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Mental health professionals' beliefs and attitudes towards compulsory admission in Athens: a token of social stigma or good faith in psychiatry?—a cross-sectional study

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Abstract

Background Mental health professionals' (MHPs) attitudes towards involuntary admissions have not received adequate attention in efforts to curb their rates. Thus, the present study set out to (i) explore MHP attitudes regarding involuntary hospitalisation, (ii) describe their perceived dangerousness of people with severe mental illness (SMI) and their trust in psychiatry, (iii) identify the predictors of attitudes towards compulsory admissions and (iv) gauge the contribution of perceived dangerousness versus trust in psychiatry to explaining them.

Methods A random sample of 300 mental health professionals working in public mental health services located in the Northern part of Athens and in the two psychiatric hospitals of Attica participated in the study. Respondents had to complete a self-reported instrument garnering information about participants' attitudes towards involuntary hospitalisation (original scale), the perceived dangerousness of people with SMI (Perceived Dangerousness Scale) and their trust in psychiatry (based on the Attitudes to Mental Illness scale) as well as various socio-demographic and work-related variables.

Results Respondents largely accepted involuntary hospitalisations, considering them to be beneficial (72.96%) and disagreeing with the view that they adversely influence the course of illness (54.85%). Nonetheless, they believe that people with SMI should be treated in the community (89.93%), that compulsory admission should be the last therapeutic resort (84.01%) and that people with SMI should not be placed in psychiatric hospitals against their will in order to be under surveillance (90.64%). However, they acknowledge that involuntary admission is often the only treatment options(61.19%). Concomitantly, they report moderate levels of perceived dangerousness and high levels of trust in psychiatry. Trust in psychiatry had the strongest positive association with acceptance of involuntary hospitalisation among mental health professionals whereas postgraduate studies and working in outpatient settings were linked to less favourable attitudes. Interestingly, perceived dangerousness did not yield an independent effect; rather, it weakened the association between trust in psychiatry and acceptance of involuntary admissions.

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Conclusions Mental health professionals hold complex attitudes towards involuntary hospitalisation, which are largely explained by their trust in psychiatry. Efforts to reduce the rates of involuntary admissions should address both them and their determinants.

Keywords Involuntary hospitalization, Iatrogenic stigma, Mental health workers, Mental health staff, Prejudice, Coercion

Background

Scientific and policy interest in the prevalence and determinants of involuntary admissions has rekindled recently (e.g. [1, 2]. Rates of involuntary admissions vary substantially across western countries [3], and a wide array of contextual and patient-related factors seem to contribute to this variation [4–6]. In order to facilitate conceptualisation, research and intervention on the field, Roessler (2019) has grouped the correlates of compulsory admissions at three levels: the macro-, the meso- and the micro-level [7]. According to his framework, the macro-level includes social and iatrogenic stigma and legislation, among others; the meso-level relates to the mental health care system configuration and the micro-level to patient characteristics. Regarding the macro-level, the stigma attached to mental disorders and mental health legislation seem to influence one another, impacting in turn on involuntary admissions. Specifically, lay and mental health professionals' (MHPs) attitudes to severe mental illness (SMI) as well as to involuntary admissions are influenced by the mental health legislation, [4]. Concomitantly, the legislation is often the corollary of lay and professional beliefs about SMI [8]. Therefore, the increasing rates of involuntary admissions may be driven by the wider acceptance of the practice among lay people and professionals.

In spite of its importance, only a small number of studies have explored lay and expert attitudes towards involuntary admissions. In one study in Switzerland, it was found that the vast majority of the general population endorsed positive views of compulsory admissions [8]. The authors interpreted this finding as a token of public trust in psychiatry or an indication of social stigma; however, they did not explore directly the veracity of these competing accounts. Likewise, another study compared the attitudes of MHPs and lay people towards compulsory admissions in four western countries: England, Germany, Hungary and Switzerland [9]. The rates of agreement with the practice were found to be particularly high across countries, especially among psychiatrists, nurses and lay people. Moreover, higher rates of agreement were discerned in Hungary and England, followed by Germany and Switzerland. These findings were attributed to the prevalence of paternalistic and custodial attitudes towards SMI in Hungary and the heightened public health concern about dangerousness of people with SMI in England. Since then, the scarce evidence regarding professional attitudes towards compulsory admissions indicates strong support on the grounds of care and safety, with hospital-based staff being more in favour [10–12]. Hence, existing literature on the topic is limited, there has been no investigation of the contribution of trust in psychiatry and social stigma to shaping attitudes towards involuntary admissions and the latter are gauged by one item only enquiring about participants' level of agreement/acceptance.

In Greece, involuntary admission is a highly contested issue and corresponding rates have been fourfold the European average [13]. Some evidence indicates that they can be as high as 60% in the largest cities, like Athens and Thessaloniki [14]. Moreover, converging evidence from the Pan-European report "Mapping and Understanding Exclusion: Institutional, coercive and community-based services and practices across Europe", the Greek Ombudsman [15] and the double condemnation of the country in the European Court for Human Rights [16, 17] provides strong evidence for poor enforcement of the legislation and abridgment of human rights during involuntary admission. In this context, the MANA (the acronym stands for the Greek name of the group, which is equivalent to "Study of involuntary hospitalisations in Athens) research group was established in a decade ago by MHPs from an NGO (Association for Regional Development & Mental Health), one department of the Psychiatric Hospital of Attica and the Psychology Department of Panteion University of Social and Political Sciences. The group endeavoured to collate evidence that would place compulsory admissions highly in the policy agenda. In 2021 and due to converging pressures from multiple sources, including the studies by MANA, the most recent National Mental Health Plan 2021–2030 [18] prioritised the reduction of compulsory admissions by effectively addressing its determinants. Previous research from our group has explored the instigators of the process [19]; the links between patient characteristics and compulsory admissions as a function of the setting (general hospital vs psychiatric hospital), [20]; the two-year outcome of involuntary admission [21]; and patient views about it [22] in the Athens region. The present study sought to investigate MHPs' attitudes towards involuntary

admissions as well as the factors that shape them. In particular, it endeavoured to describe MHPs' attitudes towards involuntary admission, their perceived dangerousness of people with SMI and their trust in psychiatry; to identify the predictors of their attitudes to involuntary admission; and to gauge the contribution of trust in psychiatry versus perceived dangerousness in explaining them.

Study findings were expected to fill the gaps of the international – mainly European- literature as well as to inform policy recommendations in Greece. This is aligned with recent trends of identifying modifiable risk factors of involuntary hospitalisations at different levels, including the socio-economic environment, to deliver promising prevention measures [23].

The study addressed MHPs working in Athens area, as it is the area with the highest prevalence of compulsory admissions in the country [14]. As a result of this, the reduction of rates in Athens was deemed imperative and they could shed light on focal points for prevention measures to other regions of Greece or internationally.

Methods

Design

The design of the study is a cross-sectional, observational study. Observational studies can be descriptive or/and analytic depending on the research questions they explore. Cross-sectional studies are usually descriptive, as they identify correlates of the outcome of interest in a defined population in a particular place at a particular time; however, they often may have both descriptive and analytic elements.

As regards the present study, the first research questions correspond to the descriptive elements; whereas the last research question to the analytic. For the analytic aspect which explores in depth the association between trust in psychiatry and perceived dangerousness of people with mental illness as the exposures and attitudes to compulsory hospitalisation as the outcome. In this design, based on existing international literature, previous work of our research group and the advice provided by clinicians of the research team, the following variables were explored as potential confounders: gender, age, family status, educational attainment, professional group, previous work experience in a psychiatric hospital/psychiatric department of a general hospital, personal experience with mental illness and type of service (hospital- based vs community-based). Moreover, it was assumed that trust in psychiatry might interact with perceived dangerousness, in line with evidence indicating an association between attitudes to psychiatry and attitudes to mental illness [24, 25]. As a result of this, an interaction term between the two variables was also introduced into the model.

As the study targeted MHPs, its priorities, design and interpretations was the result of an active and vivid collaboration between researchers in academia and MHPs working in the state-funded mental health care system in Athens. In particular, among the authors of the present study one clinician of community mental health services and one of hospital-based services shared their experience on the field and their valuable insights in the methods of the study.

Setting and participants

Greece has a hybrid mental healthcare system in which the public sector provides universal coverage to all residents The public sector is the principal healthcare provider; while the private sector is not as popular [26]. The third sector has a noteworthy presence in community mental health services, especially in remote areas and for specific population subgroups. The community and psychosocial rehabilitation mental health services provided by the third sector are state-funded and thus for free.

The study was conducted with professionals working in the public mental health care system in the Attica region; specifically, state-funded mental health services of the Northern sector of Attica (1st Health Prefecture geographically). The public mental care system in the Northern sector includes all services which are state funded, i.e. services operated by public health authorities as well as the third sector: inpatient-units, community mental health services and housing facilities. Therefore, mental health professionals working in private psychiatric clinics (4 in the area) and those who are self-employed were not reached out. Private clinics were excluded, as they were not involved into the process of compulsory admissions at the time of the study and for many years. In a similar vein, mental health professionals who are self-employed in private practice (e.g. psychoanalysts) were not contacted, as they are also not frequently involved in the compulsory admission process in some way (e.g. prevention of severe relapse, management of acute phase, aftercare etc.) hence, they are largely unfamiliar with it. There are some psychiatrists in private practice; however, the majority of them is employed in state-funded services in Athens region and could not be reached out [26, 27]. It merits noting that there is no official register of the available MHPs who work in Greece. As a result of this, the sampling frame of the study could not have been a list of all MHPs employed in Athens.

The Northern sector of Attica comprises of 5 psychiatric departments of general hospitals and 35 community mental health services (day centres and housing units), with a workforce of roughly 400 mental health

professionals. Consistent with the method of single stage cluster sampling (i.e. a probability sampling method), a sample of services were randomly selected, with efforts to include an equal representation of hospital-based and community-based services as well as professional groups.

The sample size was calculated using Raosoft® (Sample Size Calculator; Raosoft Inc.) [28], with a 5% margin of error, 95% confidence level, and an expected response rate of 50%. The population considered consisted of approximately 628 mental health professionals [29], yielding an advisable sample size of 239 participants.

As it was considered important to include psychiatric hospitals (as they are the mainstay of hospital-based mental health treatment) in the participating mental health services, the two psychiatric hospitals of the broader Attica region, with a workforce of approximately 200 MHPs, were also included, although they were not located in the Northern sector. The questionnaire of the study was sent out to 440 MHPs of the 2 psychiatric hospitals, 3 psychiatric departments of general hospitals and 15 community mental health units. 300 of them completed the survey (response rate = 68.2%). Due to the anonymous completion of the questionnaire, the sensitive topic it concerned and the fact that data collection occurred during routine clinical practice, non-responders could not be identified and followed-up. As a result of this, potential differences between responders and non-responders could only be explored in terms of available information: gender and professional group. Specifically, no statistically significant difference was observed between responders and non-responders ($x^2 = 0.94$, $p > 0{,}05$ for gender and $x^2 = 2.97$, $p > 0{,}0.05$ for professional group). Furthermore, reasons of non-response could only be sought by the administrative staff of the services (who coordinated aspects of data collection), who identified increased workload as the preponderant reason.

The sample, thus, consisted of 300MHPs, all of Greek origin, who had been working in public mental health services in the target area: 164 from inpatient services (107 from psychiatric hospitals and 57 from psychiatric departments of general hospitals) and 136 from community mental health and rehabilitation services. Administrative personnel, mental health professionals in university placements and volunteers were excluded from the sample.

Sample characteristics are displayed in Table 1. As shown in Table 1, the majority of participants were women, unmarried persons and individuals of high educational attainment. Nurses and psychiatrists were more strongly represented in the sample and the vast majority of respondents had some experience with working in an inpatient unit. Interestingly, 71% of participants reported familiarity with mental illness either through personal experience or through someone in social network.

Materials

Perceived Dangerousness of people with mental illness (DS) [30, 31]. The scale was initially developed by Link and his colleagues in 1987 [30] and its rating strategy was revised by Penn and colleagues in 1994 [31]. It consists of 8 items tapping respondents' beliefs about the dangerousness of a person with mental illness Items are rated on a 7-point Likert scale ranging from "strongly agree" to "strongly disagree" with the midpoint reflecting a neutral position. The scoring of some items (i.e. 1,3,4,5,7 and 8) is reversed to avoid response bias. For the calculation of the total score, all items were summed so as to create a mean score ranging from 0–56. Higher scores indicated higher perceived dangerousness, while lower scores indicated lower perceived dangerousness. The scale was translated and back-translated by two bilingual persons prior to its use in the present study. Moreover, 10 MHPs (3 were stigma experts) reviewed the relevance, comprehensibility and wording of its items. The internal consistency of the scale in the present study was satisfactory (Cronbach's $\alpha = 0.76$).

Trust in Psychiatry [32]. Respondents' level of trust in psychiatry was assessed with one item derived from the Attitudes towards Mental Illness scale developed by Singh and colleagues in 1998 [32] for investigating stigma among health professionals: "I trust psychiatry and its methods for the treatment of people with severe mental illness". The particular scale has been used in a Greek context [24]. Available responses were on a 5-point Likert scale, ranging from 1 (=strongly agree) to 5 (=strongly disagree); thus, higher scores indicated less trust in psychiatry.

Attitudes towards involuntary admission scale (ATIA). In order to assess professional beliefs and attitudes towards involuntary admission, an original scale was developed. The scale encompasses 8 items, rated on a 7-point Likert scale ranging from 1 (=strongly agree) to 7 (=strongly disagree). For developing the scale, the following steps were undertaken: (i) item drafting, (ii) item review, (iii) pilot testing of its psychometric properties. Initially 12 items were drafted, derived from international and national literature as well as a focus group study with MHPs. The focus group participants were 10MHPs, 4 researchers and 6 clinicians; with respect to the latter, 4 were employed in inpatient units and 2 in community settings. The focus group took place in Athens, it was facilitated by two researchers experienced in qualitative methods, and it lasted 90'. It sought to explore professionals' views about involuntary admissions in depth, after completing a similar focus group with people who had

Table 1 Sample characteristics

	N (%)	Mean (SD)
Gender		
Male	87 (29.00)	-
Female	213 (71.00)	-
Age	-	38.69 (9.32)
Family status		
Unmarried	134 (44.67)	-
Married	144 (48.00)	-
Separated/Widowed	22 (7.33)	-
Educational level		
Secondary education/ Technical education (i.e. < = 14 years)	119 (39.67)	-
University/Technological Educational Institution (i.e. 14 years – 16 years)	132 (44.00)	-
Master's degree/ PhD (i.e. > 16 years)	49 (16.33)	-
Professional group		
Psychiatrist	68 (22.67)	-
Psychologist	63 (21.33)	-
Social worker	50 (16.67)	-
Nurse	82 (27.33)	-
Other	37 (12.33)	-
Have you ever worked in a psychiatric hospital or in psychiatric ward of a general hospital?		
Yes	196 (65.33)	-
No	104 (34.67)	-
Have you, or a person close to you/ in your social network ever experienced a mental illness?		
Yes	213 (71.00)	-
No	87 (29.00)	-
Working setting		
Inpatient units	164 (54.67)	-
Community services	136 (45.33)	-
How many years were you employed in a psychiatric hospital/clinic?	-	4.25 (2.00–9.50)[a]
How many years have you been working in this facility?	-	5 (2.90–12.00)[a]

[a] Median and range are reported

previously been compulsorily admitted [22]. The content of the focus group was audio taped and transcribed verbatim. The data were analysed independently by the two researchers through thematic analysis [33]. It is noteworthy that inter-rater reliability was deemed high (range of Cohen's kappa coefficient for emerging themes 0.77–0.82). The initial 12-item version of the questionnaire was sent out to a panel of experts on coercive measures, compulsory admissions and community mental health care, including 6 psychiatrists, 4 psychologists, 1 psychiatric nurse and 3 social workers, who commented on the appropriateness and comprehensibility of the items. Through this process, two items were dropped due to concerns that they were assessing generic knowledge and not specific beliefs about compulsory admissions. The 10-item version was then distributed to 50 undergraduate and postgraduate students of clinical mental health studies, for alpha testing, internal consistency and convergent validity. 2 further items were dropped after alpha testing. The internal consistency of the scale (Cronbach's $\alpha = 0.71$) as well as its convergent validity (Pearson's $r = 0.57$) were deemed adequate. Hence, the final version consisted of 8 items with some items being reverse-worded to avoid response bias. Higher total scores indicated more favourable attitudes. Exploratory factor analysis, employing the Principal Component extraction method, provided additional support to the construct validity of the scale. By applying the Kaiser-Guttman Rule, two components were revealed with high factor loadings for all of the items (higher than 0.4). The components explained together 59.5% of the variance (factor A: 38.4% and factor B: 21.1%), which is commonplace in stigma research [34].

In the present sample. the internal consistency of the scale was considered adequate (Cronbach's $\alpha = 0.67$).

Information on participants' sociodemographic and employment characteristics as well as their personal

experience with mental illness was also collected. Data collection took place from September to November 2019.

Procedure

In an attempt to minimise non-response bias, the present study placed great emphasis on how participants were approached, given as well the sensitive nature of the topic. Furthermore, as participants were MHPs during routine clinical practice, many efforts were made to minimise the burden introduced to them by participating in the study. Therefore, the first contact with them was regarded as being of vital importance and data collection was decided to occur through self-reported questionnaires (face to face interviews have better response rates but due to the sensitive topic, they were not selected for, as it was assumed that they would increase socially desirable responses). Moreover, a lengthy questionnaire was avoided in line with the view that "simple or less sophisticated measures may be nearly as precise while adhering a much higher response" (p.116, [35]).

The research protocol, the survey instrument and the informed consent forms were all submitted to the Ethics Committee of the Association for Regional Development and Mental Health. After approval (Number: 2019/06), a researcher contacted each of the selected services, explained the purpose of the study and sent all relevant material as well as a formal letter.

The Scientific Committee of each service approved the study protocol prior to proceeding with data collection. Upon permission, two research assistants visited the units in order to present the context of the study, its purpose and next steps to the clinical team. The research assistants who were not clinicians, stressed the anonymity of the questionnaires and explained how the completed questionnaires from all participating services will be mingled and then opened all at once. In this way, no one could have guessed which questionnaires corresponded to which services and to whom MHPs. Participants were also encouraged to be as honest as possible, as the study would be used as the first step for introducing interventions (e.g. capacity building activities). Finally, it was made clear to them that results will not be available on a service-level. After that, they handed in informed consent forms and questionnaires.

In each unit, someone from the administrative staff of the service was responsible for data collection (forms and the questionnaires). Participants were instructed to complete the form and the questionnaire by themselves, in a quiet room and in one sitting. They were told that the completion would take them roughly 10 min. After that, they would place the questionnaire and the consent form separately in an envelope (i.e. 2 envelopes: one for consents and one for completed questionnaires) so as to ensure anonymity and confidentiality of data. The professionals were given a month to complete the consent forms and the questionnaires, with weekly reminders (as a strategy to minimise "passive non-responders"). After a month, research assistants visited the services to collect the envelopes and record the feedback of the staff regarding the research procedure. They enquired about potential reasons of non-response from their point of view, but most of the services attributed it to the workload of the mental health services.

The study was in accordance with the ethical standards delineated in the 1964 Declaration of Helsinki, as revised in 2008. Participants were ensured about their anonymity and confidentiality of their responses, and it was made clear to them that the research team is independent of their mental health units and hence their colleagues and managers would not have access to their filled questionnaires nor could they identify them by their responses. Informed consent to participation was obtained from all participants.

Statistical analysis

First, descriptive analyses were performed using percentages and absolute frequencies for categorical and ordinal variables, while for continuous variables, means and standard deviations were computed if normally distributed and medians along with 25th and 75th percentiles if non-normally distributed (e.g. employment duration in a psychiatric hospital/clinic).

Moreover, a series of univariate analyses were performed with gender, age, family status, educational status, working setting (hospital-based vs community-based), professional group, working experience in an inpatient setting, personal experience with mental illness, the DS total score and the self-rated trust in psychiatry as independent variables, with the total score of ATIA as dependent variable, to identify statistically significant associations. The latter were then entered into a multiple linear regression model, to explore independent effects. All categorical variables were transformed into dummy variables before entering the model. Three consecutive blocks of variables were used: i) the self-rated trust in psychiatry, ii) the DS total score, iii) interaction between the rate of trust in psychiatry and DS total score, and the identified confounders, to identify the characteristics that were most related with professionals' ATIA. Partial η^2 values as a measure of effect size were estimated for the final model. A thorough assessment of its foundational assumptions was undertaken to affirm the integrity of our analysis. Scatterplot examinations scrutinized each predictor's relationship with the dependent variable for linearity, revealing no deviations from linear expectations between continuous variables. The Shapiro–Wilk

test confirmed the normality of the jackknife residuals ($W = 0.99$, $p = 0.76$), thus satisfying the normality criterion. Homoscedasticity, or the uniform variance of residuals across the range of predicted values, was confirmed via the Breusch-Pagan test ($\chi^2 = 2.68$, $p = 0.12$). The Variance Inflation Factor (VIF) for each predictor was well below the threshold of 5, dispelling multicollinearity concerns, with the exception of the interaction term and main effects, where correlation was inevitably high. Furthermore, no outliers or influential observations were identified in our sample, as no jackknife residual exceeded ± 2, no leverage exceeded the critical point of 0.12, and no Cook's D value exceeded 1. Collectively, these diagnostic tests validated the key assumptions underpinning our multiple linear regression model, providing a solid foundation for the subsequent analysis.

Statistical significance was set at 0.05 and the Statistical Package for Social Sciences version v 29 was employed [36]. The proportions of missing data in our study was low ranging from 2.00% (6/300) in the DS total score, and 3.33% (10/300) in the total score of the ATIA scale. Complete case analysis was used as the primary analysis since the proportions of missing data were below approximately 5% (as a rule of thumb) [37]. Therefore, the potential impact of the missing data in our study was deemed negligible.

Results

Attitudes towards involuntary admission

Regarding attitudes towards involuntary admission, as illustrated in Table 2, respondents tended to believe that involuntary hospitalisation is the only treatment option persons with SMI(61.19%) and that it is beneficial for them (72.960%). At the same time, the vast majority believed that people with SMI should be treated in community mental health services (89.93%) and not in psychiatric hospitals (90.64%). They thought that involuntary hospitalisation should be the last therapeutic resort (84.01%). Moreover, 35.19% considered involuntary admission as a measure that benefits the family rather than the patient and half of respondents either believed that involuntary admission has a negative effect on patient outcome (26.12%) or they were reluctant to answer this particular question (19.03%). Paradoxically, though, more than one third of participants (33.21%) considered that coercive measures, such as mechanical restraint, should not be abolished, as they ensure everyone's safety.

Attitudes to perceived dangerousness and trust in psychiatry

Participants appeared to have moderate levels of perceived dangerousness (DS: Mean 24.09 ± 7.66), but still hold stigmatising attitudes towards people with SMI. Specifically, most respondents (58.36%) believed that there should be a law forbidding formerly diagnosed patients with mental health issues the right to obtain a hunting license. Almost one out of three respondents were found to regard people with SMI as unpredictable (33.21%), and believed that it is dangerous to forget that they suffer from mental illness (29.59%). Moreover, 15.30% stated that they would hesitate to recommend a person with a formerly diagnosed mental illness for a teaching position or trust them, if they knew that they suffer from a mental disorder. Nonetheless, it is notable that the vast majority of respondents disagreed with the statement that the main purpose of psychiatric hospitals is to protect the public from people who suffer from mental illness (91.45%), and that if people with a formerly diagnosed mental illness lived nearby it would be

Table 2 Participants' attitudes towards involuntary admission

	Agree (%)	Unsure (%)	Disagree (%)	Mean (SD)
Involuntary hospitalization frequently occurs for the benefit of the family rather than the patient	35.19	13.33	51.48	-
Involuntary hospitalization is beneficial for the patient.[a]	72.96	18.89	8.15	-
Involuntary hospitalization must be the last therapeutic resort	84.01	7.06	8.92	-
Involuntary hospitalization has a negative impact on the course of illness	26.12	19.03	54.85	-
People with severe mental illness should be placed in psychiatric hospitals, against their will, in order to be under surveillance.[a]	5.62	3.75	90.64	-
It is more beneficial for people with severe mental illness to be treated in community mental health services	89.93	4.10	5.97	-
Practices, such as mechanical restraint, should not be abolished as they are useful for the safety of mental health staff, people with severe mental illness and the society.[a]	33.21	19.40	47.39	-
Often involuntary hospitalization is the only treatment option for people with severe mental illness	61.19	19.03	19.78	-
Total Score	-	-	-	28.51 (6.78)

[a] The items were reversed coded for the calculation of the total score

dangerous for their kids to go to the cinema (92.54%), or to play in the sidewalk (78.07%). Finally, MHPsreported high levels of trust in psychiatry (86.67%). Results are summarized in Table 3.

A series of univariate analyses revealed that the following variables were found to bear a statistically significant association with the composite score of ATIA scale: family status, educational status, professional group, working setting, self-rated trust in psychiatry, and the DS (Table 4).

Subsequently, the aforementioned variables were entered into a linear multiple regression model in three steps to observe the changes in the adjusted R^2 in each step: the rate of trust in psychiatry was entered in the model first, DS was entered in the second step, and an interaction between those two variables and all the possible confounders (i.e., family status, educational status, professional group, work setting) were entered last. The adjusted R^2 was found to be equal to 0.106, 0.271 and 0.340 in each step, respectively. The full model was found to explain 34% of the total variance.

The interaction effect between the rate of trust in psychiatry and the DS total score was found to be statistically significant ($p < 0.05$). It could be argued, thus, that the relationship between the DS total score and the total score of ATIA scale differs if the self-reported rate of trust in psychiatry is taken into account. The effect of trust in psychiatry depends negatively on the DS score. So, for each unit change in the DS score the slope of trust in psychiatry vs ATIA increases by 0.128. Results are illustrated in Fig. 1. It can be argued that, as the perceived dangerousness increases, the effect of the self-reported rate of trust in psychiatry on the attitudes towards involuntary admission is getting weaker. It is notable that after the inclusion of the interaction term and the confounders in the model, the effect of DS loses its statistical significance.

Moreover, as indicated in Table 5, having a postgraduate degree ($p < 0.05$) and working in an outpatient setting ($p < 0.05$) were found to be associated with less favourable attitudes towards involuntary admission.

Discussion

The present study endeavoured to (i) explore MHPs' attitudes towards involuntary admissions, (ii) describe their perceived dangerousness of people with SMI and their degree of trust in psychiatry, (iii) identify the predictors of their attitudes to involuntary admissions, and (iv) gauge the relevant contribution of stigma versus trust in psychiatry in explaining them.

The findings demonstrate that MHPs display complex, if not ambivalent, attitudes towards involuntary admissions. On the one hand, they consider it beneficial for the patient and to exert a positive impact on the course of illness; hence, acceptance of the measure. On the other hand, most of the respondents have a clear community mental health care orientation, as they opt for people with SMI to be treated in the community. Moreover, they agree with the view that compulsory admission should be the last therapeutic

Table 3 Participants' perceived dangerousness of people with severe mental illness and their trust in psychiatry

	Agree (%)	Unsure (%)	Disagree (%)	Mean (SD)
Dangerousness Scale				
If a group of former mental patients lived nearby, I would not allow my children to go to the movie theater alone.[a]	2.99	4.48	92.54	-
If a former mental patient applied for a teaching position at a grade school and was qualified for the job I would recommend hiring him or her	54.85	29.85	15.30	-
One important thing about mental patients is that you cannot tell what they will do from one minute to the next[a]	33.21	13.06	53.73	-
If I know a person has been a mental patient, I will be less likely to trust him.[a]	17.10	18.22	64.68	-
The main purpose of mental hospitals should be to protect the public from mentally ill people.[a]	5.20	3.35	91.45	-
If a former mental patient lived nearby I would not hesitate to allow young children under my care to play on the sidewalk	78.07	4.46	17.47	-
Although some mental patients may seem all right it is dangerous to forget for a moment that they are mentally ill.[a]	29.59	10.11	60.30	-
There should be a law forbidding a former mental patient the right to obtain a hunting license[a]	58.36	21.93	19.70	-
Total Score	-	-	-	24.09 (7.66)
Trust in Psychiatry				
I trust psychiatry and its methods for the treatment of people with severe mental illness	86.67	11.48	1.85	1.57 (0.79)

[a] The items were reversed coded for the calculation of the total score

Table 4 Univariate analyses with the ATIA scale total score as the dependent variable

	Mean	SD	*p*-value	r
Gender				
Male	28.46	6.38	.971	-
Female	28.49	6.96		-
Age	-	-	.074	.11
Family status				
Unmarried	27.09	6.89	.003	-
Married	29.99	6.56		-
Separated/Widowed	27.53	6.04		-
Educational level				
Secondary education/ Technical education	29.97	6.89	.004	-
University/Technological Educational Institution	28.03	6.4		-
Master's degree/ PhD	26.02	6.44		-
Specialty				
Psychiatrist	30.19	6.01	≤ .001	-
Psychologist	25.67	6.35		-
Social worker	25.83	7.32		-
Nurse	30.39	6.34		-
Other	30.12	6.876		-
Have you ever worked in a psychiatric hospital or in psychiatric ward of a general hospital?				
Yes	29.71	6.73	≤ .001	-
No	26.34	6.58		-
Have you, or a person close to you/ in your social network ever experienced a mental illness?				
Yes	28.17	6.86	.737	-
No	28.50	6.91		-
Type of services				
Inpatient	30.76	6.94	≤ .001	-
Outpatient	26.31	6.10		-
DS total score	-	-	≤ .001	.37
Trust in psychiatry¥	-	-	≤ .001	-.34

¥ The analysis was performed using Spearman's rho

resort (and that people with SMI should not be placed in psychiatric hospitals, under surveillance**.** Therefore, for the majority of professionals, compulsory admission is a necessary evil, which may be beneficial for the patient, when community mental health care cannot be delivered.

Nonetheless, the issue becomes rather complicated, in light of their difficulty in conceptualizing alternatives to involuntary admission. A substantial percentage considers it to be often the only option and that coercive practices serve everyone's best interest in terms of safety. The difficulty on the part of MHPs to consider alternatives to detention may reflect objective deficits in the mental health system configuration in Greece, as there is no statutory assertive community treatment [38]. Alternatively, it might reflect their subjective difficulty to think proactively and to establish informal and formal ways of collaborating within and between services. This is further supported by evidence showing that heightened rates of compulsory admissions in Greece may be partially due to gaps in continuity of care: only 13.8% of hospitalised patients- irrespective of status of admission- seem to be officially referred to community mental health services upon discharge [19].

As regards the second research objective, respondents displayed a high degree of trust in psychiatry. This may indicate that MHPs tend to think and act predominantly as clinicians in more traditional terms, considering alleviation of symptoms and improvement of functioning as their primary goals, instead of conceptualising treatment as multifaceted and continuous, often necessitating the input of various services, sectors and professionals. This, in turn, might be due to the lack of emphasis on community mental health orientation and the recovery paradigm in their training and practice [38]. The biomedical model prevails in the psychiatry residency programs; clinical psychology, rather than clinical community psychology, is taught at universities and there is no "psychiatric nurse" specialisation [38]. At the same time, the recovery model; which conceptualizes recovery as a way of living a satisfying, hopeful, and contributing life even with limitations caused by the illness, is not popular in mental health services [38].

In terms of perceived dangerousness, MHPs were found to endorse the stereotypical belief that people with mental illness are dangerous to some extent. While they do not seem to agree with explicitly derogatory and stereotypical statements, like "the main purpose of psychiatric hospitals should be to protect the public from people with mentally illness", nonetheless, a significant percentage is a bit skeptical about the risk they might pose. This concurs with international evidence [39] and it is of primary concern, given the links between MHPs' stigma and low-quality services, diagnostic labelling, pessimism about recovery, low adherence to informed consent practices, overemphasis on symptoms and coercive attitudes [40]. In Greece, previous evidence had highlighted the potency of the dangerousness stereotype in driving social stigma, as 74.6% of the general population had been found to endorse it as compared to 18.2% in Germany and 17.5% in Canada [41]. On the other hand, a previous study exploring MHPs attitudes towards mental illness in the two psychiatric hospitals of Attica documented predominantly favourable attitudes towards people with SMI; however, there were still some prejudices regarding pessimism about recovery, difficulty in understanding people with SMI as no different from everyone else and

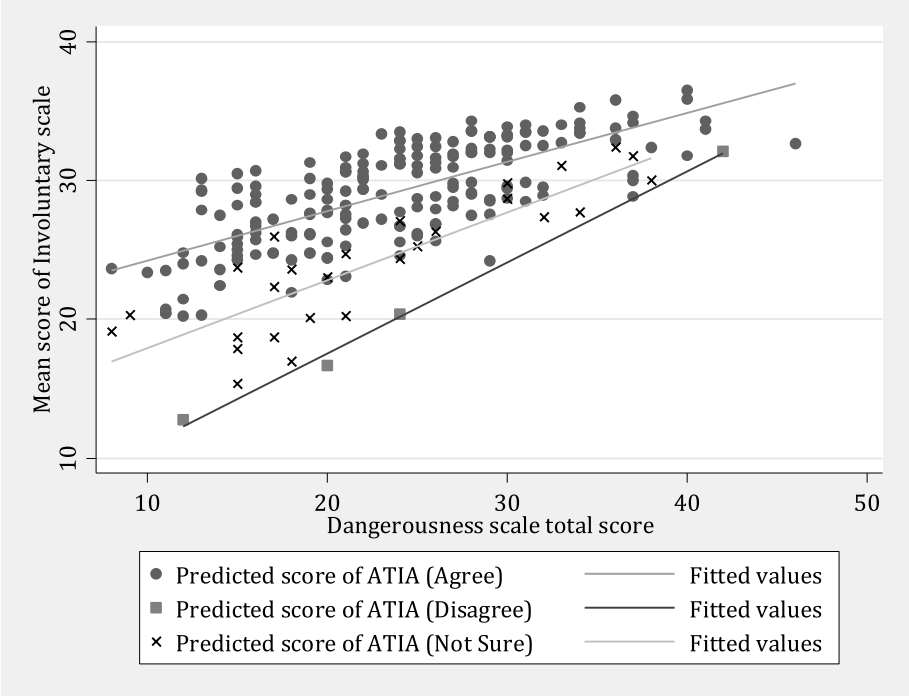

Fig. 1 Fitted values of the linear regression plotted against DS total score values and the self-rated trust in psychiatry

desire to keep distance in social encounters of greater intimacy [42]. Thus, stigma and the dangerousness stereotype seem to still be high in Greece, even among MHPs, raising skepticism about the quality of care provided.

A similar pattern is discerned regarding the predictors of staff attitudes towards compulsory admissions (research objectives 3 and 4). Trust in psychiatry emerges as the principal driver of acceptance of involuntary hospitalization. This finding resonates with the interpretation provided by the scarce international literature on the topic [8, 11]. Interestingly, the dangerousness stereotype did not yield an independent effect on shaping attitudes to compulsory admission; however, it was found to moderate the association between trust in psychiatry and acceptance of involuntary admission. In this reasoning, stigma endorsement reduces the impact of professionals' trust in psychiatry and its methods; and as a result of this, compulsory admissions no longer serve the need for treatment and optimism about recovery. Hence, it seems that stigma may introduce grave hurdles in MHPs practice, as it casts doubts about the effectiveness of their work, which in turn renders compulsory admission a procedure without purpose and an automatic practice, which eventually yields awkwardness and bewilderment to them. This finding might also bear direct relevance to the legislation pertaining to involuntary admissions. MHPs' acceptance of compulsory admissions due to their trust in psychiatry is in line with the need for treatment criterion. On the contrary, the perceived dangerousness of people with SMIs weakens the association between the two, indicating that the dangerousness criterion for detention might not be regarded as relevant to the clinical practice of mental health care, in line with the view that MHPs can only treat illness but they cannot predict violence [43]. At the same time, mental health workers of outpatient services displayed less acceptance of involuntary admissions in line with the international literature [10–12], perhaps due to a stronger community orientation as well as no direct involvement in the practice.

Study limitations

This study was not without its shortcomings. As it relied on self-report assessment, it could not have been impervious to social desirability bias. However, the anonymity of the questionnaire and the presentation of the study to participants endeavoured to minimise its occurrence. Social desirability scales were decided not to be used, as their validity has been questioned [44]. Due to the lack of a register of MHPs working in Athens region, no list of working professionals could constitute the sampling frame of the study. In this reasoning, the selection occurred on the basis of state-funded mental health services (hospital-based and community-based mental health services, including psychosocial rehabilitation units). As a result of this, MHPs of private mental health services as well as from other community structures (e.g.

Table 5 Linear regression analysis of correlates of ATIA

	Unstandardized coefficients	SE	Sig	Unstandardized coefficients	SE	Sig	Unstandardized coefficients	SE	Partial η^2	Sig
1. Trust in Psychiatry	−2.83	0.49	≤.001	−2.70	.46	≤.001	−5.27	1.52	.055	≤.001
2. Perceived Dangerousness scale				.38	.049	≤.001	.06	0.13	.001	.638
3. Trust in psychiatry x Dangerousness							.13	0.06	.020	.042
Educational level										
Secondary education/ Technical education										
University/Technological Educational Institution							−1.30	0.86	.020	.134
Master's degree/ PhD							−2.40	1.21	.021	.049
Family status										
Unmarried										
Married							.67	.83	.003	.417
Separated/Widowed							−2.99	1.64	.015	.071
Specialty										
Psychiatrist										
Psychologist							−1.36	1.27	.005	.284
Social worker							−2.19	1.37	.012	.113
Nurse							.03	1.19	.000	.982
Other							-.15	1.4	.000	.918
Type of services										
Inpatient										
Outpatient							−2.32	0.94	.028	.014
Work experience in a psychiatric hospital or the psychiatric ward of a general hospital							.77	1.01	.002	.444
Constant	32.98	0.87	$p<0.001$	25.02	1.46	$p<0.001$	32.85	3.39		$p<0.001$
	$R^2_{adj}=0.11, F=26.93, p<0.001$			$R^2_{adj}=0.27, F=41.61, p<0.001$				$R^2_{adj}=0.34, F=9.65, p<0.001$		

school psychologists, counseling centres, art therapists in musems etc.) were not taken into consideration. Professionals working in other community structures are a slim minority and they are not involved in any way (prevention, treatment of the acute phase and aftercare) in compulsory hospitalisations. In a similar vein, private mental health hospitals were also not involved in compulsory admissions at the time of the study. Private psychiatrists are a minority but they could not be reached out as well. The exclusion of these professionals occurred on the basis of relevance (for those not involved in any way in the treatment of people with severe mental illness) and feasibility (no register of psychiatrists in private practice). Their exclusion posits barriers to the generalisability of the findings; however, it would have jeopardized the internal validity of the study, as findings would have been contaminated by people with theoretical knowledge or no knowledge of the process. Nonetheless, the exclusion of private psychiatrists might have introduced selection bias in the study.

In terms of non-response bias, which is the most noteworthy limitation of cross-sectional surveys, very intense efforts were made to maximise response rate. In particular: (i) we formulated an engaging first approach to the participants, (ii) we opted for a self-rated instrument for data selection as we thought that face to face interviews would push participants into lower response rates and more socially desirable answers (due to the sensitive topic of the study), (iii) survey instrument was very short, (iv) multiple reminders tried to engage "passive non-responders", (v) anonymous completion of the instrument. These strategies were co-created with the clinicians of our research team. Nonetheless, as reasons of non-response could only be attained by administrative staff and non-responders could not be pursued, we could not rule out the emergence of non-response bias. While there were not significant differences in gender and professional groups between responders and non-responders, one cannot rule out the emergence of non-response bias in the study design. It is highly likely that people with more authoritative and unfavourable attitudes towards mental illness would be reluctant to participate in the study, leading perhaps to an underestimation of stigmatising beliefs and attitudes in the present sample and a potential source of selection and non-response bias.

As regards potential confounders, the study design endeavoured to control for confounders which were indicated by the international literature and the clinicians in our research team. There were some confounders that could not have been measured without resulting in a lengthy questionnaire that would have endangered the internal validity of the study. Examples of potential confounders operating in our study included the influence of other stereotypical beliefs surrounding severe mental illness (e.g. its curability), participants' personality structure and residual confounders.

Another potential limitation pertains to the ATIA scale. While a scientific justification for the development of a new instrument has been provided and the psychometric properties have been supported (construct, face, content and convergent validity as well as reliability), two issues warrant elaboration. The first relates to the moderate – albeit adequate- levels of internal consistency, which are probably attributed to the complexity of the construct tapped by the scale. The second pertains to the target population of the validation study (i.e. undergraduates and postgraduates of clinical mental health studies). As MHPs are burdened with increased workload and some of them would have been potential participants of our study, we decided to recruit participants for the validation study from the most popular clinical undergraduate and postgraduate courses. MHPs are usually trained there and students' educators are always clinicians with experience on the field, including involuntary admissions. As the validation of a newly developed scale is a long and laborious process, the scale is anticipated to be refined in the future. Moreover, in its present form, it provides more information than the one-item (with a dichotomous answer) previously used in the pertinent international literature. Finally, the cross-sectional design of the study does not allow to infer any conclusions about the direction of the association, a shortcoming that may be overcome by a longitudinal design.

As compulsory admission is a complicated and multipronged issue, with rates being variable across countries and even within countries [1], each case is considered unique and cannot be easily extrapolated to other regions and countries. Future studies in other regions of Greece and other countries are needed in order to shed light on the underpinnings and implications of MHPs attitudes to compulsory admissions.

Conclusions

In conclusion, the study shows that MHPS hold complex attitudes towards compulsory admissions. The acceptance of the practice was found to be attributed to their trust in psychiatry, especially given the dearth of alternatives in the current mental health care system configuration in Greece. When there are no alternatives, or MHPs cannot think of any, involuntary admission emerges as the sole treatment option. To address this, assertive community treatment and case management should become systematic parts of mental health services, while MHPs' training should be more community and recovery oriented. Concomitantly, the dangerousness stereotype does not seem to directly

impinge on their acceptance of the practice; indicating thus that it does not serve penal and control purpose in their view. Nonetheless, it does so indirectly via weakening the association between trust in psychiatry and attitudes to involuntary admission. Therefore, perceived dangerousness renders compulsory admission a practice that creates confusion and awkwardness to professionals. This is in line with growing pressures to revise the dangerousness legal criterion for detention, as predicting violent behaviour is beyond a clinician's role [43]. Stigma is still present, even among MHPs and its elimination should be prioritized. An empathy-centred intervention, especially stressing perspective taking, might be a way forward in the direction of stigma reduction [42].

Taken together, the mental health action plan in the country should systematise assertive community treatment and prioritise capacity building activities for mental health staff, by providing ongoing training on human rights (WHO Quality rights, [45]), community mental health and iatrogenic stigma.

Finally, in order to design and deliver preventive interventions against involuntary admissons, research and policy should not only address the patient-related predictors of involuntary hospitalisation but also the wider socio-economic and environmental factors that play a pivotal role. MHPs' acceptance of compulsory admissions as well as their shapers are an integral part of the culture pertaining to mental health care and thus constitutes a modifiable risk factor for any effort to curb detention rates.

Abbreviations

SMI	Severe mental illness
MHPs	Mental health professionals
DS	Dangerousness scale
ATIA	Attitudes towards involuntary admission

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Authors' contributions

LP: conception, design, analysis, interpretation and drafting the article. SN: design, analysis, interpretation and drafting the article. KT: design, interpretation and drafting the article. ND: conception, interpretation and drafting the article. EG: interpretation and revising the article critically for important intellectual content. AA: interpretation and revising the article critically for important intellectual content. KS: conception, design and revising the article critically for important intellectual content. SS: conception, design and revising the article critically for important intellectual content. VY: analysis, interpretation and revising the article critically for important intellectual content. All authors reviewed the manuscript.

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Data availability

The datasets generated and/or analysed during the current study are not publicly available due to still processing them for other submissions but are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate

Informed consent for participation was obtained from all participants and the study was approved by the Ethics Committee of the Association for Regional Development and Mental Health (number: 2019/06), as well as by the Scientific Boards of all the participating services.
The study was in accordance with the ethical standards delineated in the 1964 Declaration of Helsinki, as revised in 2008.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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References

1. Wasserman D, Apter G, Baeken C, Bailey S, Balazs J, Bec C, et al. Compulsory admissions of patients with mental disorders: state of the art on ethical and legislative aspects in 40 European countries. Eur Psychiatry. 2020;2020(63):e82, 1-9.
2. World Health Organization, United Nations. Mental health, human rights and legislation: guidance and practice. Geneva: World Health Organization and the United Nations; 2023.
3. Sheridan-Rains L, Zenina T, Dias MC, Jeffreys S, Branthonne-Foster S, Lloyd-Evans B, et al. Variations in patterns of involuntary hospitalization and in legal frameworks: an international comparative study. Lancet Psychiatry. 2019;6:403–17.
4. Aluh DO, Aigbogun O, Ukoha-Kalu BO, Silva M, Grigaite U, Santos-Dias M, et al. Beyond patient characteristics: a narrative review of contextual factors influencing involuntary admissions in mental health care. Healthcare. 2023;2023(11):1986.
5. Barnett P, Mackay E, Matthews H, Gate R, Greenwood H, Ariyo K, et al. Ethnic variations in compulsory detention under the Mental Health Act: a systematic review and meta-analysis of international data. Lancet Psychiatry. 2019;6:305–17.
6. Walker S, MacKay E, Barnett P, Sheridan Rains L, Leverton M, Dalton-Locke C, et al. Clinical and social factors associated with increased risk for involuntary psychiatric hospitalization: a systematic review, meta-analysis and narrative synthesis. Lancet Psychiatry. 2019;6:1039–53.
7. Roessler W. Factors facilitating or preventing compulsory admissions in psychiatry. World Psychiatry. 2019;8:355–6.
8. Lauber C, Nordt C, Falcato L, Roessler W. Public attitude to compulsory admissions of mentally ill people. Acta Psychiatr Scand. 2002;105:385–9.
9. Steinert T, Lepping P, Baranyai R, Hoffmann M, Leherr H. Compulsory admission and treatment in schizophrenia: a study of ethical attitudes in four European countries. Soc Psychiatry Psychiatr Epidemiol. 2005;40:635–41.
10. del Olmo-Romero F, Gonzalez-Blanco M, Sarro S, Gracio J, Martin-Carrasco M, Martinez-Cabezon AC, et al. Mental heath professionals' attitudes

towards mental illness: professional and cultural factors in the INTER NOS study. Eur Arch Psychiatry Clin Neurosci. 2019;269:325–39.
11. Lepping P, Steinert T, Gebhardt RP, Rottgers HR. Attitudes of mental health professionals and lay people towards involuntary admission and treatment in England and Germany – a questionnaire analysis. Eur Psychiatry. 2004;2004(19):91–5.
12. Wu HC, Tang IC, Lin WI, Chang LH. Professional values and attitude of psychiatric social workers toward involuntary hospitalization of psychiatric patients. J Soc Work. 2012;13:419–34.
13. Loukidou E, Mastroyannakis A, Power T, Thornicroft G, Craig T, Bouras N. Evaluation of Greek psychiatric reforms: methodological issues. Int J Ment Health Syst. 2013;7:11.
14. Stylianidis S, Georgaca E, Peppou LE, Arvaniti A, Samakouri M, MANE Group. Involuntary psychiatric hospitalizations in Greece: contemporary research and policy implications. Psychiatrike. 2023;2023(34):204–11.
15. The Greek Ombudsman. Ex officio research by the Greek Ombudsman on involuntary hospitalization of psychiatric patients: special report. Athens: Greek Ombudsman; 2007.
16. Karamanof v. Greece. Appeal Nbr: 46372/09. European Court of Human Rights, First Section. 2011. Available at: https://hudoc.echr.coe.int/eng?i=001-105761.
17. Venios v. Greece. Appeal Nbr: 33055/08. European Court of Human Rights, First Section. 2011. Available at: https://hudoc.echr.coe.int/fre?i=001-105522.
18. Ministry of Health. National Plan for Mental Health. 2023. http://www.opengov.gr/yyka/wp-content/uploads/downloads/2023/04/NMHAP-LAST-VERSION_24.04.2023.pdf. Accessed 25 May 2024.
19. Stylianidis S, Peppou LE, Drakonakis N, Douzenis A, Panagou A, Tsikou K, et al. Mental health care in Athens: are compulsory admissions in Greece a one-way road?. Int J Law Psychiatry. 2017;52:28–34.
20. Peppou LE, Drakonakis N, Nikolaidi S, Georgaca E, Arvaniti A, Stylianidis S. Rates and determinants of involuntary hospitalizations in Athens region: are there any differences between psychiatric and general hospitals? Psychiatry Res Commun. 2022;2022(2):100041.
21. Drakonakis N, Stylianidis S, Peppou LE, Douzenis A, Nikolaidi S, Tzavara C, et al. Outcome of voluntary vs involuntary admissions in Greece over 2 years after discharge: a cohort study in the Psychiatric Hospital of Attica "Dafni." Community Ment Health J. 2022;58:633–44.
22. Stylianidis S, Peppou LE, Drakonakis K, Iatropoulou G, Nikolaidi S, Tsikou K, et al. Patients' views and experiences of involuntary hospitalization in Greece: a focus group study. Int J Cult Mental Health. 2018;11:425–36.
23. Karasch O, Schmitz-Buhl M, Mennicken R, Zielasek J, Gouzoulis-Mayfrank E. Identification of risk factors for involuntary psychiatric hospitalization: usng environmental socioeconomic data and methods of machine learning to improve prediction. BMC Psychiatry. 2020;20:401.
24. Economou M, Kontoangelos K, Peppou LE, Arvaniti A, Samakouri M, Douzenis A, et al. Medical students' attitudes to mental illnesses and to psychiatry before and after the psychiatric clerkship: training in a specialty and a general hospital. Psychiatry Res. 2017;258:108–15.
25. Paul S. Mental health: an endangered occupational therapy specialty? Am J Occup Ther. 1996;50:65–8.
26. Christodoulou NG, Kollias K. Current challenges for psychiatry in Greece. BJPsych Int. 2019;16:60–1.
27. Konte V, Papachristou E, Stamou M, Peppou LE. Country Profile Greece. Community-based mental healthcare networks: key facts and national priorities. 2023. https://ja-implemental.eu/wpcontent/uploads/2024/04/cp_greece_final.pdf. Accessed 25 May 2024.
28. Raosoft I. Sample Size Calculator by Raosoft Inc. http://www.raosoft.com/samplesize.html. Accessed 16 Jun 2019.
29. Greek Ministry of Health. 2019. Sectorized design of development of mental health units. https://www.moh.gov.gr/articles/health/domes-kai-draseis-gia-thn-ygeia/c312-psyxikh-ygeia/monades-psyxikhs-ygeias/5520-ekthesh-sxediasmos-anaptykshs-monadwn-psyxargws. Accessed 16 Jun 2019.
30. Link BG, Cullen FT, Frank J, Wozniak JF. The social rejection of former mental patients: understanding why labels matter. Am J Sociol. 1987;92:1461–500.
31. Penn DL, Guynan K, Daily T, Spaulding WD, Garbin CP, Sullivan M. Dispelling the stigma of Schizophrenia: what sort of information is best? Schizophr Bull. 1994;20:567–78.
32. Singh SP, Baxter H, Standen P, Duggan C. Changing the attitudes of "tomorrow's doctors" towards mental illness and psychiatry: a comparison of two teaching methods. Med Educ. 1998;32:115–20.
33. Daly J, Kellehear A, Gilksman M. The public health researcher: a methodological approach. Melbourne: Oxford University Press; 1997.
34. Madianos M, Economou M, Peppou LE, Rogakou E, Alevizopoulos G. Measuring public attitudes to severe mental illness in Greece: development of a new scale. Eur J Psychiat. 2012;2012(26):55–67.
35. Prince M. Cross-sectional surveys. In: Prince M, Stewart R, Ford T, Hotopf M, editors. Practical psychiatric epidemiology. Oxford: Oxford University Press; 2007. p. 111–29.
36. IBM Corp. IBM SPSS statistics for windows, version 29.0.2.0. Armonk: IBM Corp; 2023.
37. Jakobsen JC, Gluud C, Wetterslev J, Winkel P. When and how should multiple imputation be used for handling missing data in randomised clinical trials - a practical guide with flowcharts. BMC Med Res Methodol. 2017;17(1):162.
38. Stylianidis S, Chondros P, Lavdas M. Critical approach of an empowerment recovery process: a case study from Greece. In: Soldatos C, Ruiz P, Dikeos D, Riba M, editors. Pluralism in psychiatry: diverge approaches and converging goals. Bologna: MEDIMOND; 2014. p. 229–35.
39. Stuber JP, Rocha A, Christian A, Link BG. Conceptions of mental illness: attitudes of mental health professionals and the general public. Psychiatr Serv. 2014;2014(65):490–7.
40. González-Torres MA, Oraa R, Arístegui M, Fernández-Rivas A, Guimon J. Stigma and discrimination towards people with schizophrenia and their family members. A qualitative study with focus groups. Soc Psychiatry Psychiatr Epidemiol. 2007;42:14–23.
41. Economou M, Gramandani C, Richardson C, Stefanis C. Public attitudes towards people with schizophrenia in Greece. World Psychiatry. 2005;4:40–4.
42. Economou M, Peppou LE, Kontoangelos K, Palli A, Tsaliagkou I, Legaki EM, et al. Mental health professionals' attitudes to severe mental illness and its correlates in psychiatric hospitals of Attica: the role of workers' empathy. Community Ment Health J. 2020;56:614–25.
43. Gilhooley J, Kelly BD. Return of the asylum. Br J Psychiatry. 2018;212:69–70.
44. Lanz L, Thielmann I, Gerpott FH. Are social desirability scales desirable? A meta-analytic test of the validity of social desirability scales in the context of prosocial behavior. J Pers. 2022;90:203–21.
45. World Health Organisation. 2019. Mental health, disability and human rights. WHO Quality Rights core training – for all services and all people. Available at: https://www.who.int/publications/i/item/who-qualityrights-guidance-and-training-tools. Accessed 27 October 2024.

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