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Reducing seclusion and restraint in an acute adolescent psychiatric ward: A feasibility study

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Accessible Summary

What is known on the subject:

- Restraining and secluding health consumers for safety reasons continue to be used in psychiatric inpatient facilities even though they have no therapeutic value and have negative effects on consumers, families and staff.
- Six Core Strategies (6CS) for reducing seclusion and restraint have been developed to address this problem but there are very few effectiveness studies in inpatient adolescent psychiatric facilities.

What the paper adds to existing knowledge:

- We used a mixed methods approach to evaluate the implementation of 6CS in an adolescent psychiatric facility. The implementation was successful. It eliminated the use of seclusion, substantially reduced the use of restraints and significantly reduced staff absenteeism.
- Using thematic analysis on feedback surveys, we identified five dominant themes that described consumers' and carers' experiences during their stay at the facility: communication, service delivery, flexibility, consistency and internal feeling states.

What are the implications for practice:

- This study provides support for the feasibility of a comprehensive and broad-based intervention program such as 6CS to reduce seclusion and restraint practices in inpatient mental health facilities.
- This study also demonstrates the value of using surveys to gather consumer and carer feedback and improve outcomes for service users.

Abstract

Introduction: Seclusion and restraint practices are routinely used in psychiatric facilities but are controversial for ethical, legal and safety reasons, and can cause significant harm to consumers, staff and organisations. Six Core Strategies (6CS) for reducing seclusion and restraint were developed to address this problem but very few studies have examined their effectiveness in adolescent settings.

Aim/Question: To evaluate the implementation of 6CS in an adolescent inpatient psychiatric facility.

Method: We retrieved archival data from an acute adolescent psychiatric ward that implemented the 6CS. Using a mixed methods approach, we evaluated outcomes on the use of seclusion and restraint, nursing staff sick leave and feedback surveys.

Results: Findings showed an elimination of seclusion, and a significant reduction in restraint use and staff absenteeism in the 12 months after project implementation. Thematic analysis of feedback survey responses identified communication, service delivery, flexibility, consistency and internal feeling states as dominant themes in consumers' and carers' experience on the unit.

Discussion: The 6CS is feasible and may be effective in reducing seclusion and restraint, which in turn may have a positive impact on staff wellbeing.

Implications for Practice: Implementation of the 6CS with executive support, combined with staff and programmatic changes at a local level is recommended.

KEYWORDS
restraint, risk management, seclusion and restraint, self-harm

1 | INTRODUCTION

Seclusion and restraint practices are restrictive practices routinely used in mental health facilities to prevent and minimise disturbed or aggressive behaviour (NSW Health, 2020). However, there are significant ethical, legal and safety concerns regarding these practices. As there is no evidence that these practices have any therapeutic value (Ramluggun et al., 2018; Sailas & Fenton, 2000; Sethi et al., 2018), the reduction and elimination of seclusion and restraint is a priority for mental health services. The present study aims to evaluate the outcomes of a clinical project that sought to reduced seclusion and restraint use in an acute adolescent psychiatric ward and to understand the impact of these changes on consumers, carers, and staff.

1.1 | Definitions

Seclusion in mental health settings is defined as the 'the confinement of a person, at any time of the day or night, alone in a room or area from which free exit is prevented' (NSW Health, 2020). Voluntary isolation requested by an individual and where they are free to leave at any time is not considered seclusion (Australian Institute of Health and Welfare, 2019). Restraint is broadly defined as 'the restriction of an individual's freedom of movement'.

Restraint methods can be mechanical, physical, or chemical. These methods warrant separate definitions (NSW Health, 2020). Mechanical restraint refers to devices that control a consumer's freedom of movement and includes furniture or other devices designed for that purpose. These devices may include belts, harnesses, manacles, sheets, and straps. The use of devices for the proper treatment of a physical disorder or injury is not considered mechanical restraint (Australian Institute of Health and Welfare, 2019). Physical restraint refers to the use of staff 'hands-on' immobilisation of a consumer to restrict movement in order to prevent harm to self and others or to administer treatment (Australian Institute of Health and Welfare, 2019).

Finally, chemical restraints refer to the use of medication for the primary purpose of restricting a consumer's behaviour or movement. In psychiatric settings, there is a distinction made between chemical restraint and medications used as part of a treatment plan to manage a mental disorder. In NSW, Australia, emergency sedation used to manage disturbed behaviour resulting from a mental disorder is not considered chemical restraint (NSW Health, 2020).

1.2 | Ethical challenges

There is widespread consensus that seclusion and restraint practices restrict the rights of people with psychiatric disabilities to freedom of movement and access, and are not aligned with contemporary guiding principles of mental health care. These principles include human rights, personal recovery and trauma-informed care (Watson et al., 2014). In the context of these guiding principles of care, much of the current research on seclusion and restraint use focusses on the outcomes of these practices on consumers, staff and organisations in mental health facilities.

1.2.1 | Consumer outcomes

Although seclusion and restraint practices are often intended as a last resort to manage aggressive or disturbed behaviours, these practices place consumers at risk of premature death or physical injury

(NSW Ministry of Health, 2018). In a systematic review of physical harm and death in the context of coercive measures in psychiatric settings, Kersting et al. (2019) found that restraint practices placed consumers at risk of death by strangulation, deep vein thrombosis and other physical injuries. As for seclusion practices, the review found that consumers suffered more self-inflicted injuries compared to their counterparts who were not subjected to seclusion, largely due to receiving inadequate attention while secluded.

There is also evidence to suggest that seclusion and restraint practices result in emotional and psychological harm to consumers. Consumers reported overwhelmingly negative experiences and the revisiting of past trauma experiences due to seclusion and restraint practices (Bonner et al., 2002; Roberts et al., 2009). These findings were supported by more recent, larger scale studies with similar methodologies (Brophy et al., 2016; Haw et al., 2011). An online survey conducted in Australia into the lived experience of consumers also showed similar findings (Melbourne Social Equity Institute, 2014). In a recent systematic review, Butterworth et al. (2022) located 12 studies that explored consumer experiences of restrictive practices in acute inpatient psychiatric settings. They found overwhelming evidence of negative psychological effects, with consumers reporting intense anxiety and fear during restraint, re-traumatisation and post-traumatic symptoms including nightmares and intrusive memories.

1.2.2 | Staff outcomes

Research into staff perceptions of seclusion and restraint use also suggest that these practices have negative physical and psychological consequences on staff. Many studies highlight the existence of internal conflict for nurses in mental health settings (Hawsawi et al., 2020). While negative emotions such as anxiety, sadness, stress and guilt are experienced about these practices, (Butterworth et al., 2022; Mérineau-Côte & Morin, 2014; Sequiera & Halstead, 2004), opinions and feelings are conflicted because staff also viewed seclusion and restraint as an integral part of nursing, necessary for maintaining control and preventing harm (Bigwood & Crowe, 2008; Korkeila et al., 2016; Thomann et al., 2022).

1.2.3 | Organisational outcomes

Research on seclusion and restraint have also focused on organisational outcomes of these practices. In a systematic review of health service use and costs associated with managing and containing consumer agitation, Rubio-Valera et al. (2015) found that the burden of agitation and containment has significant economic impacts on the healthcare system. In a study of 136 of adult acute psychiatric wards in the United Kingdom, Flood et al. (2008) estimated that half of all nursing resources were dedicated to managing conflict and deployment of containment measures. Associated organisational costs include managing injuries caused by restraining patients, managing staffing volatilities, training resources dedicated to restraint and seclusion measures, and litigation proceedings when these practices result in death or injury (Chan et al., 2012; Flood et al., 2008; LeBel & Goldstein, 2005).

Not surprisingly, there are also economic benefits when the use of restraint is reduced. Using time motion and process task analyses, LeBel and Goldstein (2005) found that in an adolescent inpatient facility in Massachusetts, a program targeted to reduce the use of restraint in the facility resulted in a 92% reduction in cost and an associated 91% decrease in episodes of restraint. A review by LeBel (2011) show that reduction programs can have cost-saving implications for health organisations by increasing staff satisfaction, reducing turnover, preventing injuries and litigation costs.

1.3 | Seclusion and restraint reduction programs

Systematic reviews into existing seclusion and restraint reduction programs in mental health settings found that broad-based interventions that address the issue from multiple perspective are most effective (Goulet et al., 2017). One example of an evidence-based, recovery-oriented approach is The Six Core Strategies (Huckshorn, 2004, 2014).

1.3.1 | The Six Core Strategies

The Six Core Strategies to Reduce the Use of Seclusion and Restraint (6CS, Huckshorn, 2004) is an American national training curriculum developed by the National Association of State Mental Health Program Directors (NASMHPD). In systematic reviews examining the effectiveness of seclusion and restraint reduction programs, the 6CS, or its variations, were found to be the most frequently studied and implemented, and with the largest evidence base (Goulet et al., 2017; LeBel et al., 2014; Scanlan, 2010).

The 6CS is based on the public health prevention model. In the context of seclusion and restraint prevention, primary prevention addresses the systemic administrative and clinical treatment environment to develop policies, procedures, and risk assessments to support the reduction and elimination of seclusion and restraint practices. Secondary prevention focusses on the early identification of triggers of conflict and aggression. This involves training staff in de-escalation and changing the physical environment to avoid resorting to seclusion and restraint practices. Tertiary prevention seeks to minimise and repair the damage caused after an incident of seclusion and restraint. Strategies include detailed analyses of each incident of seclusion and restraint and debriefing after the event (Huckshorn, 2004). The six core strategies are 1. Leadership towards organisational change, 2. Use of data, 3. Training and workforce development, 4. Use of seclusion and restraint prevention tools, 5. Increasing consumer roles and 6. Debriefing (Huckshorn, 2004).

1.3.2 | Leadership towards organisational change

Commitment from executive leadership is seen as a crucial aspect to driving an organisation towards seclusion and restraint reduction. The 6CS emphasised the importance of consistent and continuous involvement of senior facility leadership, and a clear articulation of missions, values, philosophy and targets directing that coercive practices must be reduced. The curriculum recommends that every seclusion and restraint incident be overseen by senior management, and quality reviews should be instigated to analyse and review relevant policies and procedures (NASMHPD, 2008). Studies have shown that the executive-level witness and review of restraint events have led to a downward trend in the frequency and duration of seclusion and restraint incidences (Hernandez et al., 2017; Huckshorn, 2014).

1.3.3 | Use of data to inform practice

The 6CS recommends the collection and use of seclusion and restraint data to drive the reduction of these practices. Regular quantitative comparison of the data, when used in a non-punitive way, can serve for 'healthy competition' between wards and facilities, and allows for benchmarking (Huckshorn, 2014; Riahi et al., 2016; Scanlan, 2010).

1.3.4 | Training and workforce development

The 6CS curriculum also recommends training staff in principles of trauma-informed, person-centred care and recovery, as well as debunking myths around the use of seclusion and restraint as an effective means to promote safety and compliance (NASMHPD, 2008; Scanlan, 2010). Teaching the value of flexibility in implementing rules to address individual needs and modifying hiring practices to reflect seclusion and restraint reduction values are also important aspects of workforce development.

1.3.5 | Use of seclusion and restraint reduction tools

This core strategy recommends the use of assessments and clinical practices, integrated into day-to-day treatment, that specifically target seclusion and restraint reduction. Assessments should take into account consumers' trauma history and identify risk factors for aggression. Strategies such as safety plans for each consumer, sensory modulation rooms and equipment, and structuring boredom-reducing therapeutic activities can help consumers to self-regulate their distress without resorting to aggression, which often precedes the administration of seclusion and restraint practices (Maguire et al., 2012).

1.3.6 | Increasing consumer roles

Consumers, families and external advocates are encouraged to play significant and formal roles in all aspects of assessment and treatment. The 6CS encourages the establishment of consumer consultants or peer specialist roles to assist with the oversight, monitoring and debriefing of seclusion and restraint practices. This strategy is consistent with principles of recovery and trauma-informed care by incorporating the lived experiences of consumers into the daily workings of mental health facilities (Kennedy et al., 2019). Other tools to increase consumer roles in inpatient settings include regular consumer surveys and timely management of complaints (Azeem et al., 2011).

1.3.7 | Debriefing

The necessity of debriefing in seclusion and restraint reduction is guided by the assumption that these practices are invasive and traumatic for all involved. The 6CS described two main debriefing activities: a post-acute event debrief, conducted immediately after an incident by a senior supervisor, and a formal debriefing that occurs one or several days after the incident. The first debriefing meeting ensures the safety of all involved and that the event is correctly documented for later analysis. A problem-solving approach is applied at the second debriefing, to analyse the circumstances that led up to the deployment of seclusion and restraint, and to review strategies to prevent their reoccurrence in the future (Huckshorn, 2004).

1.4 | Gaps in the current literature

There is currently limited research into the impact of seclusion and restraint reduction strategies in child and adolescent psychiatric facilities. In a review summarising 10 years of literature on this topic, Perers et al. (2022) identified only three studies that specifically examined the effectiveness of 6CS in child and adolescent facilities (Azeem et al., 2011, 2015; Wisdom et al., 2015). All of the studies were US-based and did not include qualitative data such as feedback surveys or examine the impact on 6CS on staff leave.

1.5 | The current study

Redbank House Acute Adolescent Unit (AAU) is an inpatient psychiatric facility for adolescents in the Western Sydney Local Health District. In response to state-wide efforts to implement 6CS to reduce the use of seclusion and restraint, the unit implemented a clinical project to reduce these practices. Prior to the clinical project, Redbank House AAU held some of the highest rates of seclusion and restraint use across all child and adolescent mental health units in the state. Table 1 highlights some of the features of the clinical project in line with the 6CS curriculum.

TABLE 1 Features of Redband House AAU clinical project.

Six Core Strategies elements	Features of Redband House AAU clinical project
Leadership towards organisational change	• New model of care • On-call executive and after-hours nurse manager • Clinical escalation process • Seclusion and restraint reduction champion • Guidance, direction, participation and ongoing review by executive leadership
Using data to inform practice	• Unit benchmarks on least restrictive care • Rigorous collection of seclusion and restraint data (including time of day, location and points of conflict). Data are analysed and reviewed
Workforce development	• Recruitment of new nursing, allied, and medical staff • Supporting long-term staff who experienced difficulty adjusting and adapting to change • Clinical Nurse Educator providing ongoing education and support in seclusion and restraint reduction • Training on de-escalation techniques
Use of seclusion and restraint reduction tools	• Establishment of 'Good Morning AAU' community meetings daily to communicate mutual expectations. • Emphasis on recovery focused, trauma informed and consumer-centred care • Youth and family friendly environment and services • Review of historical rules and procedures that were not congruent with a non-coercive, recovery facilitating environment • Individualised safety plans to encourage identification of triggers and emotional self-management
Consumer roles in inpatient settings	• Establishment of peer support • Community meetings led by consumers • Consumer's active involvement in care plans • Regular review of feedback surveys • Integrating consumers' choices at every opportunity and respecting family's wishes
Debriefing techniques	• Establishment of 'post-event' briefing and a formal debriefing after each episode of seclusion and restraint involving staff and treatment team • Availability of Employee Assistance Program to provide post-incident support to staff

There is to date limited research on the feasibility of 6CS in Australia, particularly with adolescent populations. The aim of the current research project is to formally evaluate the outcomes of the clinical project and understand the impact of these changes on staff, consumers, and carers by examining data across two time periods, namely 12 months prior to and 12 months after implementation of the clinical project. It is anticipated that the findings of this research project will inform clinical practice in other inpatient psychiatric units in the country and stimulate further research in this area.

1.6 | Research questions and hypotheses

First, in line with previous research supporting the effectiveness of 6CS, we hypothesised a decrease in the number of seclusion and restraint episodes and rates across the two time periods. Second, in line with previous research into organisational outcomes of seclusion and restraint reduction programs, we hypothesised a significant reduction in nursing staff sick leave taken in the 12 months following the implementation of the clinical project compared to the 12 months prior its implementation.

The current study also aimed to analyse consumer and carer feedback survey data to gain insight into users' experience of Redband House AAU in the same period. We hypothesised a significant improvement in consumer and carer satisfaction in the 12 months after the clinical project was implemented compared to the 12 months prior to its implementation. A thematic analysis of responses to open-ended questions of the feedback survey was also conducted to gain users' perspectives of their experience at the AAU.

2 | METHOD

2.1 | Description of archival data

2.1.1 | Seclusion and restraint rates

Seclusion and restraint data at Redbank House AAU from July 2016 to June 2018 were utilised for analysis. Data were obtained from the NSW Ministry of Health System Information and Analytics Branch.

2.1.2 | Nursing staff sick leave rates

Data regarding nursing staff sick leave from July 2016 to June 2018 were obtained from human resources records at Redbank House AAU.

2.1.3 | Consumer and carer feedback surveys

Data on consumer and carer feedback from June 2016 to June 2018 were obtained from The Redbank House AAU Consumer and Carer Feedback Surveys (see Supplementary Materials). Surveys were included for analysis after consultation with the treatment team to confirm the timeframes which they were completed. Surveys were not included in the sample if the completion date was unclear or ambiguous.

Consumers were defined as patients who were treated at Redbank House AAU who completed a feedback survey at discharge; carers were defined as the primary carer of consumers, who completed a feedback survey at the consumer's discharge. A total of 99 consumer feedback surveys (46 pre-clinical project, 53 post-clinical project) and 80 carer feedback surveys (54 pre-clinical project, 26 post-clinical project) were included for analysis.

The Redbank House AAU Consumer and Carer Feedback Surveys were developed by the treatment team at Redbank House AAU. The purpose of the surveys is to obtain feedback from consumer and carers to improve services at a unit level. The surveys were self-administered and were anonymous.

The consumer feedback survey consists of a total of 32 items. The first two questions sought information about how long the consumer has been using mental health services and the length of their recent stay at the AAU. The following 25 items contained statements about different aspects of service delivery which required the consumer to check their responses on a 5-point Likert scale (1 = completely disagree to 5 = completely agree). The last five questions consisted of open-ended questions about service delivery where the consumer is invited to respond using their own words. The carer feedback survey consists of a total of 29 items. Its format is almost identical to the consumer survey, with the consumer referred to as 'my child'. Cronbach's alpha for the consumer and carer surveys were .96 and .98 respectively.

2.2 | Research design and data analysis

This study used a non-experimental mixed methods research design and utilised archival data, namely, rates of seclusion and restraint, nursing staff sick leave rates, and consumer and carer feedback surveys.

All data were analysed using IBM SPSS Statistics 26. Seclusion and restraint rates were calculated by the number of seclusion and restraint events per 1000 occupied bed days. The seclusion and restraint rates across the two time periods before and after implementation of the clinical project were reported.

Differences in staff sick leave hours and the Likert scale items on feedback surveys across the two time periods were analysed using the non-parametric independent samples Mann Whitney U test. Non-parametric analysis was chosen due to violation of assumptions for parametric analysis. Furthermore, the samples were treated as independent samples due to the anonymous nature of the data provided for analysis, and it cannot be ascertained whether there were staff and service user overlap across the two time periods.

Thematic analysis using the six-step framework detailed by Braun and Clarke (2006) was used to analyse responses to open-ended questions of surveys. The six steps of analysis included data familiarisation, generating initial codes, searching for themes, reviewing themes, labelling, and defining themes.

2.3 | Ethics

Ethical approval was obtained by the WSLHD Human Research Ethics Committee prior to commencing the study.

3 | RESULTS

3.1 | Seclusion and restraint rate

Seclusion and restraint rates were calculated by the number of seclusion/restraint events per 1000 occupied bed days. In the period between July 2016 to June 2017, prior to implementation of the clinical project, there were a total of 23 seclusion episodes and 35 episodes of restraint, at rate of 40.5 and 65.5 respectively. In the period between July 2017 and June 2018, when the clinical project was implemented, there were no episodes of seclusion, and three episodes of restraint at a rate of 2.7.

3.2 | Nursing staff leave

Between July 2016 and June 2017, 14 staff worked on the unit and took a total of 1112 hours of sick leave ($M = 79.43$, $SD = 45.67$). Between July 2017 and June 2018, 10 staff worked on the unit, taking a total of 375.5 hours of sick leave ($M = 37.55$, $SD = 31.03$). There was a significant reduction in hours of sick leave taken in the second time period ($U = 34.5$, $p = .036$).

3.3 | Consumer and carer overall rating

There were no significant differences found in consumer satisfaction received while in the AAU between the two time periods ($U = 1371$, $p = .213$). There were also no significant differences found in carer satisfaction ($U = 677.5$, $p = .610$).

3.4 | Thematic analysis

Thematic analysis of consumers' and carers' responses to open-ended questions revealed a number of overarching themes that were relevant to their experiences of Redbank House AAU. A visual model of themes is shown in Figure 1.

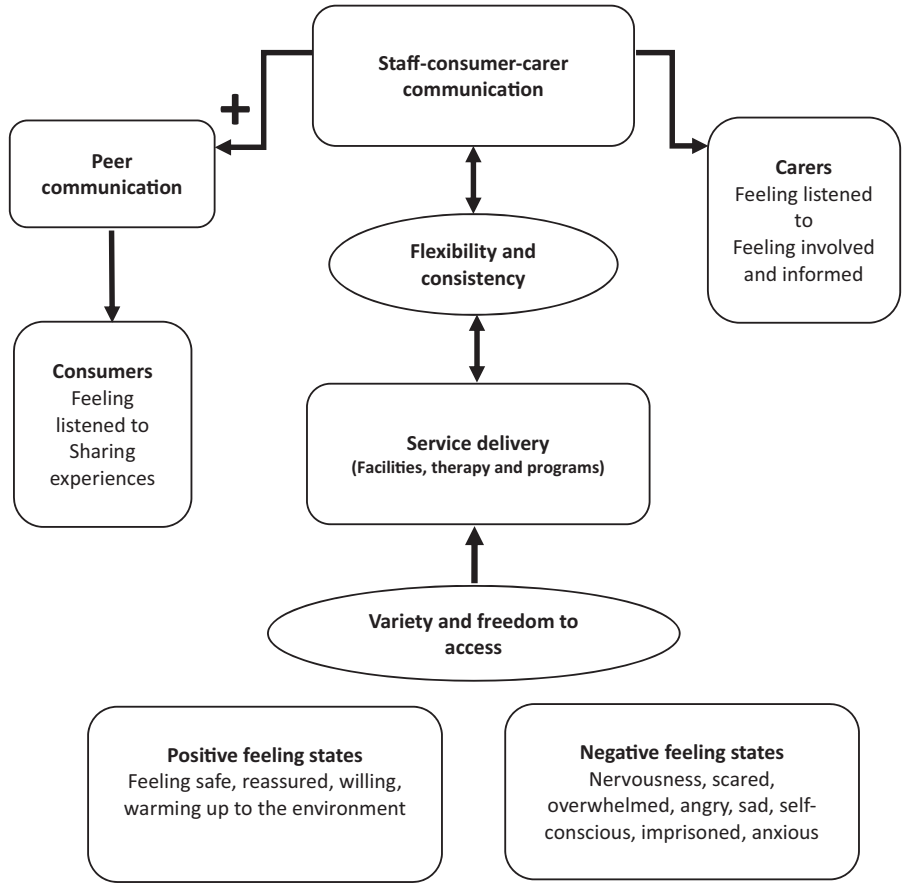

FIGURE 1 Thematic map of consumers' and carers' experience of Redbank House AAU.

3.4.1 | Theme 1: Staff–consumer–carer communication

Communication between staff, consumers and carers was suggested to be an important factor in determining the quality of users' experience of the AAU. Positive attributes to staff communication included being friendly, caring and flexible. Carers who perceived staff communication to be positive felt listened to, informed about and involved in their child's treatment. As described by a carer,

> The feedback from the staff and nurses on how my child is going was good. The care the psychologists/psychiatrist took in getting to know my child's issues/feelings.

For consumers, it was the positive staff communication and the opportunity to communicate with peers that made them feel listened to. It also served the social function of sharing their experiences of mental illness. Positive staff communication also appeared to mitigate negative feeling states for young people and carers during initial admission into the unit and their subsequent experience at the AAU. For some, positive staff communication served to facilitate a 'warming up' of their attitude to being on the unit and receiving treatment, as described by a consumer and a carer:

> At first, I didn't like this place. But now that I think about it the orientation and greeting was very good. The staff were lovely and very caring also. (Consumer)

> Because [child] did come on her own, it was a shock but after meeting the staff and showed me around I felt reassured that [child] was in the best place she could be. (Carer)

3.4.2 | Theme 2: Service delivery (facilities, therapy and programs)

Service delivery in terms of therapy and programs were also reported to be an important factor in determining consumers' and carers' experience on the unit. Variety and freedom to access these services were dominant sub-themes that determined whether consumers and carers found their experiences helpful. For example, some programs, such as dialectical behaviour therapy or mindfulness, were deemed as helpful to some consumers but not others. Some consumers expressed that they appreciated having art and music therapy as program on the unit but were disappointed that they cannot access the art or music room as they pleased.

3.4.3 | Theme 3: Flexibility and consistency

The values of flexibility and consistency appeared to be recurring themes in determining consumers' and carers' perception of staff communication. For consumers, staff flexibility in enforcing certain rules and restrictions were appreciated, yet at the same time, some young people found inconsistencies between staff unhelpful. Three young people wrote what they found to be unhelpful on the unit:

> Restrictions and unchangeable rules even when there is no risk. (Consumer)

> Certain staff members didn't listen, took away harmless and valuable items then lost them. (Consumer)

> Youse [sic] all have different rules. (Consumer)

Flexibility and consistency in therapy and program delivery were also identified as important. Where consumers and carers perceived services to be unavailable, inconsistent, or insufficient, they perceived their experience on the unit as unhelpful. The clinical project expanded the provision of therapeutic facilities and programs offered to consumers, which appeared to improve service delivery, but the freedom to access these facilities without restrictions, and the consistency in which programs are delivered, were identified to be issues to be improved.

3.4.4 | Theme 4: Consumers' and carers' internal feeling states

Open-ended responses provided by consumers and carers shed insight into a range of internal feeling states that described their experiences while on the unit. Positive internal feelings states included feeling safe, reassured, understood and informed, while negative feeling states included fear, anxiety, nervousness and feeling self-conscious.

4 | DISCUSSION

The purpose of this study was to report the findings from a clinical project that was implemented at an adolescent acute mental health unit which aimed to reduce the use of seclusion and restraint practices. Results of this study partially supported its hypotheses. First, seclusion and restraint data on the unit showed that seclusion was eliminated while restraint use decreased after the clinical project was implemented. The reduction of seclusion and restraint practices after the implementation of the clinical project is consistent with findings of previous studies investigating the effectiveness of broad-based intervention programs such as the Six Core Strategies (Azeem et al., 2017; Perers et al., 2022).

Second, the current study found that nursing staff sick leave reduced significantly in the 12 months after the implementation of the clinical project, compared to the 12 months prior to its implementation. This finding is consistent with that of previous studies examining the traumatic impact of coercive practices on mental health nursing staff (Chapman et al., 2016; Ross et al., 2014), and the associated positive organisational outcomes of seclusion and restraint reduction programs (Chan et al., 2012; Flood et al., 2008; LeBel & Goldstein, 2005).

Third, it was predicted that consumer and carer satisfaction would be significantly higher in the 12 months after the implementation of the clinical project, compared to 12 months prior to its implementation. This hypothesis was not supported as the results did not indicate statistically significant differences in user satisfaction between the two time periods. These non-significant findings in consumer and carer satisfaction are perhaps not unexpected because the groups were independent samples; consumers and carers in the later time period could not compare their experience to what their stay at Redbank House AAU may have been like before the clinical project was implemented, and so their feedback was independent of the changes that took place.

To gain consumers' and carers' perspectives into their experience at Redbank House AAU over time, a thematic analysis on open-ended responses of feedback surveys was also completed in the current study. Staff–consumer–carer communication and service delivery in terms of facilities, therapy and programs emerged as dominant themes that described users' experiences, with flexibility and consistency found to be important values in both themes that likely led to a more positive and helpful experience on the unit.

The importance of staff communication and relationships in consumers' and carers' perception of mental health service delivery, specifically towards managing aggressive behaviour and reducing the use of coercive measures, is well established by the literature (Baby et al., 2018; Mayers et al., 2010). These findings are consistent with a thematic analysis of studies on mental health users' perception of seclusion and restraint, which found that professionals' ability and willingness to interact with consumers had a significant influence before, during and after episodes of seclusion and restraint, on whether consumers associated these measures with positive or negative impacts (Tingleleff et al., 2017).

The predominant themes identified in this study are also in line with the findings of Wilson and Rouse (2018)'s qualitative study on mental health consumers' and staff members' suggestions for reducing physical restraint in adult mental health wards in the UK. The study identified four dominant themes including improving communication and relationships, staffing factors, environment and space, and activities and distraction.

4.1 | Limitations and future directions

This study has several limitations. First, the non-experimental design, while suited for an investigation of feasibility, does not control for extraneous variables that may have contributed to the reduction of seclusion and restraint use or nursing staff sick leave. Additional data on nursing staff's reasons for taking leave could have provided

important information to determine the impact of the clinical project on staff absenteeism. However, although an experimental design may provide stronger evidence, the difficulty of carrying out controlled trials with vulnerable populations has been acknowledged by researchers, given the invasiveness of seclusion and restraint measures (Sailas & Fenton, 2000).

Second, this study used archival data in the form of routinely collected feedback surveys. The use of archival data provided insight into seclusion and restraint rates from 2016 to 2018, which captured the period before and after implementation of the 6CS intervention. A limitation of this archival data is that more recent data to show longer term outcomes were not available. Future research is required to examine whether improvements are maintained over time. Another limitation is that a portion of the feedback surveys were excluded from analysis due to ambiguous completion dates. Consumers and carers were also not specifically asked about seclusion or restraint practices, or the impact of the changes brought about by the clinical project. Future studies may seek to develop feedback surveys that specifically focus on the effectiveness of the clinical project or use focus groups to interview consumers and carers about their experiences of seclusion and restraint in the facility.

Finally, this study was time-limited and site-specific in that it only investigated outcomes of the clinical project in one ward 12 months on from its implementation, while changes were still actively taking place within the facility to implement seclusion and restraint reduction strategies. Given that this was essentially an $n = 1$ study, statistical analyses of the decrease in seclusion and restraint practices could not be conducted and generalisability of findings to other wards are unknown. Future prospective studies should be conducted across multiple sites to examine the long-term impact of the 6CS on coercive practice use and staff, consumers and carers' experiences.

5 | CONCLUSION

This study is the first of its kind in Australia to use mixed research methods to evaluate the feasibility and outcomes of a seclusion and restraint reduction program in an adolescent mental health ward. Our findings provide promising evidence that a broad-based intervention program involving executive leadership, rigorous collection and examination of data, staff training and workforce development, use of seclusion and restraint reduction tools, consumer and carer involvement, and debriefing can have a positive impact on reducing the use of coercive measures, which in turn is associated with a decrease in staff absenteeism. This study, through qualitative analysis of feedback surveys, also identified themes relevant to service users' experiences in a mental health unit. The methodology of this study illustrated the feasibility of using mixed methods research to investigate a complex phenomenon such as seclusion and restraint practices in a specialised facility and population. Future research may utilise these insights and methods in a more robust effectiveness study to capture the experience of seclusion and restraint reduction programs on consumers and carers in mental health settings.

6 | RELEVANCE STATEMENT

Seclusion and restraint practices in mental settings cause harm to health consumers, carers, staff and organisations, and is contrary to contemporary guiding principles of mental health care. Our study showed that these coercive practices can be substantially reduced and eliminated by implementing a comprehensive and broad-based intervention program. This study demonstrates the feasibility of the program and of capturing consumers' experiences using surveys as well as quantitative data to evaluate seclusion and restraint prevention outcomes.

AUTHOR CONTRIBUTIONS

All authors contributed to the study conception and design. Alexandra Vakili, Ashwini Padhi, Sumithira Joseph and Julie Norcott contributed to the data collection. Angel Lee-Aube conducted the data analysis, compiled results and drafted the manuscript. All authors reviewed and commented on the draft manuscript, and approved the final manuscript. Keong Yap and Alexandra Vakili provided Angel Lee-Aube with research supervision.

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CONFLICT OF INTEREST STATEMENT

No conflicts of interests to report.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS APPROVAL

Ethics approval was obtained by the Western Sydney Local Health District (WSLHD) Human Research Ethics Committee and the Australian Catholic University Human Research Ethics Committee (approval no. 2019-214R).

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SUPPORTING INFORMATION

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

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