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Informal coercion as a neglected form of communication in psychiatric settings in Germany and Switzerland

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Abstract

Aims: Informal coercion is a frequently used form of communication among mental health professionals to influence treatment outcomes. This study investigates the recognition, attitude, and application of different forms of informal coercion by mental health professionals.

Methods: Mental health professionals of five psychiatric institutions in Germany and Switzerland (N=424) took part in an online survey assessing the recognition of, attitudes towards, and application of different forms of informal coercion.

Results: Mental health professionals did not recognize the extent of informal coercion adequately; especially stronger forms were underestimated. Recognition and application of informal coercion was predicted by attitudes towards coercion. Furthermore, there were differences between profession of participants regarding the recognition and application of informal coercion.

Conclusions: It is important to realize that the extent of applied informal coercion in therapeutic communication is often not recognized by practitioners, although it might interfere with a sound therapeutic relationship.

Key words: Health communication, coercion, inpatients, ethics, health personnel

1. Introduction

Informal coercion is a widely applied form of communication in psychiatric practice (Jaeger and Rossler, 2009; Monahan et al., 2005). In contrast to formal coercive measures, which are regulated by the law, informal coercion comprises a range of more subtle practices that rely on communication within the therapeutic relationship (e.g. persuasion, leverage). Informal coercion can be used more or less deliberately. Its use mostly aims at attaining treatment adherence or at preventing formal coercive measures (Jaeger and Rossler, 2010). It can have negative effects on the therapeutic relationship between the patient and the mental health professional by increasing perceived coercion and inducing mistrust and feelings of being treated unfairly (Sheehan and Burns, 2011; Theodoridou et al., 2012; Pridham et al., 2016). On the other hand, a reflected and transparent practice of informal coercive practices might be beneficial for patient-centered care (Geller, 2012).

When applying informal coercion, mental health care professionals are required to evaluate if such practices are ethically and professionally justifiable (Dunn et al., 2012). The recognition of coercion and the professionals' attitudes towards such measures are critical factors that determine whether coercion is applied in a judicious way (Happell and Koehn, 2011). Furthermore, Happell and Koehn (2011) suggested that individual attributes (e.g., professional background, work experience, emotional exhaustion, and general attitudes) of the mental health professionals determine whether formal coercive measures are applied. Several authors have called for more (quantitative) research on informal coercion and for more discourse on its application in academic and clinical settings (Gaskin et al., 2007; Jaeger et al., 2014; Scanlan, 2010) as well as within psychiatric community treatment orders (Burns et al., 2016).

This study intends to reproduce a pilot study (Jaeger et al., 2014) which suggests that mental health professionals underestimate stronger forms of informal coercion and that individual attitudes towards coercion are related to their ability to recognize informal coercion.

However, the pilot study's contributions are limited due to a small sample size ($n = 39$). The primary aim of this study was thus to replicate the pilot study by assessing the degree to which mental health care professionals recognize informal coercion and by investigating how this is related to individuals' attitudes towards coercion. The secondary aim was to evaluate if age, gender, profession type, ward atmosphere, social distance, and symptoms of distress were related to recognition, attitudes, and actual application of informal coercion. The third

aim of this study was to compare practicing physicians' ratings of recognition and attitudes of informal coercion with a population of medical students, which had not yet been socialized to common practices in clinical settings.

2. Method

2.1. Participants

A cross-sectional survey was conducted among all clinical staff of general psychiatry inpatient departments (excluding child-, forensic-, and geriatric psychiatry wards) of five psychiatric clinics in Switzerland and Germany in 2015. In each clinic the study was approved by either the board of directors or the ethics committee. The total number of eligible staff was 1629. The staff was invited by way of e-mail to fill out a self-administered web-based questionnaire. A reminder was sent out four weeks after the first invitation. Participants did not receive any incentives for their participation. Their participation implied informed consent. Of the eligible mental health professionals, 428 (26%) responded to the survey. Four participants were excluded from the analysis due to implausible response patterns. Thus, our final sample consisted of 424 participants.

The sample of medical students consisted of 101 second to fourth-year students of a Swiss university.

2.2. Measures

In order to assess the participants' recognition of coercion and their attitudes towards such practices the Knowledge on Coercion Scale (KCS) (Jaeger et al., 2014) was used. The instrument is composed of 15 vignettes describing typical clinical situations (see Appendices for a list of the vignettes). These vignettes can be classified into five forms of coercion according to the continuum of coercion (Szmukler and Appelbaum, 2009): no coercion, persuasion or conviction, leverage, threat, and formal coercion. To measure their recognition of coercion on the KCS-scale, participants were asked to rate the level of coercion of each vignette on a five point rating scale (ranging from 0 to 4). Further, participants' Coercion Attitude (CAT) was measured by asking whether they would approve of the practices described by the vignettes (dichotomous: yes / no). We extended the pilot study's questionnaire to measure Coercion Application (CAP) by asking participants whether they had ever acted in a similar way in a situation, comparable to the practices described by the vignettes (dichotomous: yes / no). CAP was not assessed in the student sample because generally they have no practical experience in a psychiatric setting.

Further variables were assessed using the following instruments: The Social Distance Scale (SDS; Link et al., 1987) containing seven items. The Staff Attitude Coercion Scale (SACS;

Husum et al., 2008), containing 15 items on three subscales (coercion as offending, coercion as care and security, coercion as treatment). The Good Milieu Index (GMI; Moos, 1974) assesses ward atmosphere containing five items. Psychological distress was assessed with the Symptom Check List (SCL-10; Nguyen et al., 1983). All scales were measured on a five point rating scale ranging from 0 to 4, except the GMI which was measured on a four point rating scale ranging from 0 to 3.

2.3. Analyses

The Knowledge on Coercion Scale (KCS) was constructed with the mean rating of all 15 vignettes, from which each a default score was subtracted. The default score corresponds to the degree of coercion displayed in the vignette. A list of all vignettes and their default scores can be found in Appendix A. In all subsequent analyses, the KCS measures an individual's mean deviation of ratings from the default score. A positive KCS score indicates a general overestimation of coercion whereas a negative score indicates a general underestimation of coercion. Hence, the value of zero indicates that the level of coercion was recognised adequately (Jaeger et al., 2014). Coercion attitude (CAT) and coercion application (CAP) values were calculated as the mean of all attitude and application assessments respectively. The values of the CAT measure represent the proportion of participants who approved of practices described by the vignettes. Likewise, values of the CAP measure represent the proportion of participants who acted in a similar way as the practices described by the vignettes.

We conducted student's t-tests, to test whether KCS scores differed from the default score (i.e., whether they differed from zero) and to compare KCS group means between individuals based on their attitude (CAT) and application (CAP) of the vignette. Student's t-test was also used to compare KCS and CAT scores of the sample of health care professionals to the sample of medical students. For t-tests we also computed the Cohen's *d* as a measure of effect size. Pearson and Spearman correlation coefficients were calculated to assess the associations of the KCS, CAT, and CAP scales with the SDS, SACS, SCL-10, and GMI-scales, and with age and sex. To assess the differences between professions concerning KCS, CAT, and CAP, three hierarchical regression models were estimated. For each outcome measure, independent variables were added in three steps. In the first model, age, sex, and dummy variables for clinic affiliation were included. In a second step, dummy variables for each profession were added. In the final step, SACS scales to investigate effects of profession beyond these relations were included. The statistical software R (R Core Team, 2015) was used for all analyses.

3. Results

3.1. Description of the study population

Table 1 describes the characteristics of the sample. The sample sizes of the clinics were as follows: $n^1 = 114$, $n^2 = 93$, $n^3 = 81$, $n^4 = 65$, $n^5 = 71$. Table 2 shows the descriptive characteristics of all scales. All scales showed acceptable internal consistency values (Cronbach's α .60 – .86) and appeared to be normally distributed (as indicated by skewness and kurtosis).

Table 1 about here

Out of the 101 medical students, 33 were female (32.9%). The mean of the medical students' KCS was -0.75 ($SD = 0.39$), and CAT 0.79 ($SD = 0.13$).

Table 2 about here

3.2. Recognition, attitude, and application

The descriptive evaluation of the 15 coercion vignettes rated by mental health professionals is shown in Table 3. Differences in the KCS were associated to the level of coercion: weaker forms of coercion (persuasion and leverage) showed significant but moderate deviation from the default score ($M_{persuasion} = -0.18$, $t(423) = -6.87$, $p < 0.001$, $d = 0.33$; $M_{leverage} = -0.28$, $t(423) = -7.57$, $p < 0.001$, $d = 0.37$) whereas stronger forms of coercion (threat and formal coercion) showed strong deviations from the default score ($M_{threat} = -1.04$, $t(423) = -29.09$, $p < 0.001$, $d = 1.42$; $M_{formal coercion} = -1.15$, $t(423) = -26.65$, $p < 0.001$, $d = 1.34$).

As indicated in Column six and twelve of Table 3, participants approved and applied less coercion of the forms leverage and threat than the other forms of coercion (including formal coercion). Moreover, participants who approved informal coercive practices (i.e., held positive attitudes towards persuasion, leverage, and threat) and applied persuasion and leverage themselves tended to underestimate significantly the coercion level of these vignettes (Column 9 and 15 of Table 3).

Table 3 about here

A correlation matrix of all relevant scales is shown in Table 4. KCS scores did not correlate with CAP but negatively with CAT, indicating that professionals who underestimated the described practices tended to approve of such procedures and vice versa. Also, KCS and

CAT were associated with all three SACS subscales indicating that an underestimation of informal coercion as well as a more positive attitude towards informal coercion were associated with an attitude that coercion in general can be regarded as treatment and care rather than an offence. KCS scores did not correlate with CAP. CAT was positively associated with CAP, indicating that participants tended to approve the practices they apply in clinical practice themselves. No significant bivariate relationships were found between the KCS, CAT, or CAP measures and social distance, ward atmosphere, distress symptoms, age, and gender.

Table 4 about here

3.3. Differences between professions in coercion scales

Table 5 shows the results of the regression models in which variables regressing on KCS, CAT, and CAP were added in a stepwise manner.

Table 5 about here

The estimates in Table 5 suggest that differences on KCS, CAT, and CAP between clinics and the reference clinic became non-significant when the dummy-variables for the profession and SACS scores were added to the models (Model 1 vs. Model 3). Age category remained a significant predictor of the KCS, suggesting that older participants underestimated the coercion vignettes to a higher degree than younger participants. With each increase in age category (10 year intervals) the KCS score on average decreases by 0.06. Compared to the reference category (nurses), psychologists showed significantly lower values on the KCS even when controlling for SACS scores (Model 2 vs. Model 3). For CAT there was no significant predictor of profession type and only the care subscale of the SACS was positively predictive of the CAT measure.

Several profession dummy variables were significant predictors of CAP. Physicians reported higher values in experience with different informal coercive practices than nurses.

Psychologists, other therapists, and social workers reported significantly lower scores in CAP than nurses. These results remained stable even when SACS scales were controlled for (Model 2 vs. Model 3).

3.3.1. Medical Students

Medical students underestimated coercion to a higher degree than experienced physicians ($t(45) = -4.30, p < 0.001, d = 0.86$) and they reported higher approval according to CAT scores than physicians, $t(45) = 3.03, p = 0.004, d = 0.72$.

4. Discussion

Any form of coercion in a psychiatric setting is stated and perceived as negative. However informal coercion might be inserted by professionals aiming to prevent patients from concurrent or future harm, and overcoming obstacles in treatment adherence. The crucial aspect to us is whether professionals reflect on the use of informal coercion and only apply it if they lack other options. This deliberate use is the prerequisite to applying informal coercion in a transparent and ethically well-founded way. As a general principle, informal coercion should be used within similar ethical standards as formal coercion, i.e. as the least restrictive alternative, following transparent procedural standards and information practices, and after reflection on commensurability (SAMW, 2015). However, we intentionally do not want to justify the use of informal coercion. The significance of informal coercion in psychiatry should be reflected on in cooperation with former concerned patients, psychiatrists, nurses, ethicists, philosophers, and lawyers.

The findings of the present study, replicating and enhancing the findings of a pilot study (Jaeger et al., 2014), revealed that mental health professionals generally underestimated informal coercion, specifically its stronger forms (i.e. threat and negative pressures). This implies a considerable risk for a haphazard application of coercion that is not regulated in a formal way but subjectively perceived by the affected patient as similarly coercive as a formal coercive measure. Higher degrees of perceived coercion might considerably deteriorate the therapeutic relationship and withdrawal from treatment (Sheehan and Burns, 2011; Theodoridou et al. 2012). Examples are the taking of an oral medication under the threat of a possible coercive parenteral medication or the permission of leaving the ward for a walk under the premises of taking medication. However, while stronger forms of informal coercion usually seem to be obviously coercive, the awareness for the coercive nature of a more ambivalent interaction such as persuasion and leverage is more challenging.

Prevalence rates of informal coercion between 29 - 59% have been found in literature, indicating a very common phenomenon (Hotzy and Jaeger, 2016). Also, attitudes towards

formal coercive practices were more positive and less ambivalent than attitudes towards some forms of informal coercion (i.e., leverage and threat). Momentously for a well-founded handling of informal coercion is the finding that mental health professionals who held more positive attitudes towards informal coercion practices tended to underestimate coercion to a higher degree than professionals who held less positive attitudes. In a similar vein, applications of some forms of informal coercion (leverage and threat) were less frequently reported than formal coercive measures. These findings point to the distortion of awareness for coercion by more positive attitudes towards coercion and paternalistic behaviour on the part of mental health professionals. An explanation of the general tendency to underestimate coercion and more positive attitudes could be that professionals might get used (flattened critical reflection) to practices they perform more frequently (in terms of common practice). Formal coercion has been part of psychiatric care for many decades (as e.g. patriarchal therapeutic relationship) and gained a status of ethically justified clinical practice under defined circumstances, although research findings concerning ethical aspects are still scarce (Hem et al., 2016) or controversial concerning the practice (Bergk et al., 2011; Molewijk et al., 2015; Steinert et al., 2013; Soininen et al., 2014). This general underestimation might be transferred to informal coercive practices that are applied to prevent formal coercion (thus being rated to be less coercive than the formal coercive measures averted; Cutcliffe et al., 2015). For a prevention of formal and informal coercion, reflexivity of mental health care staff on its use is needed and should thus be part of clinical training. Informal coercion as well coercive measures are also known outside the psychiatric setting, for example in the educating or parental sector, or for the vaccination of children (Navarro-Illana et al., 2014; Hendrix et al., 2016). In- and outside of the psychiatric setting, empirical evidence on effects of informal coercion (i.e., under which circumstances it might be beneficial for the patient and the therapeutic team) are still needed.

The underestimation of informal and formal coercion in the study at hand was associated with profession and slightly with age. However, there were considerable differences between professions regarding their own experience with informal coercion. The analysis showed that psychologists did underestimate the severity of coercion significantly more than the reference category of nurses. This is related to the clinical practice of formal coercion that mostly involves nurses and doctors while psychologists primarily are involved in psychotherapy and neuropsychological evaluations. Also, medical students did underestimate coercion considerably compared to graduated physicians whilst holding a more positive attitude

towards coercive practices. This underpins the aspect mentioned above that less clinical practice and involvement in formal coercive interventions might be disadvantageous for the awareness of coercion. The differences between professions as well as between medical students and graduated physicians strongly indicate that informal coercion should be targeted more frequently in curricula as well as in clinical routines. Younger professionals rated the level of coercion described in the vignettes slightly more adequately than older participants. This might be due to the paradigm shift of the last years towards a balanced therapeutic relationship, person-centred and recovery-orientated clinical practice (Geller, 2012). Given the small effect size of the age parameter and the vast number of predictors in the model, emphasizing a potential over-interpretation of this age effect is crucial. Nevertheless, age should be included in further evaluations as a potential factor.

Also, our results indicate that positive attitudes towards coercive practices in general (according to SACS measure) are negatively associated with the adequate recognition of such practices. Especially individuals that held attitudes towards coercion as an offending practice recognized coercion more adequately. This is in line with the above-mentioned association between recognition of informal coercion (according to KCS) and attitudes (CAT). Training mental health care professionals to recognize coercion might thus lead to a change of attitudes underpinning the recommendation of the inclusion of the issue in curricula. However, prospective-longitudinal studies are needed to evaluate the directionality of this relationship. Attitudes, that reflect coercion as a practice of care, were positively associated with the application of coercion. Mental health care professionals that frequently apply coercion might thus justify their behaviour by including these practices as an act of care.

However this study contains several limitations. First, the construction of the vignettes used as well as the determination of the default scores was subjected to a consensus procedure by several mental health professionals but not to psychometric test validation. Therefore, we can state face validity but not construct validity. Second, the default score of coercion vignettes might not reflect the real amount of coercion within the described practice, as coercion is also a value-dependent construct. Third, the effect sizes (i.e., beta coefficients) of profession differences were mostly small. This might be due to the small sample sizes of some profession types, and the unbalanced distribution in profession group sizes. Fourth, the subjective self-report of attitudes and application on a sensitive topic might have induced socially desirable replies. Fifth, the low response rate of 26% indicates a potential selection

bias. The reasons for refusing to participate in this study are not known. Our sample might be biased as individuals with socially undesirable attitudes towards coercion might not have participated in this voluntary survey because they did not want to disclose such attitudes or behaviours. At the same time, individuals that are not sensitive to the topic of (informal) coercion might not have participated due to a lack of awareness for this topic. Future “coercion”-studies should thus aim to face the potential selection bias.

4.1. Conclusions

Although the avoidance of any kind of coercion has a high priority in psychiatric treatment, informal coercive interventions might be used as a less restrictive alternative in order to avoid complications in psychiatric treatment. Patients perceive formal and informal coercive practices mostly as negative (Mielau et al., 2015; Norvoll and Pedersen, 2016), but tend to accept it as a legitimate option if they feel that they are being treated fairly and understood the coercive behaviour as a strategy, applied with the best intentions and only if other options failed to prevent them from harm (Jaeger and Rossler, 2010; Theodoridou et al., 2012). When asked for helpful alternatives patients rate “efforts of persuasion” as least helpful, or even harmful, than others (e.g. physical activity, conversation with a familiar therapist/staff) (Heumann et al., 2017).

Clinical guidelines on the use of coercion in medicine in general and particularly in psychiatry elaborate on ethical aspects concerning good clinical practice, but mostly focus on formal coercion rather than informal interventions, therapeutic attitude, and communication (Burns et al., 2016; NICE, 2015; SAMW, 2015). However, the phenomenon of coercion in clinical psychiatry obviously has a dimensional nature that includes interactions of similar (especially subjectively perceived) coercion outside formally regulated coercive measures. Consequently, the ethical guidelines and best clinical practice standards for the application of formal coercion should be equally valid for informal coercive interventions. The awareness of obvious as well as subtle coercion within clinical interactions and the therapeutic relationship is a prerequisite for deliberate and ethically founded professional action. Moreover, the awareness for informal coercion might influence the attitudes towards coercion in general. Research on informal coercion is still scarce and it is mostly unknown under which circumstances which types of coercive practices are applied. Future studies should include informal coercion as well as formal coercive measures and focus on the clinical effects as well as the influence on the therapeutic relationship.

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Figures and Tables

Table 1

Demographic characteristics of the sample

| | <i>n</i> | % |
|-------------------------------|----------|-----|
| Gender | | |
| Male | 160 | 38% |
| Female | 264 | 62% |
| Age | | |
| < 26 years | 42 | 10% |
| 26 to 35 years | 139 | 33% |
| 36 to 45 years | 97 | 23% |
| 46 to 55 years | 105 | 25% |
| > 55 years | 41 | 10% |
| Profession | | |
| Nurse | 285 | 67% |
| Physician | 51 | 12% |
| Psychologist | 24 | 06% |
| Social workers | 17 | 04% |
| Other therapists ¹ | 47 | 11% |

Note. Total *n* = 424. ¹ Occupational and physical therapists

Table 2

Descriptive properties of all scales

| Scale | M (SD) | Mdn | Sk | Kur | α |
|----------------|--------------|-------|-------|-------|----------|
| KCS | -0.52 (0.45) | -0.53 | -0.11 | 0.49 | .77 |
| CAT | 0.73 (0.15) | 0.73 | -0.63 | 0.56 | .60 |
| CAP | 0.55 (0.26) | 0.60 | -0.30 | -0.63 | .78 |
| SDS | 2.19 (0.79) | 2.14 | -0.01 | -0.29 | .86 |
| SACS Offending | 3.55 (0.59) | 3.67 | -0.22 | -0.49 | .63 |
| SACS Care | 4.15 (0.56) | 4.17 | -0.77 | 0.98 | .71 |
| SACS Treatment | 1.93 (0.76) | 2.00 | 0.60 | -0.30 | .61 |
| SCL-10 | 1.43 (0.46) | 1.30 | 1.86 | 4.58 | .83 |
| GMI | 2.29 (0.38) | 2.20 | -0.09 | -0.18 | .62 |

Note. $n = 416-424$ due to occasional missing data. KCS = Knowledge on Coercion Scale; CAT= Coercion Attitude; CAP = Coercion Application; SDS = Social Distance Scale; SACS = Staff Attitude to Coercion Scale; SCL-10 = Symptom Check List; GMI = Good Milieu Index; Mdn = Median; Sk = Skewness; Kur = Kurtosis; α = Cronbach's alpha.

Table 3

Assessment of coercion vignettes by mental health professionals

| Vignette | Default score | Proportion of people assessing vignette adequately (%) | Mean difference to default score | Standard deviation | Proportion of people approving procedure (% CAT=yes) | Mean KCS scores of people approving of procedure (CAT=yes) | Mean KCS scores of people disapproving of procedure (CAT=no) | t | d.f. | p | Proportion of people that acted similarly (%CAP=yess) | Mean KCS scores of people who have acted similarly (CAP=yes) | Mean KCS scores of people who have not acted similarly (CAP=no) | t | d.f. | p |
|---------------------|---------------|--|----------------------------------|--------------------|--|--|--|--------|--------|-----|---|--|---|-------|--------|-----|
| KCS no coercion | 0 | 92.67 | 0.04 | 0.17 | | | | | | | | | | | | |
| Vignette 5 | 0 | 95.04 | 0.05 | 0.23 | 95.05 | 0.03 | 0.52 | -3.77 | 20.15 | ** | 89.93 | 0.04 | 0.19 | -2.46 | 43.45 | |
| Vignette 9 | 0 | 96.69 | 0.04 | 0.24 | 77.91 | 0.03 | 0.08 | -1.46 | 110.34 | | 57.73 | 0.04 | 0.05 | -0.55 | 340.28 | |
| Vignette 14 | 0 | 98.81 | 0.02 | 0.16 | 97.14 | 0.00 | 0.38 | -1.80 | 11.01 | | n/a | | | | | |
| KCS persuasion | 1 | 21.23 | -0.18 | 0.56 | | | | | | | | | | | | |
| Vignette 2 | 1 | 33.73 | -0.34 | 0.78 | 84.56 | 0.49 | 1.56 | -10.19 | 78.74 | *** | 65.06 | 0.48 | 1.01 | -6.16 | 218.00 | *** |
| Vignette 7 | 1 | 31.67 | 0.34 | 1.02 | 68.66 | 1.06 | 1.95 | -8.78 | 218.95 | *** | 38.50 | 1.04 | 1.52 | -4.80 | 352.18 | *** |
| Vignette 15 | 1 | 29.86 | -0.56 | 0.66 | 83.33 | 0.29 | 1.18 | -9.14 | 79.83 | *** | 76.64 | 0.35 | 0.77 | -4.79 | 126.79 | *** |
| KCS leverage | 2 | 16.08 | -0.28 | 0.77 | | | | | | | | | | | | |
| Vignette 4 | 2 | 35.46 | -0.29 | 1.17 | 69.91 | 1.41 | 2.41 | -8.84 | 237.11 | *** | n/a | | | | | |
| Vignette 6 | 2 | 37.12 | 0.05 | 1.05 | 25.18 | 1.19 | 2.34 | -11.28 | 186.10 | *** | 17.27 | 1.65 | 2.14 | -3.62 | 102.40 | ** |
| Vignette 12 | 2 | 31.98 | -0.62 | 1.03 | 78.42 | 1.12 | 2.32 | -11.16 | 135.66 | *** | n/a | | | | | |
| KCS threat | 3 | 6.40 | -1.04 | 0.74 | | | | | | | | | | | | |
| Vignette 1 | 3 | 32.78 | -0.67 | 0.93 | 37.53 | 1.90 | 2.59 | -8.05 | 312.12 | *** | 54.83 | 2.30 | 2.41 | -1.21 | 399.98 | |
| Vignette 8 | 3 | 20.24 | -1.24 | 1.02 | 81.71 | 1.61 | 2.42 | -6.69 | 114.77 | *** | 52.15 | 1.69 | 1.83 | -1.36 | 410.13 | |
| Vignette 11 | 3 | 19.09 | -1.22 | 1.18 | 53.00 | 1.42 | 2.18 | -6.98 | 399.00 | *** | 23.96 | 1.64 | 1.81 | -1.25 | 163.51 | |
| KCS formal coercion | 4 | 7.82 | -1.15 | 0.85 | | | | | | | | | | | | |
| Vignette 3 | 4 | 24.35 | -1.17 | 0.93 | 47.96 | 2.45 | 3.16 | -8.51 | 380.78 | *** | n/a | | | | | |
| Vignette 10 | 4 | 56.87 | -0.68 | 1.04 | 96.68 | 3.31 | 3.57 | -1.43 | 15.46 | | n/a | | | | | |
| Vignette 13 | 4 | 18.33 | -1.61 | 1.28 | 91.67 | 2.35 | 2.91 | -2.90 | 42.98 | * | 70.56 | 2.48 | 2.23 | 1.77 | 215.02 | |

Note. $n = 416-424$ due to occasional missing data. KCS = Knowledge on Coercion Scale; CAT = Coercion Attitude; CAP = Coercion Application; n/a = not applicable because Coercion Application was measured only in a subset of all vignettes. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. P values corrected with Bonferroni correction.

Table 4

Correlation coefficients between relevant variables

| | KCS | CAT | CAP |
|------------------|----------|---------|-------|
| KCS | | | |
| CAT | -0.47*** | | |
| CAP | -0.02 | 0.28*** | |
| SDS | 0.12 | -0.12 | 0.03 |
| SACS Care | -0.18** | 0.38*** | 0.08 |
| SACS Offending | 0.18* | -0.20** | 0.04 |
| SACS Treatment | -0.16* | 0.21** | -0.05 |
| SCL-10 | 0.04 | 0.00 | -0.05 |
| GMI | -0.04 | 0.04 | 0.09 |
| Age ^a | -0.13 | 0.10 | 0.07 |
| Sex ^a | -0.01 | -0.05 | -0.16 |

Note. $n = 416-424$ due to occasional missing data. ^a Spearman's rank correlations. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. P values corrected with Bonferroni correction. KCS = Knowledge on Coercion Scale; CAT = Coercion Attitude; CAP = Coercion Application; SDS = Social Distance Scale; SACS = Staff Attitude to Coercion Scale; SCL-10 = Symptom Check List; GMI = Good Milieu Index.

Table 5

Multivariate regression models with the dependent variables KCS, CAT, and CAP

| | KCS | | | | | | CAT | | | | | |
|-------------------------------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| | Model 1 | | Model 2 | | Model 3 | | Model 1 | | Model 2 | | Model 3 | |
| | β | (SE) | β | (SE) | β | (SE) | β | (SE) | β | (SE) | β | (SE) |
| Intercept | -0.30** | (0.10) | -0.31** | (0.10) | -0.19 | (0.27) | 0.71*** | (0.04) | 0.72*** | (0.04) | 0.40*** | (0.09) |
| Age | -0.05** | (0.02) | -0.05** | (0.02) | -0.06** | (0.02) | 0.01 | (0.01) | 0.01 | (0.01) | 0.01 | (0.01) |
| Sex (ref. = male) | -0.02 | (0.04) | 0.00 | (0.05) | -0.02 | (0.04) | -0.01 | (0.02) | -0.01 | (0.02) | 0.00 | (0.01) |
| Clinic (ref. = Clinic 1) | | | | | | | | | | | | |
| Clinic 2 (<i>D</i>) | -0.03 | (0.06) | -0.03 | (0.06) | 0.00 | (0.06) | -0.01 | (0.02) | -0.01 | (0.02) | -0.03 | (0.02) |
| Clinic 3 (<i>D</i>) | 0.00 | (0.06) | -0.02 | (0.07) | -0.07 | (0.07) | 0.01 | (0.02) | 0.01 | (0.02) | 0.03 | (0.02) |
| Clinic 4 (<i>D</i>) | -0.03 | (0.07) | -0.05 | (0.07) | -0.09 | (0.07) | -0.05* | (0.02) | -0.05* | (0.02) | -0.03 | (0.02) |
| Clinic 5 (<i>D</i>) | -0.11 | (0.07) | -0.12 | (0.07) | -0.09 | (0.07) | 0.03 | (0.02) | 0.03 | (0.02) | 0.01 | (0.02) |
| Profession (ref. = Nurses) | | | | | | | | | | | | |
| Physician (<i>D</i>) | | | 0.04 | (0.07) | -0.01 | (0.07) | | | -0.03 | (0.02) | -0.01 | (0.02) |
| Psychologists (<i>D</i>) | | | -0.28** | (0.09) | -0.30** | (0.09) | | | 0.02 | (0.03) | 0.01 | (0.03) |
| Other therapists (<i>D</i>) | | | -0.13 | (0.07) | -0.13 | (0.07) | | | 0.00 | (0.03) | 0.00 | (0.02) |
| Social workers (<i>D</i>) | | | -0.05 | (0.11) | -0.06 | (0.11) | | | 0.03 | (0.04) | 0.03 | (0.04) |
| SACS Treatment | | | | | -0.06 | (0.03) | | | | | 0.02 | (0.01) |
| SACS Care | | | | | -0.07 | (0.04) | | | | | 0.08*** | (0.01) |
| SACS Offending | | | | | 0.10* | (0.04) | | | | | -0.02 | (0.01) |
| Adjusted R ² | .015 | | .034 | | .084 | | .023 | | .019 | | .159 | |

Note. $n = 412$ (listwise deletion of missing data). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. *D* = dummy variable; KCS = Knowledge on Coercion Scale; CAT = Coercion Attitude; CAP = Coercion Application; SACS = Staff Attitude to Coercion Scale.

Table 5 (Continued)

| | CAP | | | | | |
|-------------------------------|----------|--------|----------|--------|----------|--------|
| | Model 1 | | Model 2 | | Model 3 | |
| | β | (SE) | β | (SE) | β | (SE) |
| Intercept | 0.61*** | (0.06) | 0.60*** | (0.05) | 0.35* | (0.14) |
| Age | 0.01 | (0.01) | 0.02 | (0.01) | 0.02 | (0.01) |
| Sex (ref. = male) | -0.09*** | (0.03) | -0.04 | (0.02) | -0.04 | (0.02) |
| Clinic (ref. = Clinic 1) | | | | | | |
| Clinic 2 (<i>D</i>) | 0.06 | (0.04) | 0.01 | (0.03) | 0.02 | (0.03) |
| Clinic 3 (<i>D</i>) | 0.11** | (0.04) | 0.03 | (0.04) | 0.03 | (0.04) |
| Clinic 4 (<i>D</i>) | 0.02 | (0.04) | -0.05 | (0.04) | -0.03 | (0.04) |
| Clinic 5 (<i>D</i>) | 0.09* | (0.04) | 0.02 | (0.04) | 0.01 | (0.04) |
| Profession (ref. = Nurses) | | | | | | |
| Physician (<i>D</i>) | | | 0.10** | (0.04) | 0.09* | (0.04) |
| Psychologists (<i>D</i>) | | | -0.16** | (0.05) | -0.18*** | (0.05) |
| Other therapists (<i>D</i>) | | | -0.33*** | (0.04) | -0.33*** | (0.04) |
| Social workers (<i>D</i>) | | | -0.23*** | (0.06) | -0.24*** | (0.06) |
| SACS Treatment | | | | | -0.03 | (0.02) |
| SACS Care | | | | | 0.06** | (0.02) |
| SACS Offending | | | | | 0.02 | (0.02) |
| Adjusted R ² | .039 | | .231 | | .243 | |

Note. $n = 412$ (listwise deletion of missing data). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. *D* = dummy variable; KCS = Knowledge on Coercion Scale; CAT = Coercion Attitude; CAP = Coercion Application; SACS = Staff Attitude to Coercion Scale.

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Appendix A

Vignettes (English translation, shortened, vignette number of the original questionnaire in brackets)

No coercion

NC1 (5): A patient leaves the ward for weekend release in good mood and says goodbye to nursing staff. A nurse replies: “If you feel worse you can come back at any time”.

NC2 (9): A patient calls his psychiatrist: “I am recovered and want to end therapy”. “All right, you have my number if you want to come again”.

NC3 (14): At Alcoholics Anonymous (AA): “I did not drink since two years, it's time to quit”. The group leader wishes well offers return if needed.

Persuasion/Conviction

PC1 (2): A patient refuses to attend outpatient consultations on a regular basis. The psychiatrist answers: “Please, use this opportunity to reduce risk of relapse and recurrent involuntary admissions”.

PC2 (7): The therapist negotiates with a cocaine user: “Drug tests on a regular basis can help to keep you from relapse so that you do not risk losing your work place”.

PC3 (15): A young inpatient with depression asks for a weekend at her parents. The physician is concerned: “don't you think it would be better to stay another weekend in the clinic?”

Leverage

LE1 (4): A judge makes an offer to a criminal offender with drug addiction: “if you agree to undergo treatment we will desist from detention this time”.

LE2 (6): A psychiatrist proposes to his patient who has a history of non-compliance and multiple involuntary admissions: “if you agree to this depot medication I can support you to find an adequate accommodation”.

LE3 (12): A new inhabitant of a sheltered accommodation is asked to sign the following treaty: “outpatient treatment is a requirement for all our

residents”.

Threat

TH1 (1): A physician says to a very agitated and tensed patient inside the seclusion room: “Please take this tablets, otherwise we have to give you an injection”.

TH2 (8): A psychiatric patient is repeatedly bankrupt and recently lost her apartment. The social worker confronts her: “if you cannot control your finances yourself, a legal guardian- ship will be inevitable”.

TH3 (11): A patient with suicidal ideations attends the emergency ward because he cut himself severely. The attending psychiatrist talks to him: “if you cannot agree to hospital admission, a compulsory hospitalization could release you from your ambivalence”.

Formal coercion

FC1 (3): A confused young woman is located without her clothes praying in a park. An emergency doctor initiates commitment to an institution.

FC2 (10): An old man unexpectedly demolishes a parked car with a metal bar and tells the pedestrians that he acted in the name of god. The police crush him down and transfer him to a psychiatric hospital.

FC3 (13): A violent patient lies on the floor in the seclusion room overpowered by nursing staff. Just before the injection of an antipsychotic medication he asks for oral application of the medication. The staff fulfills this desire.