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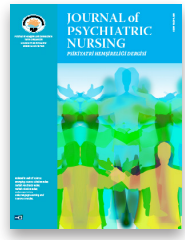

Original Article

Determination of psychiatric clinic nurses' knowledge, attitudes, and practices regarding the use of physical restraints

Ahmet Göktaş, Kadriye Buldukoğlu

Department of Psychiatric Nursing, Akdeniz University Faculty of Nursing, Antalya, Turkey

Abstract

Objectives: This study was carried out to determine nurses' knowledge, attitudes, and practices regarding the use of physical restraint in psychiatric settings.

Methods: This descriptive study was conducted in seven psychiatric hospitals in Turkey between May and October 2015. The attempt was to reach an entire study population without any sampling; it was completed with 304 nurses (62.8%). Data were collected using the Scale for Nurses' Knowledge, Attitudes and Practices Regarding Physical Restraints and a Questionnaire Form, and then assessed with SPSS software, using descriptive statistics, t-test, Mann-Whitney U test, Kruskal-Wallis test, and a Kolmogorov-Smirnov normality test.

Results: Nurses' knowledge about the complications of using physical restraint was lacking; most nurses (65.8%) did not use alternative methods instead of physical restraints. It was found that nurses' knowledge level regarding physical restraint was good, attitudes were negative, and practices were close to excellent. The mean knowledge score of nurses who did not use physical restraints (p=0.031) was statistically higher than others'. The mean attitudes scores of nurses whose age was between 20 and 35 (p=0.044), who were bachelors (p=0.026), and who did not use physical restraints (p=0.034) were statistically higher than others'. The mean practice scores of women (p=0.005) and nurses who had over 10 years' clinical experiences (p=0.03) were statistically higher than others.

Conclusion: Nurses' knowledge level regarding physical restraint was good, although attitudes were negative, and practices were nearly excellent. The suggestion to hold comprehensive and practical training programs promoting nurses' knowledge, attitudes, and practices regarding physical restraints for nurses arose from these conclusions.

Keywords: Psychiatric nursing; psychiatric setting; physical restraint practice.

Physical restraint is the direct use of physical force to limit movements of an individual without permission. This might be physical force, human power, a mechanical device, or a combination.[1] Physical restraint is applied when patients' behaviors are physically harmful and alternative methods are inadequate to protect them and others.[2] It is often used to reduce the risk of a patient's falling, to prevent removal of life-support equipment, and to reduce the risk of patient's harming himself or others.[3] In this respect, physical restraint is widely used in intensive care, neurology, and psychiatric clinics.

Although physical restraint is beneficial for patients, it may cause some complications, depending on the application process. These complications can be classified as follows: inhibition of blood circulation, deterioration of tissue integrity, incontinence, aspiration, respiratory distress, pressure injuries, constipation, nerve damages, loss of self-esteem, humiliation, fear, and anger.[3,4] Therefore, nurses must know the possible complications of physical restraint and follow up patients who are physically restrained Psychiatric nurses are responsible for establishing a safe and therapeutic environment for patients,

Address for correspondence: Dr. Ahmet Göktaş, Akdeniz Üniv. Hemşirelik Fak., Psikiyatri Hemşireliği Anabilim Dalı, 07058 Antalya, Turkey
Phone: +90 242 310 29 89 **E-mail:** agoktas.85@gmail.com **ORCID:** 0000-0002-6337-0389

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maintaining this environment, and ensuring optimal clinical restraint surveillance based on the restraint application standards.[1,5,6] In this context, physical restraint appears to be included in psychiatric nursing practices.

A study conducted in Turkey reported that a low percentage of nurses know the complications of physical restraint.[7] The same study also reported that most nurses used physical restraint in the clinic, did not receive directives from physicians when deciding to apply a restraint, and did not use alternative methods. Despite these negative findings, it was determined that more than half of the nurses recorded the physical restraint that they had used. Çelik et al.[8] (2012) determined that nurses behaved sloppily in performing and recording physical restraint applications with a physician request. A similar study conducted in Hong Kong determined that nurses' knowledge about physical restraint was inadequate, and that they exhibited negative attitudes toward restraint application.[9]

In Turkey, standards for use of physical restraint are defined in the Health Quality Standards published by the Ministry of Health. According to these standards, the physical restraint decision must be provided by a physician, and this decision must be reviewed every 24-hours.[10] However, studies conducted in Turkey report that nurses do not receive a physician request while applying a physical restraint and behave careless in this respect.[7,8,11] Studies have been conducted on this subject in various clinics in Turkey;[7,8,11,12] however, none of these studies have been conducted in psychiatric clinics in Turkey. Physical restraint is a mandatory procedure in psychiatric clinics because of the risk of damage that patients receiving inpatient treatment in these clinics might cause themselves and their surroundings. Therefore, more studies should emphasize psychiatric clinic nurses' knowledge, attitudes, and practices regarding physical restraint.

Based on the results of the studies carried out in Turkey, nurses do not receive physician requests for physical restraint application, they do not keep accurate records, and they have only a low level of knowledge about the physical and psychological complications of physical restraint, these problems make it necessary to conduct comprehensive studies on the use of physical restraint in Turkey.[7,8,11] The present study results will provide important information about nurses' knowledge level, attitudes, and practices regarding the use of physical restraint in psychiatric settings. These results are also expected to contribute to the content of physical restraint training for both future nurses in nursing faculties and nurses working in psychiatric hospitals. Thus, this study was conducted to determine nurses' knowledge, attitudes, and practices regarding the use of physical restraint in psychiatric settings.

Research Questions

The following research questions will be addressed in this research:

1. What is the level of nurses' knowledge regarding the use of physical restraint in psychiatric settings?
2. What are the nurses' attitudes regarding the use of physical restraint in psychiatric settings?
3. What are the nurses' practices regarding the use of physical restraint in psychiatric settings?
4. Is there a significant relationship between nurses' individual characteristics, working environment, and physical restraint experiences, and their knowledge level, attitudes and practices regarding the use of physical restraint in psychiatric settings?

Materials and Method

This descriptive study was planned to be conducted in eight psychiatric hospitals affiliated to the Turkish Public Hospitals Authority between May and October 2015. However, as one of these hospitals did not give the institutional permission for the study, the research was carried out in seven psychiatric hospitals, located in Manisa, Samsun, Trabzon, Elazığ, Adana, Bolu, and Istanbul Erenköy. The study population is composed of the nurses working in psychiatric clinics of these hospitals. The researchers attempted to reach the entire study population without using any sampling method. In total, 580 nurses in these seven hospitals were approached; 96 were on leave, so 484 nurses comprised the study sample. All participants are called "nurses" in this study because midwives are professionally authorized to assume nursing duties, and health officers are considered to be nurses according to the Ministry of Health in Turkey.[13]

In this context, 304 of the 484 nurses (62.8%) agreed to participate in the survey and completed the information form and scale. The abstaining nurses refused to participate in the survey because of the frustration of completing questionnaires, and also because they expressed that they were physical restraint supporters and that many relevant studies had already been conducted at their institutions. The researchers planned to go to one of the cooperating institutions every month after receiving permission letters from these institutions. As part of this plan, they communicated with each institutional manager before visiting the institution, went to the intitutions using their own transportation and equipment, and then collected the research data.

Data Collection Tools

The research data were collected using the Scale for Nurses' Knowledge, Attitudes and Practices Regarding Physical Restraints and the Questionnaire Form. The questionnaire form was prepared by the researchers based on relevant published literature, and includes questions about nurses' individual characteristics, working environment and duties, and experiences with physical restraint.[7,8,11,12] A sample preliminary application was carried out by 8 nurses working in a psychiatric clinic of a university hospital; they found that no correction was needed in the questionnaire form. The mean application time to fill out the form and the scale was 15 to 20 minutes.

The scale, which was adapted to Turkish society by Kaya et al.[11] (2008), consists of three parts (subscales). The first part, which measures the level of nurses' knowledge regarding the use of physical restraint, consists of 11 questions, 10 of which are true statements and one is a false statement. In this section, the correct and incorrect answers are evaluated as 1 and 0 points, respectively; the score's limits are 0 and 11. A high score indicates a "high level of knowledge". The second part, which measures nurses' attitudes, consists of 12 questions regarding the use of physical restraint. The score limits of this section are 12 and 48: a high score indicates a "positive attitude towards physical restraint" and a low score indicates "negative attitude towards physical restraint". In the third part, 14 questions evaluate nurses' practices regarding the use of physical restraints. Item 10 in this section is a negative item and is evaluated in reverse order. The score limits of this section are 14 and 42: a high score indicates "excellence of the practice" and a low score indicates "inappropriateness of the practice".[11,14] The scale's test-retest value is 0.88 –0.90 and Cronbach's alpha value was 0.69. The Cronbach's alpha value for this study overall was 0.67.

Research Variables

Dependent variables: The mean scores of each subscale of the scale for nurses' knowledge, attitudes, and practices regarding physical restraints.

Independent variables: Nurses' individual characteristics, working environment, and experiences with using physical restraint.

Ethical Consideration

The study was approved by the Ethics Committee for the Clinical Investigations at Akdeniz University Faculty of Medicine, and written permissions were obtained from the institutions where the research was conducted. The institutions' managers allowed the researchers to conduct the present study provided that the study results would not reveal their institutions. The researchers accepted this condition because it did not interfere with the research methodology and actually coincided with the research questions and purpose. Informed consents were obtained from the participating nurses after they had been informed about the study's purpose.

Strengths and Limitations of the Study

Strengths: the present study covers hospitals in seven different provinces of Turkey, and 304 nurses participating in the survey work in psychiatric clinics.

Limitations: one of the hospitals where the research was planned to be conducted did not give the necessary institutional permission, and some of the nurses in the hospitals where the research was conducted did not want to participate in the study.

Data Analysis

The research data were assessed by the SPSS program using descriptive statistics, a t-test, Mann-Whitney U test, Kruskal-Wallis test, and the Kolmogorov-Smirnov normality test. In these tests, the alpha level for the statistical significance limit was set as 0.05.

Results

The mean age of the participant nurses was 34.73±7.48 years. Among them, 70.1% were female, 74.3% were married, 54.9% had bachelor's degree, 78% worked in shifts, and 27.6% provided healthcare to an average of 31 to 40 patients per day, 46.4% had working experience in psychiatric clinics for 1 to 5 years, 53% had received training on physical restraint, and 93.5% of these trainees received the training as in-service training (Table 1).

Among the nurses, 81.3% had used physical restraint; 65.8% did not use any method as an alternative to physical restraint. Nurses using alternative methods were asked to indicate alternative methods they used: 31.7% of them responded chemical restraint, 29.6% with isolation, and 29.0% with communication (Table 2).

The question of "what kind of complications have you observed?" was asked of the nurses who used physical restraint. Table 3 presents their answers. Based on these answers, "circulatory disorder, rosella and agitation-anger" ranked as the top three complications of physical restraint. The vast majority of these complications were physical complications. Psychological complications accounted for only 14.6% of their responses. None of the nurses indicated complications that could affect patients' social lives.

The nurses' mean scores on the subscales of knowledge, attitudes, and practices regarding the use of physical restraints were 7.75±1.27, 27.29±4.12 and 38.58±2.61, respectively (Table 4). Considering the range of scores that can be derived from each subscale, the levels of their knowledge, attitudes, and practices were observed to be "good", "negative" and "excellent", respectively. In the present study, those who did not use physical restraint (p=0.031) were found to obtain a higher mean score on the subscale of knowledge than those who used physical restraint. In terms of the subscale of attitudes, the participant nurses with ages between 20 and 35 years (p=0.044), the single participant nurses (p=0.026), and those who did not use physical restraint (p=0.034) received higher mean scores than those in other groups. Similarly, in terms of the subscale of practices, female nurses (p=0.005) were found to have higher mean scores than male nurses. Moreover, those with working experience of 10 years and longer in psychiatric clinics were found to have higher mean scores on the subscale of practices than those in other age groups (p=0.03) (Table 4).

Based on the nurses' responses on the subscale of knowledge, 42.1% of them did not observe patients' right to object to the use of restraint, and they behaved inattentive in selecting

Table 1. Nurses' personal characteristics

Characteristics	n	%
Age		
20–35	161	53.0
36 and over	135	44.4
No response	8	2.6
Education status		
Medical vocational high school	28	9.2
Associate degree	91	29.9
Bachelor degree	167	54.9
Graduate degree	17	5.6
No response	1	0.3
Gender		
Female	213	70.1
Male	91	29.9
Marital status		
Single	78	25.7
Married	226	74.3
Physical restraint use		
Yes	247	81.3
No	56	18.4
No response	1	0.3
Training on physical restraint		
Yes	161	53.0
No	142	46.7
No response	1	0.3
Work experience in psychiatry clinic		
Less than 1 year	19	6.3
1–5 years	141	46.4
6–9 years	88	28.9
10 years and longer	56	18.4
Subject of the training on physical restraint (n=124)*		
In-service training	116	93.5
Other (graduate training, seminar, etc.)	8	6.5
Working type		
Shift	237	78.0
Regular daytime	64	21.0
No response	3	1.0
Alternative method use		
Yes	103	33.9
No	200	65.8
No response	1	0.3
Number of patients cared for daily		
1–10	28	9.2
11–20	50	16.4
21–30	61	20.1
31–40	84	27.6
41 and more	69	22.7
No response	12	3.9
Working experience in other clinics		
Less than 1 year	4	1.3
1–5 years	91	29.9
6–9 years	33	10.9
10 years and longer	76	25.0
Had not worked	100	32.9
Total	304	100.0

*The percentages are calculated using only the respondents.

Table 2. Distribution of alternative methods used by nurses

Alternative methods (n=103)	n	%
Chemical restraint	46	31.7
Isolation	43	29.6
Relaxing by communication	42	29.0
Other*	14	9.7
Total**	145	100.0

*Other (mechanical restraint: 3, making observations: 2, therapy application: 2, directing patient to attention-grabbing activities: 2, change of the clinical service: 2, warning: 2, punishment: 1). **Percentages were given over n, because responses were more than one.

Table 3. Physical restraint complications observed by nurses

Complications	Complication type	n	%
Circulatory disorders	Physical	33	16.0
Rosella	Physical	31	15.0
Agitation-anger	Psychological	26	12.6
Bruising-cyanosis	Physical	19	9.2
Edema-swelling	Physical	19	9.2
Ecchymosis	Physical	10	4.8
Aspiration	Physical	9	4.4
Deformation of skin integrity	Physical	9	4.4
Pain	Physical	8	3.9
Respiratory Distress	Physical	7	3.4
Resolving the restraint	Physical	7	3.4
Incontinence	Physical	6	3.0
Fracture-Dislocation	Physical	5	2.4
Drowning risk	Physical	3	1.5
Fatigue	Physical-Psychological	2	1.0
Knocking down the bed	Physical	2	1.0
Other*	Physical	10	4.8
Total** 100.0		207	

*Other (Respiratory arrest: 1, Psychological trauma: 1, Loss of self-confidence: 1, Retention: 1, Allergy: 1, Excitation risk: 1, Vomiting: 1, Thirst: 1, Fever: 1, Sweating: 1, Orthostatic hypotension: 1). **More than one answer has been given.

the appropriate restraint for patients' conditions. Also, 18.1% did not receive the informed consent from patients' families (Table 5).

According to the nurses' responses on the subscale of attitudes, 54.9% disagreed with the ideas that "family members have right to oppose application of restraint to their patients" and "If I were a patient, I would have had the right to accept or refuse application of restraint". Among them, 92.1% reported that they did not feel guilty when they applied a restraint to a patient; 74.4% reported that they did not feel bad when the patient got worse or angry after the application of restraint;

Table 4. Comparison of the nurses' characteristics and their knowledge, attitudes, and practices related to physical restraint use

	Knowledge Scale	Attitude Scale	Practice Scale
Mean±Standard deviation	7.75±1.27	27.29±4.12	38.58±2.61
Nurses' characteristics			
Age groups*	p=0.429; Z=-0.8	p=0.044; Z=-2.0	p=0.351; Z=-0.9
Gender*	p=0.233; Z=-1.2	p=0.732; Z=-0.3	p=0.005; Z=-2.8
Marital status*	p=0.938; Z=-0.1	p=0.026; Z=-2.2	p=0.077; Z=-1.7
Educational status**	p=0.813; x^2=0.9	p=0.411; x^2=2.8	p=0.391; x^2=3.0
Work experience in psychiatry clinic**	p=0.472; x^2=2.5	p=0.679; x^2=1.5	p=0.003; x^2=13.8
Work experience in other clinics**	p=0.109; x^2=6.0	p=0.187; x^2=4.8	p=0.794; x^2=1.0
Working type*	p=0.814; Z=-0.2	p=0.929; Z= -0.1	p=0.127; Z=-1.5
Number of daily cared patients**	p=0.134; x^2=7.0	p=0.692; x^2=2.2	p=0.113; x^2=7.5
Training status*	p=0.270; Z=-1.1	p=0.210; Z=-1.2	p=0.431; Z=-0.8
Subject of the received training*	p=0.584; Z=-0.5	p=0.807; Z=-0.2	p=0.402; Z=-0.8
Restraint use status*	p=0.031; Z=-2.1	p=0.034; Z=-2.1	p=0.506; Z=-0.7
Status of alternative method use*	p=0.617; Z=-0.5	p=0.122; Z=-1.5	p=0.284; Z=-1.0

*Mann-Whitney U Test; **Kruskal-Wallis Test.

Table 5. Distribution of nurses' knowledge levels of physical restraint use

Scale division	Mean±Standard deviation	Minimum-Maximum	
Knowledge	**7.75±1.27**	**0-11**	
Knowledge items		**I agree n (%)**	**I disagree n (%)**
1- Restraints are tools designed to prevent injury.		280 (92.1)	24 (7.9)
2- Restraint is practiced by professionals when the patient cannot be closely monitored.		149 (81.9)	55 (18.1)
3- The patient has the right to appeal use of restraints. The appropriate restraint should be determined based on the patient's condition.		128 (42.1)	176 (57.9)
4- Informed consent must be obtained from a family member when a restraint is applied to the patient.		55 (18.1)	249 (81.9)
5- The restraint should be loosened in 2 hours.		178 (91.4)	26 (8.6)
6- The restraint should be applied comfortably so that there will be no space between the skin and the restraint; also, the type of restraint, time of application, and reason for using restraint should be recorded in the nursing notes.		288 (94.7)	16 (5.3)
7- The risk of deterioration in skin integrity is increased when a restraint is applied to a patient.		172 (56.6)	132 (43.4)
8- The restraint should be attached to the edges of the bed, not to the bed linen or rails.		297 (97.7)	7 (2.3)
9- The patient should never be restrained face down because there may be a suffocation risk.		294 (96.7)	10 (3.3)
10- There is no restraint method or device that we can say works very well in every condition.		210 (69.1)	94 (30.9)
11- A jacket-type restraint could cause death of the patient.		222 (77.4)	65 (22.6)

64.8% stated that they did not feel bad when the patient's orientation deteriorated after the application of the restraint. In addition, the participant nurses were found to be very careful about taking legal measures to protect themselves and their institution during the application of restraint (Table 6).

Based on the nurses' responses on the subscale of practices, nurses generally took care to apply the restraint using the physician directive, responding to the calls of patients under restraint as soon as possible, controlling whether the restraint is in the correct position, and checking the skin of the restrained patient for friction or irritation. In addition, the nurses were found to be very careful in checking the restraint frequently to determine whether it opened automatically; recording the restraint type and reason for using restraint, application hour and relevant nursing interventions in the nursing notes. However, it was determined that they did not give due consideration to use different nursing interventions to prevent the patient from falling; to inform family members about the reasons for applying a restraint to their patient; and finding alternative ways to control the patient's movements.

Table 6. Distribution of nurses' attitudes of physical restraint use

Scale division	Mean±Standard deviation	Minimum-Maximum			
Attitude	**27.29±4.12**	**12–48**			
Attitude items (n=304)		**I strongly agree n (%)**	**I agree n (%)**	**I disagree n (%)**	**I strongly disagree n (%)**
1- I think that family members have the right to oppose application of a restraint.		9 (3.0)	59 (19.4)	167 (54.9)	69 (22.7)
2- If I were the patient, I would have had the right to accept or refuse application of a restraint.		24 (7.9)	80 (26.3)	167 (54.9)	33 (10.9)
3- I feel guilty if I apply the restraint to the patient myself.		5 (1.6)	19 (6.3)	193 (63.5)	87 (28.6)
4- The reason for using restraints in our institution is the inadequate number of nurses.		3 (1.0)	15 (4.9)	147 (48.4)	139 (45.7)
5- I feel bad when one of the family members enters the room of a patient to whom a restraint was applied.		48 (15.8)	120 (39.5)	91 (29.9)	45 (14.8)
6- I feel bad when the patient is worse / angry after application of a restraint.		7 (2.3)	71 (23.4)	178 (58.6)	48 (15.8)
7- I feel bad when the patient's orientation deteriorates after application of a restraint.		3 (1.0)	104 (34.2)	154 (50.7)	43 (14.1)
8- The patient experiences a decrease in self-confidence after application of a restraint.		4 (1.3)	61 (20.1)	188 (61.8)	51 (16.8)
9- It is important for me and for my institution to apply the restraint while observing the legal measures.		130 (42.8)	152 (50.0)	10 (3.3)	12 (3.9)
10- I think that the application of a restraint reduces the duration of nursing care.		8 (2.6)	50 (16.4)	199 (65.5)	47 (15.5)
11- I think restraints increases the risk of suffocation in patients.		4 (1.3)	74 (24.3)	184 (60.5)	42 (13.8)
12- I think restraints decrease the rate of falls in patients.		76 (25)	182 (59.9)	34 (11.2)	12 (3.9)

Moreover, 36.9% of the nurses (30.6% reported "sometimes" and 6.3% reported "always") were found to apply a restraint on more patients when the number of their nursing colleagues decreased (Table 7).

Discussion

Physical restraint practice is an application directly related to the responsibility of establishing a therapeutic environment within the framework of psychiatric nursing clinical practice standards.[15,16] Physical restraint practices have the risk of physical, psychological, and social damage to patiens and infringment of their right to autonomy.[17,18] Therefore, the less restrictive alternative methods should be considered before using physical restraint.[17] The present study found that the majority of nurses did not use alternative methods of physical restraint (Table 1), which can be regarded as a sign of these nurses' failure to comform to the principle of non-harming–utility in complying with ethical principles guiding nursing practices.[19]

The present study also determined that most of the methods used by nurses as alternatives to physical restraint are indeed not alternatives to physical restraint (Table 2). This result is important in terms of showing that nurses do not have sufficient knowledge about physical restraint. It is particularly noticeable that nurses think chemical restraint practices, which they use frequently, are an alternative to physical restraint. Studies in the literature support this result.[7,12,20] Whereas chemical restraint is not an alternative to physical restraint, it is another type of restraint where drugs are used to control patients' behaviors in an emergency or to limit their freedom.[21] The fact that nurses are not aware that chemical restraint is not an alternative to physical restraint may be dangerous for patients: chemical restraint may cause complications such as the risk of falling, and lead to violation of the right to autonomy, one of the basic human rights.[19]

Although physical restraint is applied for the benefit of patients, it may cause many complications affecting their physical, psychological and social life, depending on its use.[3,4,22] Therefore, nurses need to know the effects of physical restraint on patients and follow them during application process. The present study found that nurses had very low level of knowledge regarding the use of physical restraint (Table 3). Studies on the subject support this result.[7,12] Considering this issue in terms of nurses' responsibility for establishing a therapeutic environment as one of the psychiatric nursing practices, it is thought that nurses do not pay enough attention to fulfilling this role. Relevant studies state that psychiatric nurses must establish and maintain a safe and therapeutic environment for patients.[1,5] Due to nurses' in adequate knowledge about physical restraint, it is impossible for them to establish and maintain a therapeutic environment for patients with physical restraint.

Table 7. Distribution of nurses' practices of physical restraint use

Scale division	Mean±Standard deviation	Minimum-Maximum		
Practice	**38.58±2.61**	**14–42**		
Practice items (n=304)		**Always n (%)**	**Sometimes n (%)**	**Never n (%)**
1- I try different nursing interventions to prevent the patient from falling before applying a restraint to the patient.		193 (63.5)	105(34.5)	6 (2.0)
2- I apply a restraint to the patient only by physician's directive.		260 (85.5)	40 (13.2)	4 (1.3)
3- I share my idea with the physician when I think the patient does not need to be restrained.		213 (70.1)	82 (27.0)	9 (3.0)
4- If the patient has been restrained, I respond to the patient's calls as soon as possible.		270 (88.8)	34 (11.2)	0 (0.0)
5- I check the restraint every two hours to determine whether it is in the correct position.		290 (95.4)	9 (3.0)	5 (1.6)
6- I check the skin of the patient with restraint in terms of friction or irritation.		286 (94.1)	17 (5.6)	1 (0.3)
7- I inform family members why the patient was restrained.		159 (52.3)	116(38.2)	29 (9.5)
8- I inform the patient why the restrain is necessary.		224 (73.3)	77 (25.3)	3 (1.0)
9- I inform the patient when the restraint will be removed.		238 (78.3)	63 (20.7)	3 (1.0)
10- As the number of colleagues decreases, the number of patients with restraints increases.		19 (6.3)	93 (30.6)	192 (63.2)
11- We try to find different ways of controlling the patient's movements in our institution rather than applying restraint.		148 (48.7)	149 (49.0)	7 (2.3)
12- I check the restraint frequently to determine whether it has opened automatically.		255 (83.9)	49 (16.1)	0 (0.0)
13- When the restraint is applied, I record the type of the restraint, the reason for using restraint, application hour, and relevant nursing interventions in nursing notes.		197 (97.7)	7 (2.3)	0 (0.0)
14- When the restraint is applied, I frequently check, evaluate, and record its effects.		278 (91.4)	26 (8.6)	0 (0.0)

The present study found that the situations stated by nurses as complications were mostly physical complications (Table 3). On the other hand, physical restraint may also affect patients' psychology and social life.[22] Only 14.6% of the complications noted by the nurses (Table 3) were psychological complications. More importantly, none of the nurses indicated complications such as a decrease in self-esteem and loss of reputation affecting patients' social lives.[22] Karagözoğlu and Özden[7] (2013) report that only a small number of nurses know about psychiatric complications. The fact that nurses mostly have knowledge only about physical complications can be a sign that they do not have a holistic view in giving healthcare for patients. Psychiatric nurses who consider human beings as a bio-psycho-social entity are expected to carry out healthcare practices using a philosophical approach that states each person is a unity with his/her bio-psycho-social domains, so one negativity emerging from these domains affects other domains.[15,23] Therefore, it is argued in recent years that nurses should approach patients using a holistic approach.[24] This also suggests that consultation relying on psychiatric nursing is required in nursing.

According to the nurses' mean score on the subscale of knowledge regarding the use of physical restraint and the score limits that can be taken from this subscale, nurses were found to have good but inadequate knowledge level (Table 5). Özden et al.[25] (2014) provided training on physical restraint to the participating nurses and found that the nurses' mean score obtained after the training were higher than the nurses' mean score found in the present study, which was conducted without training activity. This result may be an obvious sign for the importance of relevant training given to nurses. In addition, in the present study, those who did not use physical restraint were found to have higher mean score on the subscale of knowledge than those who used physical restraint (Table 4). The subscale of knowledge about the use of physical restraint includes the techniques, indications, benefits, risks and damages of physical restraint. Given this situation, nurses lacking knowledge regarding physical restraint may have led those nurses who did not apply restraint to think that physical restraint was the only option to restrain patients, without taking into account the benefits of other options.

Nurses must obtain confirmation from patients, their families, or legal representatives before applying restraint.[26,27] The use of restraint without patients' permissions may have legal limitations; therefore, nurses must inform patients and their families and receive their approval so that nurses are protected from legal problems in possible situations.[26–28] The present study found that 82% of the nurses did not receive approval when using restraint (Table 5). Zencirci[29] (2009) also found that almost all the nurses (97.6%) used restraint on patients

without receiving their informed consent. This may be an important sign of an information gap among nurses, but also may be related to the failure of consistently using consent forms in hospitals. In addition, the disclosure of the reason for using restraint will help to reduce the anxiety of both patients and their families, and support patients adapt to restraint.[26]

According to the nurses' mean score on the subscale of attitudes regarding the use of physical restraint and the score limits that can be taken from this subscale, this study suggest that nurses had negative attitudes regarding the use of physical restraint (Table 6). This result differs from that in the national and international literature.[8,9,14,25,30] This difference can be explained by the fact that studies in the literature were carried out outside the psychiatric clinics. The attitude mean scores of those aged 20–35 years, those who were single, and those who did not use physical restraint were found to be significantly higher in the present study (Table 4). The positive attitude of those who did not use physical restraint can be explained by the fact that the level of their knowledge about the subject is higher. The reason for the positive attitudes of the single nurses and those aged 20–35 years may be related to their being younger than those in other age groups. It is also thought that there is a need for further studies examining the effect of individual characteristics on the use of physical restraint. For example, Gelkopf et al.[31] (2009) found that nurses generally showed negative attitudes regarding the use of physical restraint, and that these negative attitudes varied by gender. Accordingly, they stated that because women consider themselves inadequate in coping with violence, this situation causes them to have negative emotions toward restraint. Therefore, female healthcare professionals ask males help in applying restraint to the patient in case of threatened violence.

Studies report that the restrained patients feel humiliated and that their self-reliance decreases.[7,22,32] In the present study, most of the participant nurses stated that self-confidence of the restrained patients does not decrease. This situation indicates that nurses have seriously inadequate knowledge about the psychological complications of physical restraint (Table 6). Literature knowledge supports this assertion.[7,20,33] Karagözoğlu and Özden[7] (2013) reported that only 19.4% of nurses stated the loss of self-confidence in restrained patients as a complication. Moreover, there are studies in which none of nurses stated the loss of self-confidence as a complication in restrained patients.[20,33] Studies also state that physical restraint is used to prevent the patient from falling out of bed.[7,34–36] In the present study, 84.9% of nurses reported that the use of physical restraint prevents patients from falling out of bed: this is because they might believe in using physical restraint against the risk of a patient's falling.

According to the nurses' mean score on the subscale of practices regarding the use of physical restraint and the score limits that can be taken from this subscale, nurses were found to have good physical restraint practices but with some shortcomings (Table 7). Suen[14] (1999) found similar results. The studies in the national literature show different results from the present study results in this respect.[7,11,30] The difference between these studies may be because of the more frequent use of physical restraint in psychiatric clinics. Kaya et al.[11] (2008) found that nurses working in psychiatric clinics obtained higher mean score on the subscale of practices regarding the use of physical restraint than nurses working in other clinics, which supports the present study's result. The present study determined that female nurses' practice scores were higher than male nurses, suggesting that female nurses are more likely to use physical restraint. It also found that nurses with 10 years and more of clinical experience had significantly higher mean scores on the subscale of practices regarding the use of physical restraint than those with less work experiences. (Table 4). Çelik et al.[8] (2012) found similar results. This is important for demonstrating the importance of clinical experience in the use of physical restraint.

Intensive nursing care is applied to patients after the use of physical restraint. They are monitored continuously with direct observation or using the camera.[37] This observation should be done every 15–30 minutes, and the patients' behaviors should be checked regularly.[2,38] Nurses should evaluate whether it is necessary to continue the use of restraint after each regular observation.[39] In addition, it is important to change the position of patients who have a restraint and care for their skin care regularly.[37] The position of patient with restraint should be anatomically appropriate so that the formation of bed wound could be avoided.[40] These observations and controls are also important to prevent complications due to the use of physical restraint.

The present study found that nurses generally took care of responding to the calls of patients under restraint as soon as possible, controlling whether the restraint is in a correct position, checking their skin in term of complications, checking the restraint frequently to determine whether it has opened accidentally, and observing whether the restraint is in a correct position (Table 7). This result is consistent with the result of Özden et al.[25] (2014), but not consistent with the result of Suen et al.[9] (2006). This result is also important showing to what extent nurses exercise due care and discipline in this regard, how often they follow patients with restraint, and how they are sensitive in terms of reducing the risks of injury to patients and complications arising from the use of physical restraint. Even though physicians are legally responsible for deciding to use of restraint in Turkey,[10] it seems that it is not possible to apply, maintain, and finalize restraint without team collaboration. In this context, the application of restraint through a team decision is considered to be a more realistic and effective approach.

Conclusion

The present study determined that the participant nurses' knowledge level regarding physical restraint was good, at-

titudes were negative and practices were nearly excellent. Although this result may seem to contain an inconsistency, it shows that good knowledge and excellent practice do not create positive attitudes. This can be attributed to the fact that attitudes are largely related to feelings rather than knowledge and practice. In addition, the participating nurses were found to take care of receiving a physician request for using physical restraint and keeping records during restraint application. However, they did not have enough knowledge about alternative methods for and complications of physical restraint. Moreover, based on this study, nurses frequently use chemical restraint as an alternative to physical restraint. In the light of these results, it is suggested to hold comprehensive and practical training programs promoting nurses' knowledge, attitudes, and practices regarding physical restraint. It is also suggested that qualitative and quantitative studies on physical restraint should be done in psychiatric hospitals, and that these studies particularly should be related to physical restraint complications, chemical restraint, and effective alternative methods that can be used as a substitute for physical restraint. It is thought that taking this study results into consideration in the training to be given about physical restraint in psychiatric hospitals where this study was conducted will be beneficial both institutionally and in terms of nursing services in general.

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