

REVIEW ARTICLE OPEN ACCESS

# Uncovering Complexities in Reducing Aggression, Conflict and Restrictive Practices in Acute Mental Healthcare Settings: An Overview of Reviews

Esario IV Daguman | Marie Hutchinson | Richard Lakeman

Southern Cross University, Lismore, New South Wales, Australia

**Correspondence:** Esario IV Daguman ([e.daguman.10@student.scu.edu.au](mailto:e.daguman.10@student.scu.edu.au))**Received:** 4 February 2024 | **Revised:** 23 May 2024 | **Accepted:** 30 May 2024**Funding:** This study was supported by Southern Cross University and the Translational Research Grant Scheme of the NSW Office for Health and Medical Research.**Keywords:** aggression | coercion | mental health service | psychiatric hospitals | psychiatric nursing

## ABSTRACT

Aggression, conflict and restrictive practices present complexities in acute mental health services, as do implementing service changes to reduce them. Existing published literature needs to offer more high-level guidance on the effectiveness of these service changes and their associated implementation factors. As a result, an overview of systematic reviews was undertaken to identify (i) nonpharmacological interventions to reduce conflict, aggression and restrictive practices in acute mental health settings, and (ii) their effects across different clinical outcomes. A parallel re-extraction from primary studies was then utilised (iii) to identify factors influencing successful intervention implementation. Of 124 articles sourced from nine databases and registries, four reviews were retained for the final analysis, using the direction of effect and tabular and narrative summaries. These reviews included programmes or interventions focused on inpatient adolescent, adult and older adult populations. They reported on alternative containment strategies, risk assessments, Safewards, sensory rooms and equipment, Six Core Strategy-based interventions and staff training. The overview found that a combination of interventions intended to improve relationships and reduce interpersonal conflict may help reduce aggression, conflict and restrictive practices. At the same time, stand-alone staff training and sensory rooms and equipment may have mixed effects. The quality of the evidence linking these interventions to reductions in aggression, conflict and restrictive practices is limited. Successful implementation hinges on multiple factors: intervention characteristics, preparation and planning, evaluation and monitoring, outcome interpretation, stakeholder involvement/investment, staff-related factors and contextual factors. Any implementation initiative may benefit from using pragmatic and complexity-informed research methodologies, including integrating meaningful involvement with service users, peer workers and culturally diverse groups.

## 1 | Introduction

Relationships between service users and staff shape the provision of acute mental healthcare. Building and maintaining relationships—that foster a sense of safety for all, provide therapeutic support and preserve, if not enhance, a person's autonomy in an ethico-legal and psychosocial environment—is a

complex undertaking (McAllister et al. 2019). The goal is balancing risk management and ensuring safety for all, while also supporting self-determination for recovery-oriented meaning-making during a crisis (Leonhardt et al. 2017). However, it has been said that service staff have become overly cautious about engaging with service users, and have been working on a custodial and observational basis (Felton, Wright, and Stacey 2017).

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial](https://creativecommons.org/licenses/by-nc/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2024 The Author(s). *International Journal of Mental Health Nursing* published by John Wiley & Sons Australia, Ltd.

The focus of care has shifted towards containing emotional and behavioural dysregulations (Mullen 2009), which are common manifestations of mental health crises, particularly in unfamiliar, busy and crowded acute care settings and involuntary treatment contexts.

Legally permitted restrictive practices—or formal coercive measures such as seclusion and restraint—have been commonly used to manage or respond to aggression and conflict when other least coercive measures have failed (Paradis-Gagné et al. 2021). Coercion, while not inherently causing physical harm, carries the potential for moral harm (Jansen et al. 2019), due to a breach of a person's fundamental human right to exercise autonomy. Moreover, regardless of the underlying rationale, restrictive practices are associated with a range of harms, such as breakdowns in the therapeutic alliance between service users and staff (Hawsawi et al. 2020), limiting the effectiveness of treatment. Restrictive practices continue to be used and legally permitted in acute settings, despite governments and professional bodies expressing intentions for their reduction and elimination (Power, Baker, and Jackson 2020).

### 1.1 | Complexities in Reducing Aggression, Conflict and Restrictive Practices

Service change intended to foster the realisation of personal recovery and treatment goals, as well as reduce aggression, conflict and restrictive practices in acute settings, is complex. Previous efforts have yielded mixed or statistically insignificant effects for specific interventions (e.g., Boulton et al. 2022; Duxbury et al. 2019; Repique et al. 2016). Changing established practices in acute care contexts is also compounded by the idiosyncratic factors associated with aggression and conflict (Bowers 2014), the culture and traditions of practice in a localised context (Lakeman 2013), the intricate dynamics between staff implementing the intervention, and the capacities and setting of the acute unit (Snipe and Searby 2023).

Additionally, services have been preoccupied with, or pressured to focus more on, recognising and responding to service users' risk of suicide (Hawton et al. 2022; Pisani, Murrie, and Silverman 2016) and violence (Ahmed et al. 2021), and less mindful of cultivating effective nurse-service user relationships (see Hartley et al. 2020). This preoccupation with harmful risk has endured, despite that risk prediction is statistically unreliable (Kessler et al. 2020; Langan 2010), associated with increased interpersonal distance (Huff, Isbell, and Arnold 2023), and against the guidance of nursing care philosophies in many acute care reform efforts (e.g., the Tidal Model, trauma-informed care and recovery model; see Aremu et al. 2018; Fletcher and Stevenson 2001; Repique et al. 2016). It has been suggested that services rely on predicting harmful risks associated with service users to manage uncertainty about what intervention effectively prevents them, concealing the services' own risk of providing suboptimal support (Smith et al. 2015).

Besides the uncertainty about how and which interventions are effective, how they can be adapted to different environments and situations also needs to be clarified (Baker et al. 2021).

Evaluation studies also show that reductions in conflict, aggression and restrictive practices vary with the extent of implementation and adaptation of interventions (Raphael et al. 2021). Furthermore, the field lacks high-quality research, and procedural differences and inadequate descriptions in existing studies make synthesising knowledge on interventions challenging (Gaynes et al. 2017; Leach et al. 2019).

Taken together, there is a need to build comprehensive evidence bases that offer a range of effective interventions promoting engagement and a sense of safety for everyone in acute care settings, and the factors that facilitate proper support delivery without resorting to restrictive practices such as seclusion and restraint.

### 1.2 | Towards a Comprehensive Evidence Base

A growing volume of reviews within the mental healthcare field has attempted to synthesise all available evidence to support the development, implementation and evaluation of optimal alternatives that can replace restrictive practices in containing aggression and conflict in acute settings (e.g., Bak et al. 2011; Dahm et al. 2017; Finch et al. 2021; Gaskin, Elsom, and Happell 2007; Gaynes et al. 2017; Giacco et al. 2018; Hayes et al. 2019; Livingston et al. 2010; Molyneaux et al. 2019; Mugoya and Kampfe 2010; Oostermeijer et al. 2021; Quinn and Kolla 2016; Reen et al. 2020; Sailas and Fenton 2000; Scanlan 2009; Scanlan and Novak 2015; Stewart et al. 2010; Väkiparta et al. 2019; Wolf, Whiting, and Fazel 2017). Nevertheless, these previous reviews may vary in quality, raising concerns about relying on potentially poor-quality evidence bases to shape practices within the field. Furthermore, most of these reviews do not simultaneously cover intervention effectiveness and delivery complexities. Understanding the experiences of researchers trying to deploy change in acute care gives primacy to evaluating interventions with a systemic view of service issues—recognising them as the responsibility of the service, rather than service users (Harper and Speed 2012).

Taking advantage of existing syntheses, the current review provides an overview of reviews on efforts to reduce conflict, aggression and restrictive practices in acute mental healthcare settings. This approach can address broader review inquiries (Gates et al. 2020). Reviewing existing reviews also allows researchers to examine their quality and strengths (Smith et al. 2011). This methodology expedites synthesising insights, integrating findings and identifying gaps and patterns in the literature (Pollock et al. 2023). It streamlines the complexities associated with understanding and advancing knowledge in providing acute mental health care and implementing interventions.

## 2 | Aims

This review employed explicit and systematic methods to search for, and summarise, systematic review evidence on interventions to reduce aggression, conflict and restrictive practices in acute mental healthcare settings. Specifically, the following research questions guided the review:

1. What are the nonpharmacological interventions to reduce aggression, conflict and restrictive practices within the evidence base?
2. Is there any evidence of an effect from these interventions?
3. What are the factors that influence the effective implementation of these interventions?

### 3 | Methods

A two-part process was undertaken to address the review questions. First, an overview of reviews was conducted, with a re-analysis of systematic review outcome data that prevented covering evidence beyond the current overview's scope. Second, a parallel re-extraction and re-analysis of primary study outcomes within included reviews were performed. This second part enabled the exploration of novel research questions beyond the remit of the included reviews (Ballard and Montgomery 2017; Pollock et al. 2016).

The overview of reviews approach was employed to summarise evidence from systematic reviews, based on the Cochrane Review guidelines (Pollock et al. 2016) and reporting standards from the Preferred Reporting Items for Systematic Reviews and Meta-analyses (Moher et al. 2009). In an overview, systematic reviews serve as the search, inclusion and analysis unit, rather than the primary studies (Pollock et al. 2023). Study-level outcome data (not conclusions) were extracted to address the first and second review questions as they appeared in the systematic reviews. These data from included systematic reviews were re-analysed and presented through vote counting based on effect direction. A parallel re-extraction and re-analysis of outcome data from primary studies were then conducted to address the third review question since many previous reviews had yet to address intervention implementation factors alongside intervention effectiveness (see Introduction) necessary for determining the complexities in reducing the behaviours and practices under study.

#### 3.1 | Criteria for Selecting Reviews for Inclusion

Following Cochrane guidance (Pollock et al. 2023), selection criteria included systematic 'reviews of interventions' (Lasserson, Thomas, and Higgins 2023). As randomised controlled trials (RCT) and nonrandomised studies can be included in systematic 'reviews of interventions' (Cumpston and Chandler 2023), reviews were considered if they encompassed one or more experimental, quasi-experimental and observational studies. Additionally, systematic reviews covering aggregated or ward-level data from general mental health inpatient settings with service users of diverse demographic backgrounds and mental distress were included. As reduction interventions in the field take many forms, there was no limit on the intervention type to be covered, except that they were nonpharmacological interventions in an acute mental healthcare setting evaluated against within- or between-group comparators across several clinical outcomes.

#### 3.2 | Search Methods for Identification of Reviews

Nine databases and registries (i.e., APA PsycArticles, APA PsycInfo, CINAHL Plus, Cochrane Systematic Reviews, Joanna Briggs Institute Systematic Review Register, MEDLINE, PROSPERO, Psychology and Behavioural Sciences Collection and Scopus) were searched for systematic reviews published in the English language between September 2013 and September 2023. Search terms included, but were not limited to, 'aggressive behaviour', 'coercion' and 'psychiatric hospitals' (see Appendix S1 for the complete search terms).

#### 3.3 | Data Collection and Analysis

Two reviewers independently screened the literature using the Covidence software (Veritas Health Innovation n.d.), assessed the 'risk of bias' of the included reviews using the Cochrane-recommended tool—Assessment of Multiple Systematic Reviews (Shea et al. 2017), and extracted data from a sample of included studies with good agreement. A reviewer then completed the extraction for the remaining studies. The third overview author brought conflicts to a consensus at both stages. To avoid double-counting of outcome data that over-amplifies the significance of some studies, a reviewer managed overlapping reviews using a decision tool on what to include in an overview (see Pollock et al. 2019). Systematic reviews with the 'highest quality' and the most significant number of included studies have been considered. Any available 'risk of bias' and certainty of evidence assessments in the underlying systematic reviews were reported, but were not re-assessed—aligning with the Cochrane guidance (Pollock et al. 2023). A visual examination of tables that presented the synthesis findings was conducted to determine heterogeneity in the results (see Campbell et al. 2020), given the challenges in running a meta-analysis on the overview topic.

Given the diversity in the 'risk of bias' rating systems, a three-tier categorisation was applied in Figure 3, where *weak*, *very low*, *low quality*, *serious risk*, *critical risk* and 0 to 1 overall ratings were grouped as *low quality*, *moderate quality* and risk as *moderate quality*, and *strong quality* and *low risk* as *high quality*.

#### 3.4 | Data Synthesis

Outcome data on the overview topic are heterogeneous, as evidenced by the lack of meta-analyses in previous reviews. As a result, a vote-counting approach based on effect direction was used to present outcome data, following the synthesis without meta-analysis guidelines (SWiM; Campbell et al. 2020). The findings on the effectiveness of different reduction interventions were presented using an effect direction plot (see Figure 3). Primary studies were presented according to methodological quality, with higher quality presented first. On the contrary, emerging implementation factors were visualised in a diagram (see Figure 4). As there is no consensus on grouping interventions and implementation factors for reporting them, they were categorised based on their primary focus. All of the synthesis

findings were described narratively. The full details of the current overview methodology were considered in advance and placed in an online protocol.

## 4 | Results

### 4.1 | Part 1: Overview of Review Results

#### 4.1.1 | Search Results

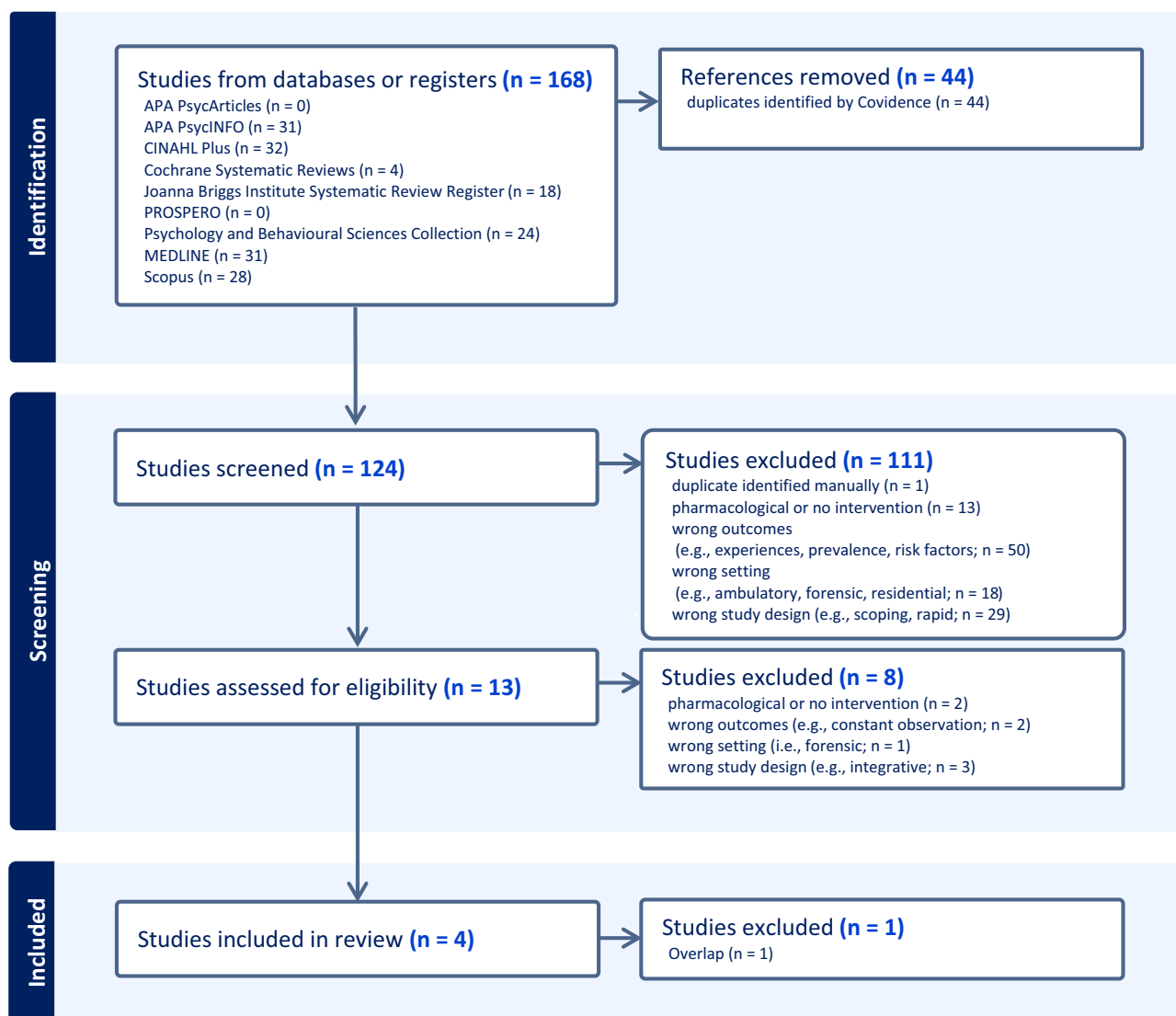
The overview search results are depicted in Figure 1. After screening 124 articles, 120 were excluded (see Appendix S1 for excluded review lists and exclusion reasons). During the full-text review, eight reviews were excluded—either lacking intervention assessment, located in a forensic context, having rapid, integrative or traditional narrative review designs, or primarily focused on constant observation or associated variables related to restrictive practices. One systematic review (Gaynes et al. 2017; with seven included studies) of *critically low* quality shared one primary study (Nurenberg et al. 2015) with another

review of the same quality (Giacco et al. 2018; with three included studies).

#### 4.1.2 | Description of Included Reviews

**4.1.2.1 | Study Design.** Four systematic reviews were analysed (see Table 1), all focusing on the effectiveness of interventions to reduce aggression and restrictive practices in acute mental healthcare settings, with two exploring specific structured programmes (Finch et al. 2021; Haig and Hallett 2022). Three reviews justified their chosen study design inclusion criteria as an exhaustive search strategy on their review topics (Finch et al. 2021; Haig and Hallett 2022) and facilitation of causal inferences (Gaynes et al. 2017). Included reviews encompassed randomised and nonrandomised primary studies.

**4.1.2.2 | Participants.** The service user participants encompassed by the reviews were inpatient adolescent, adult and older adult service users undergoing various mental



**FIGURE 1** | Flow diagram of study identification, screening and extraction processes.

healthcare treatments in acute settings. The acute care settings were from nine countries (i.e., Australia, Denmark, Finland, Germany, Poland, Switzerland, the Netherlands, the UK and the USA). One review provided details on the age, sample size, mental distress diagnoses of service user participants and some service staff participant details (Finch et al. 2021). Others covered the professional backgrounds of staff participants (Haig and Hallett 2022) and described the clinical characteristics and restrictive practice experience of service user participants (Gaynes et al. 2017). Conversely, one review briefly narrated the participants within their primary studies (Allen et al. 2018).

**4.1.2.3 | Interventions.** Six interventions were reported: (i) alternative containment strategies, (ii) risk assessment, (iii) Safewards, (iv) sensory rooms and equipment, (v) Six Core Strategy-based interventions and (vi) staff training. Only one review reported intervention duration as a separate data extraction criterion in a table (Gaynes et al. 2017). The remaining three reviews mentioned duration discretely alongside other outcome data, with 3 years as the most extended timeframe.

**4.1.2.4 | Comparisons.** Most comparisons involved within-group comparators, whereas few had between-group comparisons against treatment-as-usual groups. No review detailed matching methods used in primary studies, although some acknowledged if control groups were 'matched'. Three reviews reported the number of comparisons or time points in a study (Finch et al. 2021; Gaynes et al. 2017; Haig and Hallett 2022), with the maximum being four (i.e., baseline, intervention, post-trial and follow-up). The most common was two (i.e., pre- and postintervention).

**4.1.2.5 | Outcomes.** Outcomes included frequencies of service user aggression and restrictive practices, chiefly measured through counts or rates. One review briefly covered implementation fidelity (Finch et al. 2021), whereas another thoroughly examined factors influencing successful intervention implementation (Haig and Hallett 2022).

As seen in Table 1, for the re-analysis of outcome-level data, of 51 primary studies contained within the included reviews, 28 were excluded—10 were focused on medication-related interventions, 16 were outcomes not covered in this overview, and 2 were situated in forensic settings. The list of excluded primary studies and reasons for exclusion are also accessible as Appendix S1.

### 4.1.3 | Methodological Quality of Included Reviews

All included reviews, assessed through the AMSTAR 2 (Shea et al. 2017), were of *critically low* quality or had multiple critical weaknesses (see Figure 2). Key factors influencing quality ratings included the absence of meta-analysis and an excluded studies list. Three reviews did not establish review methodologies a priori (Allen et al. 2018; Gaynes et al. 2017; Haig and Hallett 2022), and two reviews did not meet the criteria for duplicate data extraction (Allen et al. 2018; Haig and Hallett 2022).

The reviews used various tools to assess the quality of evidence and the risk of bias. One review that used the Quality Assessment Tool for Studies with Diverse Design (Sirriyeh et al. 2012) did

not adequately assess quality for RCTs and non-RCTs, as it does not assess blinding, allocation concealment, confounding and selection bias crucial in the AMSTAR 2 (Shea et al. 2017). Two reviews needed more analysis of the observed heterogeneity in their findings (Allen et al. 2018; Haig and Hallett 2022). Conversely, all reviews were conducted with duplicate study selection, disclosed any potential conflict of interest and considered the risk of bias in their discussions of the primary study findings.

### 4.1.4 | Risk of Bias in Primary Studies Included in Reviews

The included reviews applied various measures to evaluate the 'risk of bias' in their primary studies. These measures were specifically tailored for different study designs, and various aspects of study quality were assessed using either three or four response options. One review modified the quality assessment measure's rating system to obtain an overall categorisation of the study quality (Finch et al. 2021).

The primary studies included in the reviews had notable limitations. Many did not consider confounding variables (Haig and Hallett 2022) nor use RCTs (Finch et al. 2021), control groups, blinding or allocation concealment (Allen et al. 2018). Additionally, several studies needed more justification for study design. They provided insufficient descriptions of settings, recruitment procedures, data collection processes (Finch et al. 2021) and intervention application procedures (Haig and Hallett 2022).

Sample sizes did not represent power calculations, and the standardised measures were not psychometrically validated (Finch et al. 2021). Some studies failed to account for intraclass correlations (Gaynes et al. 2017), whereas many omitted both performing and reporting statistical testing (Allen et al. 2018; Gaynes et al. 2017) and assessing implementation fidelity (Haig and Hallett 2022). Conversely, most Safewards studies justified their data analysis methodologies (Finch et al. 2021).

### 4.1.5 | Interventions in the Evidence Base

Several interventions to reduce aggression, conflict and restrictive practices in acute mental healthcare settings were identified and organised into six groups: (i) alternative containment strategies, (ii) risk assessment, (iii) Safewards, (iv) sensory rooms and equipment, (v) Six Core Strategy-based interventions and (vi) staff training. Safewards and Six Core Strategy were structured programmes; sensory rooms aided emotional regulation; risk assessment, alternative containment strategies and staff training were more general interventions with some overlap with the structured programmes. Descriptions of each intervention follow, with specific details such as associated intervention implementation timings and sample sizes available in this overview's Appendix S1.

**4.1.5.1 | Alternative Containment Strategies.** Healthcare workers provided alternative containment strategies with specific training and experience in offering

**TABLE 1** | Included reviews of interventions to reduce aggression, conflict and restrictive practices in acute care settings.

Authors and publication year	Review objectives	Types of studies reviewed	Participants	Intervention	Outcome measures	Included studies of total studies	Quality assessment methodology	Certainty of evidence assessment methodology	Quality assessment rating by overview authors
Allen et al. (2018)	Determine methods employed to reduce the use of physical restraints in acute psychiatric inpatient hospitals.	Case studies, clinical trials, comparative studies and dissertation papers	Adolescent and adult service users	Six Core Strategy-based interventions: de-escalation technique training, crisis debriefings, crisis management plans, increased reporting and data sharing, crisis response team, restraint chairs and restraint policy changes requiring chief medical officer authorisation	Number of hours of physical restraint use per 1000 service user bed days	3 of 3 studies—Bell and Gallacher (2016), Godfrey et al. (2014) and Jonikas et al. (2004)	Effective Public Health Practice Project (Thomas et al. 2004)	—	Critically low
Finch et al. (2021)	Evaluate the effectiveness of Safewards in conflict and containment reduction, and ward climate improvement.	Studies investigating the effect of Safewards	Adolescent, adult and aged service users in various mental health inpatient settings, including secure forensic setting	10 Safewards interventions: clear mutual expectations, soft words, talk down, positive words, bad news mitigation, knowing each other, mutual help meeting, calm down methods, reassurance, discharge messages	Number of conflict and containment events, and measures of ward climate	7 of 13 studies—Baumgardt et al. (2019), Bowers et al. (2015), Davies et al. (2020), Dickens, Tabvuma, and Frost (2020), Fletcher et al. (2017), Lickiewicz et al. (2020), Stensgaard et al. (2018)	Quality Assessment Tool for Studies with Diverse Designs (Sirriyeh et al. 2012) was used to arrive at a percentage score, and categorised according to GRADE approach (Atkins et al. 2004)	—	Critically low

(Continues)

TABLE 1 | (Continued)

Authors and publication year	Review objectives	Types of studies reviewed	Participants	Intervention	Outcome measures	Included studies of total studies	Quality assessment methodology	Certainty of evidence assessment methodology	Quality assessment rating by overview authors
Gaynes et al. (2017)	Examine effective approaches for preventing and de-escalating aggression and restrictive practices in acute care setting	Randomised controlled trials, cluster randomised controlled trials, nonrandomised controlled trials, and cohort studies	Adult service users with mental distress, and who were prone to or currently display aggressive conduct in different acute care settings	Staff training, risk assessment, multimodal intervention and environmental or group psychotherapeutic intervention. Medication protocol was included in the review, but excluded in this overview.	Frequency, severity and duration of aggression, and seclusion or restraint	7 of 17 studies—Aberhalden et al. (2008), Carlson and Holm (1993), Kontio et al. (2013), Nurenberg et al. (2015), Putkonen et al. (2013), Smoot and Gonzales (1995), van de Sande et al. (2011)	Cochrane Risk of Bias tool (Higgins et al. 2011) and Research Triangle Institute Risk of Bias Tool for Observational Studies (Viswanathan et al. 2012)	Guidance established by the Evidence-based Practice Center (Berkman et al. 2015)	Critically low
Haig and Hallett (2022)	Determine the effectiveness of sensory rooms in reducing service user aggression and restrictive practices in adult psychiatric inpatient settings.	Quantitative, qualitative and mixed methods studies that investigated the use of sensory rooms in psychiatric inpatient settings	Adult (aged 16–39) service users in inpatient psychiatric, high dependency/psychiatric intensive care and forensic mental health settings	Rooms and equipment designed for sensory experiences encompassed a range of elements, such as lighting and visual displays, music, diverse seating options, chances for movement, stimulating scents and textures, vibrating elements and weighted objects.	Rates of aggression and restrictive practices, and measures of service user outcomes	6 of 18 studies—Champagne and Sayer (2003), Cummings, Grandfield, and Coldwell (2010); Lloyd, King, and Machingura (2014); Novak et al. (2012); Smith and Jones (2013)	Risk of Bias in Nonrandomised Studies of Interventions (Sterne et al. 2016), and Mixed Methods Appraisal Tool (Hong, Gonzalez-Reyes, and Pluye 2018)	—	Critically low

Item	Included Systematic Reviews			
	Allen et al. (2018)	Finch et al. (2021)	Gaynes et al. (2017)	Haig & Hallett (2022)
Inclusion of PICO framework components	Yes	Yes	Yes	No
Protocol pre-registration and adherence	No	Partial Yes	No	No
Explanation of study design inclusion criteria	No	Yes	Yes	Yes
Comprehensive literature search strategy	Yes	Yes	Partial Yes	Partial Yes
Selection in duplicate	Yes	Yes	Yes	Yes
Extraction in duplicate	No	Yes	No	Yes
Reported excluded studies and exclusion reasons	No	No	No	No
Adequate description of included studies	Yes	Yes	Yes	Partial Yes
Satisfactory technique for assessing RCT quality	No	No	Yes	Yes
Satisfactory technique for assessing NRSI quality	Partial Yes	No	Yes	Yes
Source of funding declaration	Yes	No	Yes	No
Satisfactory meta-analytic methods for RCT	-	-	-	-
Satisfactory meta-analytic methods for NRSI	-	-	-	-
Assessment of study quality on meta-analysis results	-	-	-	-
Accounting for study quality in discussion	Yes	Yes	Yes	Yes
A satisfactory explanation of heterogeneity	No	Yes	Yes	No
Investigation and discussion of publication bias	-	-	-	-
Conflict of interest declaration	Yes	Yes	Yes	Yes
<b>Overall Rating</b>	<b>Critically Low</b>	<b>Critically Low</b>	<b>Critically Low</b>	<b>Critically Low</b>

**FIGURE 2** | Quality of included reviews of interventions to reduce conflict, aggression and restrictive practices in acute care settings. Note: The Assessment of Multiple Systematic Reviews 2 (Shea et al., 2017) was used. A dash (-) represents the absence of a meta-analysis. NRSI indicates non-randomised studies of interventions; PICO, participants, intervention, comparison, and outcomes; RCT, randomised control trial.

targeted support to service users. This intervention group included equine-assisted therapy and occupational therapy, which aimed to decrease aggression by altering the physical environment of the service users or implementing therapeutic activities.

**4.1.5.2 | Risk Assessment.** Risk assessment was intended to identify and minimise potential harm to service users and the people surrounding them through standardised measures. These measures included the Brøset Violence Checklist (BVC; Woods and Almvik 2002), the Kennedy Axis V (Kennedy and Foti 2003), the Dangerousness Scale (Baars van 2006) and the Social Dysfunction and Aggression Scale (Wistedt et al. 1990). Risk in this context meant ‘individual patients’ risk of becoming actively aggressive’ (Gaynes et al. 2017, 821).

**4.1.5.3 | Safewards.** Safewards was a set of 10 interventions from research exploring influences over ‘conflict’ and ‘containment’ in acute mental healthcare services (Bowers 2014). Among the interventions intended to reduce conflict and containment were, but not restricted to, clear mutual expectations and empathetic communication (‘soft words’ and ‘talk down’), promoting positive communication (‘positive words’), mitigating the impact of bad news (‘bad news mitigation’) and relationship-building (‘knowing each other’ and ‘mutual help meetings’; Bowers et al. 2015).

**4.1.5.4 | Sensory Rooms and Equipment.** Sensory rooms and equipment denoted rooms, spaces and equipment that were sensory-supportive and used primarily to reduce levels of arousal and agitation and prevent mental health crises (Champagne and Stromberg 2004). These sensory-supportive

Study	Type of Study	Aggression	Suicidal and Self-harming Thoughts and Behaviours	Physical Injury	Seclusion	Physical Restraints	Mechanical Restraints	Chemical Restraints	Restrictive Practice Duration
<b>Alternative Containment Strategies</b>									
Nurenberg et al. (2015)	RCT	▼			▼		▼		
Carlson & Holm (1993)	RCS						▼		
<b>Risk Assessment</b>									
Abderhalden et al. (2008)	CRT	▼			▼		▼	▼	
van de Sande et al. (2011)	CRT	▼							▼ 1
<b>Safewards</b>									
Bowers et al. (2015)	CRT	▼					▼		
Dickens et al. (2020)	BAS	▼					▼		
Lickiewicz et al. (2020)	QES						▼		
Baumgardt et al. (2019)	BAS						▼		▼ 2
Davies et al. (2020)	BAS	▼					▼		
Fletcher et al. (2017)	QES				▼				
Stensgaard et al. (2018)	QES						▼		
<b>Sensory Rooms and Equipments</b>									
Champagne & Sayer (2003)	BAS						▼		
Cummings et al. (2010)	BAS				◄◄		◄◄		
Lloyd et al. (2014)	QES				▼				
Novak et al. (2012)	QES	◄◄			◄◄				
Sivak (2012)	BAS		▲	▼	◄◄		▼		
Smith & Jones (2013)	MMS				▲				
<b>Six Core Strategy-based Interventions</b>									
Putkonen et al. (2013)	CRT				▼		▼		▼ 3
Bell & Gallacher (2016)	BAS					▼			
Godfrey et al. (2014)	BAS								▼ 4
Jonikas et al. (2004)	BAS								▼ 5
<b>Staff Trainings</b>									
Kontio et al. (2013)	CRT								▼ 4
Smoot & Gonzales (1995)	CRT				◄◄		◄◄		

**FIGURE 3** | Effect direction plot summarising direction of outcomes from studies on interventions to reduce conflict, aggression and restrictive practices in acute care settings. Note: Symbol legend: ▲, increase, ▼, decrease, ◄◄, mixed effect or no change; green, high quality, yellow, moderate, red, low quality. Some arrows represent multiple outcomes or those that are not clearly defined. In such cases, arrows were placed at the centre of merged and bordered cells. Study quality was assessed using different measures. Categories: 1, seclusion, 2, restrictive practices 3, seclusion or restraint, 4, mechanical restraint, 5, physical restraint. CRT indicates clustered randomised trial, BAS, before-and-after study, QES, quasi-experimental study, MMS, mixed method study, RCS, retrospective cohort study.

spaces and equipment were designed to offer a range of sensory modalities to service users with their specific sensory needs, whether through touch, balance, body awareness, hearing, sight, smell or taste.

**4.1.5.5 | Six Core Strategy-Based Interventions.** Six Core Strategy-based interventions encompassed various interventions that were substantial, systemic changes to a mental health setting practice. Most of these interventions involved either all or a combination of some of the Six Core Strategies to Reduce Seclusion and Restraint (Huckshorn 2004, 2005)—that is, leadership and organisational change, workforce training, incident prevention planning, active service user involvement, debriefing for learning and data-driven practice—that stemmed from a review of the literature and foundational theories in aid of developing optimal seclusion and restraint reduction activities.

**4.1.5.6 | Staff Training.** Staff training covered in-person and online learning opportunities and resources provided

to acute mental health service workers, including nurses. These trainings aimed to develop new skills, including empathic interpersonal communication, to manage or de-escalate aggression or violence and prevent the use of restrictive practices.

#### 4.1.6 | Effects of Interventions

The different interventions to reduce aggression, conflict and restrictive practices in acute mental healthcare settings were associated with an array of positive, negative and mixed outcomes (see Figure 3).

**4.1.6.1 | Alternative Containment Strategies.** Equine-assisted therapy was shown to reduce the frequency of aggression and mean monthly seclusion and restraint in a randomised controlled study with moderate methodological quality (Nurenberg et al. 2015). Similarly, occupational therapy was noted to decrease restraints in a



**FIGURE 4** | Factors influencing intervention implementation.

low-quality retrospective cohort study (Carlson and Holm 1993). The restraint type was not specified for either study.

**4.1.6.2 | Risk Assessment.** Two primary studies demonstrated decreases in clinical outcomes after implementing risk assessment. One study noted reductions in the frequencies

of aggressive incidents, physical attacks, seclusion, mechanical restraints and chemical restraints (Abderhalden et al. 2008). Another study depicted a decrease in the frequency of aggression and duration of seclusion events (van de Sande et al. 2011). These two clustered randomised control studies employed various risk assessment measures, timing and frequency, but both used

the BVC (Woods and Almvik 2002). These two studies received low-quality ratings from the systematic review authors (Gaynes et al. 2017).

**4.1.6.3 | Safewards.** All studies that evaluated the effectiveness of the Safewards interventions reported positive outcomes. Specifically, three studies showed reductions in ‘conflict’ events—that is, aggression, absconding and self-harm (Bowers et al. 2015; Davies et al. 2020; Dickens, Tabvuma, and Frost 2020), whereas five studies saw decreases in frequencies of ‘containment’—that is, seclusion, restraint, constant observation and security policies (Baumgardt et al. 2019; Bowers et al. 2015; Davies et al. 2020; Dickens, Tabvuma, and Frost 2020; Stensgaard et al. 2018). Three studies showed reductions in seclusion (Fletcher et al. 2017), mechanical restraint (Lickiewicz et al. 2020) and duration of restrictive practices (Baumgardt et al. 2019). Notably, all except two studies (Baumgardt et al. 2019; Lickiewicz et al. 2020) used all 10 commonly used Safewards interventions. Three out of seven Safewards studies received high-quality ratings (Bowers et al. 2015; Dickens, Tabvuma, and Frost 2020; Lickiewicz et al. 2020) from the underlying review authors (Finch et al. 2021), despite only one being a randomised design.

**4.1.6.4 | Sensory Rooms and Equipment.** Three studies that investigated the effectiveness of sensory rooms and equipment on reducing seclusion exhibited mixed effects or no change (Cummings, Grandfield, and Coldwell 2010; Novak et al. 2012; Sivak 2012), whereas one showed a reduction (Lloyd, King, and Machingura 2014), and one presented an increase (Smith and Jones 2013). A study observed no change in the frequency of aggression (Novak et al. 2012). One study displayed no change in the frequency of restraints (Cummings, Grandfield, and Coldwell 2010), whereas another indicated a decrease (Champagne and Sayer 2003); here, restraints were not explicitly defined. Notably, one study observed decreases in physical injuries and mechanical restraints, although they were accompanied by increased self-harming behaviours (Sivak 2012). All six studies used various sensory rooms and equipment, but all were assigned low methodological quality by the underlying review authors (Haig and Hallett 2022).

**4.1.6.5 | Six Core Strategy–Based Interventions.** One study that employed a Six Core Strategy–based intervention observed decreases in the frequency and duration of seclusion and restraint (Putkonen et al. 2013). Additionally, individual studies demonstrated reductions in physical restraints (Bell and Gallacher 2016), mechanical restraint duration (Godfrey et al. 2014) and physical restraint duration (Jonikas et al. 2004). The use of the Six Core Strategies differed across studies; only one study employed all six (Putkonen et al. 2013), although all studies included staff training on de-escalation techniques. All studies, except one (Putkonen et al. 2013), received a low-quality rating from respective review authors (Allen et al. 2018; Gaynes et al. 2017).

**4.1.6.6 | Staff Training.** There were mixed findings in low-quality clustered randomised control trials that implemented staff training. The training that focused on developing empathy in interpersonal communication showed

no effect, with outcomes more favourable in the control group (Smoot and Gonzales 1995), whereas a decrease in the duration of mechanical restraint was seen when online resources for aggression prevention and management were applied (Kontio et al. 2013).

#### 4.1.7 | Certainty of Evidence in Included Reviews

Only one review assessed evidence certainty or strength (Gaynes et al. 2017) and revealed a low quality for various outcomes in studies using risk assessment (Abderhalden et al. 2008; van de Sande et al. 2011) and Six Core Strategy–based intervention (Putkonen et al. 2013; see Appendix S1). The evidence exhibited moderate bias risk, uncertain consistency (i.e., evidence is supported by a single study), directness and precision, with a notable absence of clustering in statistical analyses (Gaynes et al. 2017).

## 4.2 | Part 2: Factors Influencing Intervention Implementation

Several factors influencing the implementation of interventions intended to reduce aggression, conflict and restrictive practices in acute mental healthcare settings were identified and grouped into seven broad categories: (i) intervention characteristics, (ii) preparation and planning, (iii) evaluation and monitoring, (iv) outcome interpretation, (v) stakeholder involvement/investment, (vi) staff and (vii) context factors (see Figure 4).

### 4.2.1 | Intervention Characteristics

Intervention characteristics influenced implementation, especially in complex interventions like the 10 Safewards interventions. Staff had to provide swift and mindful support to prevent service user distress from escalating into conflict incidents (Fletcher et al. 2017). Conversely, simplifying interventions, such as using a subset of a larger framework (e.g., applying 3 of 10 Safewards interventions; Lickiewicz et al. 2020), enhanced staff acceptance. ‘Simple, practical prevention measures’ (Abderhalden et al. 2008, 48) constantly reminded mental health staff about supporting service users. Clear and accessible intervention language may reduce the need for extensive adaptation to specific populations and contexts (Davies et al. 2020). Lastly, including seclusion-specific topics in training may prove helpful (Kontio et al. 2013).

### 4.2.2 | Preparation and Planning

Supporting service change was also influenced by planning and preparation processes, such as reviewing emerging evidence-based practices before the strategy implementation (Bell and Gallacher 2016). In addition, obtaining ethical approval for intervention evaluation (Dickens, Tabvuma, and Frost 2020) and sufficient resources (Baumgardt et al. 2019; Bowers et al. 2015; Champagne and Sayer 2003; Dickens, Tabvuma, and Frost 2020; Kontio et al. 2013; Putkonen et al. 2013)—encompassing time, funding, space, equipment, beds and control group, was

seen as instrumental in achieving implementation success. Furthermore, prompt adaptation of recording tools (Bell and Gallacher 2016) and adequate documentation contributed to accurate outcome measurements (Baumgardt et al. 2019; Carlson and Holm 1993).

#### 4.2.3 | Evaluation and Monitoring

Implementing planned changes in acute mental healthcare involves various factors. Key aspects included effective communication of desired outcomes and commitment to reducing restrictive practices during staff training sessions (Fletcher et al. 2017). Maintaining the direction of service changes required ongoing quality monitoring and periodic meetings (Dickens, Tabvuma, and Frost 2020; Godfrey et al. 2014). Using outcome measures as part of routine processes (Abderhalden et al. 2008) expedited survey distribution, enhanced response rates and eliminated the need for explicit consent (Dickens, Tabvuma, and Frost 2020). Considering an extended intervention implementation timeframe was necessary; for some, 'one year is too brief a time for a fundamental cultural change' (Putkonen et al. 2013, 855), but for others, 'it took 12 months for implementation efforts to be consolidated' (Fletcher et al. 2017, 468).

#### 4.2.4 | Outcome Interpretation

Outcome interpretation factors were vital considerations, including recognising potential natural fluctuations (Jonikas et al. 2004) in aggressive behaviours and restrictive practices. Acknowledging selection bias was seen as crucial in understanding whether the participant selection process influenced outcomes (Carlson and Holm 1993; Jonikas et al. 2004). Furthermore, unintended consequences, such as a reduction in mechanical restraints accompanied by an increase in chemical restraints (Stensgaard et al. 2018), or potential carry-over effects from the intervention to control wards (van de Sande et al. 2011), were identified as necessary to contextualise noted success or failure in intervention implementation.

#### 4.2.5 | Stakeholder Involvement/Investment

Meaningful involvement from various stakeholders in acute mental health care also contributed to the success of service change delivery. Considering an opt-in basis 'to implement a strategy of their choosing' (Fletcher et al. 2017, 467) emphasised the voluntary nature of service changes and allowed participating services to implement what may work for them. More importantly, involving service users (Lloyd, King, and Machingura 2014), staff (Baumgardt et al. 2019; Bell and Gallacher 2016; Bowers et al. 2015; Godfrey et al. 2014) and leaders (Baumgardt et al. 2019; Cummings, Grandfield, and Coldwell 2010; Dickens, Tabvuma, and Frost 2020; Godfrey et al. 2014), both within and beyond a given service (Abderhalden et al. 2008; Dickens, Tabvuma, and Frost 2020; Kontio et al. 2013; Nurenberg et al. 2015), were perceived as helpful in achieving the goals of service changes.

Meaningful stakeholder involvement/investment in intervention implementation was considered to involve seeking feedback from service users, which may help identify the direct impact of interventions on people using the services (Davies et al. 2020). Bell and Gallacher (2016) suggested that commencing intervention implementation with service user feedback may be advantageous, providing insight into what success should look like when receiving feedback. Creating a similar feedback loop with staff also enhanced efforts to reduce restrictive practices, serving as an opportunity to reinforce service philosophy and policy and celebrate restraint-free days (Godfrey et al. 2014).

#### 4.2.6 | Staff

Staff-related factors also influenced the successful implementation of service changes. Elements like staff age and professional experience (Baumgardt et al. 2019) impacted the adoption and flow of intervention processes. Staff decision-making, especially regarding the application of sensory rooms, affected the 'sense of community' (Smith and Jones 2013, 29) and intervention success (Lloyd, King, and Machingura 2014). Staff training (Baumgardt et al. 2019; Champagne and Sayer 2003; Cummings, Grandfield, and Coldwell 2010; Fletcher et al. 2017), attitudes and expectations (Bowers et al. 2015; Carlson and Holm 1993; Jonikas et al. 2004) and workforce levels and turnover influenced implementation continuity (Baumgardt et al. 2019; Carlson and Holm 1993; Davies et al. 2020; Fletcher et al. 2017).

#### 4.2.7 | Context

Finally, a recurring theme in successful service change implementations was the need for contextualisation. Transforming services involved understanding that acute mental healthcare settings are unique (Bowers et al. 2015), and support for service users will need to be shaped by their clinical presentation (Baumgardt et al. 2019; Davies et al. 2020; Nurenberg et al. 2015; Smith and Jones 2013) and the profile of the organisation and intervention (Jonikas et al. 2004) to be effective. Similarly, existing models of care (Davies et al. 2020), policies (Baumgardt et al. 2019), trends and politics (Kontio et al. 2013; Stensgaard et al. 2018) in the acute care setting formed a backdrop that influenced service change delivery. For example, a leadership change introduced a shift in how unit operations were run and made implementing practice changes difficult (Fletcher et al. 2017; Lickiewicz et al. 2020).

## 5 | Discussion

Four systematic reviews of critically low quality reported various interventions used in inpatient mental health settings to reduce aggression, conflict and restrictive practices. The reviews revealed diverse participants, interventions and outcomes involved in implementation and evaluation studies on these reduction interventions, indicating clinical heterogeneity on the overview topic. Additionally, variations were noted in study timeframes, intervention components, intervention delivery methods, measurement time points, comparators, reporting

metrics and statistical analyses—suggesting methodological heterogeneity. Only one review appraised the certainty of evidence for two interventions, all of which were low. However, most of the primary studies included in the four reviews reported a range of factors perceived as influential in implementation success.

## 5.1 | Interventions in the Evidence Base

The reviews revealed a range of reduction interventions that can be grouped into alternative containment strategies, risk assessments, Safewards, sensory rooms and equipment, Six Core Strategy-based interventions and staff training. These broad groups align with recent reviews (Baker et al. 2021; Gooding, McSherry, and Roper 2020; Väkiparta et al. 2019). However, the current overview does not encompass other interventions like mindfulness, acceptance and commitment therapy (see Giacco et al. 2018), and trauma-informed care (Muskett 2014). These exclusions were due to the overlap and stringent inclusion criteria (i.e., exclusion of traditional or narrative literature reviews). Furthermore, other nurse-led therapeutic interventions (e.g., illness, relationship and stress management education; Hayes et al. 2019) are yet to be evaluated against the primary outcomes considered in this overview.

An emerging overview theme is the trajectory of nonpharmacological interventions for reducing aggression, conflict and restrictive practices, reflecting patterns seen in pharmacological therapy for mental distress (Barlow et al. 2021; Braslow and Marder 2019); initially popular, they fade as moderate effects become widely known, yet a few find their place in standard treatment. Although Six Core Strategy-based interventions initially garnered enthusiasm, they gradually diminished despite positive results, and their routine adoption remains to be determined. Conversely, the widely adopted Safewards continues flourishing, raising questions about potentially reduced uptake as experiences and perceptions show moderate benefits. Its predecessor, the *City Nurse* (Bowers et al. 2006, 2008), had a different tenure. Nonetheless, more evidence is needed to understand the trajectory of these interventions thoroughly.

## 5.2 | Effects of Interventions

Six Core Strategy-based interventions and Safewards, which combine various reduction interventions, have effectively reduced aggression, conflict and restrictive practices. However, the effectiveness of sensory rooms and staff training remains inconclusive. These findings signal that achieving positive outcomes needs more than just workforce development and sensory support, as other service changes also hold critical impact, consistent with recent reviews supporting the effectiveness of combining different reduction interventions (Fernández-Costa et al. 2020; Hirsch and Steinert 2019; Perers et al. 2021). However, it is uncertain what and how such combinations influence aggression, conflict and restrictive practices, and their reduction pathways, similar to the difficulty in isolating behaviour-changing mechanisms in many reduction interventions (Baker et al. 2021) and the most effective of the 10 Safewards interventions (Bowers et al. 2015).

The findings on staff training and sensory rooms conflict with those from previous reviews ( $n=11$ , Barbu et al. 2020;  $n=7$ , Hirsch and Steinert 2019). These conflicts may have resulted from the varying study counts, as this overview included only two studies on staff training and six on sensory rooms, possibly not comprehensively representing their effectiveness. However, reductions were observed when these interventions were incorporated into a comprehensive approach (see Six Core Strategy-based interventions in Figure 3 for staff training, and Oostermeijer et al. 2021 for sensory rooms). Nevertheless, the reductions were not solely due to simply influencing staff and service users to behave differently, although they are essential.

Risk assessment and alternative containment strategies have evidence of reducing aggression, seclusion and restraints, suggesting professional expertise as a viable support. Unlike complex combinations, the simplicity of these interventions may have enabled their reliable routine use (see Abderhalden et al. 2008). However, evidence strength supporting risk assessment could be higher, with only two RCTs demonstrating effectiveness, and no appraisal of evidence strength exists for alternative containment strategies. Others argue that risk assessments lack service user involvement, stigmatise individuals with lived experiences of mental distress and trigger inappropriate interventions (Hvidhjelm et al. 2023), due to their focus on the service user and neglect of the broader context of violence. Therefore, exploring service user-led approaches, such as therapeutic risk-taking (Felton, Wright, and Stacey 2017), where professionals support service users in taking on challenges towards growth, may be beneficial. Alternatively, considering dynamic risk factors in predicting aggression, which includes changeable situational factors, may broaden the understanding of the service user's experience (Greer et al. 2020), facilitating more personalised support (Heffernan and Ward 2019).

## 5.3 | Factors Influencing Intervention Implementation

Factors influencing the effective implementation of reduction interventions, extracted from primary studies, were categorised into seven groups: intervention characteristics, preparation and planning, evaluation and monitoring, outcome interpretation, stakeholder involvement/investment, staff-related factors and contextual factors. These factors align broadly with, and include more than, those identified in recent research (Anderson et al. 2021; Jaspers et al. 2022; Price et al. 2018; Wright et al. 2023). They highlight the need for a systemic shift, which is significant in cultivating mental health nursing practice and a sense of safety in the acute unit (Wilson et al. 2023). A synergy of factors is critical for enacting changes to permeate an organisation.

Interestingly, many included studies cited staff-related factors, especially staff training in deploying an intervention, as influential in successful intervention implementation (Baumgardt et al. 2019; Champagne and Sayer 2003; Cummings, Grandfield, and Coldwell 2010; Fletcher et al. 2017). This finding is likely due to the pivotal role of staff, especially nurses, as primary caregivers and points of contact for service users who are seen as responsible for intervention implementation (Snipe and

Searby 2023). Additionally, while staff training may not directly reduce aggression and restrictive practices, it may help services mitigate other negative impacts, like lost workdays, staff attrition, complaints and service expenditures (Leach et al. 2019). Thus, any intervention implementation may need to invest in the staff, who act as catalysts for delivering service changes.

## 5.4 | Quality of Evidence

Interpreting the overview findings necessitates consideration of the quality of the evidence bases. Regardless of who assessed their risk of bias, a pattern seen across the included reviews and primary studies is their low methodological quality. The reviews lack transparency due to the omitted excluded studies list, which is considered essential by the overview authors for reducing bias risks. They also need more robustness because meta-analyses were absent or not feasible. Nevertheless, evaluation study designs and outcomes on the overview topic are usually heterogeneous and challenging to synthesise (Gaynes et al. 2017; Leach et al. 2019).

Many primary studies lacked randomisation and control groups, which may prevent unmeasured contextual factors (e.g., chemical restraint application) from confounding observed reductions attributed to interventions. A possible reason for this absence is the numerous practical challenges associated with implementing safety-oriented studies, which include the complex nature of interventions, service resource limitations (Hirsch and Steinert 2019) and the resource-intensive nature of finding a comparable control group (Putkonen et al. 2013).

Considering the link between low methodological quality and systemic errors (Rifin et al. 2022), it is essential to approach the overview findings cautiously. Low methodological quality means that the components of reduction interventions and the necessary modifications for desired outcomes are yet to be clarified (Baker et al. 2021). It further denotes that there is no ability to draw firm conclusions (Price et al. 2015); that is, interventions deemed effective may not be readily applicable on a broader scale.

More importantly, another overview theme emerged: the intellectual challenge in acute mental health care still surfaces from inside the dominant scientific paradigm, favouring meta-analyses and RCTs. Although these traditional knowledge bases form the foundation of defensible practice, overemphasising them conflicts with recovery-oriented frameworks (Leamy et al. 2011) that consider role modelling, social contexts and stakeholder narratives. Relying on traditional knowledge bases alone can also be difficult, given the uniqueness of influences over violence and aggression in acute care settings (Fletcher et al. 2021; Ilkiw-Lavalle and Grenyer 2003). There is a need to move towards cultivating pragmatic knowledge bases that offer not only flexibility, but also a comprehensive understanding of service change initiatives.

## 5.5 | Potential Sources of Bias

Additional considerations in interpreting results include potential biases in the overview process. A limitation was

relying on ‘reviews of interventions’ (Lasserson, Thomas, and Higgins 2023) as the main inclusion unit. Discussions among overview authors about variability in applications of several systematic-style reviews occurred, and ‘rapid reviews’ and ‘integrative reviews’ were excluded postprotocol preregistration. Nevertheless, such reliance may have introduced bias in review selection, inadvertently excluding other relevant reviews.

Another potential bias is solely relying on effect direction for intervention effectiveness synthesis, overlooking outcome significance, confidence intervals and outcome variability (Campbell et al. 2020). Despite many studies lacking robust statistical tests, such reliance hinders drawing accurate and comparative conclusions on study effects. It also does not support the identification of the extent to which intervention outcomes are uniformly experienced across sample groups.

Lastly, the included review authors—coming from diverse disciplines like nursing (Allen et al. 2018; Haig and Hallett 2022), psychology (Finch et al. 2021) and psychiatry (Gaynes et al. 2017)—bring their unique experiences and perspectives, possibly introducing external biases. Notwithstanding the included review authors’ disclosure of potential conflict of interest, their backgrounds may have influenced the conduct of their review. Limited topic experience increases the chance of overlooking crucial study details (Moore, Torgerson, and Beckmann 2021), possibly restricting review consumers’ views on intervention benefits and harms.

## 5.6 | Implications for Research

Future reviewers may need to adopt open and inclusive methodologies to synthesise evidence on reduction interventions. Allocating more resources to include overlapping reviews, reporting excluded studies and specifying descriptions of included studies could support a comprehensive synthesis of evidence, highlighting commonly adopted reduction interventions requiring further evaluation and refinement. Moreover, incorporating search terms like ‘patient safety’ and ‘relationship’ could encompass more efforts in acute care reform with embedded nursing philosophies, where reductions in aggression, conflict and restrictive practices—though secondary—are additional positive outcomes alongside measures of experience, safety and the therapeutic relationship. Nevertheless, no previous reviews have systematically outlined reduction interventions across different clinical outcomes and the relevant success factors as this overview does.

Many reduction interventions included in this overview were implemented without thorough documentation on how they were modified and delivered as intended. More documentation is needed to identify, maintain and replicate what works (Baker et al. 2022). For primary study authors, the emerging challenge is not ‘What interventions are effective?’, but ‘How can changes be effectively sustained and documented?’. Besides documenting implementation fidelity, there is also a need for using consistent outcome language and metrics, sourcing seclusion and restraint data from reliable means, and broadening the range of nurse-sensitive outcomes (see Ngune et al. 2023) to achieve better outcome comparisons.

There is a need to incorporate cultural safety in many reduction interventions, given the absence of cultural consultation in many implementations, and the higher rates of mental distress, hospitalisation (AIHW 2022) and restrictive practices exposure (VMAC 2022) among culturally diverse groups. Integrating cultural safety into strategy implementations may offer benefits, including amplifying mental health professional cultural competence (Venkataramu et al. 2020), and creating an inclusive and safe environment for mental health service users (Milroy et al. 2023). However, ensuring its continued effectiveness demands ongoing training, and active involvement with diverse communities.

Lastly, only a few studies engaged service users and peer workers to a limited extent in designing reduction interventions, suggesting a need to rethink their involvement from the design to the implementation and evaluation of such interventions. Service users and peer workers, through their lived experiences, can offer insights into the needs and preferences of individuals in mental health care (Marks et al. 2021). Their involvement can support: the development of how whatever needed changes might occur (Åkerblom and Ness 2022); foster autonomy, safety and hope for recovery among service users (Forchuk et al. 2020); and amplify job satisfaction for peers (Gillard et al. 2022), among others. Therefore, success in delivering reduction interventions is more likely if service users and peer involvement are given primacy.

### 5.7 | The Ghost in The Room: The Legally Sanctioned Coercive Context of Acute Inpatient Care

The findings from this overview provide some confidence that workers in mental health services can take measures that tangibly reduce aggression, conflict and the use of restrictive practices in acute inpatient units. What was noticeably absent in many research surveyed was a systemic view of the context in which the use of restrictive practices arises—in particular, considerations of the legal framework that facilitates a highly coercive pathway to public inpatient care in most countries (Sheridan Rains et al. 2019) and the instrumental roles of primarily nursing staff in legally sanctioned coerced psychiatric treatment. The ethical basis or justification for restrictive practices, as well as the ever-expanding medicalisation of everyday problems as ‘illnesses’, has been challenged as being potentially damaging and ineffective (Frances 2013; Szasz 2007). Nevertheless, rates of restrictive practices are increasing.

Australia stands out for its high rate of involuntary mental health admissions, with 45% of public hospital admissions being involuntary in 2021–2022 (AIHW 2023). A robust private hospital sector operates on a for-profit and entirely voluntary basis with no compulsory treatment or restrictive practices. In contrast, most people are admitted to public sector mental health units involuntarily. All public mental health units in the State of Queensland are required to be locked, explicitly to prevent people from absconding (Gill et al. 2021). In Queensland, thousands of people are compelled annually by police and ambulance services to attend emergency departments for assessments, necessitating the employment of security staff or guards in most

emergency departments (Clough et al. 2022). Australia has been found to have the second highest rate of involuntary hospitalisation of 22 countries at 227.3 admissions per 100000 people, compared with England at 58.5 and the lowest in Italy at 14.5 (Sheridan Rains et al. 2019).

It is widely reported that the experience of involuntary hospitalisation is traumatic; only a minority of people typically reflect on the experience as being necessary, and most find the processes in need of improvement (Sibitz et al. 2011). Unsurprisingly, it is in these highly coercive environments that conflict and legally sanctioned restrictive practices occur. There are limits to which nursing staff can influence the coercive pathways into care. Nurses are, nevertheless, charged with enacting coercive treatment and responding to the conflict that may inevitably arise. Understanding localised cultures of mental health care embedded in the broader medicalised discourse that justifies and legitimises restrictive practices (Lakeman 2013) is integral to understanding how sustained cultural change can occur to support reducing and eliminating restrictive practices. Such sustained change has remained elusive to date.

## 6 | Conclusion

Driven by the need to address aggression, conflict and restrictive practices in acute mental health settings, this overview synthesised evidence from systematic reviews, uncovering various reduction interventions, their effectiveness and implementation challenges. Despite covering several clinical outcomes, the limited representation of specific interventions compared with previous reviews suggests potential gaps in intervention evaluation. The effectiveness of a combination of reduction interventions was apparent, and the observed complexities in implementation emphasised the need for systemic approaches. The limited quality across the evidence bases necessitates cautious interpretation of findings. Future researchers and service developers are encouraged to consider employing open, robust, pragmatic methodologies and co-producing with culturally diverse groups, service users and peer workers.

## 7 | Relevance for Clinical Practice

The findings of the overview collectively revealed the complex nature of reducing aggression, conflict and restrictive practices in acute mental healthcare settings. The clinical and methodological heterogeneity within the evidence reflected unique backdrops influencing intervention outcomes, underscoring that change implementation is context-dependent—a property of complex systems (Skivington et al. 2021). In the same breadth, the different factors influencing intervention implementation confirm that ‘multiple forces, variables and influences must be factored into any change process, and that unpredictability and uncertainty are normal properties of multi-part, intricate systems’ (Braithwaite et al. 2018, 1).

Challenges in isolating mechanisms of service change, identifying effective interventions, tracing historical trajectories and mapping outcome reduction pathways parallel the irreducible and unpredictable features of complex systems. These features,

emerging from enmeshed relationships among multiple components, suggest that phenomena like service changes cannot be easily simplified without losing relevant information (Turner and Baker 2019). In complex systems, attempts to separate components for prediction purposes prove elusive as systems may self-organise in response to change (McGill et al. 2021), displaying unexpected properties over time, like reduced physical injuries but increased self-harm (Sivak 2012), or positive outcomes surfacing over an extended evaluation period (Fletcher et al. 2017; Putkonen et al. 2013).

Taken together, these complexities suggest that effective interventions in reducing aggression, conflict and restrictive practices in acute mental healthcare settings might not work for all services due to the uniqueness of both the service user's needs and preferences and the therapeutic environment they present themselves in during a crisis. More importantly, practitioners need to consider effective interventions not solely on their capacity to suppress outward expressions of mental distress. These expressions are descriptive, but do not necessarily explain a service user's experience. A narrow view of effectiveness, focused on overly optimised clinical measures, might overlook the real potential of interventions seen as unsuccessful, because perhaps they were measured against the wrong standards. In contrast, they might have shown greater success if evaluated using criteria that mattered more to service users, or nonbiomedical or nonpsychological rubrics found outside an acute mental health setting.

The overview findings suggest that clinicians discerningly employ interventions, as unequivocal support for their effectiveness on a broader range of outcomes is not abundant. Practitioners are invited to consider interventions that, while possibly needing further refinement in clinical effectiveness, demonstrably enhance a service user's valued social role and align with their strengths, preferences and aspirations. A practitioner can make a reasonable expectation that an intervention's mixed support for its effectiveness can motivate mental health services and staff to enact a more open and thoughtful approach to change over time.

#### Author Contributions

E.D. designed the review and conducted the literature search. E.D. and M.H. applied the selection criteria to the retrieved papers and independently assessed the quality. R.L. brought conflicts in the selection and quality assessment processes to a consensus. E.D. and M.H. extracted the outcome data from a sample of eligible studies. They achieved good agreement, with the remainder extracted by E.D. M.H. and R.L. supervised the design, reviewed the results and revised the manuscript draft. All authors listed meet the authorship criteria according to the latest guidelines of the International Committee of Medical Journal Editors. All authors agree with the content of this manuscript.

#### Acknowledgements

We acknowledge Jill Parker, a librarian at Southern Cross University, for her valuable contribution to developing the search strategy. Additionally, we thank Southern Cross University's support for open-access publication through collaboration with Wiley and the Council of Australian University Librarians. Open access publishing facilitated by Southern Cross University, as part of the Wiley - Southern

Cross University agreement via the Council of Australian University Librarians.

#### Conflicts of Interest

Esario is on a PhD scholarship co-funded by Southern Cross University and the Translational Research Grant Scheme of the NSW Office for Health and Medical Research. The overview has been designed, conducted, analysed and written independently of the funding institutions. The views expressed in the overview are those of the authors and are not necessarily endorsed by the funding institutions.

#### Data Availability Statement

The data that supports the findings of this study are available in the supplementary material of this article.

#### References

- Abderhalden, C., I. Needham, T. Dassen, R. Halfens, H.-J. Haug, and J. E. Fischer. 2008. "Structured Risk Assessment and Violence in Acute Psychiatric Wards: Randomised Controlled Trial." *British Journal of Psychiatry* 193, no. 1: 44–50. <https://doi.org/10.1192/bjp.bp.107.045534>.
- Ahmed, N., S. Barlow, L. Reynolds, et al. 2021. "Mental Health Professionals' Perceived Barriers and Enablers to Shared Decision-Making in Risk Assessment and Risk Management: A Qualitative Systematic Review." *BMC Psychiatry* 21, no. 1: 594. <https://doi.org/10.1186/s12888-021-03304-0>.
- AIHW. 2022. *Indigenous Health and Wellbeing*. Canberra, ACT, Australia: Australian Institute of Health and Welfare. <https://www.aihw.gov.au/reports/australias-health/indigenous-health-and-wellbeing>.
- AIHW. 2023. *Seclusion and Restraint – Mental Health – AIHW*. Canberra, ACT, Australia: Australian Institute of Health and Welfare. <https://www.aihw.gov.au/mental-health/topic-areas/seclusion-and-restraint>.
- Åkerblom, K. B., and O. Ness. 2022. "Peer Workers in Co-Production and Co-Creation in Mental Health and Substance Use Services: A Scoping Review." *Administration and Policy in Mental Health and Mental Health Services Research* 50, no. 2: 296–316. <https://doi.org/10.1007/s10488-022-01242-x>.
- Allen, D. E., S. Fetzter, C. Siefken, M. Nadler-Moodie, and K. Goodman. 2018. "Decreasing Physical Restraint in Acute Inpatient Psychiatric Hospitals: A Systematic Review." *Journal of the American Psychiatric Nurses Association* 25, no. 5: 405–409. <https://doi.org/10.1177/1078390318817130>.
- Anderson, E., D. C. Mohr, I. Regenbogen, et al. 2021. "Influence of Organizational Climate and Clinician Morale on Seclusion and Physical Restraint Use in Inpatient Psychiatric Units." *Journal of Patient Safety* 17: 316–322. <https://doi.org/10.1097/pts.0000000000000827>.
- Aremu, B., P. D. Hill, J. M. McNeal, M. A. Petersen, D. Swanberg, and K. R. Delaney. 2018. "Implementation of Trauma-Informed Care and Brief Solution-Focused Therapy: A Quality Improvement Project Aimed at Increasing Engagement on an Inpatient Psychiatric Unit." *Journal of Psychosocial Nursing and Mental Health Services* 56, no. 8: 16–22. <https://doi.org/10.3928/02793695-20180305-02>.
- Atkins, D., D. Best, P. A. Briss, et al. 2004. "Grading Quality of Evidence and Strength of Recommendations." *BMJ* 328, no. 7454: 1490. <https://doi.org/10.1136/bmj.328.7454.1490>.
- Baars van, A. 2006. "De Schaal voor Gevaar." In *The Epidemic of Dwangtoepassingen in de Psychiatrie*, edited by C. L. Mulder and A. Snijedewind. Badhoevedorp, Netherlands: Mension.
- Bak, J., M. Brandt-Christensen, D. M. Sestoft, and V. Zoffmann. 2011. "Mechanical Restraint-Which Interventions Prevent Episodes

- of Mechanical Restraint? A Systematic Review." *Perspectives in Psychiatric Care* 48, no. 2: 83–94. <https://doi.org/10.1111/j.1744-6163.2011.00307.x>.
- Baker, J., K. Berzins, K. Canvin, et al. 2021. "Non-Pharmacological Interventions to Reduce Restrictive Practices in Adult Mental Health Inpatient Settings: The COMPARE Systematic Mapping Review." *Health Services and Delivery Research* 9, no. 5: 1–184. <https://doi.org/10.3310/hsdr09050>.
- Baker, J., S. Kendal, K. Berzins, et al. 2022. "Mapping Review of Interventions to Reduce the Use of Restrictive Practices in Children and Young People's Institutional Settings: The CONTRAST Study." *Children & Society* 36, no. 6: 1351–1401. <https://doi.org/10.1111/chso.12581>.
- Ballard, M., and P. Montgomery. 2017. "Risk of Bias in Overviews of Reviews: A Scoping Review of Methodological Guidance and Four-Item Checklist." *Research Synthesis Methods* 8, no. 1: 92–108. <https://doi.org/10.1002/jrsm.1229>.
- Barbui, C., M. Purgato, J. Abdulmalik, et al. 2020. "Efficacy of Interventions to Reduce Coercive Treatment in Mental Health Services: Umbrella Review of Randomised Evidence." *British Journal of Psychiatry* 218, no. 4: 1–11. <https://doi.org/10.1192/bjp.2020.144>.
- Barlow, D. H., V. M. Durand, S. G. Hofmann, and M. L. Lalumière. 2021. *Abnormal Psychology (Canadian edition)*. 6th ed. Toronto, ON, Canada: Cengage Learning Canada Inc.
- Baumgardt, J., D. Jäckel, H. Helber-Böhlen, et al. 2019. "Preventing and Reducing Coercive Measures — An Evaluation of the Implementation of the Safewards Model in Two Locked Wards in Germany." *Frontiers in Psychiatry* 10: 1–13. <https://doi.org/10.3389/fpsy.2019.00340>.
- Bell, A., and N. Gallacher. 2016. "Succeeding in Sustained Reduction in the Use of Restraint Using the Improvement Model." *BMJ Quality Improvement Reports* 5, no. 1: u211050.w214430. <https://doi.org/10.1136/bmjquality.u211050.w4430>.
- Berkman, N. D., K. N. Lohr, M. T. Ansari, et al. 2015. "Grading the Strength of a Body of Evidence When Assessing Health Care Interventions: An EPC Update (1878–5921 (Electronic))." *Journal of Clinical Epidemiology* 68: 1312–1324.
- Boulton, K. A., V. Raghupathy, A. J. Guastella, and M. R. Bowden. 2022. "Reducing Seclusion Use in an Australian Child and Adolescent Psychiatric Inpatient Unit." *Journal of Affective Disorders* 305: 1–7. <https://doi.org/10.1016/j.jad.2022.02.066>.
- Bowers, L. 2014. "Safewards: A New Model of Conflict and Containment on Psychiatric Wards." *Journal of Psychiatric and Mental Health Nursing* 21, no. 6: 499–508. <https://doi.org/10.1111/jpm.12129>.
- Bowers, L., G. Brennan, C. Flood, M. Lipang, and P. Oladapo. 2006. "Preliminary Outcomes of a Trial to Reduce Conflict and Containment on Acute Psychiatric Wards: City Nurses." *Journal of Psychiatric and Mental Health Nursing* 13, no. 2: 165–172. <https://doi.org/10.1111/j.1365-2850.2006.00931.x>.
- Bowers, L., C. Flood, G. Brennan, and T. Allan. 2008. "A Replication Study of the City Nurse Intervention: Reducing Conflict and Containment on Three Acute Psychiatric Wards." *Journal of Psychiatric and Mental Health Nursing* 15, no. 9: 737–742. <https://doi.org/10.1111/j.1365-2850.2008.01294.x>.
- Bowers, L., K. James, A. Quirk, A. Simpson, D. Stewart, and J. Hodson. 2015. "Reducing Conflict and Containment Rates on Acute Psychiatric Wards: The Safewards Cluster Randomised Controlled Trial." *International Journal of Nursing Studies* 52, no. 9: 1412–1422. <https://doi.org/10.1016/j.ijnurstu.2015.05.001>.
- Braithwaite, J., K. Churrua, J. C. Long, L. A. Ellis, and J. Herkes. 2018. "When Complexity Science Meets Implementation Science: A Theoretical and Empirical Analysis of Systems Change." *BMC Medicine* 16, no. 1: 63. <https://doi.org/10.1186/s12916-018-1057-z>.
- Braslow, J. T., and S. R. Marder. 2019. "History of Psychopharmacology." *Annual Review of Clinical Psychology* 15, no. 1: 25–50. <https://doi.org/10.1146/annurev-clinpsy-050718-095514>.
- Campbell, M., J. E. McKenzie, A. Sowden, et al. 2020. "Synthesis Without Meta-Analysis (SWiM) in Systematic Reviews: Reporting Guideline." *BMJ* 368, no. 1: 1–6. <https://doi.org/10.1136/bmj.l6890>.
- Carlson, J. M., and M. B. Holm. 1993. "Effectiveness of Occupational Therapy for Reducing Restraint Use in a Psychiatric Setting." *American Journal of Occupational Therapy* 47, no. 10: 885–889. <https://doi.org/10.5014/ajot.47.10.885>.
- Champagne, T., and E. Sayer. 2003. "The Effects of the Use of the Sensory Room in Psychiatry." [https://www.ot-innovations.com/wp-content/uploads/2014/09/qi\\_study\\_sensory\\_room1.pdf](https://www.ot-innovations.com/wp-content/uploads/2014/09/qi_study_sensory_room1.pdf).
- Champagne, T., and N. Stromberg. 2004. "Sensory Approaches in Inpatient Psychiatric Settings: Innovative Alternatives to Seclusion & Restraint." *Journal of Psychosocial Nursing and Mental Health Services* 42, no. 9: 34–44. <https://doi.org/10.3928/02793695-20040901-06>.
- Clough, A. R., A. Evans, K. Grant, et al. 2022. "Recent Amendments to Queensland Legislation Make Mental Health Presentations to Hospital Emergency Departments More Difficult to Scrutinise." *Emergency Medicine Australasia* 34, no. 1: 130–133. <https://doi.org/10.1111/1742-6723.13878>.
- Cummings, K. S., S. A. Grandfield, and C. M. Coldwell. 2010. "Caring With Comfort Rooms." *Journal of Psychosocial Nursing and Mental Health Services* 48, no. 6: 26–30. <https://doi.org/10.3928/02793695-20100303-02>.
- Cumpston, M., and J. Chandler. 2023. "Chapter II: Planning a Cochrane Review." In *Cochrane Handbook for Systematic Reviews of Interventions Version 6.4*, edited by J. P. T. Higgins, J. Thomas, J. Chandler, M. Cumpston, T. Li, M. J. Page, and V. A. Welch, vol. 5. Cochrane. <https://training.cochrane.org/handbook/current/chapter-ii>.
- Dahm, K. T., A. K. Steiro, K. A. Leiknes, et al. 2017. *Interventions for Reducing Seclusion and Restraint in Mental Health Care for Adults: A Systematic Review*. Oslo, Norway: Knowledge Centre for the Health Services at the Norwegian Institute of Public Health (NIPH). <https://pubmed.ncbi.nlm.nih.gov/29553686/>.
- Davies, B., J. Silver, S. Josham, et al. 2020. "An Evaluation of the Implementation of Safewards on an Assessment and Treatment Unit for People With an Intellectual Disability." *Journal of Intellectual Disabilities* 25, no. 3: 357–369. <https://doi.org/10.1177/1744629520901637>.
- Dickens, G. L., T. Tabvuma, and S. A. Frost. 2020. "Safewards: Changes in Conflict, Containment, and Violence Prevention Climate During Implementation." *International Journal of Mental Health Nursing* 29, no. 6: 1230–1240. <https://doi.org/10.1111/inm.12762>.
- Duxbury, J., J. Baker, S. Downe, et al. 2019. "Minimising the Use of Physical Restraint in Acute Mental Health Services: The Outcome of a Restraint Reduction Programme ('RES TRAIN YOURSELF')." *International Journal of Nursing Studies* 95: 40–48. <https://doi.org/10.1016/j.ijnurstu.2019.03.016>.
- Felton, A., N. Wright, and G. Stacey. 2017. "Therapeutic Risk-Taking: A Justifiable Choice." *BJPsych Advances* 23, no. 2: 81–88. <https://doi.org/10.1192/apt.bp.115.015701>.
- Fernández-Costa, D., J. Gómez-Salgado, J. Fagundo-Rivera, J. Martín-Pereira, B. Prieto-Callejero, and J. J. García-Iglesias. 2020. "Alternatives to the Use of Mechanical Restraints in the Management of Agitation or Aggressions of Psychiatric Patients: A Scoping Review." *Journal of Clinical Medicine* 9, no. 9: 2791. <https://doi.org/10.3390/jcm9092791>.
- Finch, K., D. Lawrence, M. O. Williams, A. R. Thompson, and C. Hartwright. 2021. "A Systematic Review of the Effectiveness of Safewards: Has Enthusiasm Exceeded Evidence?" *Issues in Mental Health Nursing* 43, no. 2: 1–18. <https://doi.org/10.1080/01612840.2021.1967533>.

- Fletcher, A., M. Crowe, J. Manuel, and J. Foulds. 2021. "Comparison of Patients' and Staff's Perspectives on the Causes of Violence and Aggression in Psychiatric Inpatient Settings: An Integrative Review." *Journal of Psychiatric and Mental Health Nursing* 28, no. 5: 924–939. <https://doi.org/10.1111/jpm.12758>.
- Fletcher, E., and C. Stevenson. 2001. "Launching the Tidal Model in an Adult Mental Health Programme." *Nursing Standard (Through 2013)* 15, no. 49: 33–36.
- Fletcher, J., M. Spittal, L. Brophy, 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, no. 5: 461–471. <https://doi.org/10.1111/inm.12380>.
- Forchuk, C., M.-L. Martin, D. Sherman, et al. 2020. "An Ethnographic Study of the Implementation of a Transitional Discharge Model: Peer Supporters' Perspectives." *International Journal of Mental Health Systems* 14, no. 1: 18. <https://doi.org/10.1186/s13033-020-00353-y>.
- Frances, A. 2013. *Saving Normal: An Insider's Revolt Against Out-of-Control Psychiatric Diagnosis, DSM-5, Big Pharma and the Medicalization of Ordinary Life*. New York, NY, USA: HarperCollins Publisher.
- Gaskin, C. J., S. J. Elsom, and B. Happell. 2007. "Interventions for Reducing the Use of Seclusion in Psychiatric Facilities." *British Journal of Psychiatry* 191, no. 4: 298–303. <https://doi.org/10.1192/bjp.bp.106.034538>.
- Gates, M., A. Gates, S. Guitard, M. Pollock, and L. Hartling. 2020. "Guidance for Overviews of Reviews Continues to Accumulate, but Important Challenges Remain: A Scoping Review." *Systematic Reviews* 9, no. 1: 254. <https://doi.org/10.1186/s13643-020-01509-0>.
- Gaynes, B. N., C. L. Brown, L. J. Lux, et al. 2017. "Preventing and De-escalating Aggressive Behavior Among Adult Psychiatric Patients: A Systematic Review of the Evidence." *Psychiatric Services* 68, no. 8: 819–831. <https://doi.org/10.1176/appi.ps.201600314>.
- Giacco, D., M. Conneely, T. Masoud, E. Burn, and S. Priebe. 2018. "Interventions for Involuntary Psychiatric Inpatients: A Systematic Review." *European Psychiatry* 54: 41–50. <https://doi.org/10.1016/j.eurpsy.2018.07.005>.
- Gill, N. S., S. Parker, A. Amos, et al. 2021. "Opening the Doors: Critically Examining the Locked Wards Policy for Public Mental Health Inpatient Units in Queensland Australia." *Australian and New Zealand Journal of Psychiatry* 55, no. 9: 844–848. <https://doi.org/10.1177/00048674211025619>.
- Gillard, S., R. Foster, S. White, et al. 2022. "The Impact of Working as a Peer Worker in Mental Health Services: A Longitudinal Mixed Methods Study." *BMC Psychiatry* 22, no. 1: 373. <https://doi.org/10.1186/s12888-022-03999-9>.
- Godfrey, J. L., A. C. McGill, N. T. Jones, S. L. Oxley, and R. M. Carr. 2014. "Anatomy of a Transformation: A Systematic Effort to Reduce Mechanical Restraints at a State Psychiatric Hospital." *Psychiatric Services (Washington, D.C.)* 65, no. 10: 1277–1280. <https://doi.org/10.1176/appi.ps.201300247>.
- Gooding, P., B. McSherry, and C. Roper. 2020. "Preventing and Reducing "Coercion" in Mental Health Services: An International Scoping Review of English-Language Studies." *Acta Psychiatrica Scandinavica* 142, no. 1: 27–39. <https://doi.org/10.1111/acps.13152>.
- Greer, B., R. W. Taylor, M. Cella, R. Stott, and T. Wykes. 2020. "The Contribution of Dynamic Risk Factors in Predicting Aggression: A Systematic Review Including Inpatient Forensic and Non-forensic Mental Health Services." *Aggression and Violent Behavior* 53: 101433. <https://doi.org/10.1016/j.avb.2020.101433>.
- Haig, S., and N. Hallett. 2022. "Use of Sensory Rooms in Adult Psychiatric Inpatient Settings: A Systematic Review and Narrative Synthesis." *International Journal of Mental Health Nursing* 32, no. 1: 54–75. <https://doi.org/10.1111/inm.13065>.
- Harper, D., and E. Speed. 2012. "Uncovering Recovery: The Resistible Rise of Recovery and Resilience." *Studies in Social Justice* 6, no. 1: 9–26. <https://doi.org/10.26522/ssj.v6i1.1066>.
- Hartley, S., J. Raphael, K. Lovell, and K. Berry. 2020. "Effective Nurse-Patient Relationships in Mental Health Care: A Systematic Review of Interventions to Improve the Therapeutic Alliance." *International Journal of Nursing Studies* 102, no. 1: 103490. <https://doi.org/10.1016/j.ijnurstu.2019.103490>.
- Hawsawi, T., T. Power, J. Zugai, and D. Jackson. 2020. "Nurses' and Consumers' Shared Experiences of Seclusion and Restraint: A Qualitative Literature Review." *International Journal of Mental Health Nursing* 29, no. 5: 831–845. <https://doi.org/10.1111/inm.12716>.
- Hawton, K., K. Lascelles, A. Pitman, S. Gilbert, and M. Silverman. 2022. "Assessment of Suicide Risk in Mental Health Practice: Shifting From Prediction to Therapeutic Assessment, Formulation, and Risk Management." *Lancet Psychiatry* 9, no. 11: 922–928. [https://doi.org/10.1016/s2215-0366\(22\)00232-2](https://doi.org/10.1016/s2215-0366(22)00232-2).
- Hayes, C., V. Palmer, B. Hamilton, C. Simons, and M. Hopwood. 2019. "What Nonpharmacological Therapeutic Interventions Are Provided to Adolescents Admitted to General Mental Health Inpatient Units? A Descriptive Review." *International Journal of Mental Health Nursing* 28, no. 3: 671–686. <https://doi.org/10.1111/inm.12575>.
- Heffernan, R., and T. Ward. 2019. "Dynamic Risk Factors, Protective Factors and Value-Laden Practices." *Psychiatry, Psychology and Law* 26, no. 2: 312–328. <https://doi.org/10.1080/13218719.2018.1506721>.
- Higgins, J. P. T., D. G. Altman, P. C. Gotzsche, et al. 2011. "The Cochrane Collaboration's Tool for Assessing Risk of Bias in Randomised Trials." *BMJ* 343, no. 343: d5928. <https://doi.org/10.1136/bmj.d5928>.
- Hirsch, S., and T. Steinert. 2019. "Measures to Avoid Coercion in Psychiatry and Their Efficacy." *Deutsches Aerzteblatt* 116, no. 19: 336–343. <https://doi.org/10.3238/arztebl.2019.0336>.
- Hong, Q. N., A. Gonzalez-Reyes, and P. Pluye. 2018. "Improving the Usefulness of a Tool for Appraising the Quality of Qualitative, Quantitative and Mixed Methods Studies, the Mixed Methods Appraisal Tool (MMAT)." *Journal of Evaluation in Clinical Practice* 24, no. 3: 459–467.
- Huckshorn, K. A. 2004. "Reducing Seclusion & Restraint Use in Mental Health Settings: Core Strategies for Prevention." *Journal of Psychosocial Nursing and Mental Health Services* 42, no. 9: 22–33. <https://doi.org/10.3928/02793695-20040901-05>.
- Huckshorn, K. A. 2005. "Re-Designing State Mental Health Policy to Prevent the Use of Seclusion and Restraint." *Administration and Policy in Mental Health and Mental Health Services Research* 33, no. 4: 482–491. <https://doi.org/10.1007/s10488-005-0011-5>.
- Huff, N. R., L. M. Isbell, and D. H. Arnold. 2023. "Behavior or Diagnosis? Effects of Irritable Patient Behavior and a Schizophrenia Diagnosis on Mental Illness Stigma." *Stigma and Health* 8, no. 1: 49–60. <https://doi.org/10.1037/sah0000360>.
- Hvidhjelm, J., L. L. Berring, R. Whittington, P. Woods, J. Bak, and R. Almvik. 2023. "Short-Term Risk Assessment in the Long Term: A Scoping Review and Meta-Analysis of the Brøset Violence Checklist." *Journal of Psychiatric and Mental Health Nursing* 30, no. 4: 637–648. <https://doi.org/10.1111/jpm.12905>.
- Ilkiw-Lavalle, O., and B. F. S. Grenyer. 2003. "Differences Between Patient and Staff Perceptions of Aggression in Mental Health Units." *Psychiatric Services* 54, no. 3: 389–393. <https://doi.org/10.1176/appi.ps.54.3.389>.
- Jansen, T.-L., M. H. Hem, L. J. Dambolt, and I. Hanssen. 2019. "Moral Distress in Acute Psychiatric Nursing: Multifaceted Dilemmas and Demands." *Nursing Ethics* 27, no. 5: 1315–1326. <https://doi.org/10.1177/0969733019877526>.

- Jaspers, S. Ø., D. R. Andersen, I. L. Karlsen, et al. 2022. "Contextualizing Violence Prevention – How Contextual Aspects Influence the Implementation of a Violence Prevention Initiative in Prisons and Psychiatry." *Scandinavian Journal of Work and Organizational Psychology* 7, no. 1: 4. <https://doi.org/10.16993/sjwop.141>.
- Jonikas, J. A., J. A. Cook, C. Rosen, A. Laris, and J.-B. Kim. 2004. "Brief Reports: A Program to Reduce Use of Physical Restraint in Psychiatric Inpatient Facilities." *Psychiatric Services* 55, no. 7: 818–820. <https://doi.org/10.1176/appi.ps.55.7.818>.
- Kennedy, J. A., and M. E. Foti. 2003. "Axis V Revisited." *Psychiatric Services* 54, no. 10: 1413. <https://doi.org/10.1176/appi.ps.54.10.1413>.
- Kessler, R. C., R. M. Bossarte, A. Luedtke, A. M. Zaslavsky, and J. R. Zubizarreta. 2020. "Suicide Prediction Models: A Critical Review of Recent Research With Recommendations for the Way Forward." *Molecular Psychiatry* 25, no. 1: 168–179. <https://doi.org/10.1038/s41380-019-0531-0>.
- Kontio, R., A. Pitkänen, G. Joffe, J. Katajisto, and M. Välimäki. 2013. "eLearning Course May Shorten the Duration of Mechanical Restraint Among Psychiatric Inpatients: A Cluster-Randomized Trial." *Nordic Journal of Psychiatry* 68, no. 7: 443–449. <https://doi.org/10.3109/08039488.2013.855254>.
- Lakeman, R. 2013. "Talking Science and Wishing for Miracles: Understanding Cultures of Mental Health Practice." *International Journal of Mental Health Nursing* 22, no. 2: 106–115. <https://doi.org/10.1111/j.1447-0349.2012.00847.x>.
- Langan, J. 2010. "Challenging Assumptions About Risk Factors and the Role of Screening for Violence Risk in the Field of Mental Health." *Health, Risk & Society* 12, no. 2: 85–100. <https://doi.org/10.1080/13698571003632429>.
- Lasserson, T. J., J. Thomas, and J. P. T. Higgins. 2023. "Chapter 1: Starting a Review." In *Cochrane Handbook for Systematic Reviews of Interventions Version 6.4*. London, UK: Cochrane. <https://training.cochrane.org/handbook/current/chapter-01>.
- Leach, B., B. Leach, E. Gloinson, et al. 2019. *Reviewing the Evidence Base for De-Escalation Training*. Santa Monica, CA: Rand.Org. [https://www.rand.org/pubs/research\\_reports/RR3148.html](https://www.rand.org/pubs/research_reports/RR3148.html).
- Leamy, M., V. Bird, C. L. Boutillier, J. Williams, and M. Slade. 2011. "Conceptual Framework for Personal Recovery in Mental Health: Systematic Review and Narrative Synthesis." *British Journal of Psychiatry* 199, no. 6: 445–452. <https://doi.org/10.1192/bjp.bp.110.083733>.
- Leonhardt, B. L., K. Huling, J. A. Hamm, et al. 2017. "Recovery and Serious Mental Illness: A Review of Current Clinical and Research Paradigms and Future Directions." *Expert Review of Neurotherapeutics* 17, no. 11: 1117–1130. <https://doi.org/10.1080/14737175.2017.1378099>.
- Lickiewicz, J., N. Adamczyk, P. P. Hughes, P. Jagielski, B. Stawarz, and M. Makara-Studzinska. 2020. "Reducing Aggression in Psychiatric Wards Using Safewards – A Polish Study." *Perspectives in Psychiatric Care* 57, no. 1: 50–55. <https://doi.org/10.1111/ppc.12523>.
- Livingston, J. D., S. Verdun-Jones, J. Brink, P. Lussier, and T. Nicholls. 2010. "A Narrative Review of the Effectiveness of Aggression Management Training Programs for Psychiatric Hospital Staff." *Journal of Forensic Nursing* 6, no. 1: 15–28. <https://doi.org/10.1111/j.1939-3938.2009.01061.x>.
- Lloyd, C., R. King, and T. Machingura. 2014. "An Investigation Into the Effectiveness of Sensory Modulation in Reducing Seclusion Within an Acute Mental Health Unit." *Advances in Mental Health* 12, no. 2: 93–100. <https://doi.org/10.1080/18374905.2014.11081887>.
- Marks, J., R. Foster, S. L. Gibson, et al. 2021. "Development of a Peer Support Intervention to Improve the Experience and Outcomes of Discharge From Inpatient Mental Health Care: The Role of Experiential Knowledge in a Coproduced Approach." *BMC Research Notes* 14, no. 1: 320. <https://doi.org/10.1186/s13104-021-05735-0>.
- McAllister, S., G. Robert, V. Tsianakas, and N. McCrae. 2019. "Conceptualising Nurse-Patient Therapeutic Engagement on Acute Mental Health Wards: An Integrative Review." *International Journal of Nursing Studies* 93, no. 93: 106–118. <https://doi.org/10.1016/j.ijnurstu.2019.02.013>.
- McGill, E., V. Er, T. Penney, et al. 2021. "Evaluation of Public Health Interventions From a Complex Systems Perspective: A Research Methods Review." *Social Science & Medicine* 272: 113697. <https://doi.org/10.1016/j.socscimed.2021.113697>.
- Milroy, H., S. Kashyap, J. R. Collova, M. Platell, G. Gee, and J. L. Ohan. 2023. "Identifying the Key Characteristics of a Culturally Safe Mental Health Service for Aboriginal and Torres Strait Islander Peoples: A Qualitative Systematic Review Protocol." *PLoS One* 18, no. 1: 1–10. <https://doi.org/10.1371/journal.pone.0280213>.
- Moher, D., A. Liberati, J. Tetzlaff, and D. G. Altman. 2009. "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement." *BMJ* 339: b2535. <https://doi.org/10.1136/bmj.b2535>.
- Molyneaux, E., A. Turner, B. Candy, S. Landau, S. Johnson, and B. Lloyd-Evans. 2019. "Crisis-Planning Interventions for People With Psychotic Illness or Bipolar Disorder: Systematic Review and Meta-Analyses." *BJPsych Open* 5, no. 4: e53. <https://doi.org/10.1192/bjo.2019.28>.
- Moore, I., C. Torgerson, and N. Beckmann. 2021. "Systematic Review Measuring the Efficacy of Study Abroad in Undergraduate Language Learners on Linguistic Proficiency Gains." *Review of Education* 9, no. 3: 1–26. <https://doi.org/10.1002/rev3.3306>.
- Mugoya, G., and C. Kampfe. 2010. "Reducing the Use of PRN Medication in In-Patient Psychiatric Hospitals." *Journal of Life Care Planning* 9, no. 2: 37–46.
- Mullen, A. 2009. "Mental Health Nurses Establishing Psychosocial Interventions Within Acute Inpatient Settings." *International Journal of Mental Health Nursing* 18, no. 2: 83–90. <https://doi.org/10.1111/j.1447-0349.2008.00578.x>.
- Muskett, C. 2014. "Trauma-Informed Care in Inpatient Mental Health Settings: A Review of the Literature." *International Journal of Mental Health Nursing* 23, no. 1: 51–59. <https://doi.org/10.1111/inm.12012>.
- Ngune, I., H. Myers, A. Cole, et al. 2023. "Developing Nurse-Sensitive Outcomes in Acute Inpatient Mental Health Settings—A Systematic Review." *Journal of Clinical Nursing* 32: 6254–6267. <https://doi.org/10.1111/jocn.16679>.
- Novak, T., J. Scanlan, D. McCaul, N. MacDonald, and T. Clarke. 2012. "Pilot Study of a Sensory Room in an Acute Inpatient Psychiatric Unit." *Australasian Psychiatry* 20, no. 5: 401–406. <https://doi.org/10.1177/1039856212459585>.
- Nurenberg, J. R., S. J. Schleifer, T. M. Shaffer, et al. 2015. "Animal-Assisted Therapy With Chronic Psychiatric Inpatients: Equine-Assisted Psychotherapy and Aggressive Behavior." *Psychiatric Services* 66, no. 1: 80–86. <https://doi.org/10.1176/appi.ps.201300524>.
- Oostermeijer, S., C. Brasier, C. Harvey, et al. 2021. "Design Features That Reduce the Use of Seclusion and Restraint in Mental Health Facilities: A Rapid Systematic Review." *BMJ Open* 11, no. 7: e046647. <https://doi.org/10.1136/bmjopen-2020-046647>.
- Paradis-Gagné, E., P. Pariseau-Legault, M. H. Goulet, J. D. Jacob, and C. Lessard-Deschênes. 2021. "Coercion in Psychiatric and Mental Health Nursing: A Conceptual Analysis." *International Journal of Mental Health Nursing* 30, no. 3: 590–609. <https://doi.org/10.1111/inm.12855>.
- Perers, C., B. Bäckström, B. A. Johansson, and O. Rask. 2021. "Methods and Strategies for Reducing Seclusion and Restraint in Child and

- Adolescent Psychiatric Inpatient Care." *Psychiatric Quarterly* 93, no. 1: 107–136. <https://doi.org/10.1007/s11126-021-09887-x>.
- Pisani, A. R., D. C. Murrie, and M. M. Silverman. 2016. "Reformulating Suicide Risk Formulation: From Prediction to Prevention." *Academic Psychiatry* 40, no. 4: 623–629. <https://doi.org/10.1007/s40596-015-0434-6>.
- Pollock, M., R. M. Fernandes, L. A. Becker, R. Featherstone, and L. Hartling. 2016. "What Guidance Is Available for Researchers Conducting Overviews of Reviews of Healthcare Interventions? A Scoping Review and Qualitative Metasummary." *Systematic Reviews* 5, no. 1: 190. <https://doi.org/10.1186/s13643-016-0367-5>.
- Pollock, M., R. M. Fernandes, L. A. Becker, D. Pieper, and L. Hartling. 2023. "Chapter V: Overviews of Reviews." In *Cochrane Handbook for Systematic Reviews of Interventions Version 6.4*. London, United Kingdom: Cochrane. <https://training.cochrane.org/handbook>.
- Pollock, M., R. M. Fernandes, A. S. Newton, S. D. Scott, and L. Hartling. 2019. "A Decision Tool to Help Researchers Make Decisions About Including Systematic Reviews in Overviews of Reviews of Healthcare Interventions." *Systematic Reviews* 8, no. 1: 29. <https://doi.org/10.1186/s13643-018-0768-8>.
- Power, T., A. Baker, and D. Jackson. 2020. "'Only Ever as a Last Resort': Mental Health nurses' Experiences of Restrictive Practices." *International Journal of Mental Health Nursing* 29, no. 4: 674–684. <https://doi.org/10.1111/inm.12701>.
- Price, O., J. Baker, P. Bee, and K. Lovell. 2015. "Learning and Performance Outcomes of Mental Health Staff Training in De-Escalation Techniques for the Management of Violence and Aggression." *British Journal of Psychiatry* 206, no. 6: 447–455. <https://doi.org/10.1192/bjp.bp.114.144576>.
- Price, O., J. Baker, P. Bee, and K. Lovell. 2018. "The Support-Control Continuum: An Investigation of Staff Perspectives on Factors Influencing the Success or Failure of De-Escalation Techniques for the Management of Violence and Aggression in Mental Health Settings." *International Journal of Nursing Studies* 77, no. 1: 197–206. <https://doi.org/10.1016/j.ijnurstu.2017.10.002>.
- Putkonen, A., S. Kuivalainen, O. Louheranta, et al. 2013. "Cluster-Randomized Controlled Trial of Reducing Seclusion and Restraint in Secured Care of Men With Schizophrenia." *Psychiatric Services* 64, no. 9: 850–855. <https://doi.org/10.1176/appi.ps.201200393>.
- Quinn, J., and N. J. Kolla. 2016. "From Clozapine to Cognitive Remediation." *The Canadian Journal of Psychiatry* 62, no. 2: 94–101. <https://doi.org/10.1177/0706743716656830>.
- Raphael, J., O. Price, S. Hartley, G. Haddock, S. Bucci, and K. Berry. 2021. "Overcoming Barriers to Implementing Ward-Based Psychosocial Interventions in Acute Inpatient Mental Health Settings: A Meta-Synthesis." *International Journal of Nursing Studies* 115: 103870. <https://doi.org/10.1016/j.ijnurstu.2021.103870>.
- Reen, G. K., J. Bailey, D. L. Maughan, and C. Vincent. 2020. "Systematic Review of Interventions to Improve Constant Observation on Adult Inpatient Psychiatric Wards." *International Journal of Mental Health Nursing* 29, no. 3: 372–386. <https://doi.org/10.1111/inm.12696>.
- Repique, R. J. R., P. M. Vernig, J. Lowe, J. A. Thompson, and T. L. Yap. 2016. "Implementation of a Recovery-Oriented Training Program for Psychiatric Nurses in the Inpatient Setting: A Mixed-Methods Hospital Quality Improvement Study." *Archives of Psychiatric Nursing* 30, no. 6: 722–728. <https://doi.org/10.1016/j.apnu.2016.06.003>.
- Rifin, H. M., M. Y. J. Ling, T. G. R. Lourdes, et al. 2022. "Small/Kiddie Cigarette Packaging Size and Its Impact on Smoking: A Systematic Review." *International Journal of Environmental Research and Public Health* 19, no. 19: 12051. <https://doi.org/10.3390/ijerph191912051>.
- Sailas, E. E. S., and M. Fenton. 2000. "Seclusion and Restraint for People With Serious Mental Illnesses." *Cochrane Database of Systematic Reviews* 2000: 1–17. <https://doi.org/10.1002/14651858.cd001163>.
- Scanlan, J. N. 2009. "Interventions to Reduce the Use of Seclusion and Restraint in Inpatient Psychiatric Settings: What We Know So Far a Review of the Literature." *International Journal of Social Psychiatry* 56, no. 4: 412–423. <https://doi.org/10.1177/0020764009106630>.
- Scanlan, J. N., and T. Novak. 2015. "Sensory Approaches in Mental Health: A Scoping Review." *Australian Occupational Therapy Journal* 62, no. 5: 277–285. <https://doi.org/10.1111/1440-1630.12224>.
- Shea, B. J., B. C. Reeves, G. Wells, et al. 2017. "AMSTAR 2: A Critical Appraisal Tool for Systematic Reviews That Include Randomised or Non-randomised Studies of Healthcare Interventions, or Both." *BMJ* 358, no. 8122: j4008. <https://doi.org/10.1136/bmj.j4008>.
- Sheridan Rains, L., T. Zenina, M. C. Dias, et al. 2019. "Variations in Patterns of Involuntary Hospitalisation and in Legal Frameworks: An International Comparative Study." *Lancet Psychiatry* 6, no. 5: 403–417. [https://doi.org/10.1016/s2215-0366\(19\)30090-2](https://doi.org/10.1016/s2215-0366(19)30090-2).
- Sibitz, I., A. Scheutz, R. Lakeman, B. Schrank, M. Schaffer, and M. Amering. 2011. "Impact of Coercive Measures on Life Stories: Qualitative Study." *British Journal of Psychiatry* 199, no. 3: 239–244. <https://doi.org/10.1192/bjp.bp.110.087841>.
- Sirriyeh, R., R. Lawton, P. Gardner, and G. Armitage. 2012. "Reviewing Studies With Diverse Designs: The Development and Evaluation of a New Tool." *Journal of Evaluation in Clinical Practice* 18, no. 4: 746–752. <https://doi.org/10.1111/j.1365-2753.2011.01662.x>.
- Sivak, K. 2012. "Implementation of Comfort Rooms to Reduce Seclusion, Restraint Use, and Acting-Out Behaviors." *Journal of Psychosocial Nursing and Mental Health Services* 50, no. 2: 24–34. <https://doi.org/10.3928/02793695-20110112-01>.
- Skivington, K., L. Matthews, S. A. Simpson, et al. 2021. "Framework for the Development and Evaluation of Complex Interventions: Gap Analysis, Workshop and Consultation-Informed Update." *Health Technology Assessment* 25, no. 57: 1–132. <https://doi.org/10.3310/hta25570>.
- Smith, M. J., J. Bouch, S. Bradstreet, T. Lakey, A. Nightingale, and R. C. O'Connor. 2015. "Health Services, Suicide, and Self-Harm: Patient Distress and System Anxiety." *Lancet Psychiatry* 2, no. 3: 275–280. [https://doi.org/10.1016/S2215-0366\(15\)00051-6](https://doi.org/10.1016/S2215-0366(15)00051-6).
- Smith, S., and J. Jones. 2013. "Use of a Sensory Room on an Intensive Care Unit." *Journal of Psychosocial Nursing and Mental Health Services* 52, no. 5: 22–30. <https://doi.org/10.3928/02793695-2013126-06>.
- Smith, V., D. Devane, C. M. Begley, and M. Clarke. 2011. "Methodology in Conducting a Systematic Review of Systematic Reviews of Healthcare Interventions." *BMC Medical Research Methodology* 11, no. 1: 15. <https://doi.org/10.1186/1471-2288-11-15>.
- Smoot, S. L., and J. L. Gonzales. 1995. "Cost-Effective Communication Skills Training for State Hospital Employees." *Psychiatric Services* 46, no. 8: 819–822. <https://doi.org/10.1176/ps.46.8.819>.
- Snipe, J., and A. Searby. 2023. "Elimination of Restrictive Interventions: Is it Achievable Under the Current Mental Healthcare Landscape?" *International Journal of Mental Health Nursing* 32, no. 4: 1178–1185. <https://doi.org/10.1111/inm.13180>.
- Stensgaard, L., M. K. Andersen, M. Nordentoft, and C. Hjorthøj. 2018. "Implementation of the Safewards Model to Reduce the Use of Coercive Measures in Adult Psychiatric Inpatient Units: An Interrupted Time-Series Analysis." *Journal of Psychiatric Research* 105: 147–152. <https://doi.org/10.1016/j.jpsychires.2018.08.026>.
- Sterne, J. A., M. A. Hernán, B. C. Reeves, et al. 2016. "ROBINS-I: A Tool for Assessing Risk of Bias in Non-Randomised Studies of Interventions." *BMJ* 355: i4919. <https://doi.org/10.1136/bmj.i4919>.

- Stewart, D., M. Van der Merwe, L. Bowers, A. Simpson, and J. Jones. 2010. "A Review of Interventions to Reduce Mechanical Restraint and Seclusion Among Adult Psychiatric Inpatients." *Issues in Mental Health Nursing* 31, no. 6: 413–424. <https://doi.org/10.3109/01612840903484113>.
- Szasz, T. 2007. *Coercion as Cure: A Critical History of Psychiatry*. Piscataway, NJ, USA: Transaction Publishers.
- Thomas, B. H., D. Ciliska, M. Dobbins, and S. Micucci. 2004. "A Process for Systematically Reviewing the Literature: Providing the Research Evidence for Public Health Nursing Interventions." *Worldviews on Evidence-Based Nursing* 1, no. 3: 176–184. <https://doi.org/10.1111/j.1524-475x.2004.04006.x>.
- Turner, J. R., and R. M. Baker. 2019. "Complexity Theory: An Overview With Potential Applications for the Social Sciences." *System* 7, no. 1: 4. <https://doi.org/10.3390/systems7010004>.
- Väkiparta, L., T. Suominen, E. Paavilainen, and J. Kylmä. 2019. "Using Interventions to Reduce Seclusion and Mechanical Restraint Use in Adult Psychiatric Units: An Integrative Review." *Scandinavian Journal of Caring Sciences* 33, no. 4: 765–778. <https://doi.org/10.1111/scs.12701>.
- van de Sande, R., H. L. I. Nijman, E. O. Noorthoorn, et al. 2011. "Aggression and Seclusion on Acute Psychiatric Wards: Effect of Short-Term Risk Assessment." *British Journal of Psychiatry* 199, no. 6: 473–478. <https://doi.org/10.1192/bjp.bp.111.095141>.
- Venkataramu, V. N., B. Vajawat, B. S. Raghuraman, and S. K. Chaturvedi. 2020. "Cultural Competency Training for Psychiatry Residents and Mental Health Professionals: A Systematic Review." *International Journal of Social Psychiatry* 67, no. 7: 833–839. <https://doi.org/10.1177/0020764020981610>.
- Veritas Health Innovation, n.d. *Covidence. Covidence Systematic Review Software*. Melbourne: Veritas Health Innovation. [www.covidence.org](http://www.covidence.org).
- Viswanathan, M., M. T. Ansari, N. D. Berkman, et al. 2012. *Assessing the Risk of Bias of Individual Studies in Systematic Reviews of Health Care Interventions*. Rockville, MD, USA: Nih.Gov. <https://www.ncbi.nlm.nih.gov/books/NBK91433/>.
- VMIAC. 2022. "Seclusion Report # 3". [https://www.vmiac.org.au/wp-content/uploads/VMIAC-Seclusion-Report-3\\_2020-21\\_Web-Version-2.2\\_300dpi-High-res-1.pdf](https://www.vmiac.org.au/wp-content/uploads/VMIAC-Seclusion-Report-3_2020-21_Web-Version-2.2_300dpi-High-res-1.pdf).
- Wilson, A., J. Hurley, M. Hutchinson, and R. Lakeman. 2023. "Trauma-Informed Care in Acute Mental Health Units Through the Lifeworld of Mental Health Nurses: A Phenomenological Study." *International Journal of Mental Health Nursing* 32, no. 3: 829–838. <https://doi.org/10.1111/inm.13120>.
- Wistedt, B., A. Rasmussen, L. Pedersen, et al. 1990. "The Development of an Observer-Scale for Measuring Social Dysfunction and Aggression." *Pharmacopsychiatry* 23, no. 06: 249–252. <https://doi.org/10.1055/s-2007-1014514>.
- Wolf, A., D. Whiting, and S. Fazel. 2017. "Violence Prevention in Psychiatry: An Umbrella Review of Interventions in General and Forensic Psychiatry." *Journal of Forensic Psychiatry & Psychology* 28, no. 5: 659–673. <https://doi.org/10.1080/14789949.2017.1284886>.
- Woods, P., and R. Almvik. 2002. "The Broset Violence Checklist (BVC)." *Acta Psychiatrica Scandinavica* 106, no. s412: 103–105. <https://doi.org/10.1034/j.1600-0447.106.s412.22.x>.
- Wright, L., S. Bennett, P. Meredith, and E. Doig. 2023. "Planning for Change: Co-Designing Implementation Strategies to Improve the Use of Sensory Approaches in an Acute Psychiatric Unit." *Issues in Mental Health Nursing* 1-14: 960–973. <https://doi.org/10.1080/01612840.2023.2236712>.

### Supporting Information

Additional supporting information can be found online in the Supporting Information section.