, dependability, and transferability of the research findings (Lincoln & Guba, 1985). To enhance credibility, data were collected from nurses who had direct experience with the use of physical restraints in medical wards, and there was no undue restriction in the inclusion criteria to ensure that the data reflects diverse perspectives. The researcher engaged with the collated data over an extended period through repeated reading, coding, and thematic analysis. Peer debriefing and supervisor feedback were sought during data analysis to ensure that the findings accurately represent participants' viewpoints. Care also was taken to ensure that translations into English for answers returned in Finnish accurately reflected the participants' views.

The researcher was objective in reporting and avoided researcher bias. The different stages of the research process were clearly documented to ensure dependability. The study was reviewed by the supervisor to ensure that the research process adhered to ethical and methodological standards. Comparing participants' experiences against existing literature showed that external factors like understaffing, lack of resources, and lack of training on restraint use increases the likelihood of inappropriate application of restraints. This comparison provides external validation of the findings.

The researcher acknowledges some limitations in this research. Fewer nurses took part in this research than anticipated despite inviting over 100 nurses to participate in the research. Some participants were also brief in their responses and didn't provide enough details to really gauge their perceptions on the topics even though additional prompts were contained in the questionnaire through guide questions. These limitations affected

the quality of the data set. Nevertheless, the responses were enough to achieve data saturation.

7 Conclusion

The thematic analysis highlighted nurses' perceptions of physical restraints as a legally constrained, ethically complex, and safety-driven clinical intervention usually employed as a last-resort measure and which is accompanied by moral unease, heightened responsibility, and the need for continuous monitoring. Participants demonstrated strong ethical awareness and professional accountability, while also identifying training needs and systemic pressures that shape practice around physical restraints.

Understanding the perceptions of nurses towards physical restraints' use and their ability to adhere to laws and guidelines regulating their use is crucial for improving patient outcomes and nursing practice. This study aimed to provide insights into the factors influencing the use of physical restraints by nurses in medical wards, their adherence to rules regulating such use, and the training needs of those nurses to improve their competence, patients experience, and promote evidence-based nursing practice. By focusing on these, the study seeks to improve patient outcomes, promote ethical practice, inform policy development, and enhance training programmes to better equip nurses when making judgment calls and implementing restrictive measures in the course of their work. Additionally, by highlighting the guidelines related to physical restraints through this research, nurses can reinforce their knowledge and competence on the issue thereby improving practice and protecting the nurses against legal liability from medical malpractice proceedings.

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Appendix 1: Questionnaire

- Topic: Nurses' perceptions to physical restraints' use and the rules regulating them in medical wards.
- Instructions: Please answer the following questions as fully and thoughtfully as you can. There are no right or wrong answers, what matters most is your own experiences and views. Feel free to give examples or describe situations in detail. The guide questions are just prompts, you are encouraged to reflect on the themes based on your own views and experience. Your responses will help us gain a deeper understanding of the topic. Participation is voluntary and confidential, responses to be used only for research purposes. Do not include any information that could be used to identify a person- yourself, a patient, or anyone else.
- Types of physical restraints for purposes of this research e.g: Bedrails, jumpsuits (hygieniahaalari), magnetic belts/ straps, wrist straps, and safety belts.

Background Questions

- What is your occupation? Registered nurse? Practical nurse?
- Do you have experience with physical restraint use?
- Have you had any training on physical restraint use? If yes, could you describe the nature of the training?

THEME 1: Experiences with physical restraint

Please describe a typical case in which you have used physical restraint

Guide questions

- What factors, in your opinion influenced the use of such restraint?
- What were the reasons for using physical restraints?
- How do you feel when you have to physically restrain a patient?

THEME 2: Ethical considerations when physically restraining a patient

Describe the ethical issues related to physically restraining a patient

- Could you also talk about the ethical challenges you faced, if any, when applying or deciding not to apply physical restraints on patients?

THEME 3: Nurses' responsibilities in physical restraints' use

Describe the nurses' responsibilities when applying physical restraint

Guide questions

- What responsibilities do you owe as a nurse to a physically-restrained patient?
- What do you know about the current xxx rules on physical restraint use?
- How do these rules influence your decision-making when applying physical restraints?
- What kind of alternative measures could be considered in place of physical restraints?

How do you think the process of physical restraints use could be improved?

Appendix 2: Kyselylomake

- Aihe: Hoitajien näkemyksiä fyysisten rajoittamisien käytöstä ja niitä säätelevistä säädöksistä sisätautien vuodeosastoilla.
- Ohjeet: Pyydän sinua vastaamaan kysymyksiin kuvailevasti. Kysymyksiin ei ole oikeita tai vääriä vastauksia, vaan tärkeintä ovat omat kokemuksesi ja näkemyksesi. Voit antaa esimerkkejä tai kuvailla tilanteita yksityiskohtaisesti. Ohjaavat kysymykset ovat suuntaa-antavia, voit pohtia teemoja omien ajatustesi ja kokemustesi pohjalta. Vastauksesi auttavat meitä ymmärtämään aihetta syvällisemmin. Osallistuminen on vapaaehtoista ja luottamuksellista. Vastauksia käytetään ainoastaan tutkimustarkoituksiin. Ethän sisällytä vastauksiin tunnistettavia henkilötietoja- itsesi, potilaan tai kenenkään muun tunnistamiseen.
- Fyysistä rajoittamista tässä tutkimuksessa esimerkki: Sängyn laidat, hygieniahaalari, magneettivyö. leposide, haaravyö, turvavyö.

Taustatiedot

- Mikä on ammattisi? Sairaanhoitaja? Lähihoitaja?
- Onko sinulla kokemusta fyysisen rajoittamisen käytöstä?
- Oletko saanut koulutusta fyysisen rajoittamisen käyttöön liittyen? Jos kyllä, kuvaisitko koulutuksen sisältöä?

TEEMA 1: Kokemukset fyysisestä rajoittamisesta

Kuvaile tyypillinen tilanne, jossa olet käyttänyt fyysistä rajoittamista.

Apukysymykset:

- Mitkä tekijät mielestäsi vaikuttivat rajoitteen käyttöön?
- Mitkä olivat syyt fyysisten rajoittamisien käyttämiseen?
- Miltä sinusta tuntuu, kun joudut fyysisesti rajoittamaan potilasta?

TEEMA 2: Eettiset näkökohdat potilaan fyysisissä rajoittamisessa?

Kuvaile potilaan fyysisiin rajoittamisiin liittyviä eettisiä kysymyksiä.

- Voisitko kertoa myös mahdollisista eettisistä haasteista, joita olet kohdannut fyysisen rajoittamisen käytössä tai päätöksessä olla käyttämättä niitä?

TEEMA 3: Hoitajan vastuut fyysisissä rajoittamisissa

Kuvaile hoitajan vastuuta potilaan fyysisissä rajoittamisissa

Apukysymykset:

- Mitä vastuuta sinulla on hoitajana fyysisesti rajoitettua potilasta kohtaan?
- Mitä tiedät xxx:in nykyisistä säännöistä fyysisten rajoittamisien käyttöön liittyen?
- Miten nämä säännöt vaikuttavat päätöksentekooosi fyysistä rajoittamista käytettäessä?
- Millaisia vaihtoehtoisia menetelmiä voitaisiin harkita fyysisen rajoittamisen käytön sijasta?
- Miten fyysisten rajoittamisien käytön prosessia voitaisiin mielestäsi parantaa?

Appendix 3: Plan overview: Data management plan

Title: Nurses' perceptions to physical restraints' use and the rules regulating them in medical wards

Creator: Silas Okuefuna

Affiliation: Metropolia University of Applied Sciences

Template: DMP for Thesis

Project abstract:

Purpose: The purpose of the study was to describe nurses' perceptions to physical restraints' use in the internal medicine wards of a central hospital in Finland.

Aim: The aim of the study is that the results can be used to improve competence by identifying the training needs of nurses in relation to physical restraints thereby improving quality of healthcare delivery. Furthermore, the results can be used to improve policy and patient safety by highlighting the challenges and potential ethical issues associated with physical restraint's use.

Research question: The study sought to answer the research questions;

- a. What kinds of experiences do nurses have regarding physical restraint use in the internal medicine wards?
- b. What ethical considerations do nurses identify regarding the use of physical restraints in the internal medicine wards?
- c. How do nurses perceive their responsibilities to physically restrained patients in the internal medicine wards?

Study design: The study made use of qualitative research approach using electronic questionnaire to conduct the research. The study was conducted at the internal medicine wards of

a central hospital in Finland, with research participants being recruited through the ward managers. Participants included in this research are practical and registered nurses in clinical roles at the said hospital. Timeline for data collection was 1 month. Data obtained from the study was analyzed through thematic analysis.

Keywords: Physical restraints, coercive measures, medical wards,

ID: 29065

Start date: 01-10-2025

End date: 31-12-2025

Last modified: 16-02-2026

Nurses' perceptions to physical restraints' use and the rules regulating them in medical wards

1. General description of the data

1.1. Briefly describe the data you collect and/or produce or that already exists, as well as their properties (type, file format, size, access rights, collection methods). Create a table or list of the data.

Qualitative survey with open-ended questions, excel file format, to be collected electronically through e-lomake, 31.5 KB

1.2. How do you ensure the consistency and accuracy of the data?

A copy of the original survey data was saved in MS-word format before processing.

2. Personal data, ethical principles and legislation

2.1. Does the data contain any personal information? If yes, enter in the supplementary information field: the personal data to be collected, whether there are special categories of personal data.

No

2.2. Who has the main responsibility for the processing of personal data, i.e. controller-ship? If you do not collect personal data, you can skip this question.

N/A

2.3. What measures are required to ensure data protection in my thesis? If you do not collect personal data, you can skip this question.

N/A

2.4. Do you need an ethical review? To the additional information field: justification and possible implementation

No

2.5. Are there other research ethical questions related to the data?

No

2.6. How will you manage the rights to the data you use, produce and share?

Describe here how you will agree on the rights of the research data collected, produced and (re)used in the thesis. Describe the procedures for transferring rights that apply to your data.

The researcher retains the rights to the collated data. Should there be need to transfer any rights to the research data to any interested party, such transfers of rights will be agreed upon separately.

3. Data description and documentation

3.1. How do you describe and document the data in an understandable way?

Survey answers were returned in both Finnish and English language. Returned surveys in Finnish were translated into English using AI tools with an extra confirmation from an English language teacher at Metropolia UAS. Collated data was processed using thematic approach to analyze and code data into key themes, sub-themes, and codes.

4. Storage and data security during the thesis process

4.1. Describe here where the data will be stored and how it will be backed up during the thesis process.

The collated data was stored in digitally encrypted word format on Metropolia's server located in Myllypuro Campus and in an external hard drive as a backup. The stored data was password protected.

4.2. Who has access to your data, what can those people do with the data, and how do you ensure the safe transfer of the data to your potential collaborators?

The supervising teacher. The report was sent to the commissioning organization.

5. Data after the thesis is completed: preserving, destruction or possible further use and opening

5.1. Is the data or part of it preserved? If yes: describe which data or part of it.

- Yes

Responses to questions on experiences and the use of physical restraints will be preserved in an encrypted external hard drive.

5.2. Will the data be destroyed or part of it? If yes, describe which data or part of the data, and how and when the destruction will occur.

- Yes

The stored data will be deleted 3 years post research and the external drive destroyed, unless otherwise required by HUS. The researcher's access to Metropolia's server expires some months after graduation, this necessitates the use of external hard drive for long term storage.

5.3. Are you planning to further use or open your data or part of it? If yes, describe which data or part of it. Also describe whether the data will be opened for public use with a license, or whether it will be handed over to a specific party for further use, as well as the possible measures that opening the data or preparing for further use requires (for example, anonymisation, permissions from research subjects, agreements with collaborators).

- Yes

The collated data may further be used to publish an article on physical restraints or in further studies on related themes.

6. Responsibilities and resources

6.1. Who is responsible for data management and what kind of resources does data management require?

The researcher organized the data collection by creating the surveys using e-lomake and forwarding same to the named organization's representatives, who in turn, helped in participants' recruitment and data collection through disseminating the survey links. The researcher ensured data quality, security/ protection, storage and backup. Data processing took 4 weeks after collation, after which the researcher completed and submitted the thesis for grading.

Appendix 4: Content analysis process

Research question 1: What kinds of experiences do nurses have regarding physical restraints' use in the internal medicine wards?

Themes	Sub-themes	Codes
Managing immediate risks through physical restraints	<ul style="list-style-type: none"> -Safety of patients and others -Cognitively impaired and disabled patients -Implementing care and medical treatments 	<ul style="list-style-type: none"> -Patient harming or threatening to harm themselves or others; -Amputee patients at risk of falls; -Restless and aggressive patients; -Frail patients jumping over bed railings; -Raising bedrails to prevent falls; -To carry out care for patients who are unable to decide for themselves; -Patients with cognitive issues; -Confused and frail patients; -Patients with frail legs; -Uncooperative aggressive patients; -Patients with history of substance use; -Patients pulling out Naso-gastric tubes, catheter, canula, and Intravenous lines; -Patients kicking and hitting nurses during care; -Restraining the hands and legs during hygiene care; -Putting jumpsuits to prevent removing catheters
Regulation of physical restraints	<ul style="list-style-type: none"> -Restraint authorisation -Emergency application 	<ul style="list-style-type: none"> -Patients consenting to physical restraint's use; -Doctor's permission to implement restraints; -Nurses evaluating continued need for restraints; -Using restraints in emergency situations;

Research question 2: What ethical considerations do nurses identify regarding the use of physical restraints in the internal medicine wards?

Themes	Sub-themes	Codes
Ethical dilemma in restraint use	<ul style="list-style-type: none"> -Freedom from undue limitation -Emotional discomfort -Inappropriate use of restraints 	<ul style="list-style-type: none"> -Patients' right to self-determination; -Informed consent and ability to consent to care; -Restraints limit patient's autonomy; -Restraints affect patient's dignity; -Restraint induces fear and powerlessness in patients; -Nurses' emotional distress in response to restraining patients; -Restraining patients due to resource scarcity; -Using restraints due to poor staffing; -Using restraints as punishment; -Using restraint because it is convenient;

Research question 3: How do nurses perceive their responsibilities to physically restrained patients in the internal medicine wards?

Themes	Sub-themes	Codes
Ensuring patient safety when using restraints	<ul style="list-style-type: none"> -Assessment and monitoring -Restraint-related injuries 	<ul style="list-style-type: none"> -Continuous monitoring of restrained patients; -Re-assessment of need; time-limited use; -Skin integrity and repositioning; -Prevention of injury whilst restrained;
Nurses' responsibilities to restrained patients	<ul style="list-style-type: none"> -Alternatives to restraint -Patient's best interests -Fulfilling restraint requirements 	<ul style="list-style-type: none"> -Exploring alternative de-escalation methods; -Restraint as a last resort measure; - Considering patient's best interests; -Informing patients and their family members; -Ensuring doctor's permission; proper documentation