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Exploring restrictive practices in inpatient eating disorder services: a scoping review

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ABSTRACT

Restrictive practices (RPs) encompass interventions that limit an individual's freedom, such as restraint, seclusion, and enforced treatment. While widely studied in acute mental health settings, their use within inpatient eating disorder services remains underexplored despite evidence of high prevalence. In addition to these formal restrictive interventions, eating disorder inpatient wards commonly employ structured behavioural rules as part of nutritional rehabilitation programs, including enforced rest periods, supervised meals, locked bathrooms, and limits on fluids or activity. A scoping review methodology following a five-step framework was implemented. Four databases (CINAHL, MEDLINE, Embase, and PsycInfo) were searched. The analysis involved both numerical and narrative synthesis in line with the framework. Thirty-six studies were included. Most originated from the UK, focused on anorexia nervosa, and used quantitative designs, with a substantial proportion conducted in child and adolescent inpatient settings. Common RPs included nasogastric tube feeding under restraint, involuntary admission, and physical restraint. Prevalence varied widely, with a small subset of patients accounting for most RP episodes. RPs were primarily applied in response to medical or nutritional risk rather than aggression, differentiating them from acute psychiatric contexts. Evidence regarding outcomes such as weight restoration, length of stay, and mortality was inconsistent, and RPs were frequently described by patients and staff as distressing, coercive, and potentially traumatic. Findings highlight the distinct nature of RP use in eating disorder settings and the need for context-specific policies, ethical guidance, and intervention strategies to minimize harm while ensuring patient safety.

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Clinical Implications

- This review demonstrates that RPs are commonly used within eating disorder inpatient settings, but differ in drivers and application from general psychiatric contexts, highlighting the need for context-specific clinical frameworks and targeted interventions to reduce RP use.
- The findings indicate that RP use is concentrated among patients with greater clinical complexity (e.g. longer illness duration, prior admissions), suggesting that early identification and targeted, individualized interventions are required to reduce reliance on RPs in this high-risk group.
- The review further highlights that RPs extend beyond formal interventions, with everyday ward practices and cultures experienced as restrictive and coercive, underscoring the need for ward-level, culture-focused interventions to reduce coercion and improve the therapeutic environment.

Background

Restrictive practices (RPs), sometimes referred to as restrictive interventions, coercion, or containment measures, are defined by the Care Quality Commission (CQC) as *“any type of restriction to a person’s freedom, which may range from physical or mechanical restraint, seclusion or segregation to restrictions placed on a person’s daily activities or choices”* (Care Quality Commission [CQC], 2023). These practices are often administered without consent (O’Donovan et al., 2023). National and international frameworks emphasize that RPs should be minimized and used only as a last resort, with the least restrictive option applied, proportionately and for the minimum duration necessary (Department of Health, 2015). This approach is supported by UK legislation (Mental Health Act, 1983; Mental Capacity Act, 2005), human rights frameworks (European Human Rights Act, 1998), and international conventions such as the United Nations Convention on the Rights of Persons with Disabilities (2006). Despite this, RPs remain prevalent in mental health services, with evidence highlighting the potential for such interventions to damage therapeutic relationships, undermine recovery, cause trauma, physical harm, or even death (Butterworth et al., 2022; MacDonald, Gustafsson, et al., 2023; Melillo et al., 2025). Reducing their use within mental health services is therefore a key national and international priority (NHS England [NHS], 2023).

Most research on RPs has focused on their use in acute mental health wards (Baker et al., 2021); however, high rates of RPs have been reported in eating disorder inpatient wards, highlighting the need for research into RPs to consider this specific context. This is evidenced within a recent review of child and adolescent services which found that eating disorder wards had the highest rates of coercive measures, including physical restraint,

pharmacological interventions, and forced feeding, when compared to other inpatient Child and Adolescent Mental Health Service (CAMHS) wards (Moell et al., 2024). Furthermore, in Norway, Furre et al. (2016) reported that nearly half of all restraint episodes in adolescent acute mental health wards were related to compulsory feeding, with some patients experiencing exceptionally high numbers of restraint events. In addition to these formal restrictive interventions, eating disorder inpatient wards commonly employ structured behavioural rules as part of nutritional rehabilitation programs, including enforced rest periods, supervised meals, locked bathrooms, and limits on fluids or activity (National Institute for Health and Care Excellence [NICE], 2017; Royal College of Psychiatrists, 2021). While much of the existing literature has focused on child and adolescent inpatient services, restrictive practices are also used within adult eating disorder wards, where patients often present with severe, long-standing illnesses and complex clinical needs. Despite this, the extent and characteristics of RP use in adult settings remain comparatively underexplored.

An RP commonly experienced in eating disorder wards but rarely in acute mental health wards is the application of physical restraint when administering nutrition, e.g. nasogastric tube feeding (NGT) (Blikshavn et al., 2020). Such restraint episodes are increasingly common in eating disorder wards with one study showing that a small number of patients with anorexia nervosa (AN) were exposed to exceptionally high levels of physical restraint; 1896 of a total of 4173 restraint episodes recorded across adolescent acute wards were related to compulsory feeding, with these episodes occurring across 21 patients with AN (i.e., an average of 90 episodes per patient) (Furre et al., 2016). In addition to managing immediate medical risk, RPs in eating disorder wards are sometimes employed as incentives to encourage adherence to nutrition plans or meal completion. For example, privileges may be contingent on finishing meals or escalating calorie intake may require compliance with NGT feeding, reflecting operant behavioural strategies that can shape patient behaviour beyond direct risk management (Clausen et al., 2018; MacDonald et al., 2022). This may also extend to adherence to “acceptable” patterns of eating, including the avoidance of eating disorder behaviours and compliance with ward-based expectations around meals. Previous literature have described routine RPs that are unique to eating disorder wards, such as bathroom supervision following meals, observation during or after eating, weighing protocols, and behavioural consequences for food refusal, highlighting that coercive experiences within eating disorder inpatient wards may extend well beyond formal restraint or compulsory feeding interventions (MacDonald, Gustafsson, et al., 2023; Tan et al., 2003, 2026). While these interventions are often embedded within routine nutritional rehabilitation and behavioural management protocols, their everyday nature may make them less visible forms of coercive influence despite potentially affecting a larger proportion

of patients than formal restrictive interventions. This highlights the importance of considering coercion within eating disorder inpatient care as occurring along a continuum, rather than only through overt practices such as restraint or compulsory feeding.

While the literature on RPs has increasingly focused on the use of restraint in the context of forced feeding, less attention has been given to interventions used to manage non-feeding-related conflict (Beeri et al., 2025). These practices can be considered restrictive under a broader definition, yet due to their specialist and context-specific nature, they are often excluded from the wider literature on RPs. Importantly, the distinct nature and frequency of these measures in eating disorder wards suggests that their impact may differ from that observed in acute mental health wards, highlighting the need to understand not only their prevalence but also their psychological and experiential consequences for patients (Blikshavn et al., 2020; Royal College of Psychiatrists, Quality Network for Eating Disorders, 2021; Clausen & Jones, 2014).

As has been observed across the acute mental health care literature, findings related to the use of RPs in eating disorder wards indicate that such interventions can have a significant negative effect and leave an enduring adverse impact (MacDonald, Gustafsson, et al., 2023). Given the differences between acute mental health wards and eating disorder wards, including patient presentations, patient characteristics and demographics, length of admission periods, and ward cultures, there is a need to investigate and define RPs within eating disorder inpatient wards. This is particularly salient at the current timepoint, given that hospital admissions in England for eating disorders have risen sharply, reaching 24,268 admissions in 2020/21, an 84% increase compared with 2015/16 (Royal College of Psychiatrists, 2022). This increase has been especially pronounced among children and young people, with admissions rising by 90% over the same period (from 3,541 to 6,713 episodes), alongside a 79% increase among adults. Notably, admissions among boys and young men have increased by 128%, highlighting shifting demographic patterns within eating disorder presentations (Royal College of Psychiatrists, 2022). Policy specifications recognize that eating disorder wards are often highly restrictive (e.g., numerous rules and behavioural restrictions), with reducing RPs remaining a key service-defined outcome (NHS, 2023).

These considerations exemplify that eating disorder wards present a unique context in which the use of RPs requires careful evaluation. Compared to acute mental health wards, eating disorder inpatient wards and clinical risks are more often linked to malnutrition than aggression, which is commonly observed in acute wards (Baker et al., 2021; Butterworth et al., 2022). These factors are thought to contribute to the particularly high levels of RPs reported in eating disorder wards. Understanding how these practices are used across both adult and child and adolescent inpatient services is therefore essential for

informing policy, clinical practice, and future research. This review therefore aims to map and understand the wide range of RPs employed in these eating disorder wards and to explore how their use, outcomes, and experiences may vary across child, adolescent, and adult populations.

Aim

To identify, map, and synthesize existing evidence on RPs used within inpatient eating disorder wards.

Methods

A scoping review methodology was adopted to provide a preliminary assessment of the research area and to map the nature and extent of existing evidence (Grant & Booth, 2009). This approach was deemed most appropriate given the broad aims of the review and the heterogeneity observed within the existing literature. The review was conducted in accordance with an adapted version of the Joanna Briggs Institute (JBI) framework for scoping reviews (Peters et al., 2015), which builds upon the foundational guidelines proposed by Arksey and O'Malley (2005). The review process followed five key stages: (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies; (4) charting the data; and (5) collating, summarizing, and reporting the results.

Stage 1: identify the research question

Targeted research questions were developed to guide the scoping review:

Research questions

- (1) What types of restrictive practices are used on inpatient eating disorder wards?
- (2) How and why are these interventions used?
- (3) What outcomes are related to the use of such interventions?
- (4) What are the experiences of patients, staff, and carers in relation to the use of these interventions?

Stage 2: search strategy

We searched four electronic databases (Medline, PsycINFO, Embase, CINAHL) for peer-reviewed literature relevant to our research questions. Database searches were conducted on the 17/02/2025 with no date restrictions, with an updated search conducted on 07/10/25. We searched for literature by using the Boolean operator 'OR' to create two blocks of search terms for the

setting of eating disorder inpatient wards, and terms linked to RPs and interventions, which were combined using the ‘AND’ function. Appropriate truncation and word combinations were adapted for each database search. A general outline of the building block search strategy is shown in [Figure 1](#).

Stage 3: select studies

Screening and selection process

After completing the initial search, duplicates were deleted. Covidence software was used for screening and selection procedures (Veritas Health Innovation, 2024), which were conducted using a two-step process with identified papers being assessed against study inclusion and exclusion criteria (see [Table 1](#).) To ensure consistent application of eligibility criteria, all reviewers, initially, independently screened the same ten titles and abstracts and discussed inclusion/exclusion.

First, the titles and abstracts, where available, were screened independently by members of the research team (UF, VK). Second, full-text screening was performed for identified studies where it was not possible to decide using the title and abstract. Full-text papers were screened by two members of the research team (UF, VK). Disagreements were resolved through team discussion, and steps were taken to improve

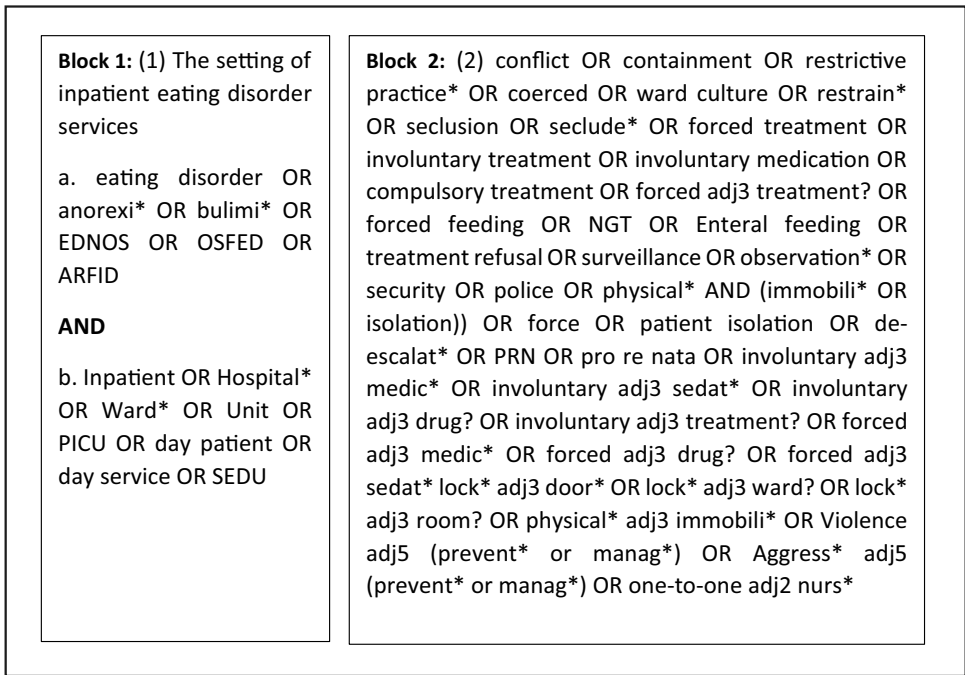


Figure 1. Search strategy.

Table 1. Eligibility criteria.

	Inclusion criteria	Exclusion criteria
Publication Type	Peer-reviewed articles including primary data	Conference proceedings Books Protocols Theses or dissertations
Methodology	Quantitative Qualitative Mixed methods	Review articles Meta-analyses Case studies Commentary articles
Language	English language	Non-English language
Population/ Setting	All services offering psychiatric inpatient care for people with eating disorders (any eating disorder diagnosis) inclusive of all services across ages, inclusive of acute wards, specialist eating disorder units, NHS and private sector services Any age group: Studies including adult, child and adolescent, or mixed inpatient eating disorder populations were eligible for inclusion. This approach was adopted to map the breadth of evidence relating to restrictive practices across inpatient eating disorder services, consistent with the exploratory aims of a scoping review.	Services not providing care to patients with eating disorders Non-inpatient services, e.g., day patient care, community services, A&E/ Emergency care Medical inpatient services
Interventions	Any intervention that is aimed at restricting the patient's behaviour, movement, or liberty, including legal and non-legal forms	

agreement, and discrepancies were resolved by discussion to reach a consensus within the wider team. After screening, a total of 36 studies were included in the review. See PRISMA diagram for full details of the process (Figure 2).

Stage 4: data extraction

The data extraction form was developed by UF in consultation with the wider team. The extraction tool included general study information (title, author, year, country, research aims), methodology (study design, sampling method, sample characteristics, setting), type of RP used, and key results (future steps/gaps in knowledge, limitations, and summary of outcomes). This form was piloted with two team members (UF and VK) extracting data from the same study to ensure consistency. Data was extracted from the 36 studies using this extraction tool by a member of the research team (UF), with a second reviewer (VK) double extracting a random 10% of papers to check extraction. This information was used to inform the narrative synthesis of eligible studies. In line with current scoping review guidance, risk of bias assessment was not completed (Munn et al., 2018; Peters et al., 2020). Meta-analysis was not possible given the heterogeneity of study designs and data presented across the received studies.

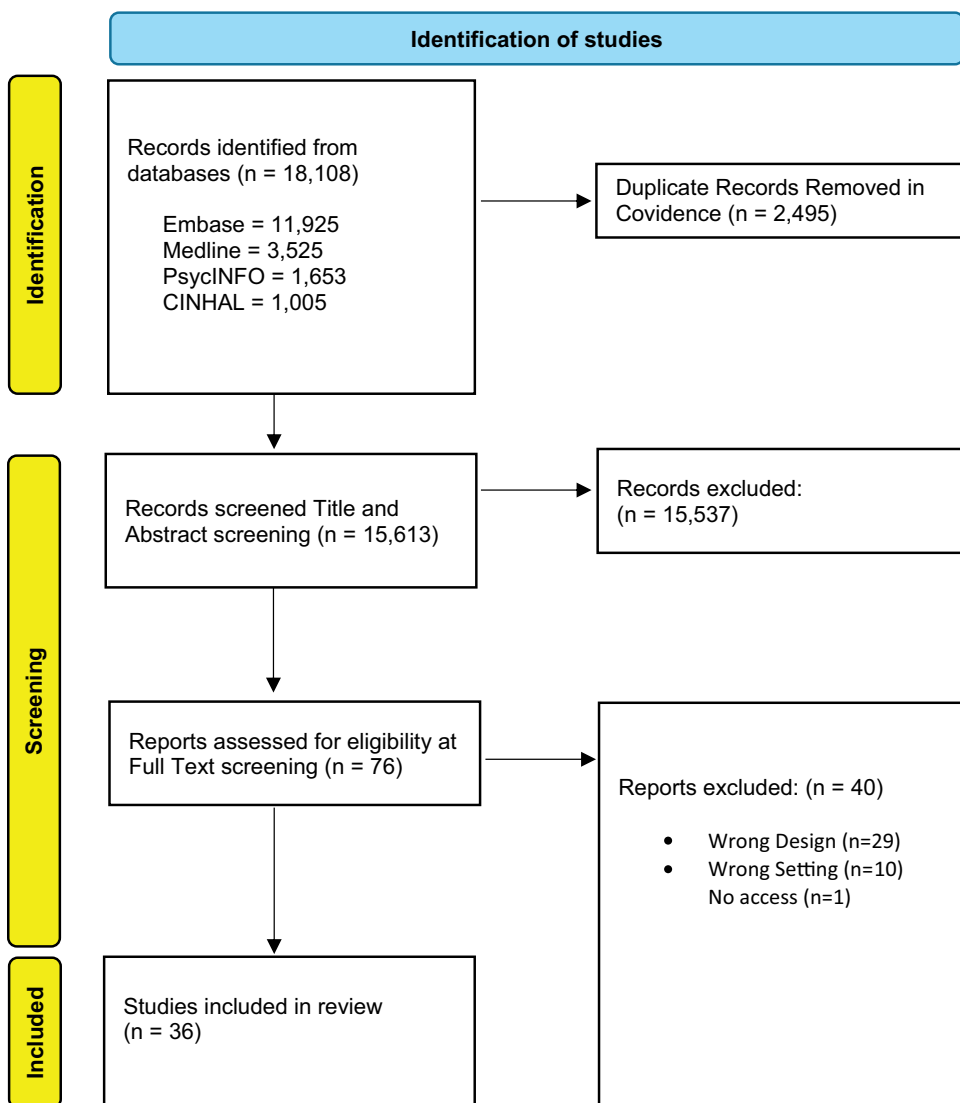


Figure 2. PRISMA diagram of data extraction, charting the data, and categorization.

Stage 5: collate, summarize, and report results

A narrative synthesis was conducted following the framework proposed by Popay et al. (2005) to enhance the transparency and trustworthiness of the synthesis process. Initially, studies were tabulated and numerically described according to study design, year of publication, country of origin, population characteristics, type of conflict and containment, and outcomes measured.

In addition, textual descriptions were developed for each study, highlighting key findings, strengths, and limitations. A common analytic framework was then constructed to map studies against the main research questions related to RPs. This framework enabled cross-study comparisons

and helped identify patterns and variations in outcomes, methodologies, populations, and settings. Quantitative and qualitative data were synthesized narratively for each research question to provide an integrated understanding of the evidence base.

Lived experience involvement

The study team included five lived experience researchers (UF, KS, AC, VK, & JG), who were actively involved across all stages of the research, from design, screening, and data extraction to analysis and write-up. The lived experience researchers brought diverse perspectives, including personal experience of eating disorders, conducting patient-led ward inspections, peer advocacy and support, caring for someone with an eating disorder, and direct experience of RPs during inpatient admission. Complementing this, two authors (HW & JG) are specialist eating disorder clinicians, and three authors (GB, JB, & AS) are mental health nurses with extensive experience in inpatient mental health care and academic research on RPs. Together, this combination of lived experience and clinical expertise ensured that the review was informed by both practical insight and professional knowledge.

Results

A total of 36 papers met the eligibility criteria and were included in the analysis. A full description of study characteristics can be viewed in [Table 2](#). Where possible, findings are presented separately based on age groups (e.g., for child and adolescent (CYP) or adult populations), however several studies reported combined samples or did not clearly distinguish age groups, which limited the extent to which findings could be disaggregated.

Countries, methodology, and publication dates

Most studies ($n = 13$) originated from the UK, and the remaining conveyed research in the USA ($n = 5$), Denmark ($n = 5$), Australia ($n = 4$), France ($n = 2$), and Norway ($n = 2$), and the remaining were based in Germany ($n = 1$), Canada ($n = 1$), Spain ($n = 1$), Italy ($n = 1$), and Ireland ($n = 1$). A total of 52% of studies were conducted between 2020 and 2025 ($n = 19$), 14% ($n = 5$) were conducted between 2015 and 2019, 28% ($n = 10$) between 2000 and 2009, and 6% ($n = 2$) before 2000.

The majority used quantitative methods ($n = 22$, 61%), with 12 (33%) using qualitative methods, and two (6%) used mixed methods. Most papers explored the outcomes associated with the use of RPs ($n = 16$). Thirteen papers explored the experiences of RP use in eating disorder wards.

Table 2. Study characteristics.

Author (Country)	Population and setting	Methods	Type of RP	Findings
MacDonald, Gustafsson, et al. (2023a) (Denmark)	Patients ($n = 7$; aged 20–39; 100% female) Four currently had AN or atypical AN, 6 had been diagnosed with comorbid psychiatric diagnoses (personality disorders, depression, autism spectrum disorders, obsessive compulsive disorder, attention deficit hyperactivity disorder, and schizophrenia disorder). Eating Disorder: Anorexia Nervosa or Atypical AN Setting: Adult Inpatient Psychiatric care (including specialized hospital units)	Design: Qualitative Interviews Methods: Semi-Structured Interviews Sample Size: $n = 7$ Analysis: Reflexive Thematic Analysis Research Question: Patients' Experiences	Involuntary Treatment (IT) and formal RPs: IT events were defined as involuntary admission, detention, mechanical restraint, physical restraint, nasogastric tube feeding, and constant observation, i.e., the constant presence of a professional	IT was often initiated due to physical and behavioural risks and influenced by systemic or organizational factors. While many participants acknowledged that IT could be life-saving and occasionally necessary, they also expressed ambivalence, emphasizing its potential misuse and emotional harm. Theme 1 described the internal coercion of AN itself, where patients felt compelled to follow harmful behaviours. Theme 2 highlighted the often traumatic and distressing nature of coercive treatment, though some found aspects like nasogastric feeding, helpful in their internal battle with AN. Theme 3 showed that IT often left a lasting emotional impact, but many participants later recognized its value in hindsight, which contributed to shifts in self-care and recovery, though some remained significantly affected.
	Patients ($n = 10$; aged 18+; 100% female) who had had multiple prior hospital admissions (voluntary and involuntary) for AN Eating Disorder: AN Setting: Adult Inpatient psychiatric care (unit with an eating disorders program).	Design: Qualitative Interviews Methods: Semi-Structured Interviews Sample Size: $n = 10$ Analysis: Reflexive Thematic Analysis Research Question: Patients' Experiences	Coercive clinical practices Inclusive of imposed weight gain protocols, forced feeding, monitoring, reduction in patient autonomy.	
Zugai et al. (2024) (Australia)	Patients ($n = 10$; aged 18+; 100% female) who had had multiple prior hospital admissions (voluntary and involuntary) for AN Eating Disorder: AN Setting: Adult Inpatient psychiatric care (unit with an eating disorders program).	Design: Qualitative Interviews Methods: Semi-Structured Interviews Sample Size: $n = 10$ Analysis: Reflexive Thematic Analysis Research Question: Patients' Experiences	Coercive clinical practices Inclusive of imposed weight gain protocols, forced feeding, monitoring, reduction in patient autonomy.	The thematic analysis established four themes: 1. Abuses of Power: Descriptions of coercion, forced feeding, overuse of medication, and lack of collaboration. Lasting trauma, mistrust and fear of healthcare systems 2. Lifesaving Use of Power: Despite distress, participants later recognized that enforced care saved their lives. Many acknowledged they couldn't advocate for themselves at the time 3. The Interpersonal Relationship: A strong, empathetic clinician-patient relationship helped reduce the sense of coercion. Feeling safe and cared for shifted perceptions of clinicians' power 4. Clinical Competence: Skilled, knowledgeable clinicians created trust and safety. Incompetent or untrained staff worsened distress and perceptions of coercion Participants' narratives converged on four overlapping themes, each with nuanced subthemes across all groups: 1. Impact on the patient during the admission: Experiences of trauma, distress during the intervention (e.g. being restrained by multiple staff, screaming, fear). Strengthening of anorexic identity and breakdown of trust with staff and peers. 2. Impact on those around the patient: On carers/parents: emotional distress witnessing the intervention. On peers: isolation or trauma by association. On staff: emotional exhaustion, moral conflict, burden of execution. 3. Longer-term impact: Patients and carers described lasting PTSD, flashbacks, especially triggered by proximity or medical procedures later in life. Clinical staff shared reflections on enduring moral distress, especially in severe malnutrition contexts. Some participants expressed gratitude that, despite trauma, it enabled physical recovery and survival.
	Total Participants ($n=36$) including: Former patients ($n = 7$; 100% AN; 100% female, age 19–34; illness duration 3–50 years, 1–13 admissions) Carers' parents ($n = 13$; 100% daughters aged 12–27) Clinicians ($n = 16$; MDT professionals) Eating Disorder: AN Setting: CYP and Adult Inpatient psychiatric care (admissions from NHS and independent sector units. Child and adolescent mental health (CAMH) admissions were in different settings including general adolescent units (GAU), psychiatric intensive care units (PICU), low secure units (LSU) and CAMH specialist eating disorder units (SEDU), whereas the adult admissions were predominantly to SEDU).	Design: Qualitative Interviews Methods: Semi-Structured Interviews Sample Size: $n = 36$ Analysis: Thematic Analysis Research Question: Patients' Experiences	NGT feeding under restraint	

(Continued)

Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Fuller et al. (2024a) (UK)	Total participants ($n=36$): former patients ($n=7$; 100% AN; 100% female; age 19–54, illness duration 3–30 +years; 1–13 admissions; admission length 8 months–5 years); careers/parents ($n=13$; 100% daughters aged 12–27); clinicians ($n=16$; MDT professionals). Eating Disorder: AN Setting: CYP and Adult Inpatient psychiatric care across England, including adult and CAMHS eating disorder services (e.g. GAU, PICU, SEDU, LSU), excluding paediatric medical wards	Design: Qualitative Interviews Methods: Semi-Structured Sample Size: $n=36$ Analysis: Thematic Analysis Research Question: Experiences: patients, carers & clinicians (MDT)	Nasogastric tube (NGT) feeding under restraint	Three key overlapping themes emerged across all stakeholder groups: 1. Individualized Care: Emphasis on tailoring care to individual needs rather than a one-size-fits-all protocol. Flexibility, personalized explanations, and negotiated care planning helped reduce distress and resistance. 2. Communication: Continuous, transparent dialogue before, during, and after intervention. Early involvement of the patient (e.g. discussions on admission) in planning and setting expectations reduced the element of shock and fostered agency. 3. Staff—Patient Relationships (Trust): Trust emerged as a vital mediator. Patients who felt genuinely heard and respected reported less psychological distress and more willingness to engage. Positive relationships fostered hope and engagement, reducing the need for coercion.
Fuller, Tan, and Nicholls (2023) (UK)	Patients ($n=623$): 111 out of 143 patients (77.6%) were cis-female, while 2 (1.4%) were cis-male, and 30 (21%) were gender-diverse, including 24 transgender individuals and 5 non-binary individuals; 1 Patients gender was not specified Age range 11–60 years (mean 18.0) 78% in CAMHS; 22% in adult SEDUs high rates of comorbid depression, anxiety, autism spectrum disorder Eating Disorder: Predominantly diagnosed with AN Setting: CYP and Adult Inpatient psychiatric care (including Child and Adolescent Mental Health Services (CAMHS) and adult Specialist Eating Disorder Units (SEDUs)).	Design: Quantitative Methods: National audit and retrospective case series Sample Size: $n=662$ (Data collected on all patients who received NGT feeding under physical restraint; June 2020–May 2021) Analysis: Case series analysis of frequency, duration, and patient characteristics Research Question: Use Prevalence of use & characteristics of who received RPs	Nasogastric tube feeding under physical restraint, used to provide life-saving nutrition when patients refuse treatment due to severe anorexia nervosa.	Duration of NGT Feeding Under Restraint: Range: Once to daily for up to 312 weeks; Mode: 1 week; Mean: 23.1 weeks (standard deviation = 30.8 weeks). • 622 Patients received NGT feeding under restraint in 1 year. • Majority were adolescents with anorexia nervosa. • Frequency ranged from 1 event to daily use for up to 312 weeks (mean duration 23 weeks). • Wide variation in practice between units. Highlights: need for standardized approaches and further research. Patient characteristics: Total Patients Reported: 622 Patients received nasogastric tube (NGT) feeding under physical restraint between June 2020 and May 2021. Age Range: 11 to 60 years (mean age = 19.02 years). Primary Diagnosis: Anorexia nervosa (68.5–95.7%), Comorbidities: Depression, anxiety, and autism spectrum disorder, clinical Setting Distribution: CAMHS: 78% ($n=486$), Adult SEDUs: 21.9% ($n=136$), Within CAMHS: SEDUs: 64% ($n=311$), non-SEDUs: 36% ($n=175$). Duration of NGT Feeding Under Restraint: Range: Once to daily for up to 312 weeks; Mode: 1 week; Mean: 23.1 weeks (standard deviation = 30.8 weeks)
Arbour et al. (2023) (Canada)	Data related to patients in two 12 bedded adolescent wards (aged 12–17). Demographics not provided Eating Disorder: Predominantly AN Setting: Specialist child and adolescent psychiatric inpatient eating disorder unit	Design: Quantitative Methods: Retrospective observational study Analysis: Descriptive comparison (percent and count change) Research Question: Outcomes: Incidence of self-harm and aggression, use of intervention- staff assists, physical restraint and seclusion, NGF	Various formal RPs: • Physical restraint • Seclusion • Emergency staff assists/code whites • NG feeding under duress	Dramatic Dedines: The complete absence of almost all coercive incidents during the modified period is remarkable and highlights the potential impact of service redesign. Contextual Shifts: The authors suggest that changes to the environment and service model such as smaller group sizes, single-room accommodations, increased family involvement, and recovery-oriented care dynamics—may have reshaped power dynamics and reduced conflicts leading to coercive interventions Clinical Implication: The authors interpret these findings as strong evidence that recovery-oriented, relational, and environmental strategies can meaningfully diminish the need for restrictive practices in adolescent psychiatric care wards. Reduction across incidents during covid with discussion hypothesizing that change in program service delivery likely impacted patient engagement (during the pandemic, by using codesign techniques patients became equal partners in decision. The authors believe that when adolescents could participate in activities of their interest, it enhanced engagement, prompted social connections with their peers, which might have reflected in reduction in agitation and adverse incidents.)

(Continued)

Table 2. (Continued).

Author (Country)	Population and setting	Methods	NGT feeding under restraint	Type of RP	Findings
Fuller, Tan, and Nicholls (2023) (UK)	Total Participants (<i>n</i> = 36) including: former patients (<i>n</i> = 7; 100% AN; 100% female; age 19–54; illness duration 3–30 years, 1–13 admissions) carers/parents (<i>n</i> = 13; 100% daughters aged 12–27) clinicians (<i>n</i> = 16; MDT professionals) Eating Disorder: AN Setting: Psychiatric inpatient care (including adult and adolescent specialist eating disorder wards)	Design: Qualitative Methods: Semi-Structured Interviews Sample Size: <i>n</i> = 36 Analysis: Reflexive Thematic Analysis Research Question: Experiences: patients, carers & clinicians (MDT)	NGT feeding under restraint	Type of RP	The researchers found two contrasting decision-making styles, each with subthemes, with both advantages and drawbacks but there is no one ‘right’ speed to making decisions about NG feeding under restraint: both quick and slow decision-making have trade-offs. What seems crucial is ensuring patient involvement, clear communication, early planning, multidisciplinary input, and balancing medical urgency with respect, autonomy and psychological risk. The findings suggest that best practice includes preparing for restraint feeding in advance, not waiting until crisis, and having a structured, collaborative process rather than just reacting under pressure Decision Types: 1. Quick Decisions • Justifications for urgent decision-making medical risk, ward dynamics (impact on other people eating) • Negative effects of quick decision making, missed opportunities for discussion and perspective taking. Broader risks or consequences of initiating NGT feeding not considered. Subthemes: medical risk, impact of not eating, limited MDT discussion 2. Slow Decisions: Decision coherent and thoughtful (all other options exhausted in a systematic way), OR decision discussed for a long time then used abruptly, with no real justification or thought out plan. Sometimes left too long and then needed feeding longer. Subtheme: perception of ‘threats’, MDT discussion with patient, not giving up, advance directives Power dynamics are central: the intervention is inherently coercive, involves exercising medical/legislative authority, and often conflicts with patient autonomy. Participants raised concerns about exclusion of patients from discussions, feeling threatened, etc. Trust, communication, collaboration matter a lot: Units that had a philosophy of not giving up, that included patients in care planning from the start, used advance directives, and had full MDT discussion tended to do better (from participants’ reports) in terms of lessening harms.
MacDonald, Bulik, et al. (2023) (Denmark)	Patients: All individuals in Denmark diagnosed (ICD-10 F50.0 or F50.1, F50.8) (other eating disorders) and F50.9 (unspecified eating disorders) with anorexia nervosa (AN) during this period (individuals: 90.4% female). Eating Disorder: AN (including atypical) Other eating disorders Unspecified eating disorders Setting: CYP and Adult inpatient psychiatric care	Design: Quantitative Methods: Nationwide, register-based retrospective cohort study (2000–2016) Sample Size: <i>n</i> = 3,287 (<i>n</i> = 550 for patients with IT) Analysis: Descriptive statistics to characterize IT utilization; Wilcoxon—Mann—Whitney U-tests and chi-square tests for group comparisons; Cox proportional hazards models and negative binomial regression to identify predictors and rates of IT; sensitivity analyses for repeated IT events. Research Question: Use Prevalence of use, type of RP used, who experiences RPs, risk factors for use	Various formal RPs: 1. Involuntary admission 2. Mechanical restraint 3. Physical restraint 4. Forced medication 5. Other involuntary measures (less specifically detailed in the dataset) (May include constant observation or, in rare cases, nasogastric feeding under restraint, but the paper does not explicitly report tube feeding events separately due to data limitations).	Type of RP	1. Utilization of involuntary Treatment (IT): 16.7% (550/3,287) of individuals with anorexia nervosa (AN) experienced at least one IT event after diagnosis. IT use peaked in the first years following initial hospital admission. Highly concentrated use: ~1% of patients accounted for ~67% of all IT events. 2. Types of Restrictive Practices: Most common measures: Mechanical restraint (belts), Physical restraint (staff holding patients), Involuntary admission and forced medication were also reported. <i>Dataset did not separate nasogastric feeding under restraint from other IT events.</i> 3. Risk Factors for Involuntary Treatment: Younger age and female sex increased risk. Previous psychiatric admissions and prior IT events strongly predicted future IT. Psychiatric comorbidity patterns (from latent class analysis) were highly predictive. Somatic comorbidity alone did not significantly increase IT risk. 4. Key Patterns: Concentration of IT in a small, high-risk subgroup suggests the need for targeted preventive strategies. Psychiatric complexity (personality disorder, self-harm, SUD) is the strongest predictor of repeated IT. Longitudinal burden: Repeated IT often occurs early and clusters in the first year’s post-diagnosis.

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Kodua et al. (2020) (UK)	Nursing assistants ($n = 8$; $f = 4$, $m = 4$; aged 23–36 - $M = 27$) majority identified as 'White European' or 'White British experience of working within the eating disorder service ranged from 5 to 36 months (mean = 20 months)—none held nursing degrees or diplomas but the majority of them held undergraduate and master's degrees in related subjects including Psychology and Biology, and one was studying for a degree in mental health nursing Eating Disorder: AN Setting: Inpatient child and adolescent eating disorder service	Design: Qualitative Interviews Methods: Semi-Structured Interviews Sample Size: $n = 8$ Analysis: Thematic Analysis Research Question: Experiences: clinicians (nursing assistants)	NGT feeding under restraint	Three central themes emerged: An unpleasant practice: Nursing assistants described feelings of emotional distress, physical exhaustion, risk of injury, and exposure to aggression during manual restraint episodes. Importance of coping: Coping strategies included talking with supportive colleagues, conversations with more recovered patients, and emotionally detaching during restraint events to manage stress. Becoming desensitized and sensitized: Over time, some nursing assistants reported emotional numbing (desensitization), while others experienced heightened sensitivity especially after repeated exposure.
Blikshavn et al. (2020) (Norway)	Patients ($n = 38$, female $n = 34$, male $n = 4$; age $M = 15.9$) no baseline differences between participants and non-participants (including involuntary status, restraint exposure) Eating Disorder: AN Setting: Specialized adolescent psychiatric ED inpatient unit	Design: Quantitative Methods: Retrospective review of hospital records Analysis: Descriptive counts of episodes (total, meal-related, self-harm-related), frequency distribution among patients, χ^2 tests (e.g. ED diagnosis persistence at follow-up), effect sizes. Comparisons of BMI, EDE-Q, readmissions (non-significant).	Formal RPs—Physical restraint, including forced NGT feeding for meal refusal and restraint to prevent self-harm during inpatient admission. Research Question: Use Prevalence of use, type of RP used, & why they are used Outcomes persistence of ED diagnosis at follow-up, weight gain/ BMI, EDE-Q scores, readmissions	• 201 total restraint episodes over 5513 inpatient days; 109 meal-related, 56 self-harm related. • 12 (32%) patients experienced ≥ 1 episode; 8 (21%) had meal-related restraint. • 4 patients accounted for 91% of all episodes (≥ 10 each). • Meal-related restraint associated with higher persistence of ED diagnosis at 5-year follow-up ($\chi^2 = 4.38$, $p < .04$, $\phi = 0.34$). • No significant differences in weight gain, BMI, EDE-Q global score or readmissions, though trends unfavourable.

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Schreyer et al. (2016) (USA)	Patients admitted to the program ($n = 202$; female $n = 191$, 94.6%, male $n = 11$, 5.4%; age $M = 31.8$) Majority identified as Caucasian ($n = 181$; 89.6%), and single ($n = 144$; 71.4%) Average illness duration was 11.7 years (SD 5.11.5). Eating Disorder: Restrictive EDs: Twenty-eight percent ($n = 56$) were diagnosed with AN-restricting type (AN-R), 53% ($n = 107$) with AN binge-eating/purging type (AN-P), and the remaining 19% ($n = 39$) met criteria for Other Specified Feeding or eating disorder (OSFED, $n = 27$), or ARFID ($n = 12$) Setting: Adult inpatient psychiatric hospital, specifically a behavioural inpatient program for eating disorders	Design: Quantitative Methods: Cross-sectional survey Sample Size: $n = 202$ Analysis: Descriptive Statistical associations between perceived coercion scores and illness severity scales (e.g., drive for thinness, body dissatisfaction), comparisons of perceived coercion across diagnostic groups (AN vs ARFID/BN) and age groups, associations between coercion and hospital course outcomes (length of stay, weight gain rate, target weight attainment, premature drop-out). Assumed use of chi-square tests for categorical outcomes and correlation/regression models for continuous measures	Non-legal forms of coerced care: Informal perceived coercion, subjective pressure experienced at admission (from family, clinicians, self), without legal detention or formal involuntary admission Research Question: Outcomes Drive for thinness scores, body dissatisfaction, BMI, Length of Stay, treatment drop-out	Higher perceived coercion was significantly associated with greater drive for thinness and greater body dissatisfaction, but not with BMI at admission. Perceived coercion did not predict length of stay, rate of weight gain, or attainment of target weight. Higher perceived coercion was associated with a decreased likelihood of successful transition to the partial hospital program. For each one-point increase on the perceived coercion scale, 1.09 times less likely to attend partial hospital at step-down).
Ward et al. (2015) (UK)	Patients ($n = 162$): Compulsory group: 81 patients (76 female, 5 male); Voluntary group: 81 patients (79 female, 2 male). Mean age: 26.2 ± 9.5 years (detained) vs 25.4 ± 7.7 years (voluntary); Employment: 17% detained vs 26% voluntary; Childhood abuse: 24% detained vs 10% voluntary ($p = .043$); Comorbidities: Depression/OCD ~44% detained vs 31% voluntary; Mean illness duration: 8.2 years (detained) vs 7.6 years (voluntary) Eating Disorder: AN Setting: Adult inpatient psychiatric eating disorder unit	Design: Quantitative Methods: Retrospective chart review Sample Size: $n = 162$ (81 compulsory admitted, 81 voluntary) Analysis: Kaplan—Meier survival analysis with log-rank test; Cox regression to assess confounding effects (e.g., age/standardized Mortality Ratios (SMRs) calculated for female patients; Fisher's exact test for mortality group comparisons Research Question: Outcomes Mortality	Compulsory admission/Involuntary Admission	• 27 deaths total over ~20 years (median age at death 37.7 years) • 5/27 suicides; majority due to physical consequences of AN • Initial 5-year follow-up: higher mortality in compulsory group (10 vs 2) • Extended follow-up: mortality difference not statistically significant (log-rank $p = .109$) • SMR for all females: 3.10 (95% CI 2.66–3.59); compulsory 7.65 vs voluntary 4.59

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Morris et al. (2015) (UK)	Patients: 206 admissions (172 patients) between 2009–2011 Adolescent population: 89 admissions for 74 patients; 93.3% were female ($n = 83$); 17 (19.1%) were compulsory admissions; 80.9% ($n = 72$) were voluntary admissions. $n = 10$ admission (12.7%) required patients to be feed via NG tubes. (75.7% - adult; $n = 86$ admissions; adolescent: $n = 70$ admissions) Adult population: 117 admissions involving 98 patients. 19 (16.2%) were repeat admissions. 8 673.5%) admissions were for AN; 18 (15.4%) were for atypical AN, 8 (6.8%) were for bulimia nervosa and 5 (4.3%) were for eating disorder unspecified. 96.6% were female ($n = 113$). 17 (14.5%) were compulsory admissions; 76 (65%) were voluntary; data regarding the status of the remaining patients ($n = 24$) was not available. Eating Disorder: 70 (78.7%) admissions were for AN; 2 (2.2%) were for atypical AN, 1 (1.1%) was for bulimia nervosa, and 16 (18.0%) were for eating disorder unspecified (atypical AN) Setting: Psychiatric inpatient care (including adult and adolescent specialist eating disorder wards)	Design: Quantitative Methods: Retrospective audit of existing clinical data Sample Size: $n = 206$ Analysis: Descriptive Statistics and Correlation / Comparative Analysis and Group comparison tests (e.g. t-tests or ANOVAs) Research Question: Outcomes Length of Stay	Nasogastric (NG) feeding & Compulsory admission	- Length of Stay (LOS)—Mean LOS: Adolescents: 141.4 days (~20 weeks); Adults: 113.0 days (~16 weeks). - Clinical and Psychological Improvements: Significant improvements in ED physical symptoms and psychological functioning were observed during inpatient treatment - Correlates of Extended LOS: A longer LOS was significantly associated with greater in-hospital weight gain in adult and adolescent samples. Among adolescents, treatment under legal detention (Mental Health Act) and the use of nasogastric feeding were linked to longer LOS.
Rojo et al. (2009) (Spain)	All discharged patients over period ($n = 299$ invited) and their relatives: $n = 171$, 92.4% female. Eating Disorder: Eating behaviour disorder undefined Setting: All ages specialist psychiatric inpatient eating disorder unit	Design: Mixed methods Methods: Post-discharge satisfaction surveys of patients and families, questionnaires with 1 open-ended question; included variables on age, illness duration, and compulsory admission Sample Size: $n = 171$ of 299 patients Invited/Analysis: Descriptive statistics and correlation tests (quantitative); thematic analysis for open-ended responses (qualitative) Research Question: Outcomes Patient and family satisfaction scores	Compulsory admission/ Involuntary Admission	Overall Satisfaction: Both patients and family members reported high overall satisfaction with the inpatient program. No significant difference in satisfaction scores was found between compulsorily admitted and voluntarily admitted patients. Factors Examined: Satisfaction scores showed no significant correlations with: - Age of patient - Duration of illness - Compulsory admission status - Parents tended to report slightly higher satisfaction than patients on closed-item measures. Patient Themes - Excessive supervision and lack of privacy during hospitalization - Feeling controlled in some aspects of care, which could be distressing - Despite high overall satisfaction, some patients expressed mixed feelings about restrictive elements of care. Family Themes - Desire for more control and structure in patient management - Request for better discharge planning and follow-up support/families generally accepted the need for strict protocols, including compulsory admission, to ensure safety.

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Ayton et al. (2009) (UK)	Patients: <i>N</i> = 50 adolescents (94% female; aged ~16.2 years) admitted over a 3-year period: 16 detained under MHA, 34 informal via parental consent. Mean age 16.3 ± 1.0 (detained) and 16.2 ± 1.3 (informal) Detained group had earlier illness onset (12.2 vs 14.3 yrs), more previous hospitalizations; poorer psychosocial functioning (CGAS 13.6 vs 26.9; HoNOSCA 41.7 vs 31.9); higher depression (BDI score 38.1 vs 26.6); higher rates of suicidal behaviour. *Outcome information available for 41 patients (29/34 informal and 12/16 detained) Eating Disorder: Majority AN; AN-restrictive <i>n</i> = 32 (23 informal; 9 detained); AN-purging <i>n</i> = 6 (5 informal, 1 detained); EDNOS <i>n</i> = 12 (informal 6, detained 6) Setting: Specialist psychiatric adolescent inpatient ED unit	Design: Quantitative Methods: Retrospective chart review Sample Size: <i>n</i> = 96 admissions from 75 different patients Analysis: Descriptive statistics; Wilcoxon rank-sum tests (Mann–Whitney <i>U</i>); Logistic regression (univariate and multivariate) Research Question: Use Factors linked to RP use including previous admissions, psychiatric co-morbidity, BMI, refeeding syndrome, Treatment setting, Length of Stay, Patient age, Type of ED, & use of purging behaviours	Compulsory admission (termed as legal coercion within the paper)	Detained adolescents presented with significantly higher illness severity at baseline. By discharge and 12-month follow-up, both groups showed substantial, clinically significant improvements, with no significant differences in outcome. Two informal patients died within 12 months (6.9%); no deaths in detained group. Clinical outcome (good /intermediate /readmission) distribution similar across groups.
Carney et al. (2008) (Australia)	Patients: <i>n</i> = 96 admissions by 75 individuals for AN. Mean age of participants under voluntary admission 25.61; coerced (compulsory) admissions 25.04 Eating Disorder: AN as primary diagnosis Setting: Psychiatric inpatient care (including adult and adolescent specialist eating disorder wards)	Design: Quantitative Methods: Retrospective chart review Sample Size: <i>n</i> = 96 admissions from 75 different patients Analysis: Descriptive statistics; Wilcoxon rank-sum tests (Mann–Whitney <i>U</i>); Logistic regression (univariate and multivariate) Research Question: Use Factors linked to RP use including previous admissions, psychiatric co-morbidity, BMI, refeeding syndrome, Treatment setting, Length of Stay, Patient age, Type of ED, & use of purging behaviours	Compulsory admission (termed as legal coercion within the paper)	Factors identified to increase the likelihood of legal coercion: Number of Previous Admissions: Patients with more prior admissions for anorexia nervosa were significantly more likely to be subject to coercion. Odds increased by ~30% per additional admission. This reflects clinicians' recognition that repeated admissions may signal treatment resistance or chronicity of illness, prompting stronger intervention. Psychiatric Co-morbidities: Coercion was also significantly associated with the number of co-occurring psychiatric diagnoses (e.g. depression, anxiety, personality disorders). Each additional co-morbidity increased the odds of coercion by ~75% to 90%. This suggests clinicians view complex mental health presentations as increasing both the risk to the patient and the difficulty of voluntary engagement. Low Body Mass Index (BMI): While not statistically significant in the final model, low BMI at admission was associated with higher likelihood of coercion. Every 1-point decrease in BMI increased the odds of coercion by 1.3. BMI was likely collinear with other factors like refeeding risk, reducing its apparent statistical power in multivariate models. Refeeding Syndrome: A subset model found the presence of refeeding syndrome alone could predict coercion. Patients who developed this potentially fatal condition were 3x more likely to be legally coerced. This underscores how acute medical risk influences clinician decisions. Treatment Setting—Locked Wards: Being placed in a locked psychiatric ward was almost synonymous with coercion (50x more likely). Age: No significant relationship found between age group and coercion, though those outside the 20–29 range were 2.2 times more likely to be coerced. Type of Eating Disorder Diagnosis: No difference in likelihood of coercion. Length of Hospital Stay: Not a predictor of coercion. Use of Purging Behaviours: Not significantly associated.

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Guarda et al. (2007) (USA)	Patients ($n = 139$): $n = 136$ female (98%) $n = 128$ White/Caucasian (92%) mean age = 25.2 years ($SD = 10$), 1 adolescents ($n = 35$ participants (25%)), adults $n = 104$ participants (75%) Eating Disorder: 55% Anorexia Nervosa (restricting + purging), 30% Bulimia Nervosa (purging + non-purging), 15% EDNOS (subthreshold anorexia or bulimia) Setting: A behavioural inpatient and partial hospital program for eating disorders (Adults and Adolescents)	Design: Quantitative Methods: Self-report questionnaire Sample Size: $n = 139$ Analysis: MANOVA, Repeated-measures ANOVA, Chi-square tests, Descriptive statistics	Informal (perceived) coercion including social/psychological coercion (e.g., feeling pressured by family or staff), informal threats of involuntary commitment, admission without personal consent (e.g., admitted by parents or for adults being brought in under pressure) Research Question: Perceived Use patients	Patients with AN reported significantly higher (<0.001) levels of perceived coercion ($M = 11.8$) than those with BN ($M = 7.9$), more pressure ($M = 9.1$) compared to BN patients ($M = 7.7$; $p = .04$), and felt less fairly treated ($M = 14.1$) than BN patients ($M = 15.8$; $p = .03$). No significant differences by age in pressure or procedural justice. Within the anorexia group, minors again reported more coercion than adults ($p < .001$). At Admission: 46 participants (33%) did not believe they needed hospitalization; 35% of those with anorexia vs. 28% with bulimia (not statistically significant), 46% of minors vs. 29% of adults ($p = .067$; trend but not sig.). Changes in Perceived Need After 2 Weeks: Of the 46 who didn't initially believe they needed hospitalization 20 patients (43%) changed their mind after 2 weeks; 17 of those 20 were adults $\rightarrow$ 85% of converters were over 18 ($p = .013$), 14 were from the anorexia group, 6 from bulimia. No changes were seen in levels of perceived coercion, pressure, or justice after 2 weeks.
Ryan et al. (2006) (Australia)	CAMHS Nurses ($n = 15$; female $n = 13$, males $n = 2$) Roles included registered nurse, enrolled nurses, nurse unit managers (NUMS), clinical nurse educators and clinical nurse consultants working across 2 children's wards and 1 adolescent ward, working with patients aged from 8–11 years, 12–14 years and 14–18 years. Eating Disorder: Predominantly AN (85%), and BN or EDNOS (15%) Setting: Child and Adolescent inpatient eating disorder unit within a hospital	Design: Qualitative Methods: Semi-Structured Interviews Sample Size: $n = 15$ Analysis: Discourse analysis Research Question: Experiences clinicians (nurses)	Non-legal, non-physical forms of restriction / coercion including behavioural control, surveillance, and enforced routine.	1. Empathic or 'Loving' Support: Nurses constructed their role as providing emotional containment, safety, and parent-like care for highly vulnerable patients. Restrictive actions were framed as expressions of care—e.g., enforcing food intake or stopping harmful behaviour was viewed as "protecting" the patient. This theme normalized restriction as nurturing, rather than coercive. But nurses expressed discomfort with infantilizing patients but saw it as necessary to support patients who were seen as emotionally or developmentally "stuck." 2. Surveillance and Disciplining of Patients: Nurses described their roles in terms of monitoring, correcting, and enforcing discipline—particularly around meals, weight, and exercise. Supervision, routine enforcement, and behavioural control were central, examples include accompanied bathroom use, meal supervision, restricting movement, and not allowing certain behaviours post-meals. Nurses likened themselves to "police officers", "prison guards", or "bouncers", showing awareness of how controlling their roles could feel. These practices were described as institutionally embedded, not just individual decisions, with nurses reporting they felt conflicted and morally burdened by these actions, especially when patients resisted or became distressed. Some feared that over-reliance on rules and surveillance could undermine therapeutic relationships. 3. Constant, Ever-Present Care: Nurses positioned themselves as constantly available, physically and emotionally, to meet patients' complex needs. Constant presence enabled monitoring and rapid intervention but also acted as a form of environmental restriction; patients were rarely left alone. The nurses' emotional labour (managing distress self-harm risk, boundary testing) was part of the structure that maintained control within the unit. The unit's routines and expectations were rigid, with staff feeling institutionally obligated to maintain consistency. Staff described emotional exhaustion and role ambiguity, caught between being always available and needing to enforce rules.
Silber et al. (2004) (USA)	Patients: $n = 14$, adolescent boys with anorexia nervosa (9 European American, 2 African American, one Biracial, and 2 Hispanic American). Oral Refeeding (OR) group ($n = 8$, mean age = 14.9, $SD = 1.7$); OR + nocturnal nasogastric refeeding (NNGR) group ($n = 6$, mean age = 13.8, $SD = 2.0$) Eating Disorder: AN Setting: Adolescent Psychiatric Inpatient Unit	Design: Quantitative Methods: Retrospective cohort study with chart review Sample Size: $n = 14$ Analysis: 8 OR, 6 NNGR Research Question: Descriptive statistics (no inferential stats due to small n) Outcomes: BMI, length of stay, refeeding syndrome	Nocturnal NG feeding vs oral feeding only	At the time of discharge, the NNGR group had a mean change in BMI of 3.75 kg/m2 ($SD = 2.3$) whereas the mean change in BMI for the OR group was 1.2 kg/m2 ($SD = 0.8$). The NNGR group was hospitalized for an average of 36.0 days ($SD = 11.0$) whereas the average length of stay for the OR group was 39.9 days ($SD = 22.0$). NNGR group had greater BMI gain (+3.75 kg/m2 vs. +1.2), weight gain, and shorter hospital stays (36 vs. 40 days average). No cases of refeeding syndrome. One instance of nasal irritation. NG feeding well-tolerated overall.

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Tan et al. (2003) (UK)	Patients ($n = 10$; 100% female; aged 13–21 years). 100% diagnosed with AN as defined by DSM-IV criteria. $n = 2$ were detained under the Mental Health Act (i.e. sectioned) at the time of interview, $n = 3$ were formally detained, $n = 1$ voluntary (informal) patient at time of interview, $n = 4$ previously informal patients. Mothers of the patients $n = 7$ Eating Disorder: AN Setting: Specialist psychiatric ED inpatient units (adolescents and young people aged up to 21)	Design: Qualitative Methods: Semi-Structured Interviews Sample Size: $n = 17$ Analysis: Thematic analysis using a ground theory approach Research Question: Experiences patients & carers	Formal RP interventions (e.g., compulsory admission, forced feeding) Informal types of control and compulsion (e.g., threats of sectioning, supervised eating, restricted bathroom access, restrictions on personal freedom)	(A) Issues of Control in Treatment: 1 Control as a core feature of anorexia nervosa: Control emerged as a central concept for participants. Both young women and their parents described anorexia nervosa as originating from a desire to gain control when other areas of life felt chaotic. 2 Participants feeling they are controlled by anorexia nervosa: The illness was described as simultaneously protective and imprisoning, offering safety but also dominating thoughts and actions. 3 Implications of control for treatment—the struggle against families and professionals: Treatment was often experienced as a threat to personal autonomy, leading to resistance against both families and healthcare providers. This struggle for control frequently shaped their willingness to engage with treatment. 4 Importance of being given choice and control to ability to make treatment decisions: Restoring some degree of choice and autonomy was described as critical for recovery. When treatment involved collaboration and flexibility, participants felt more motivated and able to fight the illness rather than the professionals. Forced treatment, by contrast, often reinforced resistance and hindered decision-making capacity. 5 The need and desire for external structure and control: Despite valuing autonomy, many participants and parents acknowledged a parallel need for external structure, guidance, and protection. Attitudes to Treatment Without Consent: 1 The dilemma in compulsory treatment: Both parents and daughters experienced deep ambivalence towards compulsory treatment. While recognizing its necessity in life-threatening situations, participants found it emotionally distressing and ethically troubling. 2 Justifications for the use of compulsion: Most felt that involuntary treatment was justified only when a patient's life was in immediate danger. Some supported earlier or more frequent use, while others opposed it altogether, arguing it was ineffective long-term or infringed on personal rights. 3 The relevance of competence to compulsory treatment: Views on patients' competence varied. Some believed that individuals with anorexia could still make rational decisions, while others argued that the illness impaired insight and judgment, making compulsory intervention necessary to preserve life. 4 The significance of overriding autonomy: Compulsory treatment was widely described as traumatic and experienced as punishment, imprisonment, or loss of dignity. Even those who accepted its necessity questioned its moral permissibility and emotional impact. 5 The parental role: Parents largely accepted their responsibility to make treatment decisions when their daughters were too unwell or young to do so. They also recognized the importance of gradually transferring responsibility as recovery and maturity increased. 6 Attitudes to compulsory treatment of chronic anorexia nervosa: Some participants expressed the view that, in cases of severe, chronic, and treatment-resistant anorexia, patients should be allowed to refuse treatment and die if that was their sustained wish. Others found this perspective distressing but understood it as reflecting compassion and respect for autonomy. (B)
Watson et al. (2000) (USA)	Patients total: $n = 397$; majority female (88.41%); diagnoses included: Anorexia nervosa, (44.84%) bulimia (25.44%), EDNOS (29.72%) Voluntary group ($n = 331$; M 24.4 yrs): Anorexia nervosa: 37% ($n = 122$ patients) Bulimia nervosa: 25% ($n = 83$ patients), EDNOS: 38% ($n = 126$ patients) Involuntary group ($n = 66$; M 26.35 yrs): Anorexia nervosa: 73% ($n = 48$ patients) Bulimia nervosa: 3% ($n = 2$ patients) EDNOS: 24% ($n = 16$ patients) Eating Disorder: Anorexia nervosa (44.84%) bulimia (25.44%) EDNOS: (29.72%) Setting: Adult inpatient psychiatric wards specialized in eating disorder treatment	Design: Quantitative Methods: Retrospective chart review, comparison of clinical and psychological measures Sample Size: $n = 397$; 331 voluntary, 66 involuntary Analysis: Chi-square tests, Wilcoxon rank sum tests, standardized psychological measures Research Question: Outcomes: Weight gain/BMI, length of stay	Compulsory admission/Involuntary Admission	• At admission, there were no significant differences in BMI (for females). • Involuntary patients had a longer duration of illness on average, but this difference was not statistically significant. • Involuntary patients had significantly more previous hospitalizations than voluntary patients (3.0 vs. 1.4 on average; $p < .02$). • Weight gain during hospitalization was significantly higher in involuntary patients: 18.8 lbs (SD = 15.9) vs. 13.9 lbs (SD = 14.5) ($p = .01$). • Rate of weight gain per week was similar: Involuntary = 2.6 lbs/week. Voluntary = 2.2 lbs/week. • Length of stay was significantly longer for involuntary patients: 57.6 days vs. 40.6 days ($p < .007$). • No significant difference in discharge weight or BMI for patients with anorexia nervosa. • Psychological test scores (EAT-26, EDI, MMPI-II) were similar between groups at admission. IQ scores were significantly lower in the involuntary group: Verbal, performance, and full-scale IQ all significantly lower

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Ramsay et al. (1999) (UK)	Patients: $n = 162$ patients; 97% female, compulsory admission $n = 81$ (age $M = 26$ years, range 16–35), voluntary admission $n = 81$ (age $M = 25$ years, range = 17–33 years) Eating Disorder: AN (restricting/ binge-purge) Setting: Adult specialist ED unit	Design: Quantitative Methods: Retrospective cohort study Sample Size: $n = 162$ (81 voluntary, 81 compulsory) Analysis: For paired comparisons (compulsory vs. matched voluntary patients): Paired t-tests/ McNemar tests; For unpaired comparisons: Unpaired t-tests and Chi-square tests, and for mortality rates used Kaplan–Meier survival analysis Research Question: Use frequency of use, reasons for use, characteristics of patients receiving RPs Outcomes Weight gain/ BMI, mortality	Compulsory admission/ Involuntary Admission	Frequency: 81 patients were compulsorily detained under the UK Mental Health Act. Reasons for detention: medical risk due to starvation, treatment refusal, suicidality. The most common legal section used was Results (treatment) in 4 cases. Detained patients had more self-harm, more abuse histories, more previous admissions. Only 1 of 23 patients who appealed their detention succeeded. Outcomes: Weight Gain: No significant difference in discharge weight or BMI. The compulsory group took longer to reach weight goals (mean 113 days vs. 88 days). Both groups achieved similar BMI outcomes at discharge. Significantly higher mortality in the detained group: mortality difference was statistically significant; most deaths were from physical effects of anorexia (e.g. malnutrition, pneumonia), then suicide.
Fuller et al. (2024) (UK)	Total $n = 53$ across four stakeholder groups including staff, patients, and families: Security staff ($n = 7$, all male) People with lived experience (PWLE) ($n = 9$, all female, aged 9–17 at time of intervention) Parents/carers ($n = 20$) Paediatric staff ($n = 20$): including Nursing assistants; nurses; mental health link nurses; ward managers; dietitians; paediatricians; psychiatrists; chief medical officer) Eating Disorder: Anorexia nervosa ($n = 4$), disordered eating ($n = 1$), avoidant restrictive food intake disorder ($n = 1$) and deliberate self-harm ($n = 1$) Setting: Paediatric inpatient wards	Design: Qualitative Methods: Semi-Structured Interviews ($n = 39$) Sample Size: $n = 53$ Analysis: Thematic Analysis Research Question: Experiences patients, carers, clinicians (MDT) & security staff	NGT feeding under restraint	1. Short-Term Impacts: Negative: The involvement of security staff felt inappropriate and traumatic for all groups. Security staff lacked clinical training and wore uniforms that escalated distress. Positive: The intervention was recognized as lifesaving. Using security staff allowed nurses to preserve therapeutic relationships by not being the ones doing the restraint. 2. Long-Term Impacts: Negative: Trauma symptoms in patients, parents, and even security staff (e.g. PTSD). Job resignations among security staff due to moral injury. Positive: Improved understanding and training for some staff. Stronger professional relationships between clinical and security staff.

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Brinchmann et al. (2024) (Norway)	Registered nurses: $n = 12$ (10 female, 2 male; age range 38–70) Staff had between 2–19 years of experience working on the inpatient ward – 7 were specialized in psychiatric nursing/mental health care, others in intensive care, diabetes, management, paediatrics, or public health. Eating Disorder: AN Setting: Adult psychiatric hospital inpatient ward	Design: Qualitative Methods: Semi-Structured Interviews Sample Size: $n = 12$ Analysis: Reflexive Thematic Analysis Research Question: Experiences: clinicians (nurses)	NGT feeding under restraint	1. Providing Good Nursing Care During Coercive Treatment: Nurses recognized nasogastric tube feeding under restraint (NGT-FR) as a life-saving intervention for patients at critical risk. They emphasized the importance of maintaining compassion, dignity, and respect for patients even while using coercion. Nurses strived to balance safety with empathy, providing emotional support before, during, and after the procedure. They saw NGT-FR as part of their professional duty but acknowledged its emotional and ethical burden. 2. Having ethical concerns about NGT-FR when the patient reaches a BMI not immediately life-threatening: Nurses experienced ethical tension when forced feeding continued after patients were no longer at immediate medical risk (BMI above critical levels). Some questioned whether continued NGT-FR was clinically justified or ethically defensible once the danger of death had passed. They expressed moral discomfort, feeling the practice might shift from life-saving care to control or compliance enforcement. This raised dilemmas about autonomy vs. beneficence, and whether prolonged coercion could harm therapeutic relationships. 3. Having concerns about involving personnel from another ward in the NGT-FR procedure: When staff from other hospital wards were brought in to assist with NGT-FR, nurses expressed concerns about lack of familiarity or trust with external staff, and increased patient distress. Nurses expressed concerns about the relational impact of NGT-FR and the emotional toll of providing comfort to the patient following restraint, when being part of the procedure themselves. Primary Outcome: BMI Increase: The NGT group had greater BMI increase during hospitalization despite having lower BMI at admission, statistically significant difference between groups ($p < .001$). Secondary Outcome: Treatment Satisfaction: No significant difference in treatment satisfaction scores between groups. Therapeutic alliance (measured with WAL-SR) was a significant predictor of satisfaction across both groups (No evidence that receiving NGT weakened alliance or increased feelings of coercion). There was no increase in perceived coercion in the NGT group compared to oral feeding. Hospital stay duration was not significantly different between the two groups. Personality traits (e.g., perfectionism) were not significantly associated with NGT use or treatment outcomes.
Martini et al. (2024) (Italy)	Patients: $n = 194$ matched hospitalizations (97 with NGT, 97 non-NGT), for 134 individuals. 100% female, aged ≥ 18 –65 years Eating Disorder: AN (AN restricting type, and AN binge-purging type) Setting: Specialist adult psychiatric inpatient Eating Disorder Centre	Design: Quantitative Methods: Observational cohort with matched controls (non-randomized) Sample Size: $n = 194$ matched hospitalizations (97 with NGT, 97 non-NGT) Analysis: Descriptive statistics; regression models adjusting for confounders (BMI change, satisfaction, alliance) Research Question: Outcomes: Weight gain/ BMI increase, treatment usefulness and satisfaction, Length of Stay, Therapeutic alliance scores, perceived coercion scores, personality traits of patients	NGT feeding	

(Continued)

Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Abry, F., Gorwood, P., Hanachi, M., & Di Lodovico, L., 2024 (France)	Patients: $n = 48$ (23 involuntary admission – 96% female; 25 voluntary admissions: 92% female). Eating Disorder: AN Setting: Specialist adult inpatient psychiatric unit for eating disorders	Design: Quantitative retrospective, longitudinal study Methods: A single-centre, retrospective, longitudinal study Sample Size: $n = 48$ (23 involuntary, 25 voluntary) Analysis: Descriptive statistics (means, standard deviations), inferential statistics (t-tests, ANOVA, regression, survival analysis) Research Question: medical complications, motivation for treatment scores, duration of illness, length of stay, psychiatric improvement, relapse rates, readmissions and employment at follow-up Outcomes: Weight/ BMI, medical complications, motivation for treatment scores, duration of illness, length of stay, psychiatric improvement, relapse rates, readmissions and employment at follow-up	Involuntary admission	At Admission BMI: I-AN: Lower BMI than V-AN; Significantly more severe malnutrition in I-AN group Medical complications: I-AN had significantly more somatic issues (e.g., electrolyte imbalances, organ dysfunction) Motivation for treatment: V-AN group had higher scores on motivation scales Duration of illness: No significant difference between groups During Hospitalization BMI at discharge: Both groups showed significant improvement in BMI; No significant difference between groups at discharge Duration of hospital stay: Slightly longer for I-AN group, but not significantly different Psychiatric and psychological improvement: Comparable across both groups Long-term Follow-Up (Average = 3.6 years) BMI: No significant difference between groups Relapse rates: Similar in both groups Employment / functional outcomes: Comparable levels of employment and reintegration Mortality: 2 deaths reported, both in the I-AN group Readmission: No significant difference in psychiatric rehospitalization rates
Rienecke et al. (2023) (USA)	Patients: $n = 30$, 26 female (87%), 3 male (10%), 1 non-binary (3%); age: 20–54 (mean 30.8 ± 10.15) Illness duration: Mean 1.6 ± 10.07 years Age of AN onset: Mean 15.7 ± 4.15 years. Subtype: 19 restrictive (AN-R), 11 binge/purge (AN-B/P). Ethnicity: 100% Caucasian. Involuntary treatment frequency: 57% once, 20% twice, remainder 3–5 times. Eating Disorder: AN; Subtype: 19 restrictive (AN-R), 11 binge/purge (AN-B/P). Setting: Adult Acute Psychiatric Treatment Unit for Eating Disorders	Design: Qualitative Methods: Semi-Structured Interviews Sample Size: $n = 30$ Analysis: Reflexive Thematic Analysis Research Question: Experiences patients	Involuntary/ compulsory treatment (admission)	Theme 1: Mixed perceptions about involuntary treatment: Some participants recognized the life-saving nature of involuntary treatment in retrospect, 33% felt they would have died without it. Positive perception shift linked to better ED recovery; negative or unchanged perceptions linked to persistent symptoms. Negative views emphasized trauma, disempowerment, and lack of control. Theme 2: Impact on external life domains: Relationships: Frequently strained with family due to perceived betrayal or lack of trust. Education & employment: Many experienced interruption or job loss due to involuntary admissions. Financial and social consequences were noted. Theme 3: Lessons learned and recommendations: For self: Maintain recovery to avoid future involuntary treatment. For other patients: Accept and use treatment time to build coping skills. For caregivers: Show empathy, validate experiences, and avoid reducing the person to their ED. For providers: Communicate clearly, humanize patients, avoid coercive tones, and maintain open dialogue.

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Haran et al. (2023) (Ireland)	Patient admissions: n=499 total hospital admissions (2018–2021); 427 non-eating disorder (non-ED) admissions; 72 eating disorder (ED) admissions (female, n=67, 93%, male n=5, 7%) Age range: 5–17 yrs 88.5% White Irish, 91.7% voluntary, 8.3% involuntary (n=6) Eating Disorder: Single “eating disorder (ED)” diagnostic category used Setting: Child and adolescent psychiatric inpatient unit	Design: Quantitative Methods: 4-year retrospective observational study Sample Size: n = 79 ED admissions from 499 total admissions Analysis: Descriptive statistics; prevalence and frequency of RIs (physical restraint and seclusion), Chi-square tests and Fisher’s exact tests Research Question: Use prevalence of use and comparison between use for ED and non-ED patients Outcomes: Length of Stay	Formal restrictive interventions including restraint and seclusion,	Restrictive Interventions prevalence: Physical restraint: 38% (n = 27) ~603 RP episodes (~32% of all RP episodes in the study). Seclusion: 6% (n = 4) ~same prevalence as non-ED. Legal status effect: involuntary ED admissions had a significantly higher rate of RP (83%) vs 33% in voluntary ED admissions (p = .025). No significant difference in seclusion rates for ED voluntary vs involuntary. Length of stay (LOS): Majority had longer admissions: 51.4%: 30–120 days, 37.5%: >120 days RP use highest among long-stay ED patients. Temporal trend: RP episodes peaked in 2019 and 2020 (53% of ED admissions restrained each year). Spike likely due to introduction of nasogastric feeding in 2019.
Nehring et al. (2014) (Germany)	Patients: n = 208 adolescent females hospitalized across four sites before age 18; with at least one inpatient stay >14 days between 1996–2006 mean age at first hospitalization: ~14.9 years; 32.7% had >1 hospitalization; median follow-up: 5.5 years (mean: 6.3 years) 34% received EF during hospitalization Eating Disorder: AN Setting: Child and adolescent psychiatric inpatient unit	Design: Quantitative Methods: Retrospective Cohort Study Sample Size: n = 208 Analysis: Descriptive statistics; Poisson regression, Relative Risks (RRs) with 95% confidence intervals; Propensity score adjustment; Subgroup analysis Research Question: Outcomes growth/ physical development, recovery rates	NGT feeding	Growth in Height (Physical Development): Enteral feeding did not significantly affect growth. However, other factors were associated with better height growth: Girls who grew normally were older at hospital admission (p < .0001, statistically significant), had higher body mass index scores at admission (p = .0002, significant), had a longer delay between disease onset and first hospitalization (p < .0001, significant). Recovery from Anorexia Nervosa: Overall, about 70% recovered from AN. Among those who received enteral feeding, 65% recovered. Among those who did not receive enteral feeding, 72% recovered. This difference was not statistically significant (p = .27). Adjusted risk ratios also showed no effect of enteral feeding on recovery. However, these factors were linked with lower recovery: Girls who had more outpatient psychological treatment before being hospitalized were less likely to recover (p = .03, statistically significant), lower body weight at follow-up (p < .0001, significant), a shorter time period since discharge from hospital (p = .02, significant). Mental Health Problems Other Than Eating Disorders: About 40% of participants showed signs of a mental health disorder at follow-up, there was no significant difference between those who received enteral feeding and those who did not. Unadjusted and adjusted risk ratios were not statistically significant. However, other factors were significantly associated with mental health problems: those who did were Shorter at admission (p = .01, statistically significant), Had lower height percentiles at the start (p = .04, significant), Had higher body mass index scores at admission (p = .03, significant), Had a shorter time since hospital discharge (p = .05, borderline significance). Also, girls who still had AN at follow-up were more likely to have other mental health disorders than those who had recovered. This association was statistically significant: p < .05

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Offord et al. (2006) (UK)	Patients: 7 young adults; 100% female, white, of British nationality; age 16–23 years Eating Disorder: AN Setting: Adolescent Psychiatric Inpatient unit. One participant was recruited via adult eating disorder services and the remaining six were recruited via past records at two general adolescent inpatient units. All received treatment for AN in general adolescent inpatient ward.	Design: Qualitative Interviews Methods: Semi-Structured Interviews Sample Size: $n = 7$ Analysis: Interpretative Phenomenological Analysis Research Question: Experiences: patients	Informal coercion such as loss of autonomy, rigid routines, limited involvement in care decisions, and poorly managed discharges, which patients experienced as disempowering during inpatient treatment.	1. Removal from Normality vs. Connecting with the Outside World: Many participants felt disconnected from everyday life during inpatient treatment. The hospital environment often felt isolating and institutional, reinforcing a sense of being separate from the real world. Some appreciated the safety and distance from external pressures, but others felt cut off and unprepared for life post-discharge. Opportunities for maintaining contact with family, school, and community were limited and often missed. 2. Treated as Another Anorexic vs. a Unique Individual in Distress: Participants often felt reduced to their diagnosis, treated as just “another anorexic” rather than as individuals. Emphasis on weight restoration and behavioural compliance overshadowed emotional support and psychological understanding. Positive experiences were tied to staff who recognized emotional pain, not just the eating disorder symptoms. 3. Control and Collaboration: The highly controlled treatment structure left many feeling powerless and excluded from decisions about their care. Some viewed this structure as necessary early in treatment but wanted more collaboration as they improved. Lack of individualized approaches led to frustration, especially when patients felt ready to take more responsibility but were not allowed. 4. The Importance of Peer Relationships: Participants expressed value in positive peer relationships and the opportunity to identify with others and learn positive ways of coping—despite this being discouraged from staff. Being alongside others with mental health difficulties was rarely perceived as unhelpful, although some felt being treated alongside patients with AN fuelled comparison and competition. Patients often felt segregated from the non-eating disorder inpatient community, such as having to sit separately at mealtimes or not being allowed to participate in groups. This was perceived as stigmatizing and unhelpful.
Griffiths et al. (1998) (Australia)	Patients: $n = 48$, female $n = 46$, male $n = 2$; age $M = 18.3$ years ($SD = 5.74$) Eating Disorder: AN Setting: Psychiatric inpatient hospitals (Adolescent and Adult wards)	Design: Mixed methods Methods: Survey with open ended questions Sample Size: $n = 48$ Analysis: Frequencies and thematic analysis Research Question: Outcomes: Weight gain Experiences: patients	Bed rest as a restrictive practice	Quantitative Findings: Before bed rest (BR): 73.8% ($n = 4$) saw BR as a punishment. 17.2% saw it as a motivator to gain weight. During BR: 93.8% reported boredom. 78.1% reported loneliness. 59.4% reported anger, and 62.5% reported anxiety. After BR: 96% rated the experience as unpleasant. 59% felt BR was not helpful. Only 1 participant (2%) still believed BR was punitive post-treatment. Qualitative Findings (Themes): Initial perceptions of BR often included negative expectations: fear of punishment, boredom, and loss of control. During BR, patients described feelings of: isolation, frustration, and being dehumanized. Some felt BR was humiliating, with a lack of privacy and autonomy. Post-BR reflections were more mixed: Some acknowledged BR's effectiveness for weight gain, but not necessarily for psychological recovery. Several recommended more stimulation/ distraction (e.g., reading materials, social contact) and greater individualization of restrictions. The experience was not seen as traumatic but rather unpleasant and disempowering.

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Strik Lievers et al. (2009) (France)	Clinical Data from Patient Records: $n = 268$ hospitalizations involving 213 female adolescents (some with multiple admissions) between 1996 and 2004. Mean age at admission was 16.1 years; mean age of anorexia onset was 15.3 years; mean illness duration was 20.4 months. Mean LOS: 135 days. Majority were in school or college, lived one or both parents, 87% lived with separation than national average. 60.5% of fathers had high-level professional jobs. Eating Disorder: AN. Subtype: 81% were restrictive-type anorexia nervosa; 19% purging-type. Setting: Specialized adolescent unit	Design: Quantitative Methods: Retrospective observational cohort study Sample Size: $n = 268$ of 300 consecutive hospitalizations/≈268 hospitalizations involving 213 patients Analysis: Descriptive statistics to summarize clinical, demographic, and treatment-related data (e.g. means, standard deviations, frequencies). Multiple linear regression analysis to identify predictors of length of stay (LOS). Bivariate correlation analyses (e.g. Pearson's correlations) to explore associations between clinical variables and LOS. Research Question: Use Intensive care and feeding support use, characteristics of patients: psychiatric comorbidity Outcomes: Length of stay	NGT feeding	Intensive Care & Feeding Support: 17.5% required intensive care transfer, 27% required nasogastric tube feeding. Average length of stay (LOS): 135 days (SD = 97). No significant LOS difference between patients discharged early or late in treatment phase. Length of Stay: Longer LOS was significantly associated with longer duration of anorexia ($r = 0.127$, $p = .038$), use of tube feeding ($p = .000$), transfer to intensive care ($p = 0.12$), not achieving the therapeutic weight contract ($p = .001$), presence of comorbid disorders ($p = .000$)—LOS with comorbidities: Mood disorders: 141 days. Anxiety disorders (mostly OCD): 174 days. Personality disorders: 171 days. No significant difference in LOS between: Patients under vs. over 18 years old, Size of the weight contract (amount of weight to be gained). Multiple Linear Regression: The best-fit model showed four significant predictors of LOS: Duration of anorexia ($p = .038$), tube feeding ($p = .000$), Adherence to weight contract ($p = .000$). Presence of comorbid disorder ($p = .000$). These factors explained 24.6% of the variance in LOS ($R^2 = 0.246$). Greater anorexia duration, need for tube feeding, and comorbidity increased LOS, while achieving weight targets reduced it.
MacDonald et al. (2022) (Denmark)	Clinical Data from Patient Records: Sample 2: $n = 278$ patients, 95.3% female, aged ≈17–19 years (sub-analysis from overall sample 1: $n = 212$ patients, ≈95% female, aged ≈19 years). Eating Disorder: AN Setting: Specialized eating disorder hospital units (Child and Adolescent & Adult services)	Design: Quantitative cohort study Methods: Retrospective cohort study Sample Size: $n = 278$ (Sample 2: includes 212 patients from Sample 1) Analysis: Descriptive statistics, t-tests, Wilcoxon—Mann—Whitney U tests, Chi-square tests, Logistic regression (sub analysis), and Cox regression analyses (full sample) Research Question: Use Patients characteristics, clinical factors: EDE-Q scores, psychiatric comorbidity, medical risk	Involuntary treatment e.g., involuntary admission/detention, or RPs including nasogastric tube feeding, involuntary medication, or restraint	26–27% of patients (56/212 in Sample 1; 72/278 in Sample 2) received IT: 1. Patient Characteristics Associated with IT: No significant differences in BMI or age between IT and non-IT groups. IT patients had more previous hospital admissions ($p < .001$, Sample 1). In Sample 2, poor or neutral cooperation and previous IT within 3 years were significantly associated with new IT events. 2. Clinical Factors Associated with IT: Eating Disorder Psychopathology (EDI-2): No EDI-2 subscales significantly predicted IT. General Psychopathology (SCL-90-R): Higher somatization scores were associated with increased odds of involuntary treatment (odds ratio = 2.60, $p = .02$). Higher phobic anxiety scores were associated with decreased odds of involuntary treatment (odds ratio = 0.43, $p = .04$). In the Cox regression analysis (Sample 2), somatization predicted a shorter time until the first involuntary-treatment event (hazard ratio = 1.77, $p = .033$). Other significant predictors in that model were poor patient cooperation (hazard ratio = 3.97) and a prior involuntary-treatment event (hazard ratio = 5.0).

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Table 2. (Continued).

Author (Country)	Population and setting	Methods	Type of RP	Findings
Clausen et al. (2018) (Denmark)	Clinical Data from Patient Records: $n = 4,727$ patients with AN admissions with a current registered ED; 8,221 admissions (3,388 patients); Admissions with involuntary measures and a current ED; 1,653 admissions (592 patients); Patients experiencing at least one involuntary ED-related measure; 392; Median age at involuntary admission (with ED); 24.8 years. For the first involuntary measure with current ED 94% female. Eating Disorder: AN Setting: Specialized eating disorder hospital units (Child and Adolescent & Adult services)	Design: Quantitative Methods: Register-based retrospective cohort study Sample Size: $n = 4,727$ patients representing 16,592 admissions of which 3,388 patients with 8,221 admissions had an ED diagnosis Analysis: Descriptive statistics, logistic regression Research Question: Us: prevalence of use; patient characteristics	Involuntary treatment/ formal RPs: including restraint; NG feeding; observations and medication.	From 16,592 total admissions: 8,221 (49.5%) had a current ED diagnosis; Out of 4,205 admissions with involuntary measures: 1,653 (39.3%) had a current ED diagnosis; 18% of patients with anorexia nervosa experienced at least one involuntary treatment during hospitalization; A subsample of 2% of AN patients had more than 100 involuntary measures recorded. The most common involuntary measure was tube feeding, accounting for 93% of all tube feeding episodes during ED-related admissions. Other measures like involuntary medication, restraint, and observation were also used, but less specifically tied to EDs: 40–64% occurred during ED admissions. Younger patients (especially under 18) were significantly more likely to receive involuntary treatment during ED admissions ($p < .001$). Older patients were more likely to receive involuntary measures in the context of other psychiatric disorders. Strong predictors of ED-related involuntary treatment included: older age at diagnosis, Comorbidities: schizophrenia, autism, personality, mood, and anxiety disorders; Previous psychiatric admissions, Gender, parental education, and calendar year were not significant predictors.
Bager et al. (2025) Denmark	National hospital and psychiatric registers (derived from clinical patient records): 9,892 individuals living in Denmark who were diagnosed with anorexia nervosa or atypical anorexia nervosa (ICD-10 codes F50.0 and F50.1) between 1 January 2000 and 31 December 2016; 93.3% female, 6.7% male. Mean age (SD) ≈ 20 years (± 10) at diagnosis. Eating Disorder: AN Setting: Psychiatric inpatient hospital units (Child and Adolescent & Adult services)	Design: Quantitative Methods: Nationwide register-based cohort study Sample Size: $n = 9,892$ Analysis: Population described with χ^2 /t-tests, morbidity subgroups identified via Latent Class Analysis, comorbidities counted, and Cox regression used to assess involuntary treatment risk Research Question: How and Why RP is used	Involuntary treatment events e.g. involuntary admission, detention, locked wards	Of 9892 individuals with AN, 821 (8.3%) individuals experienced at least one involuntary treatment event. Those exposed to involuntary treatment were slightly younger, more often from rural areas, had prior involuntary treatment, and more prior morbidities compared to those unexposed. Highest risk of involuntary treatment was seen in classes with personality disorders/self-harm/SUD, high somatic/psychiatric disorders, and developmental/behavioural disorders, while classes with mainly somatic or low morbidities had no significant increase.
Thomas et al. (2025) UK	Patients presenting difficulty of an eating disorder or disordered eating at a CYP inpatient MH services. Age at admission ranged from 12 to 17 years and all except two were female admissions. Eating Disorder: Anorexia nervosa: 27/46 (58.7%), Other eating disorder: 8/46 (17.4%), non-eating disorder mental health diagnosis: 9/46 (19.6%), Pervasive Arousal Withdrawal Syndrome: 2/46 (4.3%) Setting: Inpatient child and adolescent mental health hospital	Design: Quantitative Methods: Retrospective audit (three audit cycles) Sample Size: $n = 46$ admissions for 41 different young people Analysis: Descriptive summaries (frequencies, percentages). Research Question: How and Why RP is used Outcomes LOS	NGT Feeding and MHA detention (involuntary/ compulsory admission)	NGT Feeding: 28 individuals (28/46; 60.9%) required nasogastric feeding at some point, 19 of whom (19/46; 41.3%) required the use of approved restraint to administer the feed at some point. Mental Health Act: 39/46 admissions involved detention under the MHA Length of Stay: Overall: ~ 16 weeks NG-fed: ~ 20 weeks (range 3–75 weeks) Non-NG-fed: ~ 9 weeks (range 0.5–25 weeks) When excluding the two patients with a diagnosis of PAWS, the length of stay for admissions who received nasogastric feeding ranged from 3 to 35 weeks, with an average length of stay of just over 17 weeks. The length of stay for admissions who did not require nasogastric feeding ($n = 18$) ranged from 0.5 to 25 weeks, with an average length of stay of just under 9 weeks.

Sample characteristics

Thirteen studies focused on child and adolescent populations (36%), thirteen (36%) used data from across all ages, and ten (28%) in adult populations. The majority of studies had populations with only an AN diagnosis ($n = 22$, 61%), with 12 (33%) including mixed populations, and two with undefined populations with eating disorders, with no specific diagnosis cited (6%). Of the 12 studies with a mix of diagnosis included, 100% had a majority sample with a diagnosis of AN.

Sample sizes ranged from seven to 9,892. Participant ages reported across studies ranged from 9 to 70 years. Of the studies that described participant demographics, the majority had a mixed gender sample ($n = 22$), with most of these having a greater percentage of female participants ($n = 21$) and one paper had a 50:50 split of participants' gender, eleven included only female participants and only one study had male-only participants. Two papers did not provide a gender breakdown. Only five papers (14%) included demographic information related to participants' race and ethnicity, with all five of the papers citing that the majority of the sample were from White/Caucasian backgrounds.

Types of restrictive practice

Thirteen studies focused specifically and only on the use of nasogastric tube (NGT) feeding, with seven of these focusing on nasogastric tube (NGT) feeding under restraint. The majority of these papers ($n = 7$) were based in Child and Adolescent settings (Fuller et al., 2024; Fuller et al., 2024a; Kodua et al., 2020; Nehring et al., 2014; Silber et al., 2004; Strik Lievers et al., 2009; Thomas et al., 2025), two in adult settings only (Brinchmann et al., 2024; Martini et al., 2024), and four had samples from both adult and CYP settings (Fuller et al., 2024b; Fuller, Tan, & Nicholls, 2023; Fuller, Tan, De Costa, et al., 2023; Morris et al., 2015). For these papers, eight focused on NGT feeding under restraint only: NGT feeding under restraint referred to physical restraint, however within UK legislation NGT feeding under restraint does not have a formal definition within the mental health act.

Eleven studies focused on involuntary admissions or treatment legally mandated without patient consent. Most of these studies were based in adult settings (Abry et al., 2024; Ramsay et al., 1999; Rienecke et al., 2023; Ward et al., 2015; Watson et al., 2000), four were comprised of participants from both adult and CYP services (Bager et al., 2025; Carney et al., 2008; Morris et al., 2015; Rojo et al., 2009), and only two were specifically based in CYP settings (Ayton et al., 2009; Thomas et al., 2025).

Eight studies focused on the involuntary treatments and RPs, inclusive of a range of formal RPs inclusive of involuntary or compulsory admission/

detention, mechanical restraint, physical restraint, nasogastric tube feeding, and constant observation, i.e., the constant presence of a professional. The majority of these were based in CYP settings (Arbour et al., 2023; Blikshavn et al., 2020; Haran et al., 2023; Tan et al., 2003), three were from a mix of adult and CYP settings (Clausen et al., 2018; MacDonald et al., 2022; MacDonald, Bulik, et al., 2023), and only one was based in purely adult services (MacDonald, Gustafsson, et al., 2023).

Seven studies investigated informal coercion, encompassing subtle pressures from staff or family, or threats of involuntary admission. Six explored a range of informal practices, with the majority ($n = 3$) focused on experiences in CYP settings (Blikshavn et al., 2020; Haran et al., 2023; Tan et al., 2003), two in adult services (Schreyer et al., 2016; Zugai et al., 2024), and one across a mix of adult and CYP services (Guarda et al., 2007). One paper focused specifically on bed rest as an informal RP, which explored this across both adult and CYP services (Griffiths et al., 1998).

Prevalence and use of restrictive practices

Why restrictive practices are used

Twelve studies included data related to the prevalence and use of RPs (Bager et al., 2025; Blikshavn et al., 2020; Carney et al., 2008; Clausen et al., 2018; Fuller, Tan, De Costa, et al., 2023; Guarda et al., 2007; Haran et al., 2023; MacDonald et al., 2022; MacDonald, Bulik, et al., 2023; Ramsay et al., 1999; Strik Lievers et al., 2009; Thomas et al., 2025). These studies examined the use and prevalence of a range of RPs including involuntary admission, physical or mechanical restraint, enforced medication, seclusion, and NGT feeding under restraint. The rationale for RP use was generally framed around safeguarding patients considered to be at risk. Most of these studies ($n = 7$; 58%) used data across adult and CYP services (Bager et al., 2025; Carney et al., 2008; Clausen et al., 2018; Fuller, Tan, De Costa, et al., 2023; Guarda et al., 2007; MacDonald et al., 2022; MacDonald, Bulik, et al., 2023), four (33%) were specific to CYP services (Blikshavn et al., 2020; Haran et al., 2023; Strik Lievers et al., 2009; Thomas et al., 2025), and one (9%) in adult services (Ramsay et al., 1999).

Prevalence of restrictive practice use

Prevalence of RPs varied widely across studies, reflecting heterogeneity in patient populations, clinical settings, and the types of interventions measured. Reported practices included physical or mechanical restraint, enforced medication, seclusion, and NGT feeding. Across studies, the rationale for RP use was typically framed around safeguarding patients considered to be at significant medical or psychological risk.

For studies using a mixed sample from adult and CYP services, there were wide variations in reported rates of RP use. Some studies reported relatively

low rates, such as 8.3% of admissions involving at least one RP or involuntary treatment episode (Bager et al., 2025), while others found a moderate prevalence between 16% and 27% (MacDonald et al., 2022; MacDonald, Bulik, et al., 2023). Clausen et al. (2018) reported a comparable rate of 18% among patients with AN. Large-scale or national datasets also highlighted variability in specific practices. Fuller, Tan, De Costa, et al. (2023) identified 622 instances of NGT feeding under restraint in England over 12 months, with substantial variation across services in the frequency and duration of these interventions.

Four studies examined RP use specifically within CYP inpatient services, where high rates of intervention were often reported in more clinically severe cases. At the more severe end of the spectrum, Thomas et al. (2025) found that among a sample of 46 adolescent admissions, 41% required NGT feeding under physical restraint, and 85% were detained under mental health legislation, highlighting a highly acute subgroup where RPs were common. Blikshavn et al. (2020) reported that among a total of 201 restraint episodes for patients with an eating disorder, meal-related episodes (e.g., NGT feeding under restraint) were the most common reason for restraint use ($n = 109$), followed by incidents related to self-harm ($n = 56$), highlighting that while RPs were often implemented to ensure nutrition, they were also employed to manage significant risks of self-harm or suicidality. Similarly, while Strik Lievers et al. reported that 27% of their sample required NGT feeding and 17.5% were transferred to intensive care, underscoring the clinical severity often accompanying RP use.

When rates of RP use were compared between eating disorder and non-eating disorder populations, findings consistently indicated significantly greater use among eating disorder patients. Haran et al. (2023) found that 38% of eating disorder admissions required restrictive interventions compared with 14% of non-eating disorder admissions ($p < .05$). Nearly, one-third of all physical restraint episodes (603 of 1,868) occurred within the eating disorder group, and 83% of involuntary eating disorder admissions involved restraint. In contrast, seclusion rates were similar between groups (both 6%). Longer lengths of stay were also associated with higher RP use, with 37.5% of eating disorder patients remaining in hospital for more than 120 days compared with 3.5% of non-eating disorder patients ($p < .001$).

Only one study focused exclusively on adult inpatient services. Involuntary admissions were most frequently used when risk to life was deemed imminent, and appeals against such admissions were rarely successful (Ramsay et al., 1999).

Characteristics and factors associated with restrictive practice use

Across studies including mixed or unspecified age samples, a recurring pattern was observed whereby, while a minority of patients experienced

RPs, it was often a small proportion of patients that accounted for the majority of such interventions. For example, MacDonald, Bulik, et al. (2023) found that approximately 1% of individuals accounted for 67% of all involuntary treatment events in the 5-year follow-up period. In the same study, 8.3% of patients with AN experienced at least one RP, indicating that while exposure was relatively limited, use was highly concentrated. Clausen et al., (2018) found that 2% of patients experienced over 100 RP episodes, most commonly involving nasogastric tube (NGT) feeding, enforced medication, or restraint. Patients subjected to NGT feeding under restraint were predominantly adolescents with AN, though the age range extended from 11 to 60 years (Fuller, Tan, De Costa, et al., 2023; Thomas et al., 2025). Similarly, Clausen et al. (Clausen et al., 2018) found that approximately one in five patients underwent RP, with these measures disproportionately concentrated among individuals with more severe clinical presentations. Data relating to less formally defined or more subtle RPs (e.g. loss of privileges or enforced rest) were not consistently reported across studies.

A consistent set of clinical and demographic factors was associated with higher RP use. Across multiple studies, younger age, lower BMI, longer illness duration, and prior admissions increased the likelihood of involuntary treatment or RPs (Bager et al., 2025; Carney et al., 2008; Clausen et al., 2018; MacDonald et al., 2022; MacDonald, Bulik, et al., 2023; Strik Lievers et al., 2009). Comorbid psychiatric conditions, including depression, anxiety, emotionally unstable personality disorder (EUPD), self-harm, and substance misuse, were also repeatedly identified as predictors of involuntary treatment or RP use (Bager et al., 2025; Carney et al., 2008; MacDonald et al., 2022; MacDonald, Bulik, et al., 2023; including in the only adult-specific study identified – Ramsay et al., 1999).

Evidence from CYP specific studies further highlighted the concentration of RPs among a small number of patients and those with greater illness severity. Blikshavn et al. (2020) found that four patients represented 91% of all restraint episodes, each having ten or more episodes during admission. Strik Lievers et al. (2009) observed that RPs, particularly involuntary admissions and physical restraint, were most commonly applied to younger patients with more severe illness.

Patients' perceptions of RP use added further nuance to the findings. Guarda et al. (2007) reported that individuals with AN experienced higher perceived coercion, pressure, and unfair treatment than other groups, particularly younger patients. Notably, although a proportion of patients did not believe they required treatment on admission, this perception often shifted by discharge.

Outcomes associated with the use of restrictive practices

Seventeen studies included data that examined the outcomes associated with use of RPs (Abry et al., 2024; Arbour et al., 2023; Ayton et al., 2009; Blikshavn et al., 2020; Griffiths et al., 1998; Haran et al., 2023; Martini et al., 2024; Morris et al., 2015; Nehring et al., 2014; Ramsay et al., 1999; Rojo et al., 2009; Schreyer et al., 2016; Silber et al., 2004; Strik Lievers et al., 2009; Thomas et al., 2025; Ward et al., 2015; Watson et al., 2000). Across studies, the outcomes associated with RPs in eating disorder inpatient wards were highly variable. The majority of papers exploring outcomes were from CYP populations ($n = 8$, 47%; Arbour et al., 2023; Ayton et al., 2009; Blikshavn et al., 2020; Haran et al., 2023; Nehring et al., 2014; Silber et al., 2004; Strik Lievers et al., 2009; Thomas et al., 2025), six were from adults populations (35%; Abry et al., 2024; Martini et al., 2024; Ramsay et al., 1999; Schreyer et al., 2016; Ward et al., 2015; Watson et al., 2000), and three were focused from mixed populations (28%; Griffiths et al., 1998; Morris et al., 2015; Rojo et al., 2009).

BMI and weight outcomes

The most commonly explored outcome was body mass index (BMI) and/or weight gain, with nine studies including results linked to this outcome area (Abry et al., 2024; Blikshavn et al., 2020; Griffiths et al., 1998; Martini et al., 2024; Nehring et al., 2014; Ramsay et al., 1999; Schreyer et al., 2016; Silber et al., 2004; Watson et al., 2000).

Across adult, CYP, and mixed samples, findings examining BMI and/or weight gain were broadly similar, with considerable variability across studies. Most studies reported no significant difference in weight gain or BMI at discharge BMI between groups who received RPs such as involuntary admission, NGT feeding, or perceived coercion, despite some studies reporting lower BMI or weight for involuntary patients or those subject to NGT feeding at admission (Abry et al., 2024; Blikshavn et al., 2020; Nehring et al., 2014; Ramsay et al., 1999; Schreyer et al., 2016; Watson et al., 2000). This pattern was observed across both adult and CYP populations, suggesting that although patients who received RPs often presented with greater clinical severity at admission, their weight restoration during admission did not consistently differ from patients who did not receive such interventions.

In contrast, three studies did show greater weight gain or higher BMI for patients who were subject to RPs such as involuntary admission, NGT feeding, or bed rest (Griffiths et al., 1998; Martini et al., 2024; Silber et al., 2004). These studies included both adult and CYP samples, indicating that restrictive interventions may sometimes facilitate more rapid short-term weight restoration in medically compromised patients.

Overall, the evidence highlights inconsistent results. NGT feeding and enforced rest were most commonly linked to more rapid short-term weight

gain, but these changes did not consistently translate into different discharge BMIs or sustained weight increases across studies. Importantly, these inconsistencies were evident across both adult and CYP samples rather than appearing specific to a particular age group. Furthermore, evidence from long-term follow-up indicates that the use of RPs, including meal-related physical restraint, is not significantly associated with BMI several years after treatment (Blikshavn et al., 2020), and similarly, that enteral feeding is not linked to differences in BMI or remission at long-term follow-up (Nehring et al., 2014).

It is worth noting that while some studies reported no significant differences, they did observe non-significant trends in BMI or weight outcomes, suggesting that small sample sizes, heterogeneity in patient groups, and limited statistical power may obscure potential associations.

Clinical and psychological outcomes

Six studies explored clinical and psychological outcomes including measures of illness persistence, psychological well-being, recovery, relapse, and readmission (Abry et al., 2024; Ayton et al., 2009; Blikshavn et al., 2020; Nehring et al., 2014; Schreyer et al., 2016; Watson et al., 2000). Patients who experienced RPs tended to be more unwell at admission; however, most differences compared with patients who did not experience RPs were not statistically significant, and outcomes related to recovery and readmission appeared largely unaffected by these interventions. Despite being generally more unwell, clinical outcomes, psychological well-being, and relapse rates were largely similar between voluntary and involuntary patients (Abry et al., 2024; Ayton et al., 2009). No association was found between RPs and readmission rates, with voluntary and involuntary patients showing similar outcomes across studies (Abry et al., 2024; Blikshavn et al., 2020). Two of these studies, however, noted that while not statistically significant their results show higher rates of illness duration and lower rates of recovery for patients who experienced RPs (Nehring et al., 2014; Watson et al., 2000). Conversely, two studies reported poorer clinical outcomes for patients who experienced RPs. One study found that restraint was associated with a higher persistence of eating disorder diagnosis at follow-up (Blikshavn et al., 2020), while another found that higher perceived coercion was linked to greater drive for thinness, increased body dissatisfaction, and premature treatment dropout prior to transfer to partial hospitalization programs (Schreyer et al., 2016).

Mortality

Mortality findings across studies were mixed, with five studies reporting relevant outcome data (Abry et al., 2024; Ayton et al., 2009; Morris et al., 2015; Ramsay et al., 1999; Ward et al., 2015).

Evidence from adult samples suggested a potential association between involuntary treatment and elevated mortality risk. Ramsay

et al. (Ramsay et al., 1999) reported significantly higher mortality among detained patients, while Ward et al. (Ward et al., 2015) found that involuntarily admitted patients experienced elevated short-term mortality; however, this difference attenuated over 20 years, indicating that involuntary admission did not independently predict long-term mortality or suicide. Evidence from a mixed inpatient sample also suggested higher mortality among detained patients, with Morris et al. (2015) reporting significantly elevated mortality among individuals treated involuntarily.

Findings from CYP samples were less consistent. Ayton et al. (2009) reported no significant difference in mortality by detention status, while Abry et al. (2024) observed two deaths in the involuntary group compared to none in the voluntarily admitted group; however, no statistical testing was conducted.

Taken together, these findings suggest that while detention or involuntary admission may be associated with increased short-term mortality in adult and mixed samples, evidence from CYP populations is less consistent, and the overall findings are likely influenced by patient severity, small sample sizes, and variation in follow-up duration.

Length of stay

Seven studies examined length of stay (LOS) as an outcome (Abry et al., 2024; Haran et al., 2023; Martini et al., 2024; Silber et al., 2004; Strik Lievers et al., 2009; Thomas et al., 2025; Watson et al., 2000). Four studies conducted in CYP inpatient settings examined LOS outcomes (Haran et al., 2023; Silber et al., 2004; Strik Lievers et al., 2009; Thomas et al., 2025). Three of these studies found that patients subject to RPs, including NGT feeding and involuntary admissions, had significantly longer LOS compared to those who were not subject to these practices (Haran et al., 2023; Strik Lievers et al., 2009; Thomas et al., 2025). In contrast, one CYP study reported shorter LOS among patients who experienced NGT feeding compared with those who were not NGT-fed (Silber et al., 2004).

Evidence from adult inpatient samples was less consistent. Watson et al. (2000) found that patients who experienced RPs had significantly longer LOS. However, two studies (Abry et al., 2024; Martini et al., 2024) found no significant difference in LOS between patients who experienced RPs and those who did not; although Abry et al. (2024) noted that involuntary patients had longer LOS, this difference was not statistically significant.

Overall, these findings are mixed, although CYP studies more frequently reported longer LOS among patients receiving RPs, whereas adult studies showed less consistent associations.

Treatment satisfaction

Two studies examined treatment satisfaction for patients and carers who experienced NGT feeding in adult settings (Martini et al., 2024) or involuntary admissions across adult and CYP settings (Rojo et al., 2009). Both found no differences in treatment satisfaction related to the RP. Martini et al. (2024) additionally reported that NGT feeding did not affect perceived coercion or therapeutic alliance, both of which were significant predictors of satisfaction.

System-level factors

Only one study examined system-level influences on RP use, and this was conducted within a CYP inpatient setting. Arbour et al. (2023) highlighted the potential for system-level factors to influence outcomes. Results from this study found that during the COVID-19 pandemic, there was a marked reduction in self-harm, aggression, and RP use, including restraint and NGT feeding. This reduction was interpreted by the authors as related to the changes in ward practices and service delivery, underlining that some RP use reflects modifiable organizational factors rather than fixed patient risk.

Experiences of using restrictive practices

Fourteen studies explored the experiences of restrictive RPs in inpatient eating disorder services, including the perspectives of patients, staff, family members, and security personnel (Brinchmann et al., 2024; Fuller et al., 2024; Fuller et al., 2024b, 2024a; Fuller, Tan, & Nicholls, 2023; Griffiths et al., 1998; Kodua et al., 2020; MacDonald, Gustafsson, et al., 2023; Offord et al., 2006; Rienecke et al., 2023; Rojo et al., 2009; Ryan et al., 2006; Tan et al., 2003; Zugai et al., 2024). Of these studies, four explored patient experiences only, four included patients, carers, and staff experiences, three included only staff experiences, and one paper included both patient and carer experiences. Twelve papers reported on how and why RPs are used across settings. Five of these papers were focused on CYP populations (36%; Fuller et al., 2024; Kodua et al., 2020; Offord et al., 2006; Ryan et al., 2006; Tan et al., 2003, five 36%) used mixed populations (Fuller et al., 2024a, 2024b; Fuller, Tan, & Nicholls, 2023; Griffiths et al., 1998; MacDonald et al., 2022), and four (28%) from adult populations (Brinchmann et al., 2024; MacDonald, Gustafsson, et al., 2023; Rienecke et al., 2023; Zugai et al., 2024).

Emotional impact and distress

Across studies, RPs were consistently described as distressing and often traumatic experiences. Findings from CYP studies highlighted that patients frequently described RPs as distressing, tormenting, traumatic, and disempowering at the time of the intervention (Offord et al., 2006; Ryan et al., 2006; Tan et al., 2003). Some reported that experiences of coercion

had lasting negative effects, including mistrust and fear of healthcare services. Staff working in CYP services also described delivering RPs as emotionally demanding, with reports of moral distress and psychological strain among staff involved in these interventions (Fuller et al., 2024; Kodua et al., 2020).

Evidence from adult studies echoed similar experiences. Patients described RPs as distressing and disempowering, with some reporting long-term psychological impacts including mistrust of services and feelings of trauma (MacDonald, Gustafsson, et al., 2023; Rienecke et al., 2023; Zugai et al., 2024). In some cases, however, these negative experiences also acted as a motivator for recovery, as patients expressed a desire to avoid further coercive interventions (Rienecke et al., 2023). Studies including mixed populations similarly reported distress across patient groups, suggesting that the emotional impact of RPs is not confined to a specific age group (Fuller et al., 2024b; Griffiths et al., 1998).

Staff experiences and ethical conflict

In CYP settings, staff described RPs as unpleasant, distressing, and emotionally exhausting, sometimes contributing to burnout, moral injury, and job resignations (Fuller et al., 2024; Kodua et al., 2020). Some staff reported that delivering these interventions made them feel like “police officers”, “prison guards”, or “bouncers” rather than therapeutic professionals (Ryan et al., 2006).

Across adult and mixed population studies, staff reported similar experiences of moral conflict and distress when implementing restrictive interventions (Fuller et al., 2024b; MacDonald, Gustafsson, et al., 2023). Staff described coping strategies including informal debriefing with colleagues, peer support, emotional distancing during interventions, and reflective discussions with patients further along in recovery (Kodua et al., 2020). Some staff reported becoming desensitized to RPs over time, while others became increasingly sensitive to their ethical implications.

Perceived need for RP use

Despite the distress associated with RPs, many participants acknowledged that these interventions were sometimes necessary. In CYP studies, both patients and families recognized that RPs such as involuntary admission or NGT feeding could be required to preserve life and manage severe illness, particularly when insight was impaired (Offord et al., 2006; Ryan et al., 2006; Tan et al., 2003). Adult studies reported similar perspectives, with patients and staff acknowledging that restrictive interventions could be necessary in life-threatening circumstances despite their negative emotional impact (Brinchmann et al., 2024; MacDonald, Gustafsson, et al., 2023; Rienecke et al., 2023; Zugai et al., 2024). Mixed population studies also described this tension between perceived necessity and harm, with participants recognizing

that RPs were sometimes unavoidable in the context of severe eating disorder presentations (Fuller et al., 2024b; Rojo et al., 2009).

In addition, families often recognized the life-saving intention of these interventions but also reported feelings of guilt, relational strain, and perceived betrayal, highlighting the broader emotional impact of coercion beyond the patient–staff relationship (Rienecke et al., 2023; Tan et al., 2003).

Impact on care

Across studies, RPs were frequently described as having a significant impact on how care is delivered, particularly focused on the influence they can have on the therapeutic relationship. In both CYP and adult studies, patients reported feeling powerless and excluded from decision-making when RPs were implemented, which contributed to mistrust and reduced confidence in staff (Rienecke et al., 2023; Ryan et al., 2006; Tan et al., 2003; Zugai et al., 2024).

However, several studies have suggested that clear communication and collaborative care approaches could mitigate some of these negative impacts. Across adult, CYP and mixed populations, early discussion of expectations, transparent communication and individualized care planning were described as helping to maintain trust even when coercive interventions were required (Brinchmann et al., 2024; Fuller et al., 2024a; Fuller, Tan, & Nicholls, 2023; Offord et al., 2006; Tan et al., 2003).

Peer relationships were also described as important sources of support for patients on wards. However, ward structures and concerns about competitiveness sometimes limited peer interaction, reinforcing feelings of isolation, particularly during mealtimes (Offord et al., 2006).

Finally, some studies highlighted that the way RPs were implemented influenced their impact. Rapid, risk-driven decisions were associated with greater distress, whereas slower, collaborative decision-making processes helped reduce negative experiences and preserve therapeutic relationships (Fuller, Tan, & Nicholls, 2023).

Discussion

This review aimed to examine the types, use, outcomes, and experiences of RPs within inpatient eating disorder services. The review identified 36 studies and found substantial variation in RP definitions, interventions, populations, and outcome measures. Despite this heterogeneity, several consistent patterns developed across the literature. Studies were heavily focused on AN and child and adolescent populations, with RPs most commonly involving involuntary admission, physical restraint, and NGT feeding under restraint. Overall, RPs were primarily implemented in response to severe medical or nutritional risk rather than interpersonal aggression, distinguishing eating disorder settings from general psychiatric inpatient care. They were also

more frequently applied in the context of greater illness severity, nutritional compromise, and clinical complexity.

In addition to managing immediate medical risk, some papers included within this review highlighted that within eating disorder wards RPs are sometimes employed as incentives to encourage adherence to nutrition plans or meal completion, which are experienced as coercive by patients and staff alike. For example, privileges may be contingent on finishing meals or escalating calorie intake may require compliance with NGT feeding, reflecting operant behavioural strategies that can shape patient behaviour beyond direct risk management (Clausen et al., 2018; MacDonald et al., 2022). Restrictions may also be applied in non-nutrition-related contexts, such as limiting alone time or access to leisure activities, even in the absence of immediate medical risk, representing an additional form of coercion unique to eating disorder wards (Guarda et al., 2007; MacDonald, Gustafsson, et al., 2023). Such practices, while intended to support nutritional recovery, may also contribute to increased perceived coercion, potentially leading to distress, ruptures in therapeutic alliance, and iatrogenic harm for some patients. Importantly, these routine and often ward-wide interventions may affect a substantially greater proportion of patients than more formal restrictive interventions such as restraint or compulsory NG feeding. The everyday and pervasive nature of such actions may make them less visible forms of coercive influence within inpatient care. Furthermore, in some cases, escalating medical risk and the repeated use of intensive interventions may reinforce cycles of conflict and perceived coercion, particularly where early intervention, timely psychological support, or viable alternatives are limited. As Tan and colleagues suggest (Tan et al., 2026), coercive and restrictive practices may “lock patients and clinicians in escalating conflict and coercion”, with possible implications for illness chronicity and longer-term therapeutic engagement. Taken together, the combined use of nutrition-based and non-nutrition-based restrictions highlights the complexity of restrictive practices within eating disorder care.

As a result, these findings suggest that RP reduction frameworks developed for general psychiatric settings may require adaptation for eating disorder services where interventions are frequently implemented in response to life-threatening malnutrition, treatment refusal, and impaired decision-making capacity rather than interpersonal violence or aggression. This creates a distinct clinical and ethical dilemma for eating disorder services, where restrictive interventions may be required to prevent severe physical deterioration or death despite the absence of externally directed violence or aggression (Cave & Tan, 2025).

Findings from this review regarding outcomes associated with RPs remain uneven and inconsistent. Studies examined a range of outcome measures, including weight and BMI change, length of stay, medical stabilization, and adverse events, but results were often mixed. Where age-specific findings

could be examined, some outcomes appeared to vary between CYP and adult samples. For example, studies conducted in CYP inpatient settings more frequently reported longer lengths of stay among patients exposed to RPs, whereas adult studies showed more variable associations. While some studies reported significant associations between RP use and outcomes such as length of stay or mortality, small sample sizes, methodological heterogeneity, and variations in definitions limit the ability to draw definitive conclusions.

BMI and weight gain were the most commonly reported outcomes in studies examining RPs, but their reliability as indicators of treatment response is limited. In most inpatient programs for AN, discharge protocols require patients to reach a minimum BMI or weight threshold, meaning that discharge BMI often reflects institutional targets rather than true differences in recovery or the impact of restrictive interventions (Frostad et al., 2022; Redgrave et al., 2021). Consequently, similar discharge BMIs among patients who did or did not experience RPs may obscure meaningful variation in treatment response, particularly as patients exposed to RPs often presented with greater illness severity or lower BMI at admission and may therefore have required substantially greater weight restoration or medical stabilization during treatment. Moreover, BMI captures only somatic restoration and does not reflect psychological recovery, therapeutic engagement, or long-term health outcomes, which may be more sensitive to the effects of coercive interventions (Treasure et al., 2020). These findings highlight the need for multidimensional measures of recovery that extend beyond weight and BMI to better evaluate the efficacy and potential consequences of RPs.

Research exploring experiences indicates that RPs in eating disorder inpatient wards can be both life-saving and potentially harmful (Fuller et al., 2024b). For patients, they may be traumatic, disempowering, and damaging to trust, while staff and carers frequently report moral distress, exhaustion, and feelings of guilt. The way in which RPs are implemented, including communication, collaboration, and staff skill, appears to be critical in moderating these impacts and mitigating harm. Importantly, qualitative findings were broadly consistent across adult and CYP populations, suggesting that the relational and ethical challenges associated with RPs are shared across age groups, even where the clinical contexts differ.

Overall, the contrast between eating disorder and acute mental health wards underscores the necessity of context-specific policy, supervision, and intervention efforts. Acute mental health programs designed to reduce RPs often aim at reducing coercion in response to aggression and violence (Butterworth et al., 2022; Whiting et al., 2025). However, eating disorder inpatient wards require tailored approaches that recognize the primacy of medical and nutritional risk, the importance of communication and trust, the legal/consent complexities, the role of meal refusal and self-harm, and that adapt de-escalation, monitoring, and alternative supports accordingly. Without such

adaptation, there is a risk of misapplying generic RP reduction frameworks in specialist contexts, and possibly undermining safety for patients whose physiology is precarious. Differences between specialist eating disorder inpatient units and general psychiatric wards may influence the type and frequency of RPs employed, reflecting variation in treatment models, behavioural management approaches, and medical expertise across settings.

The literature identified within this review was heavily weighted towards child and adolescent populations, with comparatively limited evidence from adult inpatient settings. This represents an important evidence gap, particularly given that adult services often manage patients with more enduring illness, repeated admissions, and prior experiences of restrictive interventions. Further research is therefore needed to understand how RPs are experienced and implemented within adult eating disorder services, including the potential influence of trauma, institutionalization, and previous coercive care experiences on treatment engagement and outcomes. Another notable gap within the literature was the predominant focus on AN, with comparatively limited exploration of RPs used in the management of BN and binge-purge behaviours, where interventions may involve supervision, environmental restriction, or behavioural monitoring rather than compulsory feeding interventions.

Limitations

While this review followed a scoping review framework to ensure transparency and replicability, it is important to acknowledge several limitations. Only four databases were searched, and grey literature or non-peer-reviewed studies were not included, which may have resulted in the omission of relevant research and limited the breadth of findings. Additionally, the review was restricted to studies published in English, potentially overlooking culturally specific practices or perspectives on restrictive interventions, and limiting the generalizability of the conclusions. Additionally, many included studies originated from the UK or comparable healthcare systems, which may limit the transferability of some findings, policy implications, and RP frameworks to other international healthcare contexts. Another limitation relates to variability in how RPs are defined and conceptualized across studies, which constrained the ability to synthesize findings consistently. Despite these limitations, the approach used reflects current best practices in scoping reviews and provides a pragmatic overview of the literature on RPs in eating disorder inpatient wards.

Conclusion

This review highlights the distinct profile of RP use in eating disorder inpatient wards and shows that RPs are applied primarily to patients with

severe medical or nutritional risk, and in response to self-harm, rather than aggression, distinguishing them from acute psychiatric care. Although the evidence base was weighted towards child and adolescent populations, the findings were broadly consistent across adult and CYP settings, with RPs most commonly used in the context of high medical risk and clinical complexity. In addition to formal interventions such as involuntary admission and NG under restraint, the review also identified the widespread use of routine behavioural restrictions that may contribute to experiences of coercion within everyday inpatient care. These findings underscore the importance of context-specific policies, clinical approaches, and RP reduction strategies. Future research should prioritize standardized definitions and outcome measures in ED-specific RP studies, including greater attention to adult inpatient populations, ethical and implementation considerations, and the development of targeted interventions to reduce RP while maintaining patient safety and addressing the unique needs of this population.

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Author contributions

All authors substantially contributed to the conception or design of this study. The literature search was conducted by UF. Title and abstract screening was conducted by UF, VK, HL, and IN. Full-text screening was conducted by UF and VK. Data extraction was conducted by UF and KS. Evidence synthesis was led by UF and supported by all other authors. UF led on drafting the manuscript with input and/or editing by all authors. All authors read and approved the final manuscript.

Data availability statement

All data used is publicly available in the published papers included in this study.

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