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REVIEW ARTICLE

Evidence synthesis on coercion in mental health: An umbrella review

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Abstract

Coercion in mental healthcare is ubiquitous and affects the physical health, recovery and psychological and emotional well-being of those who experience it. Numerous studies have explored different issues related to coercion, and the present umbrella review aims to gather, evaluate and synthesise the evidence found across systematic reviews. The protocol, registered in the International Prospective Register of Systematic Reviews (PROSPERO registration number: CRD42020196713), included 46 systematic reviews and meta-analyses of primary studies whose main theme was coercion and which were obtained from databases (Medline/PubMed, PsycINFO, EMBASE and CINAHL) and repositories of systematic reviews following the Preferred Reporting Items for Systematic reviews and Meta-Analyses guidelines. All the reviews were subjected to independent assessment of quality and risk of bias and were grouped in two categories: (1) evidence on specific coercive measures (including Community Treatment Orders, forced treatment, involuntary admissions, seclusion and restriction and informal coercion), taking into account their prevalence, related factors, effectiveness, harmful effects and alternatives to reduce their use; and (2) experiences, perceptions and attitudes concerning coercion of professionals, mental health service users and their caregivers or relatives. This umbrella review can be useful to professionals and users in addressing the wide variety of aspects encompassed by coercion and the implications for professionals' daily clinical practice in mental health units. This research received funding from two competitive calls.

KEYWORDS
coercion, mental health, systematic review

INTRODUCTION

Coercion affects physical health, recovery and psychological and emotional well-being, resulting in negative emotions and causing profound psychological and traumatic effects in individuals (Lan et al., 2017; World Health Organization [WHO], 2019). The need to limit, regulate or even suppress the use of coercive measures in mental health care has been highlighted by international organisations, professionals and representatives of mental health service users (Aguilera-Serrano et al., 2019; Fletcher et al., 2017).

In this document, the term coercion will be used as a synonym for restrictive practices, which can be formal or informal. Formal coercion is regulated and documented, and its main representations are involuntary admission, seclusion or isolation, restriction of movement through physical or mechanical restraint and the forced administration of medication. Informal coercion, on the other hand, is not formally decided or documented and covers a range of more subtle practices, such as persuasion, influence over decision-making, threats and the stigmatising attitudes of professionals themselves (Elmer et al., 2018; Hem et al., 2018; Hotzy et al., 2018). At the core of coercion is the experience of a loss of freedom; indeed, users may feel vulnerable and exposed, which can limit them from communicating their own needs and wishes to mental health staff (Hem et al., 2018).

Coercion in mental healthcare is ubiquitous, but its nature, frequency and degree vary, as it can be influenced by different factors (Molodynski et al., 2017). Although restrictive practices should be considered the last option, only to be resorted to when other procedures have failed and individuals are a danger to themselves or others (Krieger et al., 2018), they are frequently applied to inpatients in response to management difficulties, conflict or aggression (Fletcher et al., 2017). It is possible that lower rates of conflict and coercion can be achieved through collaborative working between professionals and mental health service users (Tingleff et al., 2017; Vieta et al., 2017; WHO, 2019). However, not only inpatients experience coercion; the transference of many mental healthcare interventions to outpatient settings has led to the application of coercive measures in the community, such as Community Treatment Orders (CTOs) (Nakhost et al., 2018).

Numerous studies have explored different topics related to coercion, such as the different types, the consequences of its application, the ethical challenges involved, perceptions of users and professionals and specific interventions to reduce restrictive practices, among others. As a result of this research, a series of systematic reviews have been published regarding these topics. The aim of this umbrella review is to gather, evaluate and synthesise the existing evidence on mental health coercion provided by the systematic reviews found in the literature.

METHODS

Design

This umbrella review was developed according to the Joanna Briggs Institute (JBI) manual for evidence synthesis (Aromataris et al., 2020). The review protocol was registered in the International Prospective Register of Systematic Reviews (PROSPERO RN: CRD42020196713) in July 2020 and was published as an article in 2022 (Aragonés-Calleja & Sánchez-Martínez, 2022). The reporting of this umbrella review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

Eligibility criteria

Inclusion criteria

The general inclusion criterion was coercion as the main theme. We used the PICOS or PICo framework to provide explicit criteria on:

- Population comprised of mental health service users, family members or primary caregivers, mental healthcare providers, decision-makers and researchers.
- Intervention or phenomenon of interest considered any type of coercion (formal, informal or perceived) or restriction in mental health.
- Comparisons were varied, as primary studies in the systematic reviews could be intervention versus a non-exposed control group, pre-and-post cohorts, user versus non-user, as well as qualitative designs that did not mention any comparison.
- Outcomes were the effects or consequences of restraint, including perceptions of those who use and to whom restraint is applied, health outcomes, ethical conflicts, policies and interventions to reduce restraint.
- Study design included systematic reviews and meta-analyses, synthesising the results of primary studies on coercion. Reviews could include empirical primary studies of any design: experimental, quasi-experimental, cross-sectional, mixed and qualitative designs. We identified the synthesis of published research in any language and without a year of publication filter, to identify any relevant studies.
- Context (Co) involved any mental health setting (acute unit, community centre, addictive behaviour unit, medium stay unit, etc), regardless of country or city.

Exclusion criteria

Reviews were excluded if they incorporated texts and opinions or theoretical studies as primary sources of evidence; were not based on primary empirical studies, such as scoping reviews, as well as higher order reviews, such as reviews of reviews; if they did not provide a complete list of included primary studies; and if they did not describe the search strategy and explicit inclusion criteria.

Study selection

Both authors designed the search strategy after trying different combinations of keywords and Boolean operators, to obtain an accurate and comprehensive combination for the research topic. This strategy was presented to a group of experts from the Health Sciences Library of the University of Valencia, after which the search was further refined.

A 3-phase search process was used. First, keywords were identified through the research questions and stated objectives. Second, specific search filters were constructed for each database. The reference lists of studies meeting the inclusion criteria were reviewed.

The main sources of information were biomedical databases such as Medline/PubMed, PsycINFO, EMBASE and CINAHL; repositories of systematic reviews, such as the JBI Database of Systematic Reviews and the Cochrane Database of Systematic Reviews. We considered other sources, such as direct citation searches or hand searches of individual journals. The search

strategies used in the different sources are available in the File S1 (Search strategy).

There was no start date for the search and it included reviews published until 29 April 2021. A start date for the search was not set to avoid discarding relevant reviews and to have the option to supress them based on author consensus. There were no language restrictions on the search.

The search resulted in 921 studies being identified. After removing duplicates (n=443), both authors independently examined the titles and abstracts of 478 articles, selecting 71 for full-text reading, of which 44 met the inclusion criteria. Two more articles were added after the reference lists of the included articles were checked (n=46). The flow diagram of the study selection process is shown in Figure 1. The list of excluded studies is available in File S2 (List of excluded studies).

Data extraction

To minimise the risk of bias, data extraction was carried out independently by the two authors using the JBI data extraction template for systematic reviews and research syntheses (Aromataris et al., 2020). The standardised protocol template included the following study details: author/year, objectives, participants (characteristics/total number), setting/context, description of interventions/phenomena of interest, search details, range (years) of included studies, number of studies included, types of studies included, country of origin of included studies, appraisal (appraisal instruments used, appraisal rating), analysis methods, outcome assessed, results/findings, significance/direction, heterogeneity and comments. Any disagreement between the reviewers was resolved by consensus. The data extraction process was supported by Microsoft Excel 2016.

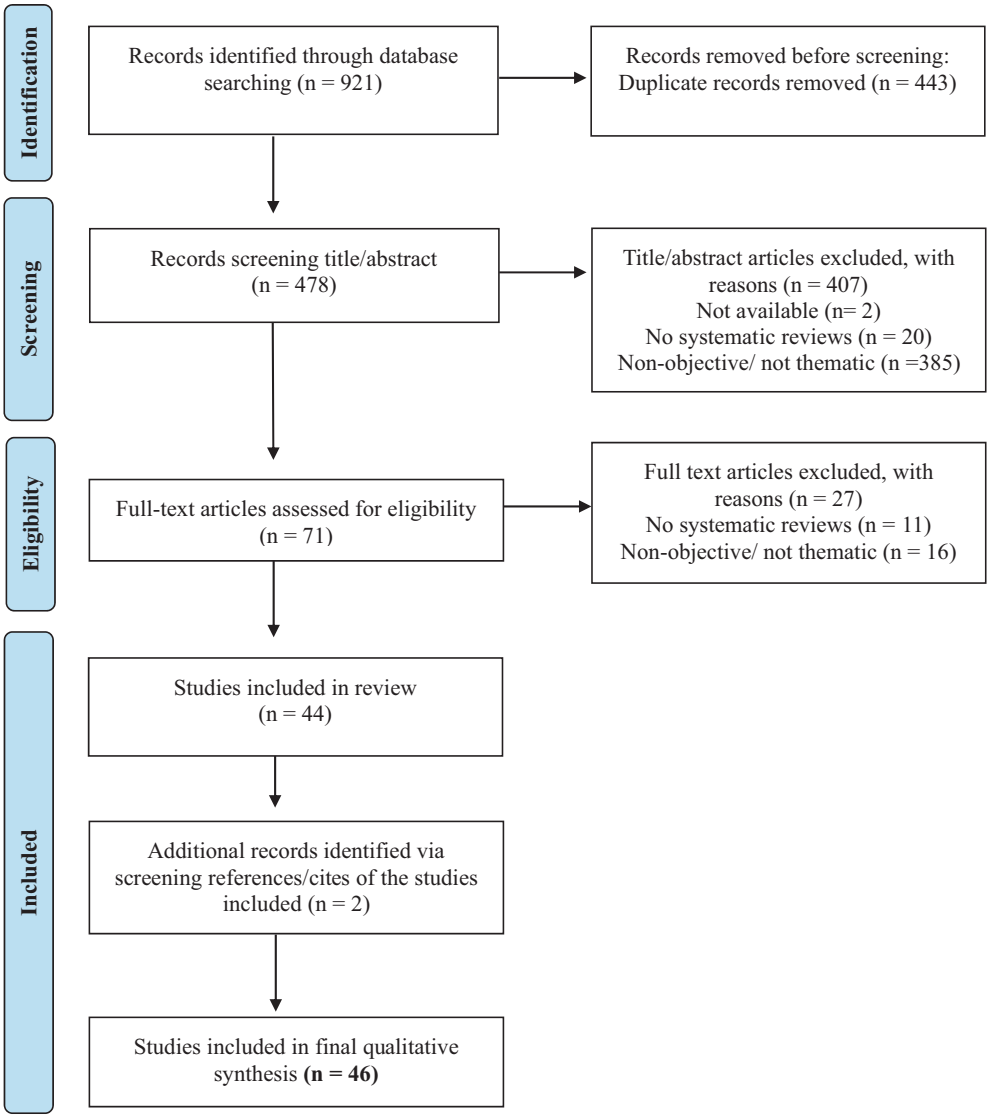

FIGURE 1 Flow diagram of the study selection process.

Data synthesis and analysis

Our initial protocol was designed to group the information according to focus and methodology (qualitative or quantitative reviews); however, given the number and heterogeneity of the studies included, a structured narrative synthesis and a thematic synthesis were developed to synthesise the key findings in an accessible format. The evidence provided by the systematic reviews regarding the prevalence, effectiveness, unintended effects, related factors and interventions to reduce the use of the specific forms of coercion was summarised using a narrative synthesis (Popay et al., 2006). A thematic synthesis was developed to summarise the experience, perceptions and attitudes of all those implicated in the application of any coercive measure (namely professionals, mental health service users and their caregivers) described in the systematic reviews, following the recommendations of Thomas and Harden (2008). The analyses reached the descriptive level, given the synthetic aim of this review.

Ethics

This umbrella review comprises secondary data from primary research. Therefore, there are no ethical issues of concern.

Assessment of risk of bias

After full-text analysis and data extraction, the JBI Critical Appraisal Tool 'Checklist for Systematic Reviews' was used to assess the quality of the studies included. Quality was assessed by each researcher independently. The quality score for each article was agreed upon: scores equal to or under four out of 11 were considered low quality; those of 5–7 out of 11 were considered moderate; and those of eight out of 11 and higher were considered high quality.

The Risk of Bias Assessment Tool for Systematic Reviews (ROBIS) was also applied independently by the two authors (Whiting et al., 2015, 2016), who classified the studies according to their risk of bias as low, unclear or high. No studies were excluded due to their quality or risk of bias, but these factors were considered during the analyses of the results.

RESULTS

Characteristics of the included reviews

The final synthesis included 46 articles, of which some were systematic reviews ($n=36$, 29 of which were qualitative syntheses) and others were systematic reviews, including meta-analyses ($n=10$). Most had been published in the previous 5 years and in English, except for one article published in Dutch (De Waardt & van der Heijden, 2017), one in German (Rabe et al., 2017), one in Norwegian (Dahm et al., 2017) and one in French (Pariseau-Legault et al., 2020). Articles originally published in Dutch, German and French were translated into English using DeepL Pro. The number of studies included in each review ranged from $N=0$ (Sailas & Fenton, 2000) to $N=311$ (Muir-Cochrane et al., 2020a; Muir-Cochrane et al., 2020b; Muir-Cochrane et al., 2020c), and the year of publication ranged from 2000 (Sailas & Fenton, 2000) to 2021 (Plunkett & Kelly, 2021). The main contexts were psychiatric inpatient units and community settings in diverse countries. The extraction table is offered to readers as supplementary material (File S3. Full data extraction table). The quality and the risk of bias of the systematic reviews included in each category are summarised in Figures 2 and 3, where it can be seen that 48% ($N=22$) were of high quality and a low risk of bias, while 2% ($N=1$) were of low quality and a high risk of bias.

Studies were classified into two categories:

- Evidence on specific coercive measures. This category included six subcategories: seclusion and restriction; forced treatment; involuntary admissions; coercion in community care (Community Treatment Orders); informal coercion; and coercion in general. For every subcategory, we described the evidence concerning their prevalence, effectiveness, harmful effects, related factors and alternatives to reduce their use.
- Professionals, mental health service users and their caregivers or relatives' experiences, perceptions and attitudes towards coercion and specific coercive measures.

Evidence on specific coercive measures

The 35 articles regarding different specific coercive measures were classified in six subcategories: seclusion and restriction; forced treatment; involuntary admissions; coercion in community care (CTOs); informal coercion; and coercion in general. Some reviews addressed more than one subcategory and were thus included in more than one. The study characteristics, objectives, methodological quality and risk of bias of the studies included in this category and subcategories are summarised in Table 1.

Seclusion and restriction

Fifteen systematic reviews addressed seclusion and physical or mechanical restraint as coercive measures in psychiatric inpatient units, estimating their prevalence (De Hert et al., 2011; Rabe et al., 2017), focusing

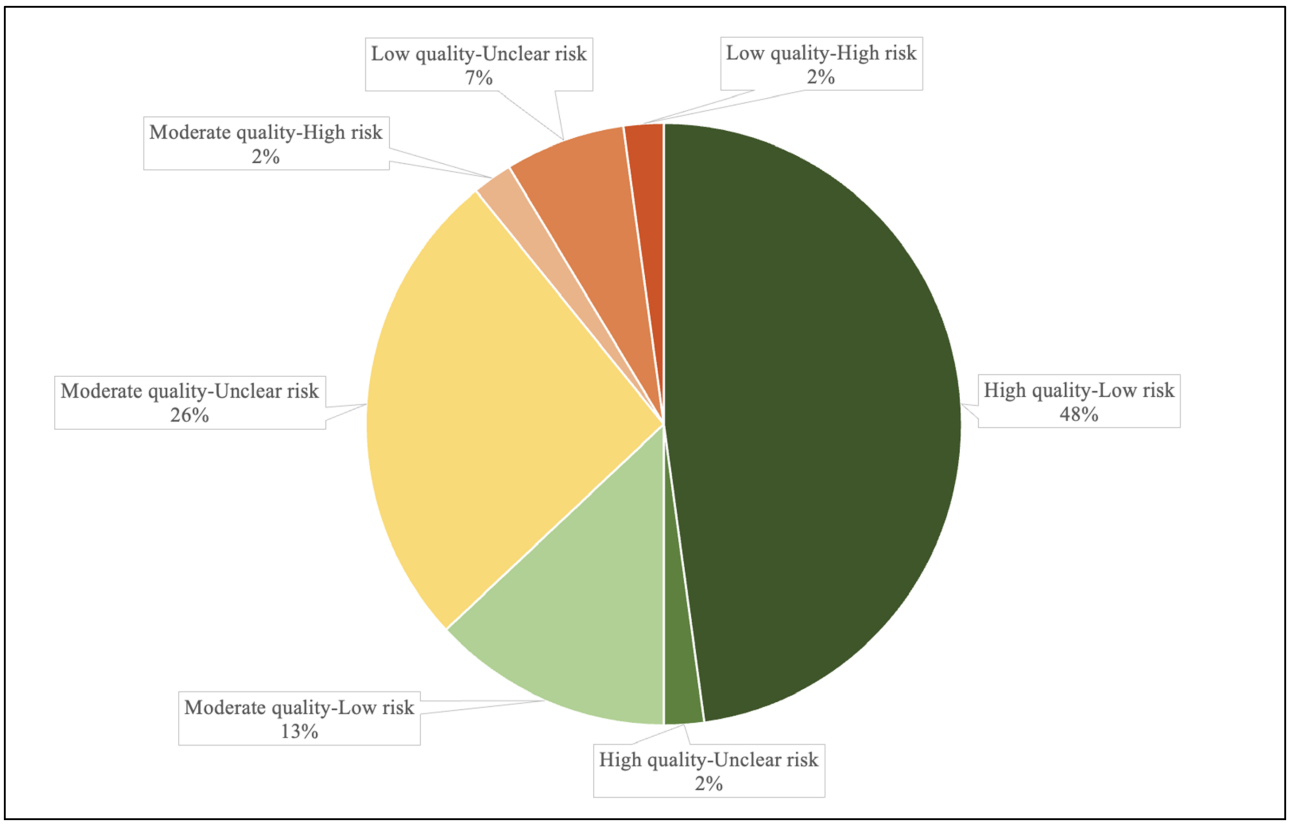

FIGURE 2 Overall quality and risk of bias of the studies.

on their effectiveness (Sailas & Fenton, 2000), summarising their harmful consequences (Chieze et al., 2019; Gleerup et al., 2019; Kersting et al., 2019; Nielson et al., 2020), describing the preference of users for seclusion over mechanical restraint (Gleerup et al., 2019), detailing the factors related to the use of seclusion and restriction (Chieze et al., 2019; Jackson et al., 2018; Jalil & Dickens, 2018; Nielson et al., 2020) and introducing interventions to reduce their use (Bak et al., 2012; Bryson et al., 2017; Dahm et al., 2017; Gaynes et al., 2017; Goulet et al., 2017; Ye et al., 2018).

Regarding the *prevalence* of seclusion and restriction, the review by Rabe et al. (2017) reported a high but unspecified prevalence of the use of coercive measures among children and adolescents. De Hert et al. (2011) also studied seclusion and restraint in children and adolescents, finding high rates of seclusion (26% of patients; 67/1000 patient days), and restraint (29% of patients; 42.7/1000 patient days) in their systematic review.

In the case of the *effectiveness* of seclusion and restraint, Sailas and Fenton considered randomised controlled trials in their 2000 review. The authors attempted to compare their effects with those of 'standard care' or other alternative approaches in mental health units, but found no studies to include in their review.

Four reviews (Chieze et al., 2019; Gleerup et al., 2019; Kersting et al., 2019; Nielson et al., 2020) analysed the *harm and unintended effects* that seclusion and restraint suppose for users. In their review regarding physical harm, Kersting et al. (2019) included 67 studies, among which restraint was the most frequently reported coercive measure and death its most frequently described harm. Cardiac arrest due to chest compression or strangulation was reported in 23 studies, while pulmonary embolism was named in eight studies. Other types of harm included venous thromboembolism and injuries during physical restraint, which were reported in 0.8%–4% of cases. Chieze et al. (2019) studied the psychological sequelae of seclusion and restraint, which generally consisted of a high incidence of post-traumatic stress disorder (25%–47%), especially in individuals with past traumatic events. The review by Gleerup et al. (2019) compared the length of stay for those in seclusion and restriction versus those who were not subjected to these methods and reported that the mean length of stay was 25 days longer for those in seclusion than for those not in seclusion, while in the case of mechanical restraint, the mean length of stay for those undergoing seclusion was only 5 days longer than for those who did not undergo it. They also found that mechanical restraint appeared to be a safer option, with less severe self-harm and shorter stays in comparison to seclusion. With respect to the potential harm caused by seclusion and restraint in children and adolescents, Nielson et al. (2020) highlighted that the main consequences of physical restraint were physical and emotional damage.

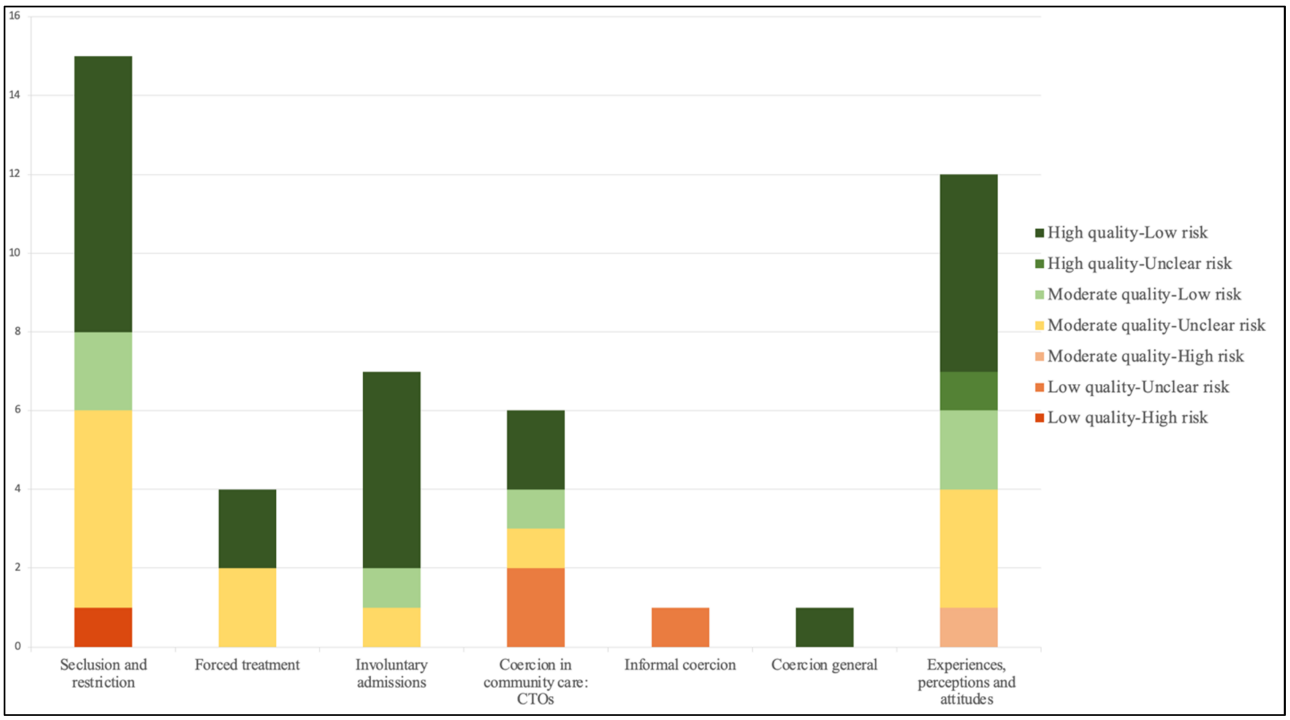

FIGURE 3 Quality and risk of bias of the studies by category.

The review by Gleerup et al. (2019) concluded that users generally *prefer* seclusion over mechanical restraint, but three of the 11 studies they contemplated were based on 'hypothetical' exposure to coercion; that is, participants rated coercive measures to which they had not necessarily been exposed, based solely on descriptions of the measures.

Regarding the *factors related* to the use of seclusion and restriction, Chieze et al. (2019) focused on psychiatric diagnosis, and concluded that those most frequently associated with the use of these measures were schizophrenia, schizoaffective disorder and bipolar disorders during manic episodes. Nielson et al. (2020) followed the methodological recommendations set out by De Hert et al. (2011) to study the diverse factors related to the use of seclusion and restriction in children and adolescents and identified characteristics that can help to predict the application of coercive measures, such as younger age, diagnosis of a psychotic disorder, multiple previous hospital admissions, trauma, self-harm and a history of aggression. They also described the most common reasons for the use of coercion, including risk behaviours, such as agitation, heteroagression and threats, and longer admissions. Jackson et al. (2018) studied the factors influencing mental health professionals in their decisions to release service users from seclusion. They divided factors into two groups: environmental and organisational. Two main environmental factors could delay this decision: a stressful environment and the need to maintain security in the wards. Two organisational factors were also involved; namely, the belief among staff that seclusion and isolation contributed paradoxically to both instability and security in the ward. In this sense, during unstable periods, the commitment of staff to work was undermined and staff insecurity increased, resulting in a reluctance to end seclusion measures. Focusing on the professionals' role in the use of seclusion and restriction, Jalil and Dickens (2018) studied the influence of mental health nurses' anger related to service users and their clinical management, or to work and the work environment. Their results suggested that anger influenced the use of physical restriction and seclusion, though they were unable to demonstrate this categorically. In addition, they found that anger could have negative consequences both for nurses' well-being and for the care provided.

In the case of the reviews that focused on *interventions to reduce the use* of mechanical restraint, Bak et al. (2012) concluded that three types were more likely to reduce the number of such interventions: the implementation of cognitive milieu therapy (achieving a reduction of 87%); combined interventions (programmes consisting of several interventions, such as user education, staff education, user involvement, programmatic changes, high-level administrative support, cultural changes and data analysis, among others) and patient-centred care. Goulet et al. (2017) studied alternatives to seclusion and restraint in their evaluation of 23 articles. Six key components predominated in all seclusion and restraint-reduction programmes: leadership, training, post-seclusion and/or restraint review, users' involvement, prevention tools and environment. In parallel, Gaynes et al. (2017) reported positive results for two strategies that effectively reduced aggressive behaviour and the use of seclusion and restraint: risk assessment and multimodal interventions consistent with the principles of the Six Core Strategies.

TABLE 1 Study characteristics, objectives, methodological quality and risk of bias of the studies included in the theme 'Evidence on specific coercive measures'.

Author/year	Objectives	*N*	Countries	Analysis	Methodological quality/JBI	Risk of bias/ ROBIS
Seclusion and restriction						
Sailas and Fenton (2000)	To compare the effects of seclusion and restraint with standard care or other alternative care in mental health units	0	Not applicable	Not applicable	8/8 High quality	Low risk
De Hert et al. (2011)	To analyse the prevalence and determinants of seclusion and restraint in children and adolescent population	7	United States (4), Australia (2) and Europe (1)	Quantitative systematic review	6/11 Moderate quality	Unclear risk
Bak et al. (2012)	To identify interventions that prevent mechanical restraint	59	International	Qualitative and quantitative systematic review	7/11 Moderate quality	Unclear risk
Bryson et al. (2017)	To examine trauma-informed care in in mental health and residential treatment settings for youth	13	Not mentioned	Qualitative systematic review	6/11 Moderate quality	Unclear risk
Dahm et al. (2017)	To summarise the evidence about interventions for reducing seclusion and restraint in mental healthcare for adults	21	Norway (2), Switzerland (2), Finland (2), Netherlands (5), United Kingdom (6), Denmark (2), Australia (1) and United States (1)	Quantitative systematic review	10/11 High quality	Low risk
Gaynes et al. (2017)	To compare the effectiveness of strategies to prevent and de-escalate aggressive behaviours among mental health inpatients for reducing use of seclusion and restraint	17	United States (8) and others (9)	Qualitative systematic review	7/11 Moderate quality	Unclear risk
Goulet et al. (2017)	To evaluate the effectiveness of mental health restraint and seclusion reduction programmes	23	United States (10), Australia (4), Netherlands (4), United Kingdom (3), Sweden (1) and Finland (1)	Qualitative systematic review	10/11 High quality	Low risk
Rabe et al. (2017)	To provide a current overview of the use of coercive measures in child and adolescent psychiatry	12	Australia (2), United States (4), Finland (1), Switzerland (1), Germany (1), Norway (1), New Zealand (1) and Canada (1)	Quantitative systematic review	4/11 Low quality	High risk
Jackson et al. (2018)	To identify factors that induce mental health professionals to release a mental health service user from seclusion	12	United Kingdom (2), Netherlands (1), United States (1), Canada (1) and Australia (5)	Qualitative systematic review	8/11 High quality	Low risk
Jalil and Dickens (2018)	To synthesise the relationship of mental health nurses' anger to their attitudes	12	United Kingdom (4), United States (2), China (1), Canada (1), Japan (1), Iran (1), Australia (1) and Turkey (1)	Qualitative systematic review	9/11 High quality	Low risk

(Continues)

TABLE 1 (Continued)

Author/year	Objectives	*N*	Countries	Analysis	Methodological quality/JBI	Risk of bias/ ROBIS
Ye et al. (2018)	To verify the effectiveness of staff training in the reduction of physical restraint in mental health service	8	China	Quantitative systematic review. Meta-Analysis	10/11 High quality	Low risk
Chieze et al. (2019)	To study the effects of seclusion and restraint on adult mental health service users and compare them versus non-exposure or exposure to other coercive measures	35	Brazil (1), Germany (4), Norway (2), Australia (3), Netherlands (1), Finland (4), European countries (1), United States (11), Japan (1), Spain (1), Sweden (1), Austria (1), France (1), India (1), Canada (1) and one stranger	Qualitative systematic review	9/11 High quality	Low risk
Gleerup et al. (2019)	To review and compare the effects of seclusion and mechanical restraint	14	United States (4), Germany (3), Israel (1), Netherlands (1), Brazil (1), India (1), Japan (1), United Kingdom (1) and 10 different European countries (1)	Quantitative systematic review	6/11 Moderate quality	Low risk
Kersting et al. (2019)	To identify physical harm on persons with mental disorders resulting from the use of coercive measures	67	Different countries of the world, mainly United Kingdom and United States	Qualitative systematic review	7/11 Moderate quality	Unclear risk
Nielson et al. (2020)	To analyse and synthesise the literature regarding the physical restraint of children and adolescents in inpatient mental health services	16	America (6), Australia (3), Norway (3), Canada (2), Belgium (1) and Finland (1)	Qualitative systematic review	7/11 Moderate quality	Low risk
Forced treatment						
Clausen and Jones (2014)	To review the frequency, duration, type and effect of involuntary treatment of people with anorexia nervosa	8	United Kingdom (3), Australia (2), Japan (1), Germany (1) and United States (1)	Quantitative systematic review	7/11 Moderate quality	Unclear risk
Muir-Cochrane et al., (2020a)	To synthesise the international prevalence of the use of forced treatment in persons with mental disorders for the emergency management of adults with uncontrolled aggression, agitation or violence through retrospective audits	48	International	Quantitative systematic review. Meta-analysis	8/11 High quality	Low risk
Muir-Cochrane et al., (2020b)	To summarise the available evidence on the efficacy and safety of chemical restraint through randomised controlled trials	21	United States (5), India (2), Brazil (4), Iran (1), Australia (5), United Kingdom (1), Holland (1), Switzerland (1) and Israel (1)	Qualitative systematic review	8/11 High quality	Low risk
Muir-Cochrane et al., (2020c)	To identify and describe existing international research on chemical containment	311	United States, United Kingdom and Australia contributed over half the research, while cross-country collaborations comprised 6%	Qualitative systematic review	7/11 Moderate quality	Unclear risk

TABLE 1 (Continued)

Author/year	Objectives	*N*	Countries	Analysis	Methodological quality/JBI	Risk of bias/ ROBIS
Involuntary admissions						
De Jong et al. (2016)	To determine which interventions effectively reduce compulsory mental health admissions	13	United Kingdom (6), Netherlands (2), United States (2), Denmark (1), Norway (1) and Switzerland (1)	Quantitative systematic review. Meta-analysis	11/11 High quality	Low risk
Giacco et al. (2018)	To appraise the available literature to identify helpful approaches to improve outcomes of involuntary treatment	19	Switzerland (5), United Kingdom (3), Australia (3), Japan (1), United States (5), Canada (1) and Spain (1)	Qualitative systematic review	7/11 Moderate quality	Low risk
Wynn (2018)	To identify the current state of research on involuntary admissions in Norway	74	Norway	Qualitative systematic review	5/11 Moderate quality	Unclear risk
Barnett et al. (2019)	To determine the association between ethnic origin and increased risk of involuntary mental health hospitalisation	71	United Kingdom (49), Canada (2), Italy (3), Ireland (2), Netherlands (4), United States (5), Norway (1), Switzerland (2), Denmark (1), Spain (1) and New Zealand (1)	Quantitative systematic review. Meta-analysis	11/11 High quality	Low risk
Molyneaux et al. (2019)	To synthesise the evidence on the effectiveness of crisis-planning interventions to reduce involuntary admissions	5	England (3), Netherlands (1) and Switzerland (1)	Quantitative systematic review. Meta-analysis	10/11 High quality	Low risk
Walker et al. (2019)	To evaluate clinical and social factors associated with an increased risk of involuntary mental health hospitalisation	77	Eighteen studies developed in high-income countries (Australia, Canada, Israel, Taiwan, the United States and 13 in Europe) and four in middle-income countries (Brazil, China, India and Turkey)	Quantitative systematic review. Meta-analysis	10/11 High quality	Low risk
Yang et al. (2020)	To examine the prevalence of voluntary and involuntary mental health admissions for persons with severe mental disorders in China and explore their associated factors	14	China	Quantitative systematic review. Meta-analysis	8/11 High quality	Low risk
Dahm et al. (2017) detailed in section of seclusion and restriction						
Coercion in community care: CTOs						
Kisely and Hall (2014)	To update the available evidence on randomised controlled trials in community treatment orders	3	United States (2) and United Kingdom (1)	Quantitative systematic review. Meta-analysis	7/11 Moderate quality	Low risk
Maughan et al. (2014)	To update a previous review evaluating the effectiveness of community treatment orders	18	Australia (8), United States (5), United Kingdom (1), Canada (3), Australia and Canada (1)	Qualitative systematic review	6/11 Moderate quality	Unclear risk

(Continues)

TABLE 1 (Continued)

Author/year	Objectives	*N*	Countries	Analysis	Methodological quality/JBI	Risk of bias/ ROBIS
Kisely (2016)	To summarise the effectiveness of community treatment orders in Canada	8	Canada	Qualitative systematic review	4/11 Low quality	Unclear risk
De Waardt and van der Heijden (2017)	To summarise the efficacy, costs and patient and caregiver perspectives on mandatory community treatment	105	Not mentioned	Qualitative systematic review	3/11 Low quality	Unclear risk
Kisely et al. (2017)	To examine the effectiveness of compulsory community treatment for people with severe mental disorders	3	United States (2) and United Kingdom (1)	Quantitative systematic review. Meta-analysis	11/11 High quality	Low risk
Barnett et al. (2018)	To update and quantify current knowledge of the effectiveness of community compulsory treatment to reduce readmission to hospital and increase engagement with community care in people with mental disorders	41	England (4), United States (19), Spain (4), Australia (9), Sweden (1), Canada (3) and Scotland (1)	Quantitative systematic review. Meta-analysis	11/11 High quality	Low risk
Informal coercion						
Hotzy and Jaeger (2016)	To compile the literature on attitudes towards informal coercion in mental health treatment	21	Mainly United States, United Kingdom and some European countries	Qualitative systematic review	4/11 Low quality	Unclear risk
Coercion in general						
Doedens et al. (2020)	To summarise the scientific literature concerning the attitudes of nurses towards coercive measures and to show how their personal characteristics influence them	84	Twenty-five different countries such as United Kingdom, Norway, Australia and others	Qualitative systematic review	10/11 High quality	Low risk

Note: Dahm et al. (2017) and Rabe et al. (2017) detailed in section of seclusion and restriction.

Ye et al. (2018) performed a meta-analysis, which revealed that appropriate staff training can reduce the duration and adverse effects of physical restraint in mental health services. Two reviews—those by De Hert et al. (2011) and Bryson et al. (2017)—focused on reducing the use of coercion and restriction in children and adolescents. De Hert et al. (2011) concluded that by applying different structured interventions during psychiatric admissions of children and adolescents (unspecified in their review), the prevalence and duration of restrictions and seclusion could be reduced. Bryson et al. (2017) suggested that comprehensive and theoretically grounded trauma-informed care initiatives seeking to associate treatment with the principles of safety, choice and collaboration could reduce the rates of seclusion, restraint and staff and patient injury.

Forced treatment

Four qualitative syntheses addressed forced medication or involuntary treatment. Muir-Cochrane et al., (2020a) focused on the prevalence of forced treatment worldwide. A review by Clausen and Jones (2014) addressed the prevalence, harmful effects and related factors of forced treatment among persons with anorexia nervosa under involuntarily treatment. Another review by Muir-Cochrane et al., (2020b) approached the factors related with rapid tranquilisation and derived clinical recommendations. A third review by the same authors (Muir-Cochrane et al., 2020c) aimed to comprehensively describe the volume, hierarchy and approach of international peer-reviewed primary literature focused on chemical restraint, including professionals' and users' perspectives of its application, policies and practices regarding its application, precursors of coercive events and the characteristics of the individuals subjected to forced medication.

Regarding the *prevalence* of chemical restraint, Muir-Cochrane et al., (2020a) used retrospective audits to estimate a median prevalence of 7.4% among all those admitted to inpatient facilities in all the countries and clinical settings under their scrutiny. Clausen and Jones (2014) investigated the prevalence and related factors of involuntary treatment in persons diagnosed with anorexia nervosa. They concluded that its prevalence varied from 13% to 44%, and that it could consist of physical or mechanical restraint, locked wards, forced feeding or forced medication.

According to Clausen and Jones (2014), the *effectiveness* of forced treatment in persons with anorexia nervosa was poorly followed up in the studies they identified, thus limiting insight on the long-term effects of this modality of treatment. Considering its *harmful effects*, they found a longer duration of treatment for those involuntarily treated, among whom the following *related factors* were determined: more co-morbidities, a longer disorder duration, longer time to weight recovery, more self-harm incidents and lower age than voluntary users. The main related factor described by Muir-Cochrane et al., (2020b) was the prevention of injury to the patient or others.

With respect to the *clinical recommendations* arising from their review, Muir-Cochrane et al., (2020b) suggested that, if chemical restraint is indicated, first-line staff should use oral, intravenous or intramuscular haloperidol (alone or combined with lorazepam or midazolam) to safely, quickly and effectively manage agitation, aggression and violent behaviours.

Involuntary admissions

Eight reviews were identified regarding involuntary hospitalisation in mental health care, mainly in acute care units, four of which focused on related factors (Barnett et al., 2019; Walker et al., 2019; Wynn, 2018; Yang et al., 2020) and four on interventions to reduce its prevalence (Dahm et al., 2017; De Jong et al., 2016; Giacco et al., 2018; Molyneaux et al., 2019).

According to Walker et al. (2019), the *related factors* most strongly associated with involuntary admissions were a diagnosis of a psychotic disorder and previous involuntary hospitalisation. Indeed, people with either one of these risk factors were more than twice as likely to be admitted against their will. Other relevant socio-demographic and socio-economic factors were male sex, single marital status, unemployment, to be receiving welfare payments and not being a homeowner. The meta-analysis by Barnett et al. (2019), which focused on minority populations internationally, concluded that all users—but specifically people from Black Caribbean, Black African and South Asian ethnic groups—were subject to a higher risk of involuntary psychiatric detention than people from white ethnic groups. The studies by Wynn (2018) and Yang et al. (2020) analysed the specific related factors in Norway and China respectively. The systematic review carried out by Wynn in the Norwegian region described high rates of involuntary admissions compared to other countries; specifically, between 135 and 418 per 100 000 people. Seriously ill men and those in emergency situations were more likely to be involuntarily admitted. General practitioners working in out-of-hours clinics were often involved in the admission process and frequently had little time and few alternatives available. In their study focused on China, Yang et al. (2020) reported high rates of involuntary admissions, particularly for persons diagnosed with schizophrenia, while voluntary admissions increased due to policy and legal reforms, decreased stigma, increased societal awareness and more resources or ease of access to resources, among other factors. The meta-analysis performed by Yang et al. revealed that the combined

rate of involuntary admissions (32.3%) was higher than the rate of voluntary admissions (30.3%), and that this difference was more pronounced in the case of schizophrenia (44.3% vs. 19.6% for other pathologies).

Regarding *interventions to reduce involuntary admissions*, Giacco et al. (2018) synthesised 14 different interventions to reduce both involuntary treatment and admission, which were grouped into three broad categories: 'Patient-centred structured care planning' (crisis cards, discharge planning and preventive follow-up, advance directives, continuous and personalised advocacy, motivational aftercare planning and continuous follow-up in the community); 'Specialised therapeutic interventions' (individual peer support, animal-assisted psychotherapy, group narrative therapy, acceptance and commitment therapy and sensory modulation therapy); and 'Systemic changes in hospital practice' (residential crisis programmes, co-housing, multimodal intervention programmes and 'understanding hospitalisation'). However, they could not perform a formal analysis of the effect of these interventions due to the heterogeneity of the studies' outcomes and designs. A meta-analysis by De Jong et al. (2016) included 13 studies in which the authors concluded that advance statements, such as advance directives and crisis plans, significantly reduced the risk of involuntary admission by 23%. In 2019, Molyneaux et al. (2019) updated De Jong et al.'s review with a meta-analysis of five new randomised controlled trials that rendered similar results: a 25% reduction in the risk of involuntary hospital admissions among those who received crisis planning interventions versus usual care. However, there was no evidence of a reduction in voluntary admissions or total psychiatric admissions. In other words, crisis plans can help reduce involuntary admissions by encouraging users and/or clinicians to consider voluntary admission when a crisis occurs. Both studies concluded that there was no evidence that other interventions, such as CTOs or integrated treatment, reduced the number of compulsory admissions. In line with Molyneaux et al. (2019), Dahm et al. (2017) concluded that the development of an emergency plan is likely to reduce the number of involuntary admissions among outpatients.

Coercion in community care: CTOs

Six reviews focusing on CTOs were included in our analysis, and all set out to update the available evidence or examine its *effectiveness* (Barnett et al., 2018; De Waardt & van der Heijden, 2017; Kisely, 2016; Kisely et al., 2017; Kisely & Hall, 2014; Maughan et al., 2014). Three of the reviews included a meta-analysis (Barnett et al., 2018; Kisely et al., 2017; Kisely & Hall, 2014).

Three of the reviews were published in 2014, 2016 and 2017 by a group led by Steve Kisely, who explored the effectiveness of CTOs in terms of readmissions, days of hospital admission and social functioning. Two of the reviews containing a meta-analysis (Kisely et al., 2017; Kisely & Hall, 2014) shared methods, studies included and findings, and found no statistically significant differences between treatment with versus without CTOs, in line with the results obtained by Maughan et al. (2014). In 2016, Kisely's group published a systematic review including only Canadian studies and concluded that CTOs could reduce readmissions and length of hospital stay, though they stressed the need to develop further studies, particularly randomised controlled trials. In the same line, the systematic review and meta-analysis by Barnett et al. (2018), which included randomised and non-randomised controlled trials of CTOs, found no clear evidence of the effectiveness of CTOs using the same outcome measures. In contrast, the review by De Waardt and van der Heijden (2017), which included 105 studies, concluded that length of stay and number of readmissions were lower in persons under CTOs, but the review was rated as of low quality due to the lack of a clear description of its methods.

Informal coercion

Only one systematic review considered informal coercion, and it aimed to determine the prevalence of informal coercion (Hotzy & Jaeger, 2016). The review was considered to be of low quality and with an unclear risk of bias. Most of the publications included focused on 'interpersonal influence' and 'incentives' as informal coercive measures, although persuasion and threat were also discussed. The authors concluded that both professionals and users reported frequent experiences of informal coercion, with prevalence rates ranging from 29% to 59%. No clinical effects of informal coercion were evidenced.

Coercion in general

Two of the studies included in this umbrella review focused on factors related to the use of coercive measures in general (Doedens et al., 2020; Rabe et al., 2017) and one on interventions to reduce the use of coercive measures (Dahm et al., 2017).

Rabe et al. (2017) explored the determining factors of coercion in children and adolescents in mental healthcare and suggested that, among adolescents, gender can play a role in the use of coercive measures. They observed that the results of European studies suggested that coercive measures were most frequently applied among girls in late adolescence, while studies conducted outside Europe implied they were employed more often among boys of an early school age. Regarding mental health diagnosis, coercive measures were more frequent

among children and adolescents in the ICD-10 F9 category. Doedens et al. (2020) studied the influence of the attitudes and characteristics of acute mental healthcare nursing staff as potential related factors in coercive measures. They argued that gender played a role, as several studies suggested that the presence of male nurses was associated with an increased use of coercive measures, while female nurses exhibited more positive attitudes, though other studies they examined did not report any gender influence in their multivariate analyses (Doedens et al., 2020).

Regarding interventions to reduce the application of coercive measures in general, Dahm et al. (2017) studied those employed in the context of providing care to young users with schizophrenia onset. They concluded that a systematic risk assessment of aggressive and violent behaviour among inpatients in acute psychiatric wards and counselling and support provided to security staff can reduce the use of coercive measures. They stated that it could not be ascertained whether inpatient rehabilitation as opposed to active outpatient treatment teams or standard treatment can reduce the number of involuntary admissions, forced treatment and use of mechanical coercive measures. Within the measures employed with users who were ready to be discharged, they were unsure whether treatment contracts tended to reduce the number of involuntary readmissions.

Professionals, mental health service users' and their caregivers' and relatives' experiences, perceptions and attitudes towards coercion and specific coercive measures

Our thematic synthesis included 12 systematic reviews of purely qualitative data and five reviews of mixed data (qualitative and quantitative), from which we extracted the experiences of coercion of the people involved; namely users, professionals and caregivers/family members. In terms of experience, we took into consideration all perceptions, feelings, perspectives, impressions and opinions. The characteristics, objectives, methodological quality and risk of bias of the studies included in this category and subcategories are summarised in Table 2.

A total of six themes, 12 sub-themes and 58 codes were identified and are detailed in Table 3. Five of the themes encompass the different coercive measures, of which experiences were described and were ordered from greatest to least impact and in terms of implications for the persons affected: restriction/confinement, involuntary admission, OTC, informal coercion and coercion in general. For each coercive measure, both positive and negative aspects were listed. The sixth theme involved factors that improve the experience of coercion.

The experience of restriction and seclusion or isolation was frequently described by mental health service users in terms of feeling imprisoned, restricted and limited by regulations, abandoned and vulnerable, stripped of their rights (Akther et al., 2019; Askew et al., 2019; Lindgren et al., 2019; Mellow et al., 2017) and dehumanised by the lack of human interaction and isolation from the rest of the ward (Newton-Howes & Mullen, 2011). However, the experiences of isolation were ambivalent; on the one hand, they felt closed in and abandoned, missing the support of family and staff and wishing for freedom, while on the other hand, they were grateful for the sense of safety and shelter (Lindgren et al., 2019). Some authors mentioned disconnection as a coping strategy of users when faced with seclusion, and underlined that, despite all the negative effects of coercive measures, some were better tolerated than others, such as forced medication or seclusion versus mechanical restraint (Askew et al., 2019).

Regarding involuntary admissions, mental health service users reported feeling marginalised due to the lack of communication and an imbalance of power with respect to the professionals and their caregivers, which impeded respect for their rights, wishes and preferences (Stuart et al., 2020; Sugiura et al., 2020), having a direct impact on their dignity (Plunkett & Kelly, 2021). Users usually opposed this measure and wanted to be listened to as part of the process of making decisions about their admission and not feel that it was an imposed measure. In turn, professionals rationalised coercion and felt that certain information did not need to be explained to users, considering it an appropriate measure in the face of threats or harm to third parties, regardless of the opinion of the family and the user. On other occasions, professionals showed concern and frustration at the difficulty they experienced when coordinating with the family. The caregivers often described conflicting feelings of relief and distress or anxiety about how the user might cope and respond to admission, while at the same time feeling responsible and talking about the need to make a great effort to maintain a good relationship with the user when he/she distanced him/herself by his/her own decision. In addition, families felt frustrated that they were not involved in the planning of treatment, especially when discharge was approaching and there was a need to receive more information and support from the mental health system (Stuart et al., 2020; Sugiura et al., 2020). Positive experiences were not reported for involuntary admissions.

Regarding CTOs, it is noteworthy that doctors working in community mental health identified certain benefits in their application, such as greater clinical stability or better quality of life, generally professing themselves to be in favour of this approach (Corring et al., 2018; De Waardt & van der Heijden, 2017; Kisely, 2016) and concluding that CTOs are necessary under certain circumstances. On the other hand, professional dissonance between their support of an imposed treatment regimen and the principles of recovery and person-centred care attention caused a conflict of principles and personal

TABLE 2 Study characteristics, objectives, methodological quality and risk of bias of the studies included in the theme 'Professionals, mental health service users and their caregivers or relatives experiences, perceptions and attitudes towards coercion and specific coercive measures'.

Author/year	Objectives	*N*	Countries	Analysis	Methodological quality/JBI	Risk of bias/ ROBIS
Newton-Howes and Mullen (2011)	To summarise mental health service users' overall experience of coercion	27	Nordic countries (13), United States (1), Europe (3), America (8) and Australia (2)	Qualitative systematic review	6/11 Moderate quality	High risk
Mellow et al. (2017)	To review the literature regarding the lived experience of seclusion in adults with mental health difficulties	11	United States (4), Australia (2), Finlandia (1), Zealand (1), Netherlands (1) and Canada (2)	Qualitative systematic review	9/11 High quality	Low risk
Tingleff et al. (2017)	To review the literature on mental health service users' perceptions of the situations associated with the process of coercion	26	Netherlands (1), Hong Kong (1), Sweden (2), Finland (1), Norway (4), United States (2), United Kingdom (7), South Africa (2), Canada (3), Australia (2) and Austria (1)	Qualitative systematic review	7/11 Moderate quality	Low risk
Aguilera-Serrano et al. (2018)	To determine the variables associated with the subjective experience of coercion in mental health service users	34	United States (8), Canada (4), Netherlands (4), Australia (3), Germany (3), Sweden (2), United Kingdom (2), Finland (2), Norway (2), South Africa (2), China (1) and Austria (1)	Qualitative systematic review	9/11 High quality	Low risk
Corring et al. (2018)	To synthesise professionals' views and experience with community treatment orders	14	Australia (3), Canada (3), New Zealand (1), Norway (1), United Kingdom (4) and United States (2)	Qualitative systematic review	8/11 High quality	Unclear risk
Akther et al. (2019)	To synthesise mental health service users' experiences of involuntary detention or involuntary admission	56	United Kingdom (30), Sweden (9), Australia (5), Ireland (5), Norway (2), Austria (1), Finland (1), Greece (1), Israel (1), United States (1)	Qualitative systematic review	9/11 High quality	Low risk
Lindgren et al. (2019)	To document evidence on lived experiences of isolation in inpatient mental healthcare	15	Australia (3), New Zealand (1), United States (2), Sweden (2), Netherlands (1), Canada (2), Finlandia (2), Africa (1) and Norway (1)	Qualitative systematic review	7/11 Moderate quality	Unclear risk
Askew et al. (2019)	To synthesise the available evidence of inpatients' lived experience of seclusion	8	United States (2), United Kingdom (1), Finland (1), Norway (1), Canada (1), South Africa (1) and Lesotho (1)	Qualitative systematic review	6/11 Moderate quality	Unclear risk
Pariseau-Legault et al. (2020)	To synthesise the integration of human rights in mental health nurses' practice in the context of coercive measures	46	Twenty-two different countries (Germany, Australia, Brazil, Canada, Chile, Croatia, Spain, United States, France, Finland, Greece, Italy, Indonesia, Iran, Ireland, Japan, Mexico, Norway, New Zealand, Netherlands, United Kingdom and Sweden)	Qualitative systematic review	7/11 Moderate quality	Low risk

TABLE 2 (Continued)

Author/year	Objectives	*N*	Countries	Analysis	Methodological quality/JBI	Risk of bias/ ROBIS
Sugiura et al. (2020)	To describe the experiences of mental health service users, informal carers and professionals in involuntary mental health admission decision-making and throughout the subsequent involuntary admission	37	11 countries (Australia, Austria, Brazil, Denmark, Ireland, Japan, Netherlands, Norway, Sweden, Taiwan and the United Kingdom)	Qualitative systematic review	9/11 High quality	Low risk
Stuart et al. (2020)	To synthesise qualitative evidence of carers' experiences of the formal assessment of their family and friends for involuntary admission in a mental health hospital	23	United Kingdom (12) and elsewhere in Europe (11)	Qualitative systematic review	9/11 High quality	Low risk
Plunkett and Kelly (2021)	To synthesise the literature on patient experience of dignity in voluntary and involuntary inpatient mental health care	9	Six different countries across two continents	Qualitative systematic review	6/11 Moderate quality	Unclear risk

Note: Hotzy and Jaeger (2016); Kisely (2016); De Waardt and van der Heijden (2017); Jackson et al. (2018) and Doedens et al. (2020) also used for the narrative synthesis and detailed in their respective sections.

unease, without forgetting the associated deterioration of the therapeutic relationship (Corring et al., 2018). Family caregivers were also often in favour (Kisely, 2016) of this measure, while users could be either in favour (De Waardt & van der Heijden, 2017) or ambivalent towards it (Kisely, 2016).

Informal coercion is a frequent form of coercion, but we detected only one systematic review on the subject. Users' and practitioners' attitudes towards this form of coercion were positive when it was applied according to different ethical aspects, such as respect for patient autonomy and transparency in communication. No clinical effects of informal coercion were evident, but subjective evaluations of potential positive consequences were considered, such as improved treatment adherence, promotion of clinical stability and prevention of relapse. Potential adverse effects included an increased stigmatisation of psychiatric services, deterioration of the therapeutic relationship and patients shying away from mental healthcare (Hotzy & Jaeger, 2016).

Mental health professionals expressed their views towards coercion mainly from the security paradigm ('coercive measures are undesirable but necessary for the ward's safety'), although the therapeutic paradigm ('coercive measures have positive or therapeutic effects') was still manifest (Doedens et al., 2020; Jackson et al., 2018). Coercive measures could be associated with positive or negative experiences, but the evidence suggested that the impact was mainly negative and affected physical and mental health, while significantly impairing the therapeutic relationship (Aguilera-Serrano et al., 2018; Newton-Howes & Mullen, 2011; Pariseau-Legault et al., 2020; Tingleff et al., 2017). In addition, professionals described the feeling that alternative interventions could have been tried before applying coercive measures, and that clinical judgement does not necessarily justify their use and leads to role conflict and emotional tension (Pariseau-Legault et al., 2020). Among the positive experiences reported were the sensation among users of feeling safe and protected (Lindgren et al., 2019; Tingleff et al., 2017), and the perception that a certain level of coercion was sometimes necessary (Plunkett & Kelly, 2021).

Plunkett and Kelly (2021) emphasised that the experience of hospitalised users was influenced by their interactions with mental health personnel, and stressed that negative attitudes of professionals were described by users as a source of negative experiences.

Among the factors that improved the perception and experience of coercion, we identified aspects related to the therapeutic relationship (such as affective and collaborative relationships), adequate communication and information provided by users to professionals, attention to basic human needs (Mellow et al., 2017) and humane and respectful treatment (Aguilera-Serrano et al., 2018). Regarding procedures and techniques, the usefulness of debriefing (Aguilera-Serrano et al., 2018) and any non-coercive de-escalation strategy (Tingleff et al., 2017)

TABLE 3 Themes, sub-themes and codes derived from the thematic analysis.

Theme	Subtheme	Codes
Coercion in general	Positive aspects	Security paradigm (P) Coercive measures are undesirable but necessary for the safety of the room (P) A feeling of safety and security (U) Some measures are necessary (U and P) Therapeutic paradigm: Coercive measures have therapeutic effects (P)
	Negative aspects	Harmful effects on physical (except informal coercion) and mental health (U and P) Coercion has a negative influence on the patient (P) Affecting therapeutic relationship (U and P) The feeling that alternative interventions could have been tried earlier (P) Clinical judgement does not justify such recourse (P) Role conflict (P)
Restraint and seclusion/isolation	Positive aspects	A feeling of protection and shelter (U)
	Negative aspects	The feeling of being imprisoned, restricted and limited (U) Sense of abandonment (U) Sense of vulnerability (U) The feeling of being stripped of their rights and dignity (U) Dehumanisation due to lack of human interaction and isolation (U) Need for family support (U) The desire for freedom (U) Disconnection as a coping strategy (U)
Involuntary admission	Negative aspects	Lack of communication and imbalance of power between professionals, family and user (U) The desire to be heard and receive information (U) Opposition to coercion (U) Affectation of their dignity (U) It is not necessary to give information to users (P) Necessary and beneficial measure for the user (P) Threats or harm to third parties are criteria for involuntary admission regardless of the opinion of the family and the user (P) Concern and frustration at the difficulty of coordinating with the family (P) Conflicting feelings of relief and anguish/anxiety about admission (F) Sense of responsibility towards your family member (F) Concern about damaging the relationship with your family member (F) Frustration at not being involved in treatment planning (F) The desire for more involvement in care (F) Lack of information and support from mental the health system (F)
Community Treatment Orders (CTOs)	Positive aspects	Improved clinical stability (P) Improved quality of life (P) CTOs are required at certain times (P) Doctors and family members are positive about the application of this measure (P and F) Users ambivalent about the application of CTOs (U)
	Negative aspects	They cause unease for the professional who applies it (P) They damage the therapeutic relationship (P)
Informal coercion	Positive aspects	Positive experiences of informal coercion in users and professionals when applied under ethical guidelines (U and P) Possible improvement of adherence, promotion of clinical stability and avoidance of relapses (U and P)
	Negative aspects	Increased stigma of psychiatric services (U and P) Deterioration of the therapeutic relationship (U and P) Avoidance of mental healthcare (U and P)
Factors that improve the perception of coercion	Therapeutic relationship	Affective relationships (U) Collaborative relations (U) Communication skills (U) Information (U) Attention to basic human needs (U) Humane and respectful treatment (U)
	Procedure and techniques	Debriefing (U) De-escalation and non-coercive strategies (P)
	Environment	Non-hostile environment (U) Comfortable rooms (U) Possibility to keep belongings (U)

Note: P: Professionals' experience or perception; U: Users' experience or perception; F: Carers or family members' experience or perception.

was demonstrated. With respect to the environment, the perception of a safe environment, comfortable rooms and the possibility of users having belongings stood out as relevant (Aguilera-Serrano et al., 2018).

DISCUSSION

The aim of this review was to provide a comprehensive synthesis of the existing evidence on coercion in mental healthcare through its characterisation and a description of its effects and consequences, the perceptions of those implied and possible alternatives. The reviews included were classified into two categories: the first comprised evidence on six specific coercive measures and provided perspective on their prevalence, effectiveness, harmful or unintended effects, related factors and interventions to reduce its use; and the second included studies describing the experience of coercion of all those implied, namely professionals, mental health service users and their caregivers. This second category included six themes.

The articles contemplated in this umbrella review suggest that, in terms of the number of systematic reviews, the main area of research interest regarding coercion is seclusion and restraint (15 systematic reviews) and the experience of all the persons involved in its use (five systematic reviews). The harmful effects of these measures and related factors were well characterised in eight of the reviews, and another six focused on alternatives. Seven of the reviews were of high quality and a low risk of bias, another seven were of moderate quality and one was of very low quality and showed risk of bias. However, it is clear that more evidence is needed regarding the prevalence and effectiveness of this approach. Sailas and Fenton (2000), whose systematic review is the oldest included in this analysis, encountered this difficulty when they reviewed evidence obtained through randomised controlled trials, reporting that they found no publications on the subject. Conducting randomised clinical trials to study mechanical restraint and seclusion involves ethical, methodological and professional challenges, as it implies that, when faced with a complex situation in which a person presents psychomotor agitation or psychopathological decompensation, a random choice will be made on how to manage the situation, and this could entail risks for those involved. Indeed, the lack of evidence on its effectiveness and the violation of human rights it represents has motivated international regulations to suppress its use (United Nations Human Rights Council, 2017). Despite this, according to Lykke et al. (2020), the use of mechanical restraint ranged between 1% and 4% per year in their study, carried out in Denmark.

Involuntary treatment was approached from the perspective of its related factors and the alternatives to reduce its use, which was one of the subcategories with the best-rated reviews in terms of quality. The meta-analysis by Barnett et al. (2019) highlighted the relevance of belonging to a minority population as a related factor to being involuntarily admitted, internationally. According to Hanlon et al. (2010), for many authors, the most important ethical concern in mental health practice is the potential failure to provide culturally appropriate, evidence-based and high-quality mental healthcare. Regarding the experiences of users, professionals and caregivers before and during the involuntary admission process, it is noteworthy that, just as users verbalised some positive effects of specific coercive measure, we found no evidence of such impressions in the case of involuntary admissions.

Six reviews studied the effectiveness of CTOs, which was not clearly proven, especially in terms of reducing readmissions or length of hospital stay. The level of quality and risk of bias varied greatly, which was surprising, since the subject has been studied in successive reviews, suggesting there has been no improvement in the methodology employed. The review by Maughan et al. (2014) aimed to update one published in 2005 (Churchill et al., 2007), which we have not included because Maughan et al. (2014) described its results. Rugkåsa participated in the review by Maughan et al. (2014) and then summarised subsequent studies related to CTOs in 2016, concluding that no new evidence existed (Rugkåsa, 2016). These systematic reviews reveal an overlapping of studies concerning CTOs and ambiguous findings regarding their effectiveness, therefore suggesting the use of CTOs is based on limited evidence. Indeed, the review by Maughan et al. (2014) could not be updated due to the scarcity of new studies, thus highlighting the difficulties encountered when performing randomised controlled trials on this subject. Nevertheless, it is surprising to find that this lack of evidence in favour of CTOs is not in line with the experiences of the medical staff who employ them, who find clear benefits and consider them necessary in certain conditions, as described by Corring et al. (2018).

Studying informal coercion remains a challenge for mental health professionals, and studies on the topic are scarce; as a result, it is difficult to compile systematic reviews on the area. In fact, only one review on the topic was included herein and it was of low quality and an unclear risk of bias (Hotzy & Jaeger, 2016). According to Paradis-Gagné et al. (2021), informal coercion can include the very rules or restrictions that govern an inpatient unit, as well as constant and intensive observation of users in their room, or surveillance of accesses to and from the unit; in this sense, this type of coercion is complex and requires further research. Potthoff et al. (2022) recently developed a conceptual model around psychological pressure (defined as the communicative strategies used to influence decision-making, and synonymous with informal coercion), based on the experience and perspectives of mental health service users. They concluded that psychological

pressure is used to improve service users' adherence to recommended treatment (treatment pressure) and to social rules, and can be exerted not only by mental health professionals, but also by family and friends, as described by Pelto-Piri et al. (2019). The resulting conceptual model defines psychological pressure holistically in terms of what is said, by whom, why, how, when and where; therefore, it includes not only the content of the communication but also the way of communicating, which is highly dependent on additional contextual factors, such as the quality of the interpersonal relationship, the institutional setting, the spatial environment and the type of discourse. Hence, this might explain why certain interactions can be perceived as negative or positive by users (Potthoff et al., 2022).

From the ethical perspective, promoting the best interests of mental health service users is the main justification for duress and coercion (Hem et al., 2018), and when coercive measures are applied one of the main ethical challenges is to find a balance between promoting good (beneficence) and inflicting harm (maleficence). Indeed, some of the studies included in the review in question focused on the moral anguish experienced by professionals when applying duress.

The experience of users can also be improved by placing attention on therapeutic relationships and on the attitudes and behaviour of professionals, in addition to reducing coercive measures. According to Berge et al. (2018), professionals should express their concern and empathy towards users and strive to improve their own communication abilities before, during and after a coercive incident. When treated with respect and involved in the decision-making process, users report a less negative perception of coercion and greater satisfaction with mental health services.

In addition, the experience of coercion can influence users' satisfaction with the mental healthcare they receive. In this context, the findings of two reviews excluded from our synthesis are worth mentioning. Woodward et al. (2017) concluded that users admitted to open inpatient units reported higher satisfaction levels and that those experiencing coercion reported lower satisfaction levels. Staniszewska et al. (2019) highlighted some critical elements contributing to a better perception of coercion and to higher satisfaction levels, such as confidence, the use of informed consent, safety in the unit, therapeutic activities and the involvement of families in the care process.

Sugiura et al. (2020) concluded that users often feel coerced when their families or professionals impose their decisions regarding their hospitalisation, treatment or therapeutic plan, though since then advance directives have been put in place to address this. Advance directives are intended to avoid these situations by respecting the rights and wishes of those receiving mental healthcare, and it is the professionals' responsibility to provide them and to explain them to users. Advance directives allow the user to decide in advance on future treatments and actions to be taken when he/she is no longer capable of making decisions (Edan et al., 2021; Suess-Schwend et al., 2016). Examples include determining preferences or refusal of treatments or medications, desired methods to de-escalate a crisis, authorising or not authorising certain people to be informed of their admission or clinical status, food preferences and designating a decision-maker on their behalf, among others (Jankovic et al., 2020).

STRENGTHS AND LIMITATIONS

Any umbrella review is subject to several limitations, such as the potential omission of relevant studies and the potential introduction of systematic errors during the selection, evaluation or data extraction processes. In this umbrella review, these limitations have been compensated through an inclusive search strategy and a rigorous and independent methodological process followed by both authors. This review may also be limited by the existing systematic reviews or research syntheses; given the wide variety of approaches and methodologies employed in the reviews included, the results obtained are heterogeneous, which made it difficult to perform meta-analyses.

CONCLUSION

To the best of our knowledge, this is the first comprehensive, systematically conducted umbrella review about coercion in mental healthcare that addresses such a wide diversity of topics and includes an assessment of the quality and risk of bias of the reviews included. The main research topic of the systematic reviews included was seclusion and restraint, and we considered the objective measures of harmful effects, related factors and alternatives to its use, as well as the perspectives of all those implied in its application.

Contradictions arise when studying coercion as a phenomenon. The physical and emotional consequences of coercive measures are well known, but the prevalence of their use remains high or unclear in all population groups. The dilemma faced by professionals in their clinical practice while trying to find a balance between the ethical principles of beneficence and maleficence is patent. Finally, a system that regulates certain coercive practices while increasing the pressure to reduce them is necessary.

RELEVANCE FOR CLINICAL PRACTICE AND RESEARCH

International organisations, professionals and mental health service users agree that there is a need to limit or

suppress the use of coercive measures, but coercion continues to be employed and is a phenomenon that arouses the interest of researchers. This umbrella review should be relevant to both professionals and users when approaching the variety of topics addressed by systematic reviews on coercion.

Different implications for clinical practice are manifested in this review. The harmful effects of the application of coercive measures for all those involved is reflected in the different themes that emerged during our analysis. The implementation of different training programmes might shift mental healthcare to a less coercive practice and improve the experience of both those providing care and mental health service users. Staff training to reduce the role of coercive measures within the therapeutic paradigm and to facilitate their own anger management is likely to help reduce the employment of coercive measures. From an ethical perspective, mental health nurses could benefit from training in the application of the principles of beneficence and maleficence; in addition, their emotional well-being might be promoted by training to manage the anguish derived from the application of coercive measures. In medium- and low-income countries, staff training to provide culturally appropriate care could help manage their main ethical concern; namely that the lack of culturally appropriate care implies that belonging to ethnical minorities means receiving more coercive measures during the care process.

The use of coercive measures in children and youth is highly prevalent, even though it has been demonstrated to produce both physical and emotional sequelae, as it does in adults. Focus should be put on the development and implementation of interventions to reduce the use of coercive measures in this vulnerable population, as they have proven to be effective in previous studies.

Evidence of the effectiveness of the use of CTOs and other coercive measures in community settings to reduce readmissions and the length of hospital stays is very limited, but they continue to be employed. Their use might be reduced through the implementation of advance care directives, and professionals need to receive training and institutional support in this process.

The perspective of acute mental healthcare users confirms that negative attitudes among staff imply negative care experiences among users. To improve the experience of users, collaborative, communicative and affective relationships are vital. Professionals must receive institutional support and resources to implement structured interventions that have been proven to be effective in reducing coercion and which can be classified as patient-centred care, prevention and professional training.

There are also implications for research. The effectiveness of the training programmes and interventions described in the previous paragraphs requires further study. There is a clear need for research about precise interventions to reduce the use of coercive measures, not only in the adult population, but also in children and adolescents, who are more vulnerable. For security and therapeutic paradigms to evolve, coercion needs to be explored not only from the professional's perspective, but also in terms of organisational aspects. The evidence available on informal coercion, its characterisation and its consequences both for professionals and users is still limited.

AUTHORS' CONTRIBUTIONS

Study design: MAC and VSM; data collection and analysis: MAC and VSM; article preparation: MAC and VSM; approval of the final version: MAC and VSM.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

The data that supports the findings of this study are available in the Supporting Information of this article.

ETHICS STATEMENT

This study was conducted following the ethical principles for medical research involving human subjects described in the Declaration of Helsinki and was approved by the Research and Ethics Committee of the Padre Jofré Hospital (Valencia). The study protocol was also approved by the hospital's medical director and supervisors of the nursing staff. Prior to each interview, the participant received a document describing the details of the study and was encouraged to ask the researchers to resolve any queries. She/he then signed the informed consent form and gave their permission for the interviews to be audio recorded.

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REFERENCES

Aguilera-Serrano, C., Guzman-Parra, J., García-Sanchez, J.A., Moreno-Küstner, B. & Mayoral-Cleries, F. (2018) Variables associated with the subjective experience of coercive measures in psychiatric inpatients: a systematic review. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie*, 63(2), 129–144. Available from: https://doi.org/10.1177/0706743717738491

Aguilera-Serrano, C., Guzman-Parra, J., Miranda-Paez, J., García-Spinola, E., Torres-Campos, D., Villagrán-Moreno, J.M. et al. (2019) Validation of a short version of the coercion experience scale (CES-18): psychometric characteristics in a Spanish sample. *Psychiatry Research*, 272, 284–289. Available from: https://doi.org/10.1016/j.psychres.2018.12.126

Akther, S.F., Molyneaux, E., Stuart, R., Johnson, S., Simpson, A. & Oram, S. (2019) PaPatients'xperiences of assessment and detention under mental health legislation: systematic review and qualitative meta-synthesis. *BJPsych Open*, 5(3), e37. Available from: https://doi.org/10.1192/bjo.2019.19

Aragonés-Calleja, M. & Sánchez-Martínez, V. (2022) Current state of research on coercion in mental health: umbrella review protocol. *Journal of Psychosocial Nursing and Mental Health Services*, 60(10), 49–55. Available from: https://doi.org/10.3928/02793695-20220428-02

Aromataris, E., Fernandez, R., Godfrey, C.M., Holly, C., Khalil, H. & Tungpunkom, P. (2020) Chapter 10: umbrella reviews. In: Aromataris, E. & Munn, Z. (Eds.) *JBI manual for evidence synthesis*. Joanna Briggs Institute. Available from: https://synthesismanual.jbi.global

Askew, L., Fisher, P. & Beazley, P. (2019) What are adult psychiatric inpatients' experience of seclusion: a systematic review of qualitative studies. *Journal of Psychiatric and Mental Health Nursing*, 26(7–8), 274–285. Available from: https://doi.org/10.1111/jpm.12537

Bak, J., Brandt-Christensen, M., Sestoft, D.M. & Zoffmann, V. (2012) Mechanical restraint–which interventions prevent episodes of mechanical restraint?- a systematic review. *Perspectives in Psychiatric Care*, 48(2), 83–94. Available from: https://doi.org/10.1111/j.1744-6163.2011.00307.x

Barnett, P., Mackay, E., Matthews, H., Gate, R., Greenwood, H., Ariyo, K. et al. (2019) Ethnic variations in compulsory detention under the mental health act: a systematic review and meta-analysis of international data. *The Lancet Psychiatry*, 6(4), 305–317. Available from: https://doi.org/10.1016/S2215-0366(19)30027-6

Barnett, P., Matthews, H., Lloyd-Evans, B., Mackay, E., Pilling, S. & Johnson, S. (2018) Compulsory community treatment to reduce readmission to hospital and increase engagement with community care in people with mental illness: a systematic review and meta-analysis. *The Lancet Psychiatry*, 5(12), 1013–1022. Available from: https://doi.org/10.1016/S2215-0366(18)30382-1

Berge, T., Bjøntegård, K.S., Ekern, P., Furan, M., Landrø, N.I., Larsen, G. et al. (2018) Coercive mental health care – dilemmas in the decision-making process. Bruk av tvang i psykisk helsevern – dilemmaer i beslutningsprosessen. *Tidsskrift for den Norske Lægeforening*, 138(12). Available from: https://doi.org/10.4045/tidsskr.17.0338

Bryson, S.A., Gauvin, E., Jamieson, A., Rathgeber, M., Faulkner-Gibson, L., Bell, S. et al. (2017) What are effective strategies for implementing trauma-informed care in youth inpatient psychiatric and residential treatment settings? A realist systematic review. *International Journal of Mental Health Systems*, 11, 36. Available from: https://doi.org/10.1186/s13033-017-0137-3

Chieze, M., Hurst, S., Kaiser, S. & Sentissi, O. (2019) Effects of seclusion and restraint in adult psychiatry: a systematic review. *Frontiers in Psychiatry*, 10, 491. Available from: https://doi.org/10.3389/fpsyt.2019.00491

Churchill, R., Owen, G., Singh, S. & Hotopf, M. (2007) *International experiences of using community treatment orders*. Institute of Psychiatry, London.

Clausen, L. & Jones, A. (2014) A systematic review of the frequency, duration, type and effect of involuntary treatment for people with anorexia nervosa, and an analysis of patient characteristics. *Journal of Eating Disorders*, 2(1), 29. Available from: https://doi.org/10.1186/s40337-014-0029-8

Corring, D., O'Reilly, R.L., Sommerdyk, C. & Russell, E. (2018) What clinicians say about the experience of working with individuals on community treatment orders. *Psychiatric Services (Washington, D.C.)*, 69(7), 791–796. Available from: https://doi.org/10.1176/appi.ps.201700492

Dahm, K.T., Steiro, A.K., Leiknes, K.A., Husum, T.L., Kirkehei, I., Dalsbø, T.K. et al. (2017) *Interventions for Reducing Seclusion and Restraint in Mental Health Care for Adults: A Systematic Review*. Knowledge Centre for the Health Services at The Norwegian Institute of Public Health (NIPH).

De Hert, M., Dirix, N., Demunter, H. & Correll, C.U. (2011) Prevalence and correlates of seclusion and restraint use in children and adolescents: a systematic review. *European Child & Adolescent Psychiatry*, 20(5), 221–230. Available from: https://doi.org/10.1007/s00787-011-0160-x

De Jong, M.H., Kamperman, A.M., Oorschot, M., Priebe, S., Bramer, W., van de Sande, R. et al. (2016) Interventions to reduce compulsory psychiatric admissions: a systematic review and meta-analysis. *JAMA Psychiatry*, 73(7), 657–664. Available from: https://doi.org/10.1001/jamapsychiatry.2016.0501

De Waardt, D.A. & van der Heijden, F.M. (2017) Gedwongen behandeling van mensen met een psychiatrische stoornis in de thuissituatie [compulsory treatment in the community for persons in need of mental health care]. *Tijdschrift voor Psychiatrie*, 59(4), 221–228.

Doedens, P., Vermeulen, J., Boyette, L.L., Latour, C. & de Haan, L. (2020) Influence of nursing staff attitudes and characteristics on the use of coercive measures in acute mental health services-a systematic review. *Journal of Psychiatric and Mental Health Nursing*, 27(4), 446–459. Available from: https://doi.org/10.1111/jpm.12586

Edan, V., Hamilton, B. & Brophy, L. (2021) Advance planning in mental health care: the trouble with terminology. *Journal of Law and Medicine*, 28(3), 655–662.

Elmer, T., Rabenschlag, F., Schori, D., Zuaboni, G., Kozel, B., Jaeger, S. et al. (2018) Informal coercion as a neglected form of communication in psychiatric settings in Germany and Switzerland. *Psychiatry Research*, 262, 400–406. Available from: https://doi.org/10.1016/j.psychres.2017.09.014

Fletcher, J., Spittal, M., Brophy, L., Tibble, H., Kinner, S., Elsom, S. et al. (2017) Outcomes of the Victorian Safewards trial in 13 wards: impact on seclusion rates and fidelity measurement. *International Journal of Mental Health Nursing*, 26(5), 461–471. Available from: https://doi.org/10.1111/inm.12380

Gaynes, B.N., Brown, C.L., Lux, L.J., Brownley, K.A., Van Dorn, R.A., Edlund, M.J. et al. (2017) Preventing and de-escalating aggressive behavior among adult psychiatric patients: a systematic review of the evidence. *Psychiatric Services (Washington, D.C.)*, 68(8), 819–831. Available from: https://doi.org/10.1176/appi.ps.201600314

Giacco, D., Conneely, M., Masoud, T., Burn, E. & Priebe, S. (2018) Interventions for involuntary psychiatric inpatients: a systematic review. *European Psychiatry*, 54, 41–50. Available from: https://doi.org/10.1016/j.eurpsy.2018.07.005

Gleerup, C.S., Østergaard, S.D. & Hjuler, R.S. (2019) Seclusion versus mechanical restraint in psychiatry – a systematic review. *Acta Neuropsychiatrica*, 31(5), 237–245. Available from: https://doi.org/10.1017/neu.2019.22

Goulet, M., Larue, C. & Dumais, A. (2017) Evaluation of seclusion and restraint reduction programs in mental health: a systematic review. *Aggression and Violent Behavior*, 34, 139–146. Available from: https://doi.org/10.1016/j.avb.2017.01.019

Hanlon, C., Tesfaye, M., Wondimagegn, D. & Shibre, T. (2010) Ethical and professional challenges in mental health care in low- and

middle-income countries. *International Review of Psychiatry (Abingdon, England)*, 22(3), 245–251. Available from: https://doi.org/10.3109/09540261.2010.482557

Hem, M.H., Gjerberg, E., Husum, T.L. & Pedersen, R. (2018) Ethical challenges when using coercion in mental healthcare: a systematic literature review. *Nursing Ethics*, 25(1), 92–110. Available from: https://doi.org/10.1177/0969733016629770

Hotzy, F. & Jaeger, M. (2016) Clinical relevance of informal coercion in psychiatric treatment-a systematic review. *Frontiers in Psychiatry*, 7, 197. Available from: https://doi.org/10.3389/fpsyt.2016.00197

Hotzy, F., Theodoridou, A., Hoff, P., Schneeberger, A.R., Seifritz, E., Olbrich, S. et al. (2018) Machine learning: an approach in identifying risk factors for coercion compared to binary logistic regression. *Frontiers in Psychiatry*, 9, 258. Available from: https://doi.org/10.3389/fpsyt.2018.00258

Jackson, H., Baker, J. & Berzins, K. (2018) What factors influence the decisions of mental health professionals to release service users from seclusion? *International Journal of Mental Health Nursing*, 27(6), 1618–1633. Available from: https://doi.org/10.1111/inm.12502

Jalil, R. & Dickens, G.L. (2018) Systematic review of studies of mental health nurses' experience of anger and of its relationships with their attitudes and practice. *Journal of Psychiatric and Mental Health Nursing*, 25(3), 201–213. Available from: https://doi.org/10.1111/jpm.12450

Jankovic, J., Richards, F., Berrisford, G. & Priebe, S. (2020) Advance statements in adult mental healthcare: an update. *BJPsych Advances*, 26(2), 109–115. Available from: https://doi.org/10.1192/bja.2019.62

Kersting, X., Hirsch, S. & Steinert, T. (2019) Physical harm and death in the context of coercive measures in psychiatric patients: a systematic review. *Frontiers in Psychiatry*, 10, 400. Available from: https://doi.org/10.3389/fpsyt.2019.00400

Kisely, S. (2016) Canadian studies on the effectiveness of community treatment orders. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie*, 61(1), 7–14. Available from: https://doi.org/10.1177/0706743715620414

Kisely, S., Campbell, L.A. & O'Reilly, R. (2017) Compulsory community and involuntary outpatient treatment for people with severe mental disorders. *The Cochrane Database of Systematic Reviews*, 3(3), CD004408. Available from: https://doi.org/10.1002/14651858.CD004408.pub5

Kisely, S. & Hall, K. (2014) An updated meta-analysis of randomised controlled evidence for the effectiveness of community treatment orders. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie*, 59(10), 561–564. Available from: https://doi.org/10.1177/070674371405901010

Krieger, E., Moritz, S., Weil, R. & Nagel, M. (2018) Patients' attitudes towards and acceptance of coercion in psychiatry. *Psychiatry Research*, 260, 478–485. Available from: https://doi.org/10.1016/j.psychres.2017.12.029

Lan, S.H., Lu, L.C., Lan, S.L., Chen, J.C., Wu, W.J., Chang, S.P. et al. (2017) Educational intervention on physical restraint use in long-term care facilities: systematic review and meta-analysis. *The Kaohsiung Journal of Medical Sciences*, 33(8), 411–421. Available from: https://doi.org/10.1016/j.kjms.2017.05.012

Lindgren, B.M., Ringnér, A., Molin, J. & Graneheim, U.H. (2019) Patients' experiences of isolation in psychiatric inpatient care: insights from a meta-ethnographic study. *International Journal of Mental Health Nursing*, 28(1), 7–21. Available from: https://doi.org/10.1111/inm.12519

Lykke, J., Hjorthøj, C., Thomsen, C.T. & Austin, S.F. (2020) Prevalence, predictors, and patterns of mechanical restraint use for inpatients with dual diagnosis. *Perspectives in Psychiatric Care*, 56(1), 20–27. Available from: https://doi.org/10.1111/ppc.12367

Maughan, D., Molodynski, A., Rugkåsa, J. & Burns, T. (2014) A systematic review of the effect of community treatment orders on service use. *Social Psychiatry and Psychiatric Epidemiology*, 49(4), 651–663. Available from: https://doi.org/10.1007/s00127-013-0781-0

Mellow, A., Tickle, A. & Rennoldson, M. (2017) Qualitative systematic literature review: the experience of being in seclusion for adults with mental health difficulties. *Mental Health Review Journal*, 22(1), 1–15.

Molodynski, A., O'Brien, A. & Burns, J. (2017) Key international themes in coercion. *BJPsych International*, 14(3), 61–63. Available from: https://doi.org/10.1192/S2056474000001926

Molyneaux, E., Turner, A., Candy, B., Landau, S., Johnson, S. & Lloyd-Evans, B. (2019) Crisis-planning interventions for people with psychotic illness or bipolar disorder: systematic review and meta-analyses. *BJPsych Open*, 5(4), e53. Available from: https://doi.org/10.1192/bjo.2019.28

Muir-Cochrane, E., Grimmer, K., Gerace, A., Bastiampillai, T. & Oster, C. (2020a) Prevalence of the use of chemical restraint in the management of challenging behaviours associated with adult mental health conditions: a meta-synthesis. *Journal of Psychiatric and Mental Health Nursing*, 27(4), 425–445. Available from: https://doi.org/10.1111/jpm.12585

Muir-Cochrane, E., Oster, C., Gerace, A., Dawson, S., Damarell, R. & Grimmer, K. (2020b) The effectiveness of chemical restraint in managing acute agitation and aggression: a systematic review of randomised controlled trials. *International Journal of Mental Health Nursing*, 29(2), 110–126. Available from: https://doi.org/10.1111/inm.12654

Muir-Cochrane, E., Oster, C. & Grimmer, K. (2020c) International research into 22 years of use of chemical restraint: an evidence overview. *Journal of Evaluation in Clinical Practice*, 26(3), 927–956. Available from: https://doi.org/10.1111/jep.13232

Nakhost, A., Sirotich, F., Pridham, K., Stergiopoulos, V. & Simpson, A. (2018) Coercion in outpatients under community treatment orders: a matched comparison study. *Canadian Journal of Psychiatry*, 63(11), 757–765. Available from: https://doi.org/10.1177/0706743718766053

Newton-Howes, G. & Mullen, R. (2011) Coercion in psychiatric care: systematic review of correlates and themes. *Psychiatric Services (Washington, D.C.)*, 62(5), 465–470. Available from: https://doi.org/10.1176/ps.62.5.pss6205_0465

Nielson, S., Bray, L., Carter, B. & Kiernan, J. (2020) Physical restraint of children and adolescents in mental health inpatient services: a systematic review and narrative synthesis. *Journal of Child Health Care*, 25(3), 342–367. Available from: https://doi.org/10.1177/1367493520937152

Paradis-Gagné, E., Pariseau-Legault, P., Goulet, M.H., Jacob, J.D. & Lessard-Deschênes, C. (2021) Coercion in psychiatric and mental health nursing: a conceptual analysis. *International Journal of Mental Health Nursing*, 30(3), 590–609. Available from: https://doi.org/10.1111/inm.12855

Pariseau-Legault, P., Vallée-Ouimet, S., Jacob, J.D. & Goulet, M.H. (2020) Intégration des droits humains dans la pratique du personnel infirmier faisant usage de coercition en santé mentale: recension systématique des écrits et méta-ethnographie. *Recherche en Soins Infirmiers*, 142, 53–76. Available from: https://doi.org/10.3917/rsi.142.0053

Pelto-Piri, V., Kjellin, L., Hylén, U., Valenti, E. & Priebe, S. (2019) Different forms of informal coercion in psychiatry: a qualitative study. *BMC Research Notes*, 12(1), 787. Available from: https://doi.org/10.1186/s13104-019-4823-x

Plunkett, R. & Kelly, B.D. (2021) Dignity: The elephant in the room in psychiatric inpatient care? A systematic review and thematic synthesis. *International Journal of Law and Psychiatry*, 75, 101672. Available from: https://doi.org/10.1016/j.ijlp.2021.101672

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M. et al. (2006) *Guidance on the conduct of narrative synthesis in systematic reviews.* A product from the ESRC methods programme Version, 1(1), b92.

Potthoff, S., Gather, J., Hempeler, C., Gieselmann, A. & Scholten, M. (2022) "Voluntary in quotation marks": a conceptual model of psychological pressure in mental healthcare based on a grounded theory analysis of interviews with service users. *BMC Psychiatry*, 22(1), 186. Available from: https://doi.org/10.1186/s12888-022-03810-9

Rabe, S.C., Fegert, J.M., Krüger, U. & Kölch, M. (2017) Zwangsmaßnahmen in der kinder- und Jugendpsychiatrie [coercive measures in child and adolescent psychiatry]. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, 66(1), 26–46. Available from: https://doi.org/10.13109/prkk.2017.66.1.26

Rugkåsa, J. (2016) Effectiveness of community treatment orders: the international evidence. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie*, 61(1), 15–24. Available from: https://doi.org/10.1177/0706743715620415

Sailas, E. & Fenton, M. (2000) Seclusion and restraint for people with serious mental illnesses. *The Cochrane Database of Systematic Reviews*, 2000(2), CD001163. Available from: https://doi.org/10.1002/14651858.CD001163

Staniszewska, S., Mockford, C., Chadburn, G., Fenton, S.J., Bhui, K., Larkin, M. et al. (2019) Experiences of in-patient mental health services: systematic review. *The British Journal of Psychiatry: the Journal of Mental Science*, 214(6), 329–338. Available from: https://doi.org/10.1192/bjp.2019.22

Stuart, R., Akther, S.F., Machin, K., Persaud, K., Simpson, A., Johnson, S. et al. (2020) Carers' experiences of involuntary admission under mental health legislation: systematic review and qualitative meta-synthesis. *BJPsych Open*, 6(2), e19. Available from: https://doi.org/10.1192/bjo.2019.101

Suess-Schwend, A., Bono Del Trigo, Á., Ibáñez-Rojo, V., Romero-Cuesta, J., Romero-Jimeno, M.D., Tamayo-Velázquez, M.I. et al. (2016) Planificación Anticipada de Decisiones en Salud Mental: modelos, utilidades y propuestas de aplicación. *Revista de la Asociación Española de Neuropsiquiatría*, 36(129), 79–102. Available from: http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S0211573520160000100006&lng=es&tlng=es

Sugiura, K., Pertega, E. & Holmberg, C. (2020) Experiences of involuntary psychiatric admission decision-making: a systematic review and meta-synthesis of the perspectives of service users, informal carers, and professionals. *International Journal of Law and Psychiatry*, 73, 101645. Available from: https://doi.org/10.1016/j.ijlp.2020.101645

Thomas, J. & Harden, A. (2008) Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8, 45. Available from: https://doi.org/10.1186/1471-2288-8-45

Tingleff, E.B., Bradley, S.K., Gildberg, F.A., Munksgaard, G. & Hounsgaard, L. (2017) "Treat me with respect". A systematic review and thematic analysis of psychiatric patients' reported perceptions of the situations associated with the process of coercion. *Journal of Psychiatric and Mental Health Nursing*, 24(9–10), 681–698. Available from: https://doi.org/10.1111/jpm.12410

United Nations Human Rights Council. (2017) Special rapporteur on the right to physical and mental health. Available from: https://www.ohchr.org/en/issues/health/pages/srrighthealthindex.aspx

Vieta, E., Garriga, M., Cardete, L., Bernardo, M., Lombraña, M., Blanch, J. et al. (2017) Protocol for the management of psychiatric patients with psychomotor agitation. *BMC Psychiatry*, 17(1), 328. Available from: https://doi.org/10.1186/s12888-017-1490-0

Walker, S., Mackay, E., Barnett, P., Sheridan Rains, L., Leverton, M., Dalton-Locke, C. et al. (2019) Clinical and social factors associated with increased risk for involuntary psychiatric hospitalization systematic review, meta-analysis, and narrative synthesis. *The Lancet Psychiatry*, 6(12), 1039–1053. Available from: https://doi.org/10.1016/S2215-0366(19)30406-7

Whiting, P., Kleijnen, Higgins, J., Caldwell, D., Reeves, B., Shea, B. et al. (2015) *ROBIS: Tool to assess risk of bias in systematic reviews: Guidance on how to use ROBIS*. Available from: http://www.bristol.ac.uk/media-library/sites/social-communitymedicine/Robis/robisguidancedocument.pdf

Whiting, P., Savović, J., Higgins, J.P., Caldwell, D.M., Reeves, B.C., Shea, B. et al. (2016) ROBIS: a new tool to assess risk of bias in systematic reviews was developed. *Journal of Clinical Epidemiology*, 69, 225–234. Available from: https://doi.org/10.1016/j.jclinepi.2015.06.005

Woodward, S., Berry, K. & Bucci, S. (2017) A systematic review of factors associated with service user satisfaction with psychiatric inpatient services. *Journal of Psychiatric Research*, 92, 81–93. Available from: https://doi.org/10.1016/j.jpsychires.2017.03.020

World Health Organization. (2019) Strategies to end seclusion and restraint: *WHO Quality Rights specialised training. Course guide*. Available from: https://apps.who.int/iris/bitstream/handle/10665/329605/9789241516754-eng.pdf

Wynn, R. (2018) Involuntary admission in Norwegian adult psychiatric hospitals: a systematic review. *International Journal of Mental Health Systems*, 12, 10. Available from: https://doi.org/10.1186/s13033-018-0189-z

Yang, Y., Li, W., An, F.R., Wang, Y.Y., Ungvari, G.S., Balbuena, L. et al. (2020) Voluntary and involuntary admissions for severe mental illness in China: a systematic review and meta-analysis. *Psychiatric Services (Washington, D.C.)*, 71(1), 83–86. Available from: https://doi.org/10.1176/appi.ps.201900106

Ye, J., Xiao, A., Yu, L., Guo, J., Lei, H., Wei, H. et al. (2018) Staff training reduces the use of physical restraint in mental health service, evidence-based reflection for China. *Archives of Psychiatric Nursing*, 32(3), 488–494. Available from: https://doi.org/10.1016/j.apnu.2017.11.028

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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