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Psychometric properties of the Turkish version of Staff Attitude to Coercion Scale

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Abstract

Background The aim of this study was to provide the Turkish version of the Staff Attitude to Coercion Scale (SACS) and to determine its psychometric properties.

Methods This is a descriptive and correlation design. The sample of this study consisted of 100 psychiatric staff members. The validity and reliability of the scale were assessed through translation procedures, content validity analysis, and confirmatory factor analysis (CFA). Reliability was further evaluated using Cronbach's alpha and item-total score correlations.

Results The content validity index was found to be 0.93. The scale has a three-factor structure and the Cronbach's alpha values of the subscales are 0.70 for offence, 0.87 for safety and 0.74 for treatment, respectively. The Cronbach alpha reliability coefficient of the total scale was found to be 0.86.

Conclusion The Turkish version of the SACS showed good reliability and validity, and confirmatory factor analysis revealed the same factor structure with three factors as in the original SACS.

Keywords Validity, Reliability, Attitude to coercion, Psychiatry, Mental health, Health personnel, Türkiye

Background

Coercion measures that interferes with some basic rights of patients such as movement and decision making are common in psychiatry [1]. Coercive interventions in psychiatry are used as a last resort measure in order to manage behaviors such as acute violence, aggression, and suicide attempts that harm the patient themselves or people around them, and strong efforts have been made in recent years to reduce the use of coercion. These coercive methods applied to patients also lead to official coercion, which includes various types of coercion, such as patient reluctance, mechanical restraint, physical restraint, isolation, forced administration of drugs, involuntary hospitalization, and forced treatment. This affects individuals who provide mental health services as well as patients [2–4], which leads to ethical problems in addition to the emotional burden.

It is of importance to ensure the sustainability of a safe and secure environment as well as to support the recovery of patients in psychiatry clinics. In this process, mental health workers have to go through tough decision-making processes involving difficult practices due to safety reasons [5–7]. While this is life-saving in terms of safety and invulnerability, it affects the relationship between the patient and the staff, and may cause the former to have traumatic experiences. Coercive measures result in individuals' right and freedom to choose and participate in their own treatment being taken away. For this reason, coercive measures should only be implemented so as to prevent the patient from harming

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themselves or other and should be reduced to a minimum all over the world [7–9]. In addition, due to the differences between countries and hospitals in the use of coercive practices, there are differences in staff attitudes towards coercion [10].

Guidelines, special programs and training events have been developed to reduce coercive practices in psychiatry clinics [11, 12]. The cognitive and emotional attitudes of mental health professionals towards coercion are thought to influence their decision-making and behavior patterns in certain situations. This is thought to affect the frequency and type of coercive interventions applied to the patients. Although the literature indicates the appropriateness of staff attitudes towards the use of coercion, little is known about the impact of coercive measures on their clinical use [13] .

There is no mental health law in Turkey. However, the Hospital Service Quality Standards Report prepared by the Ministry of Health Performance Management Quality Development Department has established standards for coercive interventions in psychiatric hospitals to ensure patient safety. In addition, it is aimed to control these interventions more frequently and reduce their rate because of the possibility of them being affected by the attitude of mental health professionals [14]. Therefore, in order to understand the attitudes of mental health professionals in Turkey towards coercive interventions and to guide improvement efforts in this area, it is important to adapt the Scale of Attitudes Towards Coercion (SACS) to Turkish culture. The validity and reliability of the Staff Attitude to Coercion Scale (SACS), which was developed to measure the attitude of mental health professionals towards coercion, have been established in previous studies for mental health professionals in [2, 15–17], but the Turkish version has not been validated yet. It is thought that adapting the scale into Turkish and examining the factor structure will contribute to the literature by enabling cross-cultural comparisons and provide a tool to measure the attitudes of mental health professionals in Turkey towards the practice of coercion against patients.

Methods

Study aim

The aim of this study is to provide the Turkish adaptation of SACS and to determine its psychometric properties.

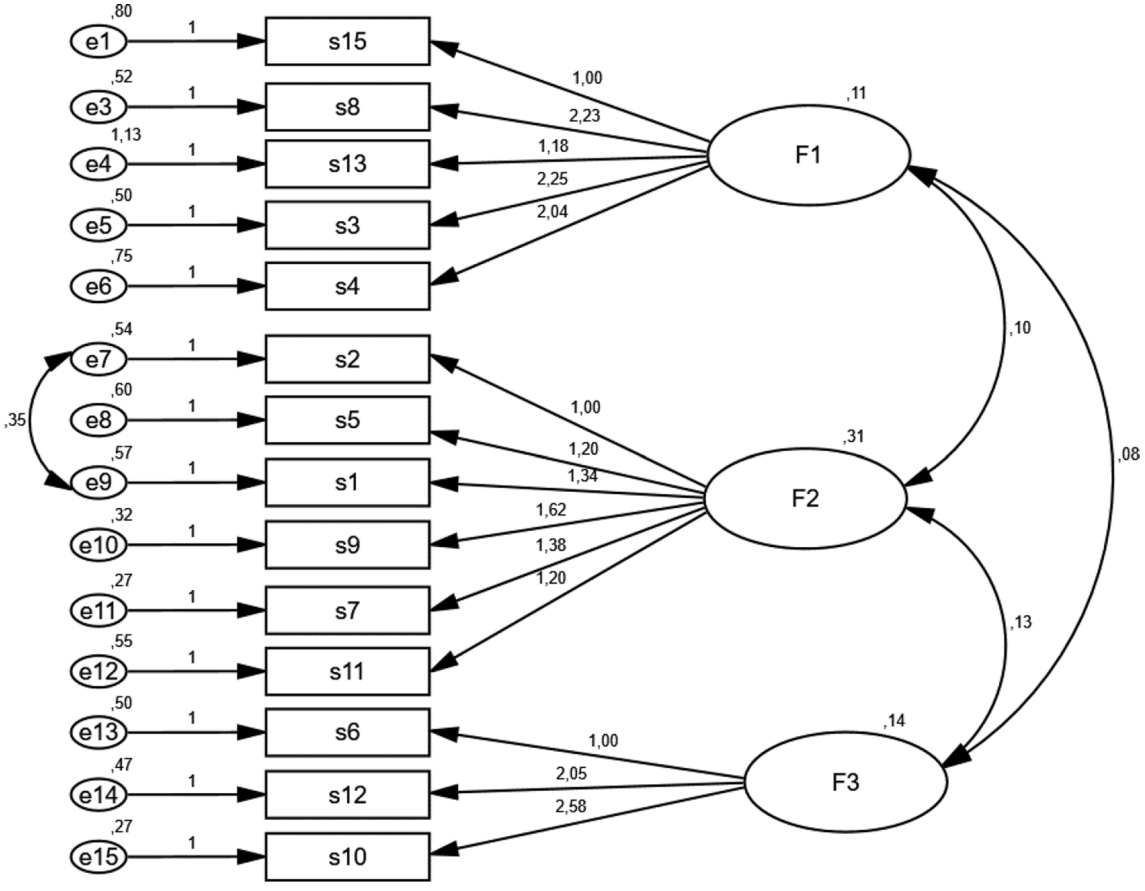

Fig. 1 Nonstandardized path coefficient

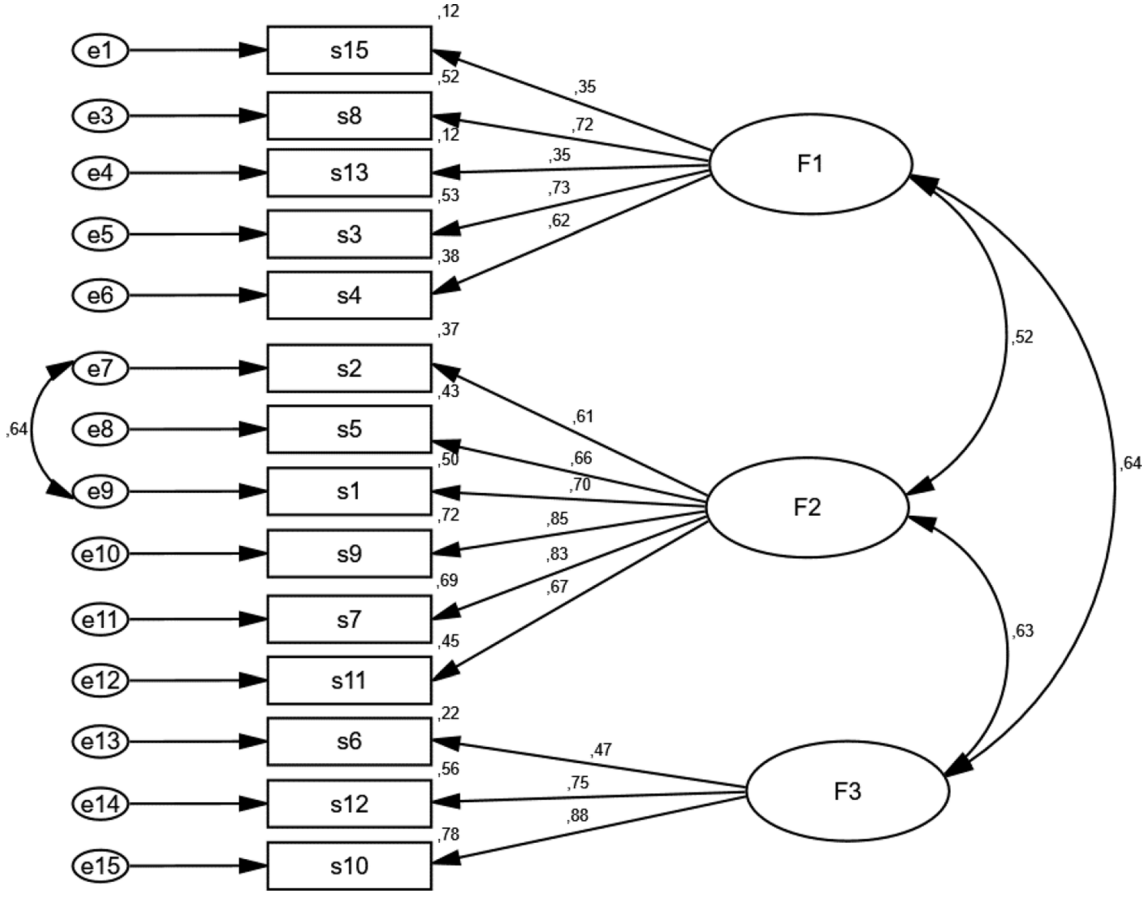

Fig. 2 Standardized path coefficient

Study design, sample, and setting

This descriptive and correlational study was carried out between June 1st and 30th, 2022. The population of the study consisted of nurses, psychiatrists and psychologists working in a psychiatric hospital. The study was conducted in a 250-bed psychiatric hospital comprising closed psychiatric ward, an open-chronic psychiatric ward, an addiction service, and community mental health centers. The psychiatric hospital staff consisted of 96 nurses, 53 psychiatrists, and 30 psychologists. In this study, at least of five participants was planned for each item on the scale [18] and the study was completed with 100 mental health professionals.

The inclusion criteria were as follows:

- Being between the ages of 18–65.
- Being a mental health professional (nurses, psychiatrists and psychologists) who has worked in a psychiatric unit and related centers for at least one year.
- Active involvement in patient care, with a minimum of several months of one-to-one patient care experience.

Exclusion Criteria:

- Individuals diagnosed with a mental illness and receiving treatment.
- Employees who are in the orientation period or on long-term leave.
- Employees who are not actively involved in patient care during the study period.

This study was performed in accordance with the Strengthening the Reporting of Observational studies in Epidemiology (STROBE) guidelines.

Data collection tools

Personal Information Form and SACS were used to collect data.

Personal information form The researcher prepared the form in line with the literature [2, 19]. It consists of questions about the individual characteristics of the participants, their profession, how long they have worked in the profession, and the units they work in.

Staff attitude to Coercion Scale (SACS) SACS was developed by Norwegian researchers to assess mental health professionals' attitudes towards coercion in general [15]. The scale consists of 15 items structured on a 5-point Likert scale ranging from completely disagree to completely agree, and has three subscales including three independent attitudes towards coercion. These are coercion as offending, coercion as care and security, and coercion as treatment. The scale was also translated into German, Polish, Arabic and Hindi. The Cronbach's α coefficients of the three subscales of the scale are 0.70, 0.73 and 0.69, respectively. The overall Cronbach's α value of the scale is 0.78 [2, 4, 15, 16, 20].

Ethics approval and consent to participate

Prior to the study, permission was obtained from Husum via e-mail to translate the scale into Turkish to ensure its validity and reliability. The study was approved by the Scientific Research and Publication Ethics Committee of Bahcesehir University (Approval no: 34596). The mental health professionals participating in the study were informed according to the Declaration of Helsinki, and their written and verbal consent was obtained. Those who agreed to participate were informed about the purpose of the study.

Process of translation and adaptation of SACS

In adapting SACS to Turkish society, a language equivalence study was first conducted. Translation of the scale from English to Turkish was done by three experienced academicians who are experts in the field. These translations were converted into a single Turkish form consisting of items reviewed and agreed upon by the researcher. The scale was then translated back into the original language by a separate linguist who knew both languages and cultures using the back-translation technique. Afterward, the researcher compared the translated Turkish scale and the original SACS and made minor corrections with the help of the linguist. In the final stage, the opinions of ten experts were obtained to determine the content analysis (Content Validity Index-CVI) of the scale, and after the pilot study, the scale was re-evaluated and its final form was given.

Content validity of SACS

The translated scale was presented to the experts for content validity (Content Validity Index-CVI). The expert team consists of 10 nurse academicians and a psychiatric nurse. Davis technique was used to evaluate CVI [21]. The experts were asked to rate each scale item on a four-point Likert-type scale ranging from 1 (not appropriate) to 4 (very appropriate). CVI value was found to be 0.93 in line with the experts' opinions. This value indicates high content validity. CVI value of 0.90 or higher is indicative of very high content validity [22].

Construct validity of SACS

Confirmatory factor analysis (CFA) was used to assess the construct validity of the scale. The first order CFA was performed and the maximum-likelihood method was used as the calculation method.

Reliability of SACS

To assess the reliability of SACS, the Cronbach's α coefficient value, and item-scale correlations were used.

Cronbach's α coefficient

The reliability coefficient Cronbach's α is used to evaluate internal consistency. In this analysis, the internal consistency of the scale ranged between 0 and 1. The Cronbach's α value of the whole scale was 0.86, which indicates that it was highly reliable. A measurement tool is considered relatively reliable when Cronbach's α ranges from 0.60 to 0.79, and highly reliable when it ranges from 0.80 to 1 [23]. The analysis was done both for the scale and subscales.

Item-scale correlations

This analysis provide the correlation between each item and scale. The correlations ranged between −1 and 1. Higher values shows higher consistency between the item and scale.

Data analysis

Data were analyzed via IBM SPSS v23 and IBM SPSS AMOS v24. The suitability of the data to the normal distribution was tested based on the assumption of multivariate normality. Davis technique was used for the content validity of the scale. In CFA, the first order CFA was performed and the maximum-likelihood method was used as the calculation method. The Cronbach's α coefficient was used to examine internal consistency and reliability. Significance level was set at $p<.05$. The data on the demographic and professional characteristics of the participants were analyzed by means of descriptive statistics, standard deviation and frequency distributions.

Results

Characteristics of the sample

The sample consisted of 100 participants (63 nurses, 24 psychiatrists, and 13 psychologists). The mean age of the participants was 35.44±8.46 years and 72.0% ($n=72$) were female. Of the participants, 52.0% ($n=52$) were single, 56.0% ($n=56$) had abachelor's degree, 63.0% ($n=63$) were nurses, 48.0% ($n=48$) were working in the closed-acute ward, and 47.0% ($n=47$) had 1–5 years of work experience (Table 1).

Table 1 Characteristics of the participants (n: 100)

Sociodemographic characteristics	Arithmetic mean (SD)
Age	35.44 ± 8.46
	f (%)
Gender	
Female	72 (72.0)
Male	28 (28.0)
Educational status	
Bachelor's degree and lower level	56 (56.0)
Master's and a doctorate degree	44 (44.0)
Marital status	
Married	48 (48.0)
Single	52 (52.0)
Profession	
Nurses	63 (63.0)
Psychiatrists	24 (24.0)
Psychologist	13 (13.0)
Department/Unit	
Closed-acute units	48 (48.0)
Chronic units	34 (34.0)
Community mental health centres	7 (7.0)
Addiction treatment centres	11 (11.0)
Work experience	
1–5 years	47 (47.0)
6–10 years	18 (18.0)
11–15 years	16 (16.0)
16 years or more	19 (19.0)

Validity analysis

Confirmatory factor analysis

In order to use the maximum-likelihood method for CFA, the data must have normal distribution. In the multivariate normality test, the critical value was determined to be 9.43.

The path coefficients of all items must be significant as a result of the first order CFA performed with a total of 15 items and 3 subscales. The path coefficient of item 14 in the F1 dimension was not statistically significant. Non-significant items should be excluded from the scale. The results obtained when item 14 was excluded are presented in Table 2.

When item 14 was excluded, the path coefficients of all remaining items in the scale were statistically significant ($p<.001$). Fit indices of the model were found as follows: CMIN=220.68, DF=74, CMIN/DF=2.98, RMSEA=0.14, CFI=0.76, GFI=0.75, TLI=0.71, IFI=0.77, AGFI=0.65. None of the fit indices other than CMIN/DF was within the desired limits. Modification indices of the model were examined and after performing one different modification, model fit values were found as follows: CMIN=178.15, DF=73, CMIN/DF=2.44, RMSEA=0.12, CFI=0.83, GFI=0.79, TLI=0.79, IFI=0.83, AGFI=0.70 (See Figs 1 and 2) .

When the factor structures of the scale were considered, Factor 1 (coercion as offending) consisted of a total of 5 items and the Cronbach's α value was found to be 0.70, which indicates that the subscale was reliable. Factor 2 (coercion as care and security) consisted of a total of 6 items and the Cronbach's α value was found to be 0.87, which indicates that the subscale was highly reliable. Factor 3 (coercion as treatment) consisted of a total of 3 items and the Cronbach's α value was found to be 0.74, which indicates that the subscale was reliable (Table 3) The Cronbach's α value of the whole scale was 0.86, which indicates that it was highly reliable. According to international standards, indicates high reliability [23]. This finding is consistent with similar studies conducted in other countries using the SACS [16, 20].

Table 2 Confirmatory factor analysis result of SACS (when item 14 is deleted)

			β^1	β^2	SEM	Test value	*p*
Item15	<---	F1	0.35	1.00			
Item8	<---	F1	0.72	2.23	0.73	3.04	0.002*
Item2	<---	F2	0.60	1.00			
Item11	<---	F2	0.67	1.20	0.22	5.39	<0.001**
Item1	<---	F2	0.70	1.33	0.14	9.05	<0.001**
Item5	<---	F2	0.65	1.20	0.22	5.30	<0.001**
Item9	<---	F2	0.85	1.61	0.25	6.28	<0.001**
Item7	<---	F2	0.83	1.38	0.22	6.21	<0.001**
Item6	<---	F3	0.47	1.00			
Item12	<---	F3	0.74	2.05	0.46	4.37	<0.001
Item10	<---	F3	0.88	2.58	0.57	4.48	<0.001
Item13	<---	F1	0.34	1.18	0.51	2.31	0.021*
Item3	<---	F1	0.72	2.25	0.73	3.04	0.002*
Item4	<---	F1	0.62	2.04	0.69	2.93	0.003*

β1: Standardized beta coefficient. β2: Unstandardized beta coefficient. SH: Right of choice. BF: Self awareness

* $p<.05$.** $p<.001$

Table 3 SACS sub-item and total reliability results

	Subscale and Items	Mean ± SD[a]	Item-total correlation	Cronbach's α on item deletion	Cronbach α
Factor 1	3. Use of coercion can harm the therapeutic relationship	2.53 ± 1.03	0.58	0.60	0.70
	4. Use of coercion is a declaration of failure on the part of the mental health services	3.31 ± 1.10	0.47	0.64	
	8. Coercion violates the patients integrity	2.77 ± 1.04	0.50	0.63	
	13. Too much coercion is used in treatment	3.15 ± 1.14	0.39	0.68	
	15. Coercion could have been much reduced, giving more time and personal contact	2.19 ± 0.96	0.34	0.69	
Factor 2	1. Use of coercion is necessary as protection in dangerous situations	3.48 ± 1.06	0.74	0.84	0.87
	2. For security reasons coercion must sometimes be used	3.68 ± 0.93	0.68	0.85	
	5. Coercion may represent care and protection	3.13 ± 1.03	0.62	0.86	
	7. Coercion may prevent the development of a dangerous situation	3.55 ± 0.93	0.74	0.84	
	9. For severely ill patients coercion may represent safety	3.39 ± 1.07	0.73	0.84	
	11. Use of coercion is necessary towards dangerous and aggressive patients	3.54 ± 1.00	0.56	0.87	
Factor 3	6.More coercion should be used in treatment	1.93 ± 0.80	0.43	0.79	0.74
	10. Patients without insight require use of coercion	3.11 ± 1.10	0.65	0.54	
	12. Regressive patients require use of coercion	2.84 ± 1.04	0.64	0.55	

[a] SD = standard deviation

Discussion

In this study, we created the Turkish version of SACS and evaluated its psychometric properties. The forward–backward translation was conducted successfully. A review of the literature revealed that SACS had previously been translated into four languages: Norwegian [15], Dutch [2], Polish [19], Arabic [20], and Hindi [4].

There were some conceptual differences related primarily to differences between the cultures. The CVI of the Turkish version of SACS was 0.93, indicating good content validity [22].

Before performing CFA, all problems with the data (outliers, skewed values, missing data, etc.) should be eliminated. In order to use the maximum-likelihood method, the data must have normal distribution. In the multivariate normality test, the critical value was determined to be 9.43. If this value is lower than 10, it is an excellent result. Studies have shown that it is not a problem for this value to go up to 20 [24].

The original version of SACS [15] consists of 15 items and has 3 factor structures. In its first version and in later studies, the scale was divided into the factors of coercion as offending, coercion as care and security, and coercion as treatment [2, 15, 19]. These 3 subscales were examined and the construct validity of the scale was evaluated through CFA in our study. Factor 1 (coercion as offending) consists of 5 items and its Cronbach's α value is 0.70; Factor 2 (coercion as care and security) consists of 6 items, its Cronbach's α value is 0.87; and Factor 3 (coercion as treatment) consists of 3 items, and its Cronbach's α value is 0.74. These values show that all three subscales are quite reliable. In the original SACS, the Cronbach's α values of the subscales were found to be 0.70, 0.73 and 0.69, respectively [15]. Efkemann's study [2] found them to be 0.76 for each subscale in their study. Arab's study [20] found them to be 0.72, 0.89, and 0.76, respectively, in their study. Similar to these results, the subscales also showed high reliability in our study. Lickiewicz's study [19], on the other hand, reported a lower levels of reliability compared to our study (0.69, 0.58, and 0.73, respectively).

Considering all items and the subscales, the path coefficients of the items must be significant as a result of the first order CFA. The path coefficient of item 14 in F1 was not statistically significant. When item 14 was excluded, the path coefficients of all remaining items in the scale were statistically significant. This item is related to insufficient use of resources and may vary depending on the units worked in and the diversity of mental health professionalsTherefore, item 14, which was non-significant, could be removed from the scale. Opinions were received from 1 psychiatric nurse, 1 psychiatrist, 1 psychologist and 2 academicians, and based on their feedback, it was decided to remove this item from.

The Cronbach's α value was found to be 0.78 in the original SACS [15]. Efkemann's study [2], on the other hand, found it to be 0.82. In the study by Arab [20] and Raveesh's [4] study, it was 0.71 and 0.58, respectively. In our study, the Cronbach's α value for the overall scale was 0.86, which corresponds to excellent reliability. This result, despite being similar to those of other studies, suggests that cultural differences are effective in the reliability of the scale.

Strengths and limitations

Our study's main strength is that it is the first validation of the Turkish version of SACS. The sample size in this study was small. Similar studies in the future should evaluate the validity of this version of the SACS with a larger group of psychiatric staff members in Turkey.

Conducting the study in a larger population may result in higher fit index values. Furthermore, in our study, the majority of participants were nurses. Future studies could include larger-scale studies comparing the attitudes of different professional groups (e.g., nurses, psychologists, psychiatrists, and social workers) toward coercive interventions. Such comparisons could reveal differences in attitudes among mental health professionals. Although the methodological results are important, the adapted scale is specific to mental health professionals in Turkey.

Conclusion

The attitudes of mental health professionals towards using coercive measures can be considered as an important factor in determining the quality of care provided to patients with mental illness. Our study showed that the Turkish version of SACS was an appropriate tool to measure the level of mental health professionals' attitudes towards coercion. SACS can be used to evaluate the coercive practices applied by mental health professionals to patients in Turkey. Measuring the attitudes of mental health professionals towards coercive measures allows for understanding the relationships between these attitudes and variables such as professional experience, education, and cultural factors. The use of the scale can contribute to the development of strategies aimed at reducing coercive measures and promoting more respectful and ethical behaviors towards patients as individuals in the mental health field.

Implications

Providing appropriate training to mental health professionals in patient-oriented practices can play an important role in changing their attitudes in a positive way. Such training events may include training on predicting and preventing aggressive behaviors and managing them effectively. Additioanally, developing multidisciplinary teams, conducting supervision that will objectively evaluate the attitudes and approaches of professionals other than the team, and holding weekly meetings may also be effective in this process. Organizational, educational and legal issues specific to the the country should be considered in interventions aimed at reducing coercion toward patients.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s40359-024-02013-z.

Supplementary Material 1

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SP: searching, desing, screening, bias assessment, data extraction and analysis, manuscript writing and editing.

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Data availability
The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation. The data are not publicly available due to restrictions their containing information that could compromise the privacy of research participants.

Declarations

Ethics approval and consent of participate
The study was approved by the Scientific Research and Publication Ethics Committee of Bahcesehir University (Approval no: 34596). The mental health professionals participating in the study were informed according to the Declaration of Helsinki, and their written and verbal consent was obtained. Those who agreed to participate in the study were informed of the purpose of the study.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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