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Variation in opinions on coercion use among mental healthcare professionals: a questionnaire study

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ABSTRACT

Introduction: Even if coercive measures are widely applied in psychiatry and have numerous well-known drawbacks, there is limited known on the agreement among mental healthcare professionals' opinions on their use. In a questionnaire study using standardized scenarios, we investigated variation in staff opinions on coercion.

Methods: In a web-based survey distributed to staff at three psychiatry hospitals, respondents were asked to consider if and what coercion to use by introducing two hypothetical scenarios involving involuntary psychiatric admission and in-hospital coercion.

Results: One hundred thirty-two out of 601 invited staff members responded to the survey (Response Rate = 22%). There was large variation in participating staff members' opinions on how to best manage critical situations and what coercive measures were warranted. In the first scenario, 57% of respondents ($n=76$) believed that the patient should be involuntarily admitted to hospital while the remaining respondents believed that the situation should be managed otherwise. Regarding the second scenario, 62% of respondents responded that some in-hospital coercion should be used. The majority of respondents believed that colleagues would behave similarly (60%) or with a tendency towards more coercion use (34%). Male gender, being nursing staff and having less coercion experience predicted being less inclined to choose involuntary hospital admission.

Conclusion: There is a high degree of variation in coercion use. This study suggests that this variation persists despite staff members being confronted with the same standardized situations. There is a need for evidence-based further guidance to minimize coercion in critical mental healthcare situations.

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Coercion; coercive measures; mental health care; psychiatry; restrictive practices

Introduction

Psychiatric coercive measures are among the most intrusive measures in western countries [1]. Research has documented the numerous drawbacks of their use such as mental distress, physical injuries and ultimately death [2–4]. In order to ensure patients' rights, Denmark has implemented special psychiatric legislation [1,5]. However, Denmark has been repeatedly criticized for its application of coercive measures [6]. Danish legislation emphasizes the so-called 'minimum intrusive measures principle' (Para 4), which is similar to least restrictive practice (or alternative) and last resort principles in other countries [7–9]. This principle states that in every situation, the least intrusive among effective coercive measures must be used. However, little knowledge exists as to how mental health workers understand and practice this principle. Moreover, it is unclear to what degree for example nursing staff agree with each other or compare with other groups of professionals, when it comes to the assessment of specific situations. However, psychiatric patients are often vulnerable and the decision to resolve a critical situation either through the forced application of sedatives and holding or, e.g. mechanical restraint is not trivial to them [10]. It is likely that different psychiatric staff and staff groups have differing opinions regarding the most appropriate use of particular coercive measures [11]. Considering both national and international statistics on variation in coercive measure use, this could very well be the case [12,13]. Similarly, others have found great variation among countries in the proportion of patients subjected to mechanical restraints [1,14,15].

Specifically, research conducted among staff in mental healthcare have suggested that attitudes towards coercion vary with gender, level of education, and years of professional experience [16–21]. As pointed to by Whittington et al. attitudes toward different types of coercive measure are likely

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to vary between staff groups, however, our knowledge is limited regarding staff preferences and those preferences may likely have some influence on the decision to deploy coercion [17]. Likewise, Efkemann et al. in a recent study found a generally approving attitude towards coercion was associated with respondents' approval of applying coercion in vignettes representing 'grey zone' cases [22].

In parallel, research has shown the utilization of coercive measures to vary with staff characteristics [19,20,23–25]. Findings have, however, been conflicting and research has predominantly been conducted among nursing staff. If mental healthcare professionals have differing opinions regarding the valid application of coercive measures, this may pose a problem in regard to healthcare quality and patient rights. In this survey study illustrating different hypothetical scenarios, we investigated variation in staff opinions on coercion. In this regard, we also assessed staff members', perceived agreement with the opinions of their colleagues, and identified predictors among staff characteristics for opinions in favor of coercion use.

Materials and methods

Design

The purpose and design of this study is the result from discussions with a mental health user organization representative about coercion use by mental healthcare professionals in psychiatric hospitals. The representative pointed toward also bearing in mind the mental health services context with scarce resources. This is an e-mail-based survey study with written case scenarios. First, participating staff members responded to demographic questions, including gender, age, field of psychiatry, professional background, years of professional experience within mental health services, and current location of employment. Afterwards, participants read two constructed vignettes illustrating scenarios involving a psychiatric patient with deteriorating mental condition and responded to questions about the need for coercion use. Vignettes aimed to illustrate two fundamentally different situations: 1. The question of involuntarily admitting an individual to a mental health hospital and 2. Use of coercion within the psychiatric hospital setting. Vignettes had undergone no methodical validation but have been used in former research: The first scenario had been previously used for investigating citizen perceptions regarding *involuntary admission* to psychiatric hospital (please see Appendix 1 [26,27]). The vignette was slightly modified as information about patient ethnicity was omitted and information was added that the patient illustrated had a middle level higher education. Questions regarding this first scenario were otherwise identical to the original study [26,27]. The second scenario related to coercive measure use *during hospitalization*. This scenario was based on a case extract from a decision from the Danish Psychiatric Patients' complaints board that has been previously discussed by Birkeland and Gildberg [1] and questions following the second scenario were purpose-designed (see Appendix 2).

Settings

The Region of Southern Denmark is one among five regional municipalities in Denmark. We invited 601 staff members from three regional psychiatric hospitals ('a', 'b', and 'c') including general psychiatric hospital and forensic mental health services through the regional administrative e-mail registries with a link to the web-based questionnaire. We included medical doctors, nursing staff and pedagogical staff (including nursing-, and pedagogical assistants) as these three groups are the staff groups typically involved in coercive measure use in Danish psychiatric hospitals. Research Electronic Data Capture (REDCap) was used as electronic questionnaire platform [28]. The survey was distributed April 20, 2023. Non-respondents received a reminder May 4, 2023, remaining non-respondents received another reminder May 18, 2023, and afterwards the survey was closed.

Analyses and statistics

Following both scenarios, keeping everything else equal, respondents were asked about their opinion regarding coercion use in managing the situation illustrated. The primary outcome variable of interest was 'use of coercive measures', in the first scenario with focus on involuntary admission to psychiatric hospital (third item '*Do you think that people like John should be forced by law to be admitted to a hospital for treatment*' with response options 'Yes', 'No' and 'Don't know'; please see Appendix 1). Regarding the second scenario, the primary outcome measure was the respondent's opinion regarding management of the situation illustrated with mutually exclusive options: a) letting the patient leave the room b) physical holding, c) mechanical restraint through belt fixation, or d) forced injection of a sedative. Response options 2, 3 or 4 were collectively treated as coercive measure use. In the regression analyses, participants' responses were dichotomized into agreement or non-agreement with colleagues' opinions on managing the situation, serving as a secondary outcome measure for the second scenario.

In the comparison of responders and non-responders, we used data from the Regional Municipality's register on staff members (characteristics) and from the Danish Health Professionals' authorization register on years since graduation.

Staff characteristic differences between respondents and non-respondents were assessed using Pearson's chi-squared test for categorical measures and Wilcoxon rank-sum test for continuous measures. Predictors for coercive measure and the assumed agreement among psychiatric hospital staff were estimated using logistic regressions. Unadjusted and adjusted analyses are presented. The adjusted analysis included individual level characteristics (gender, age, years since graduation, educational background, and experience in mental health services, experience in forensic and with coercion in psychiatry) and workplace characteristics (workplace and mental health services branch). The Hosmer–Lemeshow goodness-of-fit test was used to examine the model fit [29]. Analysis and data management were conducted using Stata V17 (Stata Corp LP, College Station, TX), and a significance level of 5% was applied.

Ethics approval and consent to participate

According to Danish law, research using questionnaires is exempted from ethical approval (Act on Research Ethics Review of Health Research Projects, Para 14). The launching of the survey, however, required compliance with EU regulation 2016/679 and Directive 95/46/EC, General Data Protection Regulation (GDPR) as well as Danish Health Data Agency (DHDA) authorization (Journal n.: 22/30902).

Results

In total, 132 among 601 invited staff members responded to the survey (Response Rate = 22%). Respondent characteristics are shown in Table 1.

The majority of respondents were women aged + 35 years and having at least 5 years of working experience from the mental health services. When comparing responders and non-responders, response rates significantly varied between gender, age, and hospitals. However, in regard to years since graduation and educational background, there was no statistically significant difference in representation.

We tested staff members' opinion regarding the need for involuntary psychiatric treatment in the first scenario. Respondents were divided as to the management of the patient-case illustrated but 57% of staff members ($n=76$) believed that the patient illustrated in the scenario should be involuntarily admitted to a psychiatric hospital. The proportion substantially increased with added information that the patient was dangerous to himself (90%, $n=120$) or to others (92%, $n=122$).

Like illustrated in Table 2, there was also a heterogeneity in the opinions regarding management of the second scenario.

When asked about how respondents believed that their colleagues would have acted in the same situation, the majority believed that their colleagues would manage the situation in roughly the same way (60%; $n=80$). A smaller amount believed that their colleagues would manage the situation illustrated with a tendency towards more use of coercion (34%; $n=45$) while only very few believed that their colleagues would tend toward less use of coercion (6%; $n=8$).

Table 3 shows the predictors for believing that, considering the second scenario, one's management in regard to coercive measure use is in line with that of peers.

It appears from Table 3 that in one workplace (in hospital 'c'), participating staff in particular believed their management of the situation was in accordance with that of their colleagues. On the other hand, those specialized within the area of psychiatry (psychiatric nursing and medical doctors) were generally less inclined to believe that their colleagues would act the same way. Those choosing more coercive interventions (options 2, 3 or 4) were also significantly more inclined to believe that colleagues would act in a similar manner.

In Table 4, predictors for involuntary psychiatric hospital admission (first scenario; 'Yes' response in response option 3) and for in-hospital use of coercive measure (second scenario; response options b, c or d) are shown.

As seen in Table 4, men and nursing staff were statistically significantly less inclined to choose involuntary hospital admission in response to the first scenario. Furthermore, respondents from one of the hospitals apparently were significantly more inclined to choose involuntary admission of the patient in the first scenario than were respondents from the other hospitals. Finally, there seemed to be a general trend that those with less coercion use experience were less inclined to choose coercion in response to the illustrated scenarios although the trend only reached significance for the first scenario.

Table 1. Respondent and non-respondent characteristics ($N=601$).

		Respondents	Non-respondents	*p*-value
		$N=132$	$N=469$	
Gender	Female	93 (70.5%)	372 (79.3%)	**.032**
	Male	39 (29.5%)	97 (20.7%)	
Age groups	<36 year	24 (18.2%)	138 (29.4%)	**<.001**
	36–50 year	50 (37.9%)	142 (30.3%)	
	>50 year	58 (43.9%)	136 (29.0%)	
	Unknown	0 (0.0%)	53 (11.3%)	
Years since graduation		11 (6–15)	9 (5–15)	.081
Education background	Medical	24 (18.2%)	111 (23.7%)	.19
	Nursing	97 (73.5%)	334 (71.2%)	
	Pedagogical	11 (8.3%)	24 (5.1%)	
Workplace	Hospital a	75 (56.8%)	175 (37.3%)	**<.001**
	Hospital b	40 (30.3%)	153 (32.6%)	
	Hospital c	17 (12.9%)	141 (30.1%)	
Mental health services branch	General psychiatry	64 (48.5%)		
	Forensic psychiatry	68 (51.5%)		
Years of experience in mental health services	0–4	34 (25.8%)		
	5–9	32 (24.2%)		
	10–19	33 (25.0%)		
	+20	33 (25.0%)		
Years of experience in forensic mental health care	0 years	53 (40.2%)		
	1–4 years	32 (24.2%)		
	5–9 years	23 (17.4%)		
	+10 years	24 (18.2%)		
Self-rated experience with coercion in psychiatry	Much experience	81 (61.4%)		
	Some experience	40 (30.3%)		
	Little or no experience	11 (8.3%)		

Discussion

In this survey aiming at investigating variation in opinions regarding coercion use among psychiatric staff, we found a relatively high variation both in regard to the perceived need

Table 2. Respondent opinions regarding second scenario – in-hospital coercion use.

Management of situation illustrated in second scenario	*n*	Percentage
"*I let the patient escape from the room with a view to subsequently resolve the situation outside the patient room*"	50	38
"*Together with the other staff members, I catch hold of the patient and hold the patient until the patient calms down completely and can be released*"	41	31
"*Together with the other staff members, I catch hold of the patient and put the patient in a belt*"	13	10
"*Together with the other staff members, I catch hold of the patient and administer a sedative injection*"	29	22

Table 3. Unadjusted and adjusted odds ratios for respondent beliefs about colleagues' willingness to use same level of coercion in second scenario (in-hospital coercion use).

		Unadjusted				Adjusted‡			
		OR	95% CI		*p*-value	OR	95% CI		*p*-value
Gender	Women	1,00				1,00			
	Men	1,11	0,51	2,38	0,80	1,29	0,49	3,38	0,60
Age	<36 y	1,00				1,00			
	36–50 y	0,77	0,29	2,07	0,61	0,57	0,17	1,96	0,37
	>50 y	1,47	0,55	3,90	0,44	1,13	0,31	4,15	0,85
Education	Doctor	1,00				1,00			
	Nurse	0,86	0,34	2,15	0,74	0,74	0,21	2,63	0,64
	Pedagogical	1,05	0,24	4,62	0,95	1,01	0,15	6,58	0,99
Workplace	Hospital a	1,00				1,00			
	Hospital b	1,73	0,79	3,79	0,17	1,93	0,80	4,67	0,14
	Hospital c	16,00	2,02	126,93	**0,01**	19,17	2,29	162,07	**0,01**
Specialized in psychiatry	No	1,00				1,00			
	Yes	0,42	0,19	0,90	**0,03**	0,29	0,10	0,82	**0,02**
Years of experience in mental health care	0–4	1,00				1,00			
	5–9	1,15	0,43	3,07	0,77	1,71	0,52	5,70	0,38
	10–19	1,21	0,46	3,21	0,70	2,44	0,67	8,79	0,18
	+20	1,38	0,52	3,68	0,52	1,68	0,45	6,32	0,44
Self-rated experience with coercion in psychiatry	Much	1,00				1,00			
	Some	0,93	0,43	2,00	0,85	0,93	0,36	2,39	0,88
	Little	1,83	0,45	7,43	0,40	1,60	0,29	9,12	0,60
Preferring coercive intervention	No	1,00				1,00			
	Yes	2,90	1,40	6,02	**<0,01**	2,60	1,14	5,94	**0,02**

OR = Odds ratio, y = years. Bold font indicates statistical significance. ‡Hosmer-Lemeshow goodness-of-fit, $chi^2 = 2.04$.

Table 4. Unadjusted and adjusted odds ratios for coercion use in scenario 1 about involuntary admission and in scenario 2 about use of coercion during an in-hospital stay.

	Scenario 1 (involuntary admission)								Scenario 2 (in-hospital coercion use)							
	Unadjusted				Adjusted†				Unadjusted				Adjusted‡			
	OR	95% CI		*p*-value	OR	95% CI		*p*-value	OR	95% CI		*p*-value	OR	95% CI		*p*-value
Gender																
Female	1.00				1.00				1.00				1.00			
Male	0.73	0.34	1.54	0.41	0.29	0.11	0.78	**0.01**	0.97	0.45	2.08	0.93	0.91	0.36	2.27	0.84
Age																
<36 year	1.00				1.00				1.00				1.00			
36–50 year	0.84	0.31	2.24	0.73	1.27	0.38	4.22	0.69	0.36	0.12	1.06	0.06	0.32	0.09	1.09	0.07
>50 year	1.01	0.39	2.66	0.98	1.41	0.41	4.88	0.59	0.63	0.22	1.85	0.40	0.56	0.16	2.02	0.38
Education																
Medical	1.00				1.00				1.00				1.00			
Nursing	0.37	0.14	1.01	0.05	0.18	0.05	0.65	**0.01**	0.59	0.22	1.55	0.28	0.47	0.14	1.62	0.24
Pedagogical	0.40	0.09	1.80	0.23	0.23	0.04	1.47	0.12	1.10	0.22	5.40	0.91	1.16	0.18	7.63	0.88
Workplace																
Hospital a	1.00				1.00				1.00				1.00			
Hospital b	2.29	1.02	5.16	0.05	2.82	1.11	7.13	**0.03**	1.18	0.54	2.60	0.68	1.40	0.59	3.32	0.45
Hospital c	0.84	0.29	2.42	0.75	0.63	0.19	2.02	0.43	1.64	0.52	5.13	0.40	1.74	0.52	5.83	0.37
Specialized in psychiatry																
No	1.00				1.00				1.00				1.00			
Yes	1.24	0.58	2.67	0.58	0.57	0.21	1.55	0.27	0.78	0.36	1.68	0.52	0.57	0.21	1.54	0.27
Years of experience in mental health care																
0–4	1.00				1.00				1.00				1.00			
5–9	1.14	0.43	3.02	0.79	0.91	0.29	2.84	0.87	1.34	0.49	3.63	0.57	1.37	0.44	4.28	0.58
10–19	1.21	0.46	3.16	0.70	0.76	0.22	2.66	0.67	1.08	0.41	2.86	0.88	1.37	0.40	4.70	0.62
+20	1.37	0.52	3.61	0.53	0.78	0.21	2.94	0.72	1.23	0.46	3.28	0.69	1.23	0.34	4.44	0.76
Self-rated experience with coercion in psychiatry																
Much experience	1.00				1.00				1.00				1.00			
Some experience	0.53	0.25	1.15	0.11	0.35	0.14	0.92	**0.03**	0.84	0.38	1.82	0.65	0.83	0.33	2.07	0.68
Little or no experience	0.49	0.14	1.74	0.27	0.19	0.04	0.94	**0.04**	0.67	0.19	2.38	0.54	0.52	0.11	2.46	0.41

OR = Odds ratio, y = years. Bold font indicates statistical significance. ‡Hosmer-Lemeshow goodness-of-fit, chi2 = 6.52. †Hosmer-Lemeshow goodness-of-fit, chi2 = 7.01.

for involuntary admission and in regard to in-hospital coercive measure use. However, in the first scenario, agreement on involuntary admission substantially increased if the patient posed a danger to himself or others. Respondents mostly believed that they were in accordance with colleagues or that colleagues would be more inclined to use coercion. There was some group variation among hospitals and mental healthcare professions in regard to the opinion regarding whether the patient in the first scenario warranted involuntary admission.

Discussion of study findings in context of the existing literature

Variation at the individual level

In our study, mental healthcare professionals' opinions regarding the use of coercive measures were rather different. Fifty-seven percent of respondents believed that the patient in the first scenario was candidate for involuntary admission. In response to the second scenario, 62% of respondents believed that some coercive measure (physically holding, belt fixation or forced injection of sedative) should be employed. The remaining staff members (38%) believed that coercion could not be justified. Evidence from other healthcare areas suggests that clinical decisions made in response to similar situations tend to vary largely [30,31]. Within mental health settings, clinical variation is regularly observed, as well. For example, Osser et al. noted a large practice variation in the use of various psychopharmacological regimens in the treatment of schizophrenia [32]. At the same time, attitudes toward coercion are well known to vary among staff. For example, some mental health staff members have positive attitudes toward restraint and seclusion, while others have negative attitudes [33]. In a similar vein, previous studies have shown that mental healthcare professionals make inconsistent opinions in regard to the use of restrictive interventions [34,35].

Although in this study we found that older mental healthcare staff seemed to be less inclined to choose coercion in the in-hospital scenario, we could find no statistical association. Wynn previously demonstrated younger staff to be less critical toward physical restraint use and more critical toward use of seclusion than older staff [16]. Correspondingly, a study by Husum et al. suggested that staff older more likely considered the use of coercion to be an offence against patients than did younger staff members [18] and Whittington et al. found younger staff to be more likely to approve of containment methods than their older colleagues [17]. Nonetheless, other authors investigating nurses' age in relation to use of seclusion, have found no association [25,36,37].

We could not find any association between staff members' educational level and their opinions regarding coercion. On this matter, previous research again has shown varied results. In Bower et al.'s studies, use of seclusion and mechanical restraint was associated with greater numbers of qualified staff on duty during the shift [23,24]. Similarly, Khalil et al. [20] found higher level of nursing education to be associated with more use of seclusion. Other studies have found no association with staff qualifications [25,36,37], and likewise, a number of studies have found no statistical association between the work experience of nurses and the use of coercive measures [20,25,36,37].

Finally, we found opinions being less in favor of involuntary admission in men, nurses and those who had less self-reported coercion experience. The association between the latter mental healthcare staff characteristics and attitude toward- and utilization of- coercive measures has previously received some research attention, although findings are inconsistent. For example, Steinert and colleagues used case reports of patients with schizophrenia to study attitudes of psychiatrists, other professionals, and lay people towards compulsory admission and treatment of patients with schizophrenia in different European countries [38]. In all countries under study, psychologists and social workers supported compulsory procedures significantly less than the psychiatrists who were rather in tune with lay people and nurses. Likewise, there were highly significant differences among countries in the agreement about coercion use [38]. Additionally, male nurses in some previous studies have shown more positive attitudes than female nurses towards coercive measures [20,21] and correspondingly, mechanical restraint utilization has been shown to be associated with higher number of male care workers on duty [25]. Other studies could document no association between the gender of the nurse and use of coercive measures [36,37]. Nevertheless, previous studies usually concerned in-hospital coercive measure use rather than involuntary admission as such. Regarding in-hospital coercive measure use, like the latter mentioned studies, our analyses demonstrated no statistical association between gender and the opinion regarding coercive measure use.

Variation at the level of hospitals and regions

Studies and reports have revealed much regional diversity in the levels of coercive measure use [12,13]. For example, in Denmark, the Health Authorities reported in 2021 that the amount of adult citizens, out of each 100,000, who was subjected to involuntary psychiatric admissions varied from roughly 64 in the region with least involuntary admissions to roughly 72 in the region showing the highest number [12]. Correspondingly, the amount of citizens subject to mechanical restraint per 100,000 citizens in 2021 varied between roughly 17 and 27 in the lowest and the highest use regions.

We found variation *among hospitals* in regards to the perception of whether the patient in the first scenario warranted involuntary admission. This finding is remarkable, as involuntarily admitting a citizen to psychiatric hospital in Denmark is not a decision that is initially made by psychiatric hospital staff. However, it could signify that some staff members have a lower threshold when they believe that individuals with severe mental disorder should be involuntarily admitted. Correspondingly, a recent small Danish regional study showed that, even if respondents were divided, the opportunities for earlier involuntary admission of individuals with severe mental disorder before deterioration was a recurring theme [39]. At the psychiatric hospital level, a study by Mahmoud previously suggested differences between attitudes and practices in three specialized governmental mental hospitals and two psychiatric wards in general hospital, however, differences were insignificant [19].

Variation among countries

International research has revealed large variations between coercive measure use between countries with the proportion of patients subject to mechanical restraints varying from 17% to 69%

among 10 European countries [1,14]. Correspondingly, in Steinert and colleagues' study from 2005 there were highly significant country differences in the agreement about coercion use [38].

When comparing responses to the first scenario in this study to the original study conducted within the public in US, we found a slightly higher percentages of staff to be in favor of involuntary measures. The reason for this remains unclear; however, it could be increased readiness to use psychiatric measures among psychiatric staff than in the public. Another explanation could be differences in the level of trust in healthcare institutions or the approach to individual freedoms and rights between countries, etc.

Limitations

This study has many limitations. First, the study suffers from limitations arising from the small sample size, low participation rate and limited representativeness of our sample. In this regard, the number of significance tests conducted should be taken into consideration when drawing conclusions from the study. In addition, it must be highlighted that findings are based on a study using hypothetical scenarios rather than real life situations. Hence, it cannot be ruled out that a real-life situation providing much more contextual information would yield higher agreement among respondents. Everything else equal, vignettes may partially reflect clinical stereotypes, diagnostic 'triggers', legal thresholds, and signal phrases. Thereby, vignettes typically will lack contextual information that could be relevant for mental healthcare staff members looking for less restrictive alternatives. For example, regarding, the first scenario in particular, the vignette lacks information on what, if anything, has been tried to help or assist the patient. In our survey, we have virtually no information or impression on whether or how respondents filled such gaps in the story (e.g. considering the possibility of trying one or several mental health team visits). Several other contextual aspects could be relevant such as whether the patient verbalizes some form of suffering that can serve as a starting point for further dialogue. Additionally, regarding the first scenario, there is no signal of danger in the case description, as it is only generically mentioned in the answer. The latter may guide the reader to re-evaluate the case with reference to legal standards of danger. Moreover, an aspect of real-life decision-making about using coercion or not is the role of group dynamics. This was not accounted for in our analyses and, even if we found those choosing more coercive interventions significantly more inclined to believe that colleagues would act in a similar manner, we did not take into account how the perception of colleagues' decisions influence the individual staff member's decision-making. Finally, there could be further explanations for the variation in coercion use opinions on the individual level, including for example contextual factors like the staff member's experience of his or her own hospital's safety culture, the presence of staff and other resources, and for example recent experiences with aggressive patient behavior [40]. None of these contextual factors were taken into account in the present study. Our limited sample size is not feasible for conducting further sub-analyses on group dynamics. Even though the analyses conducted suggest that there might be some group similarities, e.g. among particular hospitals and staff groups regarding use of coercion, the role of group dynamics needs to be investigated in larger studies. In regard to the second scenario, no intervention or response alternative to coercion, such as attempting to verbalize or acknowledge the patients reaction, was presented to respondents. The degree to which respondents think of such alternatives, might have an impact on the responses they give, and again, results might be an artefact of a vignette with limited contextual information. Furthermore, it should be noted that the survey has not been conducted anonymously. Hence, it cannot be entirely ruled out that this could introduce some bias due to, e.g. the possible social desirability of responses to different questions.

Conclusions

Despite 'agreed' legislation on coercion use in mental health services there seems to be a high degree of variation in opinions about its application. This study suggests that this variation persists despite 'standardized' identical situations. The variation also suggests that psychiatric patients may be subjected to different treatment, arising from variation in hospital settings and staff composition, potentially implying a weakening of the patients' legal rights in a psychiatric setting with scarce resources. There is an overall need for further evidence-based guidance on how to minimize coercive measure use and better manage critical mental healthcare situations. However, some potential limitations with using hypothetical case vignettes are also highlighted in the study pointing to the need for careful designing, testing and interpretation of findings when using this methodology.

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No potential conflict of interest was reported by the author(s).

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Data availability statement

Data are available from the author upon reasonable request.

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Appendix 1: First case scenario in survey

(Link et al. 1999)

Schizophrenia: John is a man with a middle-level further education. Up until a year ago, life was pretty okay for John. But then, things started to change. He thought that people around him were making disapproving comments and talking behind his back. John was convinced that people were spying on him and that they could hear what he was thinking. John lost his drive to participate in his usual work and family activities and retreated to his home, eventually spending most of his day in his room. John was hearing voices even though no one else was around. These voices told him what to do and what to think. He has been living this way for 6 months.

(Pescosolido et al. 1999)

Do you think that people like John should be forced by law to:

1. get treatment at a clinic or from a doctor
2. take a prescription medication to control his or her behavior
3. be admitted to a hospital for treatment
4. be admitted to a hospital for treatment if he or she is dangerous to himself or herself, and
5. be admitted to a hospital for treatment if he or she is dangerous to others.

Appendix 2: Second case scenario in survey

We ask you to read the medical history below and answer the following questions:

A patient is admitted voluntarily with the diagnosis 'post-traumatic stress syndrome'. The patient is not previously known in the mental health services and at the time of admission he needs a safe environment. He is anxious and at home, he has expressed ideas of persecution. The day after admission, the patient is considered as relevant and clear-headed. The patient talks about his situation and wants help. However, the patient gets worse, and as the patient becomes hyperventilating, a staff member tries to assist with breathing techniques. The staff member is with the patient in the patient's room, when the patient suddenly and unmotivated gets up, slams the door to the corridor, and stands in front of the door with clenched fists. The staff member manages to summon additional staff. Four staff members immediately arrive and they manage to get into the room. However, the patient cannot be talked into calming down and is experienced by the staff as anxious, very agitated and probably psychotic. The patient hits – possibly unintentionally – a staff member when the patient throws a chair. The patient fences with clenched fists and kicks against the staff and tries to escape into the corridor where other patients are crowded.

How do you think the situation can best be resolved? (please mark one of the following)

- I let the patient escape from the room with a view to subsequently resolving of the situation outside the patient room
- Together with the other staff members, I catch hold of the patient and hold the patient until the patient calms completely down and can be released
- Together with the other staff members, I catch hold of the patient and puts the patient in a belt
- Together with the other staff members, I catch hold of the patient and administer a sedative injection