

Staff attitudes and thoughts about the use of coercion in acute psychiatric wards

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Abstract

Purpose Previous research has shown considerable differences in how often coercive measures are used in mental health care between groups of patients, institutions and geographical areas. Staff attitudes towards the use of coercion have been put forward as a factor that may influence these differences.

Method This study investigates the attitudes to coercion in 651 staff members within 33 Norwegian acute psychiatric wards. The newly developed Staff Attitude to Coercion Scale was used to measure staff attitudes.

Results Multilevel analysis showed that there was significant variance among wards, estimated to be about 8–11% of the total variance on three scales.

Conclusions Despite substantial differences in attitudes among wards, most of the variance could be attributed to

individual staff level factors. Hence, it is likely that staff attitudes are influenced, to a large extent, by each individual staff member's personality and values.

Keywords Staff attitudes · Coercion · Acute psychiatric wards · Multilevel analysis

Introduction

Use of coercion in mental health care is controversial and an important issue for research [1, 2]. Previous research showed considerable differences in the use of coercive measures in mental health care among groups of patients, institutions and geographical areas. This is the case for coercion during involuntary admissions [3] and includes different containment methods and involuntary treatment [4]. These differences are seen within the same country [5–7] and among countries [8, 9]. Some of the differences among countries can probably be explained by differences in legislation, but legislation cannot explain the differences within countries.

Following increased emphasis on patients' human rights, empowerment and patient participation, reduction of coercion in mental health care has become a high priority in health politics worldwide [10, 11]. It has been suggested that differences among local treatment cultures, such as staff attitudes and thoughts about the use of coercion, may play an important role in the use of coercion [5, 12, 13].

Research on the use of coercion in mental health care is of relatively new interest, with various scopes and aims. One area of research has examined coercion as part of psychiatric care [14], while another branch has investigated the prevalence of coercive measures [9, 15]. A third area of research is on patients' experiences of coercion [16–18]. A fourth area is research on the attitudes of staff towards the use of coercion

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[13, 19–24]. The latter consists mainly of comparative studies that have investigated differences in staff attitudes among countries. Few studies addressed the question of which factors might influence the formation of staff attitudes [20]. Theoretically, these factors can be divided into four groups (Fig. 1) based on summaries of previous research on this topic [25] and literature about attitude formation [26].

The factors discussed on this topic will be categorized according to these four types of possible influencing factors. The literature uses terms such as “attitudes to coercion,” “reasons to use coercion,” “thoughts about coercion,” “beliefs about coercion” and other terms regarding ethical considerations of the use of coercion. These terms are so closely related that we include them in the concept of attitudes to coercion in this paper.

Cultural factors

Previous studies showed that there are considerable differences in the use of coercion among areas and hospitals within countries [5]. This can be caused by differences in local culture and differences in staff attitudes among hospitals. One study investigated whether different psychiatric cultures are formed through a professional socialization process when nurses undergo studies in psychiatric nursing [26]. It was concluded that the findings supported the interpretation that the relative evaluations of psychiatric containment methods are the property of wider national cultures rather than an isolated tradition of professional psychiatric practice.

Ward factors

Another branch of factors that may influence staff attitudes is ward or staff group factors. In the general attitude

formation literature, sources of attitudes include acquisition by imitation of role models and group processes [26]. Leadership as a special powerful agent for defining attitudes is also discussed [27]. However, addressing potential ward differences in attitudes towards coercion requires an analytical approach that separates the relative effect of factors within and among wards. Multilevel analysis is an analytical approach increasingly used to investigate the relative effect of different organizational levels [28]. No studies were found to address potential differences in attitudes to coercion among wards or staff groups in the same country within a multilevel analytical frame.

Individual staff factors

The third group of factors concerns whether differences in staff attitudes can be explained by differences in individual or personal staff characteristics. Staff characteristics include: sex, age, profession, experience, values and personality. However, the literature is not conclusive on how staff characteristics influence attitudes [19, 20, 29].

Patient factors

The last branch of factors is related to patient characteristics. It is possible that patients' characteristics such as psychopathology and severity of illness, use of drugs, behaviour and violent behaviour may influence staff attitudes towards the use of coercive measures. However, we are not aware of any studies that explored whether patient characteristics influence the formation of staff attitudes to coercion.

Research questions

Our study addresses some of the limitations of previous research by analyzing attitudes towards coercion in 651 staff members in 33 wards. The aims of this study were to:

- Measure attitudes towards the use of coercion among staff in Norwegian acute psychiatric wards.
- Analyze differences in staff attitudes towards coercion between wards.
- Identify factors that influence staff attitudes towards coercion.

Methods

Design

The study was part of a Multicentre-study of Acute Psychiatry (MAP) in Norway in 2005/2006, which was carried

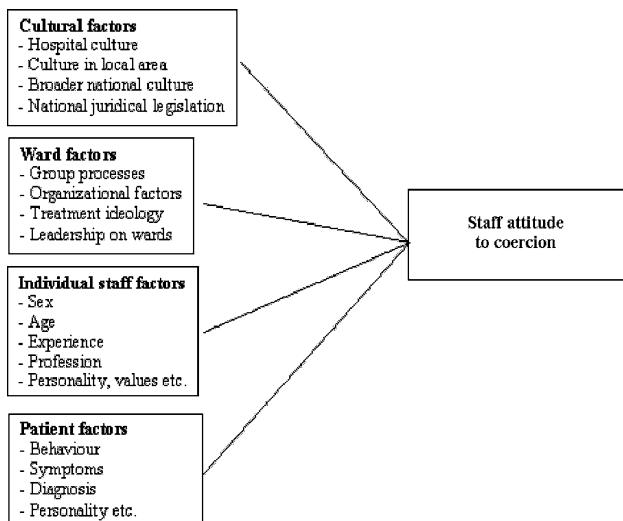


Fig. 1 Factors who may influence on staff attitude to coercion

out within a research network of acute mental health services. Data on patients and treatment episodes were collected for all patients admitted during a 3-month period. Data were also collected on number of beds, staffing, staff characteristics, staff attitudes and clinical practice in patients' wards. In this paper, data about staff characteristics, staff attitude to coercion and ward characteristics are used. Staff groups in mental health wards in Norway consist mainly of psychiatric nurses, enrolled nurses, psychologists, psychiatrists, social workers, assistant nurses and physiotherapists. The research institute SINTEF Health Research in Norway organized the network and co-ordinated the study with support from the Norwegian Directorate of Health and Social Affairs. The study was approved by the Regional Committee for Ethics in Medical Research and by the Privacy Ombudsman on behalf of the Data Inspectorate, and permission to gather information from the health services was given by the Norwegian Directorate of Health and Social Affairs.

Staff level variables

The sample originally consisted of 772 staff members. Because a link between persons and wards is essential in multilevel analysis, 121 unlinked questionnaires were removed from the analysis. The final sample consisted of 651 multidisciplinary staff from 33 psychiatric acute and subacute wards. The number of staff members on each ward who completed the questionnaire ranged from 3 to 50 (mean = 20, median = 18). Converted to full-time equivalents [30], approximately 60% of the staff on the wards in the sample completed the staff questionnaires. The wards were located in 18 of the 23 acute psychiatric departments in mental health services for adults in Norway, representing all five health regions of Norway. The sample was considered to be representative of staff at Norwegian acute psychiatric wards. Sample characteristics and a list of variables are presented in Table 1.

Ward level variables

The sample of wards comprised 29 acute and four subacute wards. Admission to subacute wards usually follows an acute ward episode. The staff-to-bed ratio is measured by the number of staff on the ward for each bed on the ward. Mean staff-to-bed ratio in this study was 3.2, SD = 0.8. The ward case load for each ward was assessed with patients' mean score on the Health of the Nation Outcome Scales (HoNOS). The HoNOS is a 12-item instrument that covers patients' clinical problems and functioning [31]. The total number of patients admitted to the wards was 3506. Additional sample characteristics are presented in Table 1.

Outcome variables: Staff Attitude to Coercion Scale

The dependent variables in this study are based on staff members' attitudes and thoughts about the use of coercion towards admitted patients. The 15-item Staff Attitude to Coercion Scale (SACS) was used. This is a new questionnaire developed for this purpose, and is described in detail in an earlier publication [32]. The questionnaire asks how the individual mental health worker perceives the attitudes of the staff as a group. The respondents are asked to rate on a five-point Likert scale how much they agree or disagree with each of the 15 statements, with labels from disagree strongly [1] through neutral [3] to agree strongly [5]. Based on the results from a previous validation of the scale, the 15 items can be divided into three subscales with acceptable reliability, validity and feasibility [32]. These are:

1. *Coercion as offending (critical attitude)* This views coercion as offensive towards patients. The dimension consists of six items (Table 2) that are most critical to the use of coercion, and focuses on a desire to reduce the use of coercion. Other aspects in this view are that coercion is potentially harmful, is an offence towards patients and can violate the relationship between caregiver and patient.
2. *Coercion as care and security (pragmatic attitude)* This views coercion as a requirement for care and security. The dimension consists of six items (Table 2) that focus on the use of coercion for security reasons, and the opinion that using coercion is perceived as giving care. This attitude can be considered as being in a middle position and has a pragmatic view on the use of coercion.
3. *Coercion as treatment (positive attitude)* is the view of coercion as a treatment intervention. This dimension consists of the three items (Table 2) with the most positive view on the use of coercion. The items claim that the use of coercion is needed when patients lack insight into their own illness or are in a state of regression, and that more coercion should be used.

Construct validity

As described in the previous article, construct validity was tested using a procedure of giving the items to a group of professionals and users of mental health care and asking them to sort the items into dimensions. The results were consistent with the results of the principal component analysis and indicate that the dimensions had good construct validity. The procedure and results of this test were more thoroughly presented in a previous article [32].

Table 1 Sample characteristics and list of variables

Variable	Mean (SD)	n (%)	Missing (%)
Staff level variables (<i>n</i> = 651)			
Women	386 (59)	30 (5)	
Age		4 (1)	
20–29	104 (15)		
30–39	189 (29)		
40–49	190 (29)		
50–59	135 (21)		
60+	29 (5)		
Acquired speciality in ones field	312 (48)	13 (2)	
Total years of work experience	18 years (10)		
Work experience in mental health care	10 years (9)		43 (7)
Profession		1 (0)	
MD	74 (11)		
Psychologists	21 (3)		
Nurse	335 (52)		
Social workers, other three years professions	43 (6)		
Enrolled nurse	78 (12)		
Day shift	119 (18)	8 (1)	
Day and evening shift	340 (52)		
Day and night	100 (15)		
Night shift	84 (13)		
Ward level variables (<i>n</i> = 33)			
Acute wards	29		
Subacute wards	4		
Staff to bed ratio	3.2 (0.8)		
HoNOS total mean score ^a	1.24 (0.2)		

^a Scale from 0 to 4 with higher ratings for more severe problem

Analysis and software

The data were analyzed using multilevel regression analysis. This analysis simultaneously examines the contribution of ward and individual staff level characteristics [28]. The regression intercepts were allowed to vary randomly across wards, making an estimation of the variance attributed to the wards versus the staff level possible. The intraclass correlation coefficient (ICC) indicates the proportion of ward level variance compared with the total variance [33], and is a measure of the degree of agreement among staff members belonging to the same ward. When multiplied by 100, it can be interpreted as the percentage of variance attributed to the ward level. The dependent variables were treated as continuous variables and linear regression analyzes were performed. Differences were denoted significant when $P < 0.05$. Multilevel regression analysis was performed using the software STATA (<http://www.stata.com>). The statistical package SPSS 15.0 was used to perform descriptive statistics and principal component analysis of the structure of subscales.

Results

Staff attitudes towards the use of coercion

The three subscales of SACS were constructed by the same procedure presented in the previous article about the development of the scale [32]. The structure of subscales presented in the previous paper was retained, although two of the 15 items showed somewhat different properties in principal component analysis. Mean, standard deviation and confidence intervals of items and subscales for the whole sample are presented in Table 2. The three subscales explain 47% of the variation in measured attitudes, and Cronbach's alphas for the three subscales in this sample were 0.65, 0.73 and 0.62. The subscales and items are presented in Table 2.

Differences in staff attitudes towards coercion between wards

A multilevel analysis was performed for each of the three subscales. The multilevel analysis model showed a

Table 2 Descriptive statistics of items and subscales ($n = 651$)

Items	<i>n</i>	Mean	SD	95% Confidence interval	
				Lower	Upper
I. Coercion as offending attitude	651	2.89	0.56	2.38	2.49
15. Coercion could have been much reduced, giving more time and personal contact	636	3.24	0.97	3.17	3.32
14. Scarce resources lead to more use of coercion	637	2.94	1.15	2.85	3.03
8. Coercion violates the patients integrity	634	3.26	0.91	3.19	3.34
13. To much coercion is used in treatment	637	2.52	0.82	2.45	2.58
3. Use of coercion can harm the therapeutic relationship	636	3.34	1.03	3.26	3.42
4. Use of coercion is a declaration of failure on the part of the mental health services	632	2.01	0.92	1.94	2.09
II. Coercion as care and security attitude	651	4.19	0.49	4.15	4.23
2. For security reasons coercion must sometimes be used	637	4.34	0.80	4.28	4.41
5. Coercion may represent care and protection	637	4.27	0.66	4.22	4.32
1. Use of coercion is necessary as protection in dangerous situations	635	4.41	0.67	4.36	4.46
9. For severely ill patients coercion may represent safety	636	4.16	0.67	4.10	4.20
7. Coercion may prevent the development of a dangerous situation	636	3.99	0.84	3.93	4.06
11. Use of coercion is necessary towards dangerous and aggressive patients	634	3.97	0.90	3.89	4.04
III. Coercion as treatment attitude	651	2.44	0.68	2.38	2.49
10. Patients without insight require use of coercion	634	2.56	0.99	2.49	2.64
12. Regressive patient require use of coercion	631	2.39	0.85	2.33	2.46
6. More coercion should be used in treatment	636	2.35	0.90	2.28	2.42

Answers given on a 5-point Likert response scale (1 = disagree strongly, 5 = agree strongly)

significant variance between wards, estimated to be about 8–11% of the total variance of the three scales (Table 3).

Factors that influence staff attitudes towards coercion

The independent variables included characteristics of individual staff members and ward levels. The independent variables could only explain to a small extent the variance in the dependent variables.

Individual staff member level variables

Women were slightly more critical on the *Coercion as treatment* subscale on the SACS than men ($P < 0.05$). Staff members older than 40 years of age had higher scale scores on the *Coercion as offending* subscale ($P < 0.01$), but there were no significant age differences on the two other subscales. The difference in scale scores among the profession groups was also marginal. University trained personnel (doctors and psychologists) had a slightly lower score than nurses on the *Coercion as offending* subscale ($P < 0.05$). Compared with nurses, other profession groups (social workers, etc.) had a small but significantly higher score on the *Coercion as care and security* subscale ($P < 0.05$). Staff who specialized in mental health care had a small but significantly lower score on the *Coercion as treatment* subscale ($P < 0.05$). Length of time as a health care services worker was negatively associated with scores on the

Coercion as offending subscale ($P < 0.01$), but not with the other two scales. Staff members who worked day and evening shifts had lower scores on the *Coercion as care and security* subscale than those who worked only day shifts ($P < 0.05$). Those who worked night, day and evening shifts, and those who worked day and night shifts, reported higher scores on the *Coercion as treatment* subscale than those who worked only day shifts ($P < 0.05$).

Ward level variables

There were no statistically significant differences in attitudes among staff members in acute and subacute wards. The staff-to-bed ratio was not significantly associated with any of the three scales. Higher severity of psychiatric problems for patients on the ward, measured by the mean level of HoNOS, was significantly associated with higher ward scores on the *Coercion as offending* subscale ($P < 0.01$).

Discussion

Main findings

In this study, we found substantial differences in staff attitudes to coercion among wards, as 8–11% of the total variance could be attributed to the ward level. Nevertheless, most of the variance could be attributed to differences

Table 3 Multilevel analysis of staff attitudes towards coercion

Fixed effects'	Offending		Security		Treatment	
	b	P value (95% conf. int)	b	P value (95% conf. int)	b	P value (95% conf. int)
Staff-level variables						
Women compared with men	−0.10	0.071 (−0.20, 0.01)	−0.01	0.849 (−0.10, 0.08)	−0.13	0.036 (−0.26, −0.01)
Age 30–39 compared with 20–29	0.08	0.295 (−0.07, 0.24)	0.01	0.930 (−0.13, 0.14)	0.05	0.631 (−0.14, 0.23)
Age 40–49 compared with 20–29	0.28	0.008 (0.07, 0.48)	−0.11	0.237 (−0.28, 0.07)	−0.05	0.693 (−0.29, 0.20)
Age 50–59 compared with 20–29	0.35	0.009 (0.09, 0.62)	−0.17	0.151 (−0.40, 0.06)	−0.14	0.382 (−0.46, 0.18)
Age 60+ compared with 20–29	0.58	0.004 (0.19, 0.97)	−0.21	0.227 (−0.54, 0.13)	0.00	0.987 (−0.47, 0.47)
University compared with nurse	−0.17	0.047 (−0.35, 0.00)	0.09	0.230 (−0.06, 0.24)	0.19	0.075 (−0.02, 0.39)
Other college education	−0.05	0.609 (−0.25, 0.15)	−0.04	0.642 (−0.21, 0.13)	−0.14	0.238 (−0.38, 0.09)
Other professions	−0.10	0.106 (−0.23, 0.02)	0.13	0.019 (0.02, 0.24)	0.06	0.423 (−0.09, 0.21)
Speciality compared with not	0.05	0.360 (−0.06, 0.16)	0.01	0.866 (−0.09, 0.10)	−0.16	0.018 (−0.29, −0.03)
Total work experience	−0.02	<0.001 (−0.03, −0.01)	0.00	0.879 (−0.01, 0.01)	0.00	0.847 (−0.01, 0.01)
Night- compared with day shift	0.05	0.636 (−0.14, 0.24)	0.16	0.056 (0.00, 0.32)	0.25	0.035 (0.02, 0.47)
Day and evening- compared with day shift	−0.04	0.632 (−0.19, 0.11)	0.09	0.185 (−0.04, 0.22)	0.22	0.016 (0.04, 0.40)
Day and night- compared with day shift	−0.15	0.096 (−0.32, 0.03)	0.18	0.023 (0.02, 0.33)	0.24	0.026 (0.03, 0.45)
Ward level variables						
Acute compared with subacute	−0.28	0.083 (−0.60, 0.04)	−0.02	0.877 (−0.34, 0.29)	−0.11	0.580 (−0.51, 0.29)
Staff to bed ratio	−0.07	0.187 (−0.18, 0.04)	0.06	0.248 (−0.04, 0.17)	−0.04	0.591 (−0.17, 0.10)
HoNOS-mean ^a	0.74	0.005 (0.23, 1.25)	−0.27	0.284 (−0.77, 0.23)	−0.33	0.312 (−0.97, 0.31)
Random effects						
Ward-level variance	0.024	(0.01, 0.07)		0.027 (0.01, 0.06)		0.041 (0.02, −0.10)
Staff-level variance	0.289	(0.26, 0.33)		0.213 (0.19, 0.24)		0.415 (0.37, −0.47)
P value likelihood-ratio test	<0.001			<0.001		<0.001
ICC	8			11		9
Observations	529			529		529

^a Scale from 0 to 4 with higher ratings for more severe problems

among staff members within wards. The available independent variables could only explain differences in staff attitudes to a small degree. This finding indicates that important factors that may influence staff have not been included in this study.

Staff attitudes towards the use of coercion

As in previous studies [32], staff agreed most with statements in the *Coercion as care and security* subscale and generally showed the least agreement with the *Coercion as treatment* subscale. This indicates that staff generally had a rather pragmatic view of the use of coercion in the daily care of patients. This may imply that coercion is considered to protect both patients and staff. Furthermore, it does not appear that staff generally look upon the use of coercion as a treatment intervention. The results indicate that many staff members tend to consider the use of coercion for care giving. This may explain why a considerable proportion of the staff members were not very critical of the use of

coercion and did not think of coercion as offensive towards patients. Perhaps the idea of giving good care excludes the thought that its use also can be offensive and potentially harmful towards patients.

Differences between wards and individuals in staff attitudes towards coercion

This study showed that a substantial part of the variance in attitudes towards coercion could be attributed to ward factors (8–11% of the total variance). This is the case for all three subscales. This may be explained by several factors. Leadership on the wards is suggested as one of them, as proposed by Bråten in his “Power-through-model paradigm” theory [27]. This view is supported by a recently published study that found that acute psychiatric wards with particularly good leadership, teamwork, structure, staff attitudes towards patients and low burnout had significantly lower rates of containment (use of coercion) events on wards [34]. Another possible explanation is that

people who work together tend to adopt the same attitudes and opinions. In the general literature about attitudes, acquisition by group processes and imitation of role models are mentioned as sources of attitude formation [26].

Nevertheless, despite substantial differences in attitudes among wards, most of the variance could be attributed to individual staff level factors. Hence, it is likely that staff attitudes are influenced, to a large extent, by each individual's personality and values. The sample comprised both acute and subacute wards and is considered a rather homogeneous sample of wards. The individuals may have been educated in different places, which may also have influenced their attitudes towards the use of coercion in mental health care. We have not found any other studies that addressed differences in staff attitudes to coercion among different wards or areas in the same country. We have, however, found some comparative studies that investigated the difference in staff attitudes among countries. One of these found that staff attitudes towards the use of compulsory procedures was influenced by both differences among countries and, to some degree, differences on an individual level [13]. The study showed significant differences among different countries in mental health workers' attitudes towards compulsory procedures. Staff from Hungary and England were more accepting of compulsion than staff from Germany and Switzerland (odds ratios 4.33). Furthermore, substantial individual differences were found and it was concluded that, to a considerable degree, acceptance of compulsory procedures is based on traditions and personal attitudes.

Research on the formation of attitudes and thoughts in mental health care in general is also relevant to this topic. Bowers et al. [34] concluded that their results supported the interpretation that the relative evaluations of psychiatric containment methods are the property of a wider national culture. Our study found differences in staff attitudes between individual staff members and wards in the same country. An explanation for this may be that individual factors, as well as group factors and broader national culture, have an influence on attitude formation.

Factors that influence staff attitudes towards coercion

Our independent variables could only explain a small amount of the difference in staff attitudes towards coercion, which indicates the effect of other factors. However, there are some statistically significant findings. Women had a marginal lower score on the *Coercion as treatment* subscale. Other studies also showed gender differences. Klinge [22] found that a higher percentage of female than male staff believed that patients experienced seclusion or restraint as positive attention. However, in the study by Kullgren and colleagues [23], female psychiatrists

suggested the use of physical restraints and the compulsory use of electroconvulsive therapy (ECT) less often than male staff. Furthermore, Falkum and Førde [35] found that female doctors expressed attitudes in favour of less paternalism, and more patient autonomy, and had more moral deliberations than male doctors.

Staff older than 40 years considered the use of coercion to be an offence against patients more than younger staff members did. Previous studies showed that older staff tends to be more accepting of the use of coercion [13, 24, 35]. However, in our study staff age was highly correlated with the variable *Total work experience*. More work experience was negatively associated with scores on the *Coercion as offending* subscale ($P < 0.01$), but not with the other two scales, a result in line with the findings reported in previous studies.

Staff members with a university education seemed less likely to consider coercion to be an offence than nurses did. This is contradictory to the findings of [22] that staff with more education believed that restraints, seclusion and medication were more overused than staff with less education did. However, Steinert and colleagues [13] discovered that in four European countries, psychologists and social workers were less supportive of compulsory procedures than psychiatrists were, who were more in tune with laypeople and nurses. Furthermore, our study showed that staff who specialized in mental health care had a small but significantly lower score on the *Coercion as treatment* subscale. This finding may indicate that staff members who went through a speciality programme believe less in the use of coercion as an intervention.

Compared with day shift workers, those who worked night, day and evening shifts, and those who worked day and night shifts, reported higher scores on the *Coercion as treatment* subscale ($P < 0.05$). An explanation for this could be that there are fewer staff members on these shifts. These results are adjusted for the education level of staff members. If they had to use more coercive measures on these shifts, the staff may have more positive attitudes in general towards the use of coercion. There was a significant association among patients with higher severity of psychiatric problems, as measured by the mean levels on the HoNOS, and higher ward scores on the *Coercion as offending* subscale ($P < 0.01$). Higher HoNOS scores indicate patient pathology and represent patients with more severe mental problems. In other words, staff on wards with more severely ill patients may find the use of coercion to be more critical and may be more preoccupied with the possible offence and humiliation that coercion can cause patients. A possible explanation for this may be that higher severity of mental illness may influence staff in such a way that they are more aware of the negative effects of the use of coercion towards patients.

Strength and weaknesses

Due to the cross-sectional design of the study, it is important to caution against drawing causal conclusions from the associations demonstrated. Furthermore, the SACS questionnaire is newly developed and needs further testing and development. However, the sample is of a considerable size and indicates a good response rate. The sample is considered to be representative of Norwegian acute wards.

Conclusion and need for future research

The results of this study indicate that differences in staff attitudes and thoughts about the use of coercion can be explained by both individual and group processes, but mainly by individual staff member factors. The three SACS subscales seem to be a meaningful way to measure staff attitudes to coercion. To understand more about attitude formation and how to reduce the use of coercion in mental health care, these processes should be more thoroughly investigated in future studies. Studies on the differences in staff attitude to the use of coercion in both comparative international and national studies are also needed.

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