

## Research Article

# Mechanical Restraint as Knowledges, Perceptions, Attitudes of Nursing Students: A Pilot Study

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### Abstract

**Background and Objective:** When discussing the concept of physical restraint, it is imperative to clarify that it can be categorized into various types based on the employed methodologies. Physical restraint is defined as “any action or procedure that restricts the unrestricted movement of an individual’s body through the utilization of any method, whether affixed or adjacent to the person’s body, which they are unable to easily control or remove.” The objective of this observational study is to examine the perception and knowledge of nursing students at a University in northern Italy concerning the subject of physical restraint.

**Materials and Methods:** The present study employed an observational approach and enrolled a total of 86 Nursing students at a University in northern Italy. Data collection was facilitated through the administration of a linguistically validated questionnaire in the Italian language.

**Results:** The data analysis reveals that students still have doubts regarding the proper utilization of physical containment devices (domain 2), while their knowledge (domain 1) is deemed sufficient but improvable. In terms of domain 3, among the interviewed students, a

propensity towards good daily clinical practice is evident, with significant differences observed between the mean scores of the third-year students and those of the first-year students ( $p < .05$ ).

**Conclusion:** The results demonstrate a lack of confidence among students in the proper management of containment physical devices. This aspect highlights the need for enhancing their knowledge and improving their attitude towards professional practice, aiming to strengthen their competence in this area.

**Keywords:** Knowledge; Nursing Student; Perception; Physical Restraint

### Introduction

Physical restraint is described as “any action or procedure that restricts the free movement of an individual’s body using any method, whether attached or adjacent to the person’s body, which they are unable to easily control or remove” [1].

Physical restraint can be defined as a healthcare-assistive act that employs chemical, physical, or environmental means directly applied to the individual or their surrounding space to limit their movements. According to the definition provided by Hatice & Selda [2] “physical restraint may appear to be a useful and simple procedure to aid treatment, but it is a complex practice that involves physical, psychological, legal, ethical, and moral considerations” [2]. This underscores the need to comprehend the level of knowledge among nurses in order to appropriately implement proper restraint measures.

This concept holds significant relevance for nurses and is extensively expressed in the new 2019 Code of Ethics (Codice Deontologico). Article 35 states: “The nurse recognizes that restraint is not a therapeutic intervention. It solely serves as a precautionary measure of an exceptional and temporary nature, which may be implemented [...] to safeguard the safety of the assisted person [...]. Restraint should always be justified and documented in the clinical-assistive documentation, and it must be temporary and monitored over time [...]” [3].

Among the main reasons leading to the decision to restrain a patient are: preventing the removal of medical devices, reducing the risk of self-harm, and controlling disruptive behaviors; therefore, it is utilized in various cases. Furthermore, as evidenced in the literature, the issue of ensuring the proper knowledge of nurses and students is mentioned, as the risk of death associated with incorrect management of restrained patients is significantly high [4,5].

In the literature, several studies conducted on nurses have revealed that despite their educational background, they do not adequately utilize clinical information and scientific evidence when performing practices, relying more on their personal experience [2]. The study by Xinqian Li [6] highlighted that nurses, in emergency situations, primarily rely on their intuition and heavily depend on their personal experience when making decisions, tending to excessively rely on their experience rather than seeking scientific evidence.

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**Citation:** Cona A, Sollami A, Marletta G, La Rosa G, Tornambè F, et al. (2024) Mechanical Restraint as Knowledges, Perceptions, Attitudes of Nursing Students: A Pilot Study. J Pract Prof Nurs 8: 052.

**Received:** May 3, 2023; **Accepted:** May 14, 2024; **Published:** May 21, 2024

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It is understandable that the use of such decision-making strategies enables nurses to make quick decisions to address sudden and uncertain situations. However, relying solely on personal experience is not sufficient for high-quality clinical decisions, especially for inexperienced nurses. In fact, these professionals, as direct care providers, should not only focus on the quantity of nursing tasks they perform but should also emphasize the quality of judgments and decisions that significantly impact patient outcomes and experiences [6].

In the Italian context, a study was conducted by Gaeta [4] that revealed deficiencies in knowledge among nurses, as less than 70% of nurses provided correct answers in 6 subsequently listed areas [4]. A higher level of knowledge among nurses and students regarding this topic, through proper education and training, could lead to:

- an improvement in observable patient outcomes;
- a significant reduction of physical and psychological harm associated with the use of physical restraints (pressure injuries, aggression, death from entrapment or asphyxiation);
- a decrease in the use of restraints, aligning with good clinical practice, professionalism, and literature [7].

## Materials and Methods

**Objective:** The study aims to investigate students' perception, knowledge, and attitudes regarding the use of physical restraint in order to determine if there are sufficient knowledge levels among students enrolled in the Nursing program at a University in northern Italy.

**Study Design/Participants:** An observational study was conducted involving a sample of students enrolled in the Nursing degree program at the three Training Centers of the Nursing program at the University in northern Italy arranged across three different campuses.

**Procedure:** The questionnaire, arranged and proposed in digital format, was sent to all students enrolled in the Nursing degree program across three different years via institutional University platform, following authorization for disclosure from the President of the Nursing Course degree. The questionnaire administration took place between May 2022 and September 2022.

**Instruments:** The instrument utilized in this study is the Janelli Scale "self-administered structured questionnaire," in its validated Italian version [4]. The questionnaire consists of 40 items distributed across three domains: Knowledge, Attitudes, and Daily Practice. The first domain explores the area of knowledge (15 items) where respondents were required to answer using a dichotomous response of "correct" or "incorrect" (e.g., "a restraint device should be loosened at least every two hours").

The second domain explores "attitudes" (11 items) where respondents were asked to rate their agreement on a 3-point Likert scale (1=Disagree; 2=Undecided; 3=Agree) (e.g., "in general, I feel prepared in caring for patients under physical restraint"). The third domain investigates "daily practice" (14 items) where respondents were asked to indicate the frequency of performing the indicated activity using a 3-point Likert scale (1=Never; 2=Sometimes; 3=Always) (e.g., "I check restraints at least every two hours to ensure they are in the correct position"). The instrument also includes socio-demographic variables (age, gender, educational background, years of internship experience, and the location of the last completed internship).

**Ethical implications:** The voluntary nature of participation in the study is reiterated. The researchers made efforts to provide comprehensive study information to the participating subjects, all nursing students, prior to enrollment. They then informed them that the provided information was strictly confidential and used solely for research purposes, and that no personal information would be used to identify the authors (in compliance with EU Regulation No. 2016/679, issued on April 27, 2016, published in the Official Journal of the European Union on May 4, 2016, effective from May 25, 2016). Consent to participate in the study was based on completing and submitting the questionnaire.

**Data analysis:** In addition to descriptive analyses, several tests were conducted to assess the significance of differences in the measured variables. Due to the small number of "out-of-course" students ( $n=2$ ), they were excluded from the analyses. To assess the normal distribution of the samples, the Shapiro-Wilk test was used since the sample size was composed by less than 100 persons. The test results indicated a normal distribution for the "attitude" variable ( $p = .109$ ), while the "daily practice" variable showed a non-normal distribution ( $p < .05$ ). Therefore, to assess whether the mean differences of the variables were significant, two types of tests were used: to evaluate the mean differences of the variables for Domain 2, the ANOVA test and the Bonferroni post-hoc test for multiple pairwise comparisons was employed; to evaluate the mean differences of the variables for Domain 3, the Kruskal-Wallis test were utilized. Regarding the first domain, "Knowledge," the  $\chi^2$  test was conducted by comparing the percentages of correct responses. Significance values of  $p < 0.05$  were considered statistically significant.

**Limits:** The small number of participants is undoubtedly a limitation of the study.

## Results and Discussion

**Sample characteristics:** In the sample, 77.9% ( $n = 67$ ) were female, 20.9% ( $n = 18$ ) were male, and 1 respondent chose not to disclose the gender. Regarding the academic year distribution, the majority of students attended the 3rd year (46.5%;  $n = 40$ ), while the number of students in the 1st and 2nd years was equal (25.6%;  $n = 22$ ). Out-of-course students participating in the survey accounted for 2.3% ( $n = 2$ ) of the total sample.

Table 1 displays the sample distribution concerning the areas of the last internship carried out. The most represented areas are Surgery Units (20.3%;  $n = 16$ ), Pediatric Units (17.7%;  $n = 14$ ), and the Emergency Department (13.9%;  $n = 11$ ). The least represented areas are Senior Housing and psychiatry (both 2.5%;  $n = 2$ ).

Internship area	n	%
Intensive Care Unit	9	11,4
Emergency Department	11	13,9
Senior housing	2	2,5
Pediatric Unit	14	17,7
Rehabilitation & Functional Recovery	3	3,8
Surgery Unit	16	20,3
Geriatric Unit	6	7,6
Medicine	7	8,9
Psychiatry	2	2,5

Other/NC	9	11,4
Total	79	100,0
Note: NC =		

Table 1: Internship Areas' Distribution.

Table 2 presents the distribution of correct answers regarding the items of the "Knowledge" domain by academic year and for the total sample. By computing the  $\chi^2$  test for the percentages of correct answers in relation to the academic year, no significant differences are observed ( $p > 0.05$ ).

	Risposte corrette							
	1 anno		2 anno		3 anno		totale	
	n	%	n	%	n	%		
1.1-Quando un paziente è contenuto fisicamente la cute si può lacerare e l'agitazione può aumentare	21	95,5	21	95,5	39	97,5	81	94,2
1.2.4 mezzi di contenzione fisica sono indumenti di sicurezza o comunque progettati per prevenire le lesioni mentre l'isolamento consiste nell'isolare un paziente all'interno di una stanza da solo	12	54,5	19	86,4	28	70,0	59	68,6
1.3-In emergenza, un infermiere può contenere un paziente senza prescrizione medica	8	36,4	5	22,7	17	42,5	30	34,9
1.4.4 Un infermiere può essere accusato di violenza se applica vincoli di contenimento fisico quando non sono necessari	22	100,0	22	100,0	40	100,0	84	97,7
1.5- Un mezzo di contenzione dovrebbe essere allentato almeno ogni due ore	16	72,7	16	72,7	38	95,0	70	81,4
1.6.4 Un paziente non dovrebbe mai essere vincolato mentre giace a letto, a causa del rischio di soffocamento	5	22,7	4	18,2	11	27,5	20	23,3
1.7-Una contenzione fisica è legale solo se è necessaria per proteggere il paziente o altre persone da pericoli	21	95,5	22	100,0	39	97,5	82	95,3
1.8-La contenzione fisica richiede prescrizione medica	20	90,9	20	90,9	37	92,5	77	89,5
1.9-Non esistono buone alternative ai vincoli fisici	20	90,9	18	81,8	38	95,0	76	90,4
1.10-Bisognerebbe tenere traccia durante e ad ogni cambio turno dei pazienti sottoposti a contenzione fisica	22	100,0	22	100,0	40	100,0	84	97,7
1.11-I vincoli di contenimento dovrebbero essere applicati in modo da essere confortevoli	22	100,0	21	95,5	37	92,5	80	93,0
1.12- Sono noti casi di decesso collegati all'uso di contenzione fisica.	14	63,6	13	59,1	27	67,5	54	62,8
1.13-La confusione e il disorientamento sono sempre indicazioni all'utilizzo dei vincoli	19	86,4	19	86,4	37	92,5	75	87,2
1.14-I pazienti ricoverati volontariamente possono rifiutare la contenzione fisica	16	72,7	14	63,6	25	62,5	55	64,0
1.15-Quando un paziente è contenuto a letto, i vincoli non dovrebbero essere fissati alle sponde del letto	13	59,1	12	54,5	20	50,0	45	52,3

Table 2: Correct Answers vs Year of Course.

Table 3 shows the mean values of the entire sample regarding the items of the "Attitudes" domain. It is important to note that the response scale ranged from 1 = disagree; 2 = undecided; 3 = agree.

	n	m	ds
2.8 Credo che una giustificazione corretta all'utilizzo della contenzione fisica sia la carenza di personale ospedaliero	86	1,48	,763
2.3 In generale, mi sento preparato sull'assistenza al paziente sottoposto a contenzione fisica	86	2,03	,727
2.7 Mi capita di sentirmi in colpa quando vincolo un paziente	86	2,27	,803
2.5 Penso che se fossi un paziente dovrei avere il diritto di rifiutare la contenzione fisica se non la ritenessi giusta	86	2,38	,800
2.9 Penso che i membri della famiglia abbiano il diritto di opporsi all'utilizzo di vincoli di contenzione, se ritenuti non necessari	86	2,44	,820
2.4 Un paziente soffre per la perdita della propria dignità quando viene vincolato	86	2,64	,572
2.10 Mi sento in imbarazzo quando i familiari entrano nella stanza di un paziente vincolato senza essere stati informati	86	2,70	,634
2.2 Mi dispiace vedere che il paziente diventi ancor più arrabbiato dopo l'applicazione dei vincoli	86	2,78	,562
2.6 Penso che gli infermieri abbiano il diritto di rifiutarsi di vincolare il paziente se non lo ritengono necessario	86	2,87	,400
2.11 Tutti i professionisti sanitari sono legalmente responsabili dell'utilizzo/gestione dei vincoli per mantenere la sicurezza del paziente	86	2,90	,435
2.1 Penso che sia importante far sapere al paziente contenuto che mi prendo cura di lui	86	3,00	,000

Table 3: Mean Score Item "Attitudes" Total Sample (Items Reported in Ascending Order of Mean Score).

Table 4 presents the levels of agreement/disagreement for the items in the "attitudes" domain in relation to the academic years and the corresponding ANOVA test. As highlighted in the table (bold text), the ANOVA test revealed that only for the item "I believe that family members have the right to object to the use of physical restraints if they are deemed unnecessary," there is a statistically significant difference in the mean value of the measure between 1st and 3rd year students after Bonferroni post-hoc test analysis.

The two previous tables present the mean scores for the items on clinical practice in the total sample (Table 5) and in relation to the academic year (Table 6). It is important to note that respondents expressed their response on a Likert-type scale: 1 = never; 2 = sometimes; 3 = always. Therefore, higher means indicate a greater frequency of engagement in the activity indicated by the item.

	1 anno			2 anno			3 anno			ANOVA
	n	m	ds	n	m	ds	n	m	ds	
2.1 Penso che sia importante far sapere al paziente contenuto che mi prendo cura di lui	22	3,00	,000	22	3,00	,000	40	3,00	,000	—
2.2 Mi dispiace vedere che il paziente diventi ancor più arrabbiato dopo l'applicazione dei vincoli	22	2,91	,294	22	2,59	,796	40	2,80	,516	F(2,83)=1,849; p=.164
2.3 In generale, mi sento preparato sull'assistenza al paziente sottoposto a contenzione fisica	22	1,91	,750	22	1,86	,710	40	2,15	,700	F(2,83)=1,443; p=.242
2.4 Un paziente soffre per la perdita della propria dignità quando viene vincolato	22	2,68	,477	22	2,55	,671	40	2,68	,572	F(2,83)=,425; p=.655
2.5 Penso che se fossi un paziente dovrei avere il diritto di rifiutare la contenzione fisica se non la ritenessi giusta	22	2,64	,658	22	2,32	,839	40	2,25	,840	F(2,83)=1,731; p=.184
2.6 Penso che gli infermieri abbiano il diritto di rifiutarsi di vincolare il paziente se non lo ritengono necessario	22	2,77	,528	22	2,95	,213	40	2,88	,404	F(2,83)=1,125; p=.330
2.7 Mi capita di sentirmi in colpa quando vincolo un paziente	22	2,36	,790	22	2,09	,868	40	2,28	,784	F(2,83)=,663; p=.518
2.8 Credo che una giustificazione corretta all'utilizzo della contenzione fisica sia la carenza di personale ospedaliero	22	1,59	,854	22	1,32	,646	40	1,50	,784	F(2,83)=,725; p=.487
2.9 Penso che i membri della famiglia abbiano il diritto di opporsi all'utilizzo di vincoli di contenzione, se ritenuti non necessari	22	2,82	,395	22	2,50	,802	40	2,83	,520	F(2,83)=4,121; p<.05
2.10 Mi sento in imbarazzo quando i familiari entrano nella stanza di un paziente vincolato senza essere stati informati	22	2,82	,395	22	2,77	,612	40	2,65	,700	F(2,83)=,624; p=.538
2.11 Tutti i professionisti sanitari sono legalmente responsabili dell'utilizzo/gestione dei vincoli per mantenere la sicurezza del paziente	22	2,77	,612	22	3,00	,000	40	2,90	,441	F(2,83)=1,498; p=.230

Table 4: Attitudes vs Year of Course.

	n	m	ds
3.3.Vi sono più pazienti contenuti quando c'è carenza di personale di quando il personale è a pieno regime	86	1,76	,650
3.1 Nel nostro centro, i membri dello staff lavorano insieme per cercare modalità di controllo del comportamento dei pazienti ricoverati diverse dall'utilizzo della contenzione	86	2,37	,575
3.12 Quando vincolo un paziente, prendo questa decisione solo con un ordine/la prescrizione del medico	86	2,37	,768
3.2 Controllo i vincoli almeno ogni due ore per assicurarmi che siano nella corretta posizione	86	2,49	,609
3.4 Valuto frequentemente e registro gli effetti della contenzione fisica, quando applicata ad un paziente ricoverato	86	2,58	,622
3.10 Valuto frequentemente se i vincoli debbano essere rimossi	86	2,62	,577
3.6 Comunico al paziente (e alla famiglia) quando saranno rimossi i vincoli	86	2,63	,575
3.7 Quando penso che un paziente non abbia bisogno di essere vincolato, lo discuto col medico (o con il mio assistente di tirocinio)	86	2,71	,528
3.13 Spiego al paziente il motivo per cui si stanno applicando i vincoli	86	2,73	,471
3.8 Rispondo il prima possibile alla chiamata di un paziente vincolato	86	2,77	,425
3.5 Provo ad utilizzare interventi infermieristici alternativi prima di vincolare il paziente	86	2,78	,495
3.11 Ispezione la cute alla ricerca di abrasioni o lacerazioni quando procedo all'igiene (e in ogni occasione di assistenza diretta) ad un paziente vincolato	86	2,84	,371
3.11 Quando vengono applicate contenzioni fisiche, registro sulla documentazione il tipo di vincolo utilizzato, le motivazioni, l'orario d'inizio della contenzione e l'assistenza infermieristica richiesta	86	2,85	,421
3.14 Comunico ai familiari i motivi per cui il paziente viene vincolato.	86	2,88	,322

Table 5: Clinical Practice Single Sample (Ascending Order)

	Anno di corso						p*			
	1 anno		2 anno		3 anno					
	n	m	ds	n	m	ds				
3.1 Ispezione la cute alla ricerca di abrasioni o lacerazioni quando procedo all'igiene (e in ogni occasione di assistenza diretta) ad un paziente vincolato	22	2,91	,294	22	2,82	,395	40	2,80	,405	0,385
3.2 Controllo i vincoli almeno ogni due ore per assicurarmi che siano nella corretta posizione	22	2,68	,477	22	2,55	,596	40	2,33	,606	0,088
3.3.Vi sono più pazienti contenuti quando c'è carenza di personale di quando il personale è a pieno regime	22	1,77	,685	22	1,45	,510	40	1,93	,606	,027
3.4 Valuto frequentemente e registro gli effetti della contenzione fisica, quando applicata ad un paziente ricoverato	22	2,68	,568	22	2,68	,568	40	2,48	,679	0,319
3.5 Provo ad utilizzare interventi infermieristici alternativi prima di vincolare il paziente	22	2,77	,429	22	2,91	,426	40	2,70	,564	157
3.6 Comunico al paziente (e alla famiglia) quando saranno rimossi i vincoli	22	2,73	,550	22	2,68	,646	40	2,53	,554	167
3.7 Quando penso che un paziente non abbia bisogno di essere vincolato, lo discuto col medico (o con il mio assistente di tirocinio)	22	2,68	,477	22	2,82	,501	40	2,65	,580	347
3.8 Rispondo il prima possibile alla chiamata di un paziente vincolato	22	2,77	,429	22	2,73	,456	40	2,78	,423	907
3.9 Nel nostro centro, i membri dello staff lavorano insieme per cercare modalità di controllo del comportamento dei pazienti ricoverati diverse dall'utilizzo della contenzione	22	2,64	,492	22	2,41	,590	40	2,20	,564	015
3.10 Valuto frequentemente se i vincoli debbano essere rimossi	22	2,68	,568	22	2,68	,568	40	2,53	,599	382
3.11 Quando vengono applicate contenzioni fisiche, registro sulla documentazione il tipo di vincolo utilizzato, le motivazioni, l'orario d'inizio della contenzione e l'assistenza infermieristica richiesta	22	2,86	,351	22	2,91	,294	40	2,80	,516	776
3.12 Quando vincolo un paziente, prendo questa decisione solo con un ordine/la prescrizione del medico	22	2,45	,739	22	2,27	,883	40	2,35	,736	788
3.13 Spiego al paziente il motivo per cui si stanno applicando i vincoli	22	2,86	,351	22	2,77	,429	40	2,63	,540	162
3.14 Comunico ai familiari i motivi per cui il paziente viene vincolato.	22	2,82	,395	22	2,91	,294	40	2,90	,304	572

Table 6: Clinical Practice vs. Academic Year (\*Kruskal-Wallis Test for Independent Samples).

Although with some distinctions, in general, the results obtained from the study appear to have similarities with the literature analyzed on the subject. Regarding Table 2, for item 1.3 "In an emergency, a nurse can restrain a patient without a medical prescription," only 34.9% of students (n = 30) responded correctly (with a higher percentage among 3rd year students). The results, therefore, highlight that 65.1% of respondents chose the "incorrect" option, assuming that a nurse cannot restrain a patient autonomously. However, Article 35 of the Italian Nursing Deontological Code of 2019 states that restraint "can be implemented by the team or, in cases of urgent necessity, even by the nurse alone if the conditions of necessity exist, to ensure the safety of the assisted person, others, and the healthcare providers" [3]. This result, although in line with the findings of the study by Gaeta et al., is slightly worse, as in the cited study, only half of the respondents answered correctly to the same item [4].

In response to question 1.12 in Table 2, “Cases of death related to the use of physical restraints are known,” 62.8% (n = 54) of students answered correctly. Therefore, 37.2% of respondents (n = 32) claim to have no knowledge of deaths related to restraint. This finding does not align with the statements made by Barney, Prat, and Parthasarathi, who argue that the use of restraint measures, especially in geriatric patients, carries inherent risks such as falls, injuries, and other negative physical effects, psychological trauma, increased agitation and aggression, as well as potential mortality [8]. The study conducted by Bellanger [5] in a senior residence also correlated deaths with the use of physical restraints [5].

The distribution of responses to this item aligns with the distribution of responses to item 1.6, “A patient should never be restrained while lying in bed due to the risk of suffocation,” as shown in Table 2, where only 23.3% (n = 20) of respondents answered correctly. Therefore, 76.7% (n = 66) of respondents considered the statement “incorrect,” suggesting that it was appropriate to restrain a patient lying in bed. This result appears to be inconsistent with guidelines, which state that such restraint increases the patient’s risk compared to the risks for which the restraints were applied [9]. Furthermore, this result contradicts the findings reported by the authors of the two studies mentioned in the previous paragraph, which correlated patient mortality specifically to “suffocation” [8] and “neck compression and mechanical asphyxia” [5].

One noteworthy result is obtained for item 1.9 in Table 2, “There are no good alternatives to physical restraints,” for which 90.7% (n = 76) of respondents answered “correct.” This result aligns with the literature, as reported by the Italian Society of Geriatrics and Gerontology (SIGG), which states that alternatives to restraints exist, such as active listening, comfort measures, physical contact, and involving family members in the care process [10].

For the second domain “Attitudes,” the results for the total sample (Table 3) suggest that respondents do not view restraint as a “correct practice” due to staffing shortages. Furthermore, they demonstrate an attitude of patient care and attention, as indicated by unanimous agreement among all respondents (n = 86) in item 2.1: “I believe it is important to let the restrained patient know that I am taking care of them”. When considering the differences in means between the various years for the items in the “Attitudes” domain (Table 4), a significant difference is observed for item 2.9: “I believe that family members have the right to object to the use of restraints if deemed unnecessary” between the mean scores of 3rd year students and 1st year students. The lower mean score for third-year students suggests that, despite still having a relatively high mean, they have a less inclusive attitude towards involving family members in the decision-making process regarding restraints. At the same time, it is necessary to reflect on whether these results could be attributed to a misinterpretation of the item, which presents a double negation.

The means of the items in the third domain “clinical practice” indicate that students demonstrate conformity in their behavior regarding guidelines and the Italian Code of Ethics related to physical restraint. The means range from a minimum of 2.37 (item 3.9: “In our center, staff members work together to find ways to manage the behavior of hospitalized patients without using physical restraints”) to a maximum of 2.88 (item 3.14: “I communicate to family members the reasons why the patient is being restrained”). The attention given to the restrained patient is highlighted by the high means for items

that demonstrate vigilant behavior, as also indicated by the guidelines for proper monitoring and evaluation of the necessity of physical restraint. Item 3.4: “I check the restraints at least every two hours to ensure they are in the correct position” (M = 2.49; SD = 0.609); item 3.5: “I frequently assess and record the effects of physical restraint when applied to a hospitalized patient” (M = 2.58; SD = 0.622); item 3.6: “I frequently evaluate whether the restraints should be removed” (M = 2.62; SD = 0.577); item 3.1: “I inspect the skin for abrasions or lacerations when providing hygiene (and on every occasion of direct care) to a restrained patient” (M = 2.84; SD = 0.371).

Consistent with the statements in Article 35 of the Italian Nursing Code of Ethics, “Restraint must be justified and documented in the clinical care documentation. It should be temporary and monitored over time to verify if the conditions that justified its implementation still exist and if it has had a negative impact on the health conditions of the assisted person” [3], the interviewed students have shown a high mean also for item 3.11: “When physical restraints are applied, I record in the documentation the type of restraint used, the reasons, the start time of the restraint, and the nursing care required” (M = 2.85; SD = 0.421).

In contrast to the high means observed for the items in domain three “clinical practice,” the results for items 2.3: “In general, I feel prepared to care for a patient subjected to physical restraint” (M = 2.03; SD = 0.727) and 2.7: “I sometimes feel guilty when restraining a patient” (M = 2.27; SD = 0.803) appear to deviate from the trend. These results may indicate a scenario of doubt and insecurity regarding the subject matter of this study, which could be explained by insufficient preparation on the topic or a lack of knowledge regarding alternative techniques to physical restraint, despite awareness of the actions to be taken when providing care to a restrained patient. This finding seems to be consistent with the results obtained by Gaeta et al., in which, despite the knowledge possessed by the interviewees, only 62.6% of them felt capable of adequately assisting a person subjected to physical restraint (4 p. 102).

## Conclusion

Physical restraint can be classified into different types depending on the methods used. Among these, we find pharmacological/chemical restraint (where medication is used to control the patient), environmental restraint (where the patient’s available area is limited to control their mobility), and physical restraint. The latter is described as “any action or procedure that restricts the free movement of a person’s body by using any method, attached or adjacent to the person’s body, that they cannot easily control or remove” [1].

The main objective of using physical restraint is to ensure the safety and protection of both the patient and healthcare personnel. However, the use of physical restraint should be considered as a temporary and last resort measure, as it can have negative physical and psychological effects on the patient. Physical effects may include injuries, trauma, muscular pain, circulatory and respiratory disturbances. Psychological effects may encompass anxiety, fear, humiliation, and a sense of helplessness.

For these reasons, the use of physical restraint is strictly regulated and should be based on an individual case-by-case assessment, taking into account the risks and benefits involved. International guidelines, such as those from the World Health Organization (WHO), encourage the avoidance of physical restraint whenever possible and the

exploration of less invasive alternatives, such as the use of de-escalation strategies, appropriate therapeutic environments, or suitable medications. The long-term aim of healthcare organizations is to minimize the use of physical restraint by promoting more humane, person-centered approaches that are evidence-based in managing challenging behaviors and safety risks.

The results highlighted by our study, despite the limited sample size, provide valuable feedback regarding the subject under analysis. They indicate that students still feel inadequate or unprepared in effectively managing restraint measures. This suggests the possibility of supporting students in their learning process through dedicated sessions (e.g., workshops/lectures). This could potentially predict improved actions in managing such a complex and delicate process, which carries significant ethical and accountability implications. While the results are encouraging regarding expressed knowledge, attitudes, and declared clinical practice, there is room for improvement in the patient care and management behaviors of those subjected to restraints. It would be desirable to implement exploratory studies not only among students but also among professionals to more carefully tailor educational events on the topic.

### Conflict of Interest

Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

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