Restrictive Practices in Aotearoa New Zealand: Current prevalence and barriers to least restrictive practice

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Mitchell Ryan Cairns

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Abstract

Restrictive practices refer to a group of practices whereby an individual's freedom of movement is prevented or partially restricted. This could be done by the use of physical force, harness or straps, or with medications and sedatives. There are several risks associated with the use of restrictive practices, such as physical injury, trauma, post-traumatic stress, and even death for both those subjected to and those implementing restraints. This study aims to determine the frequency and type of restrictive practices used in New Zealand, views of behaviour of concern, and the barriers and enablers to the reduction of restrictive practices, and examine differing views in the population using mixed-method analysis. Survey data was collected and followed up with a focus group to provide additional qualitative data. Data analysis indicated that the use of restrictive practice in New Zealand disability care was high, with 48.61%-77.0% of clients with intellectual or developmental disabilities being subjected to at least one form of restrictive practice. A high level of consensus on the definition of behaviours of concern and their most effective interventions being proactive and function-based was also reflected in the data. Identified barriers to restraint reduction were similar to existing research and included attitudes toward restraint, organisational constraints, caregiver capacity, resource limitations, and limitations in support planning. Identified enablers to restraint reduction included ongoing training and development, behaviour support plans, interdisciplinary reviews, organisational leadership, and caregiver/whānau involvement. Recommendations for future research to examine specific factors resulting in the high use of restrictive practices in New Zealand are provided.

Keywords: Restrictive practices, intellectual disability, positive behaviour support, behaviours of concern, Aotearoa New Zealand

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A restrictive practice or restraint is defined as any action or procedure that limits or prevents an individual's mobility of part or all of their body, whereby their normal access to their surroundings and/or own body is limited by any method (Craig & Sanders, 2018; Gálvez-Barrón et al., 2025; Leoni et al., 2018). Some specificity in definitions is occasionally included, such as that the restraint is not mandated by law or for therapeutic purposes (Webber et al., 2019) or that the individual subjected to the restraint is unable to remove it themselves (Gálvez-Barrón et al., 2025). Restrictive practices may be planned in a written and formalised protocol (e.g., behaviour intervention plan), unplanned (e.g., emergency use), and can be used temporarily or used on an ongoing basis (e.g., persistent locked doors or regularly prescribed medications) (Leoni et al., 2018). Restrictive practices are generally categorised into four types: physical restraint, mechanical restraint, chemical restraint, and seclusion, though there are differences in the definitions of these categories throughout the literature. Physical restraint is defined as the use of a person's body, and force to prevent an individual's movement (Richardson et al., 2020). In the New Zealand Health and Disability guidelines, this is referred to as personal restraint (Ministry of Health, Manatū Hauora, 2023). Mechanical restraint is defined as the use of a device to restrict an individual's freedom of movement (Webber et al., 2010). This can include the use of belts or straps, bed rails, recliner chairs that the individual cannot freely stand up from, or tray tables that individuals cannot move without assistance (Gálvez-Barrón et al., 2025; Webber et al., 2019) This definition can often include environmental restraints, where locked doors or other barriers are also used to restrict an individuals movements. The Ministry of Health in New Zealand, Manatū Hauora, defines this as physical restraint (Ministry of Health, Manatū Hauora, 2023). Additional criteria, such as the use of such devices for treatment or safe transport, are in some contexts not considered mechanical

restraints, (e.g., using a harness to allow for safety in a vehicle) (Webber et al., 2010). Chemical restraint appears to be one of the more debated definitions of restrictive practices. It is generally defined as the use of medications to manage the behaviour of an individual in the absence of a diagnosed mental health condition that would otherwise result in the prescription of relevant medication (Webber et al., 2010). Chemical restraint can include regularly prescribed or pro re nata (PRN)/as required medication, where the primary purpose is to manage behaviour (Richardson et al., 2020). There are claims that chemical restraint does not fall into the same categories as other forms of restraint, as it is not perceived to breach human rights or cause harm in the same way as other forms of restraint, though this view is often not supported within the literature (Kinner et al., 2017). This has resulted in some instances of the use of sedative medication not being recorded as a restrictive practice use (Cranshaw et al., 2025; Webber et al., 2011). This lack of consensus can lead to confusion for staff and inflated or deflated reported frequency of restraint use. This is evidenced by the large reduction in documented restraint use reported in Victoria, Australia, when definitions of chemical restraint were altered to exclude regularly prescribed medications (Webber et al., 2010). Seclusion has the most widely agreed upon definition of the confinement of an individual in a room alone and unable to leave (Craig & Sanders, 2018). Additional forms of restrictive practices may also include emotional restraint, where individuals are prevented from openly expressing their views (Kinner et al., 2017), rigid ward rules such as routines and visiting hours, as well as staff attitudes such as authoritarian care styles and coercive language (Griffin et al., 2025; Xyrichis et al., 2018). These practices have not been researched as they can be difficult to define and measure. In general, a lack of clearly defined and often ambiguous terms and definitions of restrictive practices has caused confusion when classifying procedures. This has led to disagreement about what constitutes a restrictive practice (Xyrichis et al., 2018). For example, Gálvez-Barrón et al. (2025) found that 54% of healthcare practitioners did not consider bedrails to be a restrictive practice despite them being defined in the relevant regulations as a restrictive practice.

Furthermore, Subih et al. (2025) found that nurses, on average, when completing a survey of what classifies a restrictive practice as defined by relevant legislation, scored low (3.3 out of 11), indicating a lack of shared understanding of the topic.

Most organisations and legislative bodies suggest that the use of restrictive practices is reserved as a last resort safety measure, to be used when other de-escalation strategies have failed (Huckshorn, 2006; La Barrass et al., 2025). This recommendation has also been adopted by organisations, such as the Association for Behaviour Analysis International (ABAI), which has published a position on the use of restrictive practices, stating that restraint must be used on rare occasions with meticulous clinical oversight and consultation with human rights boards, with the welfare of the individual being of the highest priority (Vollmer et al., 2011). All behavioural treatments should be developed with the principle of least restrictive and should incorporate reinforcement contingencies, be functionally based, be based on objective observable data, and be consistent with current best practice in the literature (Vollmer et al., 2011). In addition to ABAI's stance on restraint use, Aotearoa New Zealand's Ngā Paerewa Health and Disability Services Standards (Standards New Zealand, 2021), and the Code of Ethics for Behaviour Analysts in New Zealand (Society of Behaviour Analysis Aotearoa New Zealand, 2025), also state that restrictive practices are a last resort method, only to be used after other interventions have been attempted (Lai et al., 2024; Society of Behaviour Analysis Aotearoa New Zealand, 2025; Vollmer et al., 2011). Despite numerous organisational and legislative guidelines for restrictive practices to be used as a last resort, research often shows that restraint is employed as the first and only method of managing behaviours of concern for people with intellectual and developmental disabilities, rather than a last resort in the context of crisis management (Richardson et al., 2020; Webber et al., 2019).

Predictors of restraint use

Research indicates that the most cited reason for the use of restrictive practices by both staff and health service consumers is to maintain safety (Kinner et al., 2017), particularly when supporting

individuals who engage in behaviours of concern (Chavulak et al., 2025; Kinner et al., 2017; Webber et al., 2011). Behaviours of concern are defined as any behaviour of enough intensity, frequency, or duration to present a risk of safety or harm to the individual or those around them, and/or likely to result in the individual's exclusion from their community (Emerson & Einfeld, 2011). Behaviours of concern are likely to impact between 10% and 50% of individuals with developmental or intellectual disabilities (Dowse et al., 2019; Kurtz et al., 2020), and of those who exhibit behaviours of concern, 50%-60% are also likely to experience restrictive practices (Leoni et al., 2018). Those who experience a restrictive practice are likely to also experience multiple forms of restraint (Belayneh et al., 2024), with estimates from the literature ranging from 17-54% of people receiving a restrictive practice having multiple restraints in place (Fitton & Jones, 2020). Many other factors have been linked to the use of restrictive practices, and individual characteristics appear to be more strongly associated with restraint use than other factors (Richardson et al., 2020). Those with physical disabilities are reported to be 5.4 times more likely to be restrained than those who are more physically able (Webber et al., 2019). Disorders affecting communication ability also predict a 4.9 times higher likelihood of individuals receiving restrictive practices while in care (Richardson et al., 2020; Webber et al., 2019). Research indicates that communication barriers can lead to greater confusion between staff and people receiving support, which leads to higher levels of misunderstanding and perceived noncompliance in care environments (Griffin et al., 2025; Moore & Haralambous, 2007; Webber et al., 2010). Those with hearing impairments were 8 times more likely to be mechanically restrained, and those with vision impairments were 3.4 times more likely to be restrained (Webber et al., 2019). Neurological and psychiatric disorders predict higher levels of restrictive practices with a 3.8 times increase in the likelihood of restraint use in these populations (Robinson et al., 2025; Webber et al., 2019). A diagnosis of a developmental disability (e.g., autism spectrum disorder/ASD, intellectual and developmental disability/IDD) also predicts higher use of restrictive practices affecting activities of daily living (Fitton &

Jones, 2020; Leoni et al., 2018; Richardson et al., 2020). Research in related fields has also demonstrated trends that are important to consider regarding disability support. For example, people residing in aged care facilities are more likely to receive restrictive practices if they are more able to mobilise or are more prone to falls (Ishida et al., 2025). While the use of restrictive practices in this environment can increase risk of harm, including from falls, these practices remain common in aged care facilities in some countries (Gálvez-Barrón et al., 2025; Kong et al., 2017; Kong & Evans, 2012; Lee et al., 2021; Moore & Haralambous, 2007). In hospital and pre-hospital settings, a number of factors predict higher restraint use, including mental health crisis, alcohol or drug use, or arriving in restraints from police or ambulance staff (La Barrass et al., 2025; Lai et al., 2024; Richardson et al., 2020). Lastly, research shows in hospital, pre-hospital, and psychiatric settings that ethnicity is a significant predictor of restraint use (Bongiorno et al., 2025; Lai et al., 2024; Richardson et al., 2020). In New Zealand mental health services, Māori and Pacific Islanders are up to 4 times more likely to be secluded within the first 24 hours of admission when compared to other ethnicities (Lai et al., 2024). However, Kumar et al. (2008) found that while in a psychiatric inpatient facility, there were no measurable differences between ethnicity in rates of seclusion, use of sedative medications, or other forms of restraint. It was surmised that the presence of an active Kaupapa Māori health team on the ward acted as a protective factor against excessive restrictive practices for Māori and Pacific Islanders on the ward (Kumar et al., 2008).

There are a number of organisational and sector factors that impact the use of restrictive practices in addition to individual characteristics such as staff characteristics, including knowledge, attitudes, and experience (Dowse et al., 2019; Subih et al., 2025). Staff's fear of assault, particularly when responding to behaviours of concern or aggressive behaviours, may lead to higher use of restrictive practices to ensure their own safety (Larue et al., 2018; Rose & Cleary, 2007). Research has reported that 21.88% of staff felt unsafe at work when rostered in environments where behaviour of concern occurs, and 31.25% felt unsafe when supporting individuals with aggressive behaviour (Gerace

& Muir-Cochrane, 2019). The turnover generated by the burnout of staff supporting individuals with behaviours of concern has led the industry to rely on newer and more inexperienced staff (Kong et al., 2017; Larue et al., 2018; Leif et al., 2023b). Newer or less experienced staff, as well as agency or temp staff, are more likely to utilise restrictive practices, particularly in the absence of other skills in order to manage potential aggression, viewing them as easier and quicker interventions (Cranshaw et al., 2025; Dowse et al., 2019; Leif et al., 2024; Moore & Haralambous, 2007; Subih et al., 2025). Shift times or shift patterns are also associated with restrictive practices, with night shifts or staff working more hours being more likely to rely on these practices (Subih et al., 2025). These staff-related factors combined account for 34% of the variance in the use of restrictive practices (Subih et al., 2025). Another effect of high staff turnover is understaffing of shifts, which then leads to further restrictive practices (Moore & Haralambous, 2007; Subih et al., 2025). Once restrictive practices are established, individuals are often subjected to them long-term. As with the perceived safety in place, there is little impetus to reassess these practices as the risk are believed to be managed (Moore & Haralambous, 2007; Richardson et al., 2020). Research also indicates that a lack of review process in place for restrictions of all kinds, contributes to their long-term use (Moore & Haralambous, 2007).

Impacts of restraint use

Restrictive practices have been linked to numerous adverse outcomes for those subjected to the practice. The use of physical restraint, where an individual has been held by members of staff, has been linked to injury and death (Belayneh et al., 2025; Huckshorn, 2006; La Barrass et al., 2025; Moore & Haralambous, 2007; Sunseri, 2025). Physical restraint has been linked to bruising, abrasions, thromboembolism, and cardiovascular collapse in patients (La Barrass et al., 2025). Injuries are estimated to be caused in 10.6% of instances where physical restraints are applied (Sunseri, 2025). Death is also associated with the use of physical restraint, with the leading causes being restraint-related asphyxia and the exacerbation of pre-existing cardiovascular conditions (Paterson et al., 2003).

The position individuals are placed in, particularly face-down, prone, or with arms and legs tied behind the back, is believed to alter the biomechanical processes involved in respiration. Coupled with increased physical exertion, this can result in decreased blood oxygen saturation, leading to potential death. Although these reductions in blood oxygen have not been replicated in experimental conditions, research indicates that other confounding variables, such as obesity, fitness level, and individual characteristics, remain unaccounted for (Paterson et al., 2003). Other causes of death related to restraint use include exertion, aspiration, internal bleeding, hyperthermia, blunt force trauma, and dehydration (Sunseri, 2025). While the practices linked to restraint-related asphyxia, such as face down or prone restraints are no longer commonplace, restraint-related deaths continue to occur in various environments. Estimates of deaths in nursing home environments related to restraint are one in a thousand (Moore & Haralambous, 2007). It is also estimated that 79 children died in care in the United States between 1993 and 2018 (Sunseri, 2025).

Chemical restraint has also been linked to a number of adverse health outcomes. The use of antipsychotic and antidepressant medications to reduce behaviours of concern in aged care settings has been linked to an increase in falls amongst the elderly population (Belayneh et al., 2025). Use of benzodiazepines to settle distressed patients has resulted in a 24% increase in hip fractures where this practice is used (Moore & Haralambous, 2007). Adverse health outcomes from the use of restrictive practices go beyond physical health. It is widely accepted that the use of restrictive practices has a number of adverse effects on an individual's mental health (Fitton & Jones, 2020; Leoni et al., 2018; Moyles et al., 2023). Those who have been subjected to restrictive practices have described feeling scared, frustrated, angry and humiliated (Huckshorn, 2006; Moore & Haralambous, 2007; Sunseri, 2025) and have described feeling dehumanised and unjustly treated, comparing their care to that of a prisoner in a cell (La Barrass et al., 2025; Moore & Haralambous, 2007; Moyles et al., 2023). In addition to the traumatic nature of restraint itself, these practices can also be re-traumatising for individuals who have

histories of abuse prior to entering care (Belayneh et al., 2025; Chavulak et al., 2025; Sunseri, 2025). Many people living in care, mental health or disability facilities have experience higher rates of physical, emotional, and sexual abuse than in other environments (Allroggen et al., 2018; Euser et al., 2014), with some estimates ranging from 80% to 91% (Huckshorn, 2006), of those accessing services. The traumatic nature of restrictive practices on individuals with histories of trauma can lead to the development of comorbid psychiatric conditions (Moyles et al., 2023), with 25%-47% of people subjected to restrictive practices going on to develop post-traumatic stress disorder (Chieze et al., 2019). Restrictive practices have also been found to have a negative effect on the therapeutic relationship between staff and the people they support. The use of restrictive practices has been linked to an erosion of trust and an increase in distress among staff who have used restrictive practices (Belayneh et al., 2025; Griffin et al., 2025; Huckshorn, 2006; Sunseri, 2025). Moyles et al., (2023) found that patients in mental health services often found it difficult to differentiate between more therapeutic approaches (e.g., teaching functional skills) compared to the more safety-focused approach linked to restraint use, and thus, negative perceptions of staff persisted outside of the restraint context. Moyles et al. (2023) also found that in order to minimise the negative impact of restraint on the therapeutic relationship, skilled communication and effective debriefing involving both staff and patients were required. Similarly, Griffin et al. (2025) found that caring and empathetic staff approaches ensured that restrictive practices were perceived as therapeutic and not detrimental by health consumers leading to decreased risk of psychological harm, self-harm, and negative perceptions of staff following restraint use. The use of restrictive practices also fails to account for and address the underlying function of behaviour required by other behaviour intervention strategies (Fox et al., 2021; Leif et al., 2024; Vollmer et al., 2011). In some instances, the use of restrictive practices may consequently reinforce instances of behaviours of concern through providing interaction and physical contact to individuals (Leoni et al., 2018; Sunseri, 2025) such as the case with Harry and the use of restrictive splints to prevent self-injurious behaviour

(Foxx & Dufrense, 1984). In these instances, the use of restrictive practices could exacerbate the behaviour and increase the risk of harm to all involved. Further, restraint use can also increase negative associations with staff, and lead those involved into a cycle of escalating behaviour and increase in restraint reliance (Griffin et al., 2025; Sunseri, 2025).

The negative effects of restrictive practices go beyond the individuals subjected to them. The use of restrictive practices is also detrimental to the wellbeing of staff and other individuals who implement them (Belayneh et al., 2025; Huckshorn, 2006; La Barrass et al., 2025; Larue et al., 2018; Moyles et al., 2023; Sanders, 2009). Staff implementing physical restraint have reported experiencing psychological trauma after implementing these practices (Belayneh et al., 2025; Huckshorn, 2006). Staff reported feeling afraid of being attacked in the workplace, with research indicating 31% of nurses feeling unsafe around patients who exhibit aggressive behaviour and 5% of carers reporting being assaulted in the past year (Muir-Cochrane et al., 2018; Rose & Cleary, 2007). This stress in the workplace leads to higher levels of staff burnout and fatigue, which in turn leads to high levels of turnover in the care sector (Kong et al., 2017; Larue et al., 2018; Leif et al., 2023a). Staff are also prone to injuries during the use of physical restraint, often requiring time off work to recover physically (Huckshorn, 2006; Leif et al., 2023a). It was estimated that the physical and psychological injuries suffered by staff when implementing restrictive practices cost the care industry millions of dollars per year (Huckshorn, 2006). Research has also demonstrated that interventions targeted to reduce restraint have saved one organisation in the United States, supporting over 3000 individuals, $16, 420, 661 in workers' compensation claims, lost time, and turnover cost over an eight-year period (Craig & Sanders, 2018; Sanders, 2009).

Due to their controversial nature, there have been efforts to reduce the use of restrictive practices since the 18th century (Sturmey, 2022), a sentiment that has gained momentum in recent decades (Kinner et al., 2017). In 2006, the United Nations published the Convention on the Rights of

Persons with Disabilities, which outlines the fundamental rights of individuals with disabilities (United Nations, 2006). Since its publication, many researchers have acknowledged that the use of restrictive practices on individuals both with and without developmental or intellectual disabilities is in breach of their human rights as outlined by the United Nations (Chan, 2016; Chavulak et al., 2025; Kinner et al., 2017; Lai et al., 2024; Leif et al., 2024; Serra, 2025; Sunseri, 2025; Webber et al., 2010). As such, research conducted within the Australian care services has examined the challenges in the current practice for meeting the standards outlined in the convention, one of which is the use of restrictive practices (Chan, 2016). Restricting an individual's freedom of movement, which is the primary definition of a restraint, is in breach of Article 3 of the Convention (the right to autonomy), Article 14 (right to liberty and security of person) and Article 17 (right to physical and mental integrity). When overused, used as the sole means of managing behaviours of concern, or misapplied, then the use of restrictive practices may breach Articles 16 (freedom from violence and abuse) and 26 (the right to evidence-based interventions that promote habitation and rehabilitation). Environmental restraint practices may also impede an individual's ability to move about their immediate environment and community, which may breach Articles 18 (liberty of movement), 19 (right to independent living and community involvement), and Article 20 (right to personal mobility). Despite calls for reduction, the rate of restrictive practice remains high, and in some cases, is increasing (Belayneh et al., 2024; Richardson et al., 2020; Søndenaa et al., 2015)

Prevalence

Prevalence rates for the use of restrictive practices are highly variable due to misconceptions and disagreement on what is considered a restraint and differences in definitions between sources (Belayneh et al., 2024). Comparing sources from the literature, Larue et al., (2018) found that the use of mechanical restraint ranged from 1%-22%, and physical restraint ranged from 3% to 100%, while rates for seclusion were 6-68%. Webber et al., (2011) found that 6% of residential and respite services

reported the use of mechanical restraint, while 27% of individuals living in family accommodation were utilising the practice to support loved ones. More recent studies place the overall rate of restrictive practices, including physical, mechanical, and seclusion, between 8% and 12% in Australia (Richardson et al., 2020) though others report much higher rates of 0.2-56% from international samples (Belayneh et al., 2024). Chemical restraint appears to be the most common form of restrictive practice, though it has been historically omitted from certain research studies, as previously stated. Perry et al., (2018) found that 90% of people with disabilities surveyed were prescribed psychotropic medication with no statistically significant relationship with co-diagnosed mental health conditions. This would indicate a high off-label use as restrictive practices. Richardson et al. (2020) found that between 90% and 95% of the population with a diagnosed intellectual disability were chemically restrained over a 12-month period. Considering earlier debates on the definitions of chemical restraint, when including regular medication, this the most frequently used restrictive practice.(Richardson et al., 2020; Webber et al., 2010). The high use of chemical restraint is likely due to its less obvious, less violent nature compared to other forms of restraint.

Reduction interventions

Some studies have displayed that reductions in restrictive practices can be achieved while also promoting better outcomes for service and staff such as, greater independence, better skill acquisition, lower staff turnover, fewer injuries and the financial cost associated with them by using more functional based behaviour interventions and organisational change approaches (Craig & Sanders, 2018; Leif et al., 2024; Leoni et al., 2018). The majority of restraint reduction interventions employ the six core strategies approach of leadership toward organisational change, use of data, workforce development, use of prevention tools, consumer roles, and debriefing (Craig & Sanders, 2018; Leoni et al., 2018; Richardson et al., 2020; Sanders, 2009). Safewards is another model for restraint reduction focusing on 10 interventions of clear mutual expectations, soft words, talk down, positive words, bad news mitigation,

know each other, mutual help meetings, calm down methods, reassurances, and discharge meetings (Mullen et al., 2022; Wilson et al., 2018). The absence of strategies present in both these models is often cited as a barrier to restraint reduction in research, particularly staff training, debriefing, organisational leadership, understanding of the individual, and differences in communication and expectations (Craig & Sanders, 2018; Fitton & Jones, 2020; La Barrass et al., 2025; Larue et al., 2018; Moore & Haralambous, 2007; Moyles et al., 2023). It has also been noted that the language used in national and organisational policy and law promotes the use of restrictive practices to ensure safety which reduces the adherence to other least restrictive models of support (Hayward et al., 2023; Serra, 2025). The use of Positive Behaviour Support, a non-aversive and function-based approach to reducing behaviours of concern, has also been successful in reducing restrictive interventions, with up to two-thirds of restraint cessation being attributed to behaviour support interventions (Fox et al., 2021; Hayward et al., 2023; Richardson et al., 2020). Aspects of trauma-informed care are often incorporated into plans to protect against psychological harm in those who have histories of abuse and neglect (Chavulak et al., 2025; Craig & Sanders, 2018; McVilly et al., 2023). While these interventions are successful in reducing restrictive practices, without wider organisational approaches, they are often not implemented with fidelity (Fox et al., 2021). This can sometimes lead to the replacement of one type of restrictive practice for another, such as reductions in environmental or personal restraint but increases in chemical restraint (Cranshaw et al., 2025; Gerace & Muir-Cochrane, 2019; Kong et al., 2017).

Rationale

While there has been a growing evidence base around the use of restrictive practice for a number of decades (Xyrichis et al., 2018), there are still few studies in the field of intellectual and developmental disabilities. In Aotearoa, New Zealand, there have been few papers investigating restrictive practices in mental health settings (Lai et al., 2024; Kumar et al., 2008). In 2008, Te Pou published a report outlining the best practice in restraint reduction in health and disability settings in

New Zealand (O'Hagan et al., 2008). It stated that 16.1% of mental health service users were secluded over a 3-month period in 2006. It was also found that Māori were overrepresented in restraint use cases, and that further research was required into restraint reduction strategies for ethnic minorities and other cultural groups. In 2017, the New Zealand Human Rights Commission requested a review into the use of restraint and seclusion across health, correctional, and educational institutions in New Zealand (Shalev, 2017). It found that the use of seclusion had decreased since the introduction of new policies in 2009, but restrictive practice remained high. It was also noted that while data on the use of restraint was not regularly collected and that the data prepared for the review should be viewed with caution (Shalev, 2017). Specific data was not reported in the review, and there is currently no published data to provide a reasonable basis for estimation on the use of restrictive practices, either type or frequency, in Aotearoa, New Zealand (Dowse et al., 2019; Shalev, 2017). The primary aim of this research was to investigate the prevalence of the use of restrictive practices in support of the intellectual and developmentally disabled in Aotearoa, New Zealand. This aim is addressed by the following research questions:

1. What is the current prevalence of restrictive practice use in the intellectual and developmental disability care in New Zealand?
2. What is the frequency and types of restrictive practices employed?
3. What are the common types of restrictive practices utilised in different settings across the sector, as well as the context in which restrictive practices are used?

A secondary aim of this study was to examine the workforce's perceptions of behaviours of concern, which is addressed by the following research questions:

4. What are the perceptions and understanding of behaviours of concern by the workforce and what are the differences between groups that exist, if any?

The final aim of the study was to evaluate barriers and enablers for reduction of restrictive practices, which was address by the following research question:

5. What are the common barriers and enablers to the reduction of restrictive practice use across the sector?

Method

Design

The current study employed a mixed method design, using both qualitative and quantitative data. Qualitative data was used for thematic analysis and collected via an online survey, and a follow-up focus group was used to examine the prevalence of restrictive practices and the experiences of individuals supporting people with developmental disabilities. Data was also analysed using descriptive statistics, and chi-square analysis to allow for quantitative descriptions of restraint frequency, compare differences between groups of participants, and to determine any unique themes related to restraint use in the New Zealand context. This study was approved by the human research ethics committee at the University of Waikato (reference number: 2025# 37).

Recruitment

Participants were recruited for the study via email using a snowball sampling method. Email invitations were sent to 19 practitioners and organisations that support individuals with developmental disabilities in a range of settings including residential, respite, educational, and outpatient care. To minimise potential bias from snowball sampling, posts were also made on Facebook disability support worker forums to ensure participants from the frontline staff population were included. Organisations and individuals were identified from both the author's professional network as well as publicly available information. Potential participants were also asked to forward the informational email to individuals within their organisation or wider network to increase the sample size and distribution of respondents across the New Zealand regions. Potential participants were provided with an information sheet

including research aims, risks and benefits, consent information outlining the voluntary nature and the right to withdraw participation. Contact information for the authors was provided for any additional information. Inclusion criteria for the study were for participants to be supporting individuals with developmental disabilities either professionally or personally. After reviewing the attached material and indicating consent, participants were directed to a link to complete the online Qualtrics survey as the first part of the study. After completion of the online survey, participants were presented with an additional invitation to participate in a focus group to provide further information and context to the responses gathered during the survey.

Participants

The survey received a total of 62 responses. Nineteen of these responses were considered incomplete and were deemed to have withdrawn consent and were therefore excluded from further analysis. The total responses analysed after this removal were 43. Participants reported varying roles, experience and qualifications. Participants reported collectively supporting a population of 613 individuals with intellectual or developmental disabilities.

Fifteen participants initially indicated they wanted to participate in the focus group. These participants were contacted via email addresses provided separately to the survey and given an info sheet outlining the purpose of the focus group and a consent form. Of those contacted, five returned consent forms and participated in the focus group. The five participants represented three separate organisations across New Zealand, supporting a variety of individuals ranging from young people to adults across a range of settings (e.g., residential, respite, and in-home support). Four of the participants held specialist or leadership roles, while one participant was a support worker. Experience ranged from approximately 2 years to over 30 years. See Table 1 for participant demographics.

Measures

The survey included questions related to demographic information (i.e., role description, years of experience, relevant qualifications, and the number of individuals supported), with the majority of survey questions were related to the individuals supported within their roles, their perceptions about behaviours of concern, and restrictive practices. Following the demographic related questions, participants were then asked how many of the individuals that they support experience environmental, physical, mechanical, chemical restraint or seclusion. Next, participants were then asked to describe these practices by responding to three open-ended questions aimed at evaluating their perceptions and beliefs about behaviours of concern in the people they support.

1. *Can you please identify what is a behaviour of concern is, and what behaviours of concern do you encounter in your role?*
2. *Keeping in mind the individuals that you work with, what are some of the reasons that they may engage in behaviours of concern, and how are these managed?*
3. *What do you feel is the most effective means of managing the behaviours you described above?*

Finally, participants were asked about their perceptions of the barriers and enablers to least restrictive practices with three open-ended questions.

1. *In your current role, what helps you use the least restrictive practices?*
2. *Have you been provided with any specific training around using the least restrictive practices or behaviour interventions?*
3. *In your current role, what challenges or barriers do you encounter that prevent the use of less restrictive practices?*

Open-ended questions, based on previous research (Leif et al., 2023b), were developed for the study as no suitable metric was available. Survey questions were reviewed by experienced board-certified behaviour analysts and PhD researchers to assess the validity of the survey. Following expert review, the survey questions were revised and updated for use in the study.

At the conclusion of the online survey, participants were asked if they would like to participate in a focus group. Upon returning the consent form, the five participants were sent an online poll to vote on the most suitable times for the focus and interventions were sent based on the highest consensus. The focus group was a 1.5-hour discussion, the purpose of which was to gain a deeper understanding of some of the responses to the online survey. Discussion points included the purpose of some of the restrictive practices described, covering any gaps in survey responses, what are some practices people and organisations are engaging in to reduce restrictive practices, and what are the limitations they are facing to achieve this.

Data Analysis

Survey Data. The prevalence of types of restrictive practice was determined by taking the number of people indicated to be subjected to each kind of restrictive practice and dividing it by the total number of people supported by the sample population. This was then multiplied by 100 to determine the percentage of individuals supported by the sample who experience each type of restrictive practice. Responses that describe the types of restrictive practice were coded to determine the most frequently employed restrictive practices in Aotearoa New Zealand. To determine the rate of individuals receiving at least one restrictive practice. each participant's response was examined to calculate the maximum possible number of individuals, assuming minimum crossover that each reported restrictive practice was experienced by a different individual (i.e., sum of restraint types up to total number of people support), and minimum number with maximum crossover, assuming each reported

restrictive practice type was experienced by the same individual (i.e., the highest number of reported restraint type).

Responses to the open-ended questions were collectively analysed using thematic analysis as described by Braun and Clarke (2006). To extract key themes from the data, a process of inductive thematic coding was employed. The purpose of using inductive coding was to ensure that any themes developed were in line with the unique Aotearoa New Zealand cultural context, without imposing any external theoretical framework onto the thematic development from prior research. Thematic analysis was conducted following Braun and Clarke's (2006) six-step process. During the first phase, I read and re-read all survey responses to familiarise themselves with the content before noting initial codes based on recurring keywords or semantic themes. After the first stage, I developed the initial coding framework and applied it to the dataset by scoring each survey response on a table with the identified codes across the top. The individual coded responses were then examined for overall themes and additional groupings based on similar semantic or latent meaning. Codes with few responses were grouped into larger themes or excluded from the analysis. After coding and grouping responses into themes, the final themes were defined.

Next, themes were compared between groups to examine differences between levels of experience, qualifications, and job titles of the respondents. Responses were coded and stored within a password-protected Microsoft Excel spreadsheet to allow for coding and analysis of the data.

For the purpose of conducting chi-square analysis, participant roles were reorganised into professional (i.e. specialist care provider, service manager) and paraprofessionals (support workers). Qualifications were organised into no qualification, trade certificates (health and wellbeing three and four), and university degrees (bachelor's degree or higher). Chi-square analysis was then conducted using Jamovi statistical software with an alpha value of 0.05 to compare coded responses from each participant groups to examine any statistical differences in responding.

Focus Group Data. Focus group data were coded initially by separating the data into sections based on related research questions. Responses were then coded using the same framework as survey responses to further support theme descriptions and supplement results from the survey responses.

Inter Rater Reliability

Interrater reliability of the coding was calculated with a 32.5% sample of the responses to each open-ended question in the survey. Each response was read and coded before providing the coding framework and uncoded responses to a second independent coder. The second coder then assessed the validity of the framework and independently coded responses. Interrater reliability was then calculated by dividing the total number of codes by the number of agreed-upon codes. Both coders then met to discuss and address any differences in terminology and refine the coding framework before final coding. The percentage of agreement was then calculated as above, and inter-rater reliability was calculated using Cohen's kappa for each question and for the data set as a whole. Initial percentage agreement for all open-ended questions was 91.85%, ranging from 85.71%-95.24% per question. Of the total disagreements, 8.5% were attributed to differences in terminology between the two raters. After refining the initial terminology and coding framework, the data set was re-coded, and there was substantial inter-rater reliability $k = .79$, 95% CI [.77, .80], $Z = 48.8$, $p < .001$, with 95.53% agreement. Cohen's kappa for each open-ended question was >0.61, indicating substantial agreement across all subscales except for enablers of restraint reduction, which showed moderate agreement $k = .41$, 95% CI [.32, .50], $Z = 8.06$, $p < .001$, with 93.92% agreement. Individual subscale inter-rater reliability is reported in Table 2.

To conduct inter-rater reliability for focus group data, individual quotes relating to either barriers or enablers to restraint reduction were extracted from the transcript. After Initial thematic coding, the coding framework and definitions were provided to a second blind coder. The second coder assessed the validity of the framework and definition before coding 33.33% of the quotes relating to

enablers and 33.33% relating to barriers. Initial percentage agreement was 90.00% and 100.00% respectively. As there was high initial agreement, Cohen's kappa for inter-rater agreement was calculated. There was substantial reliability between the two raters k =.73, 95% CI [.49, .98], Z = 4.03, p <0.001, and perfect agreement on barriers to restraint reduction k = 1, 95% CI [1, 1], Z = 5.48, p <0.001.

Results

Participant Characteristics

Participant roles were predominantly support workers or specialist care providers, accounting for a total of 81.40% of participants. Participants were evenly distributed in categories of years of experience from <1 to >10 years of experience, with 10 participants exceeding 10 years. Of the total number of participants 9.56% held no formal qualification related to the support of individuals with intellectual or developmental disabilities, while 27.91% held trade certificates (health and wellbeing support three and four), and 62.80% held university-level qualifications. Participants with university qualifications were more likely to hold professional roles (85.19%) than paraprofessional roles $\chi 2$ (2, n = 43) = 15.6, p < .001.

Prevalent Restrictive Practices

Based on survey responses, the number of supported individuals experiencing at least one form of restrictive intervention was 48.61%-77.00% (M = 62.80%). Comparisons to ranges of restraint use between New Zealand and other countries can be seen in Figure 1. Mechanical restraint was the most frequently reported restrictive practice experienced by the supported population (34.91%). Mechanical restraints were most often used to ensure the safe transport of supported individuals. The most common forms of restrictive practices for safe transport were vehicle harnesses, wheelchair lap belts, and belt buckle locking devices that block access to unlocking the seatbelt. Within the home, mechanical restraints were reported to be used to prevent individuals from harming themselves, either accidentally,

such as with bedrails to prevent falls, or to prevent self-injurious behaviour, such as head banging or self-hitting with the use of helmets and arm splints. Chemical restraint was reported to be used to support 32.63% of supported individuals. As required (PRN) medications were the most commonly reported chemical restraint by participants (32.56%), while regular scheduled medication was reported significantly less (16.28%). Participants in the focus group reported that support staff are much less likely to report regular scheduled medication as a restrictive practice, partly because understanding the specific diagnosis for which certain psychotropic medications are usually prescribed would be outside of their scope of practice, but also because the belief was that doctors prescribe medications for therapeutic purposes, and this would not constitute restraint. The most commonly reported medications by survey participants were benzodiazepines (20.94%), specifically lorazepam (18.60%). Environmental restraints were reported to be in use for 30.51% of the individuals supported by the participants. Environmental restraints were reported to be used to prevent supported individuals from leaving or accessing spaces without support staff present, particularly those who do not display road safe behaviours. For this purpose, common environmental restraints include locked external doors (34.88%), as well as locked gates and fences (9.30%). Locked external doors were more likely to be described as a restrictive practice by participants with professional roles (X^2 (1, N = 43) = 5.62, p = .018). Environmental restraints were also employed to prevent individuals from engaging in unsafe eating habits with the use of locked kitchens (11.63%) and food storage areas such as fridges (9.30%) and pantries (13.95%). This was reported to be to prevent behaviours such as overeating certain unhealthy foods that lead to obesity and diabetes, or consumption of raw meat or other unsafe/unprepared items. Physical restraints were reported to be employed with 27.9% of the supported population. Physical restraints were often reported to be used as an emergency or reactive strategy to ensure safety for the individual, such as to prevent them from running out into the road, or others, such as to stop someone from hitting another person. Prevalence of restrictive practice types can be found in Table 3 and specific

restraint report rates can be found in Table 4 and comparisons between rates of restraint type can be seen in Figure 2. Participants reported few trained personal restraint strategies, such as those used by the Crisis Prevention Institute (CPI), or Safe Practice Effective Communication (SPEC) programmes. During the focus group, it was discussed that most organisations have few or no supported individuals with approved personal restraint, and as such, several organisations are moving away from personal restraint training except for those working with individuals with pre-approved restraint. A breakdown of reported trainings can be found in Table 5 and Figure 3. It was also felt by the focus group that the number of personal restraints was likely under-reported. This was believed, as many people are supported in organisations that do not display road safety behaviours. There are few to no reports of these individuals being stopped from running into roads, and/or no formal intervention to teach road safety has been implemented. The most commonly reported personal restraints are holding individuals by the hand (16.28%) or holding them by the arm (9.30%). There are some reports of individuals being held down or restrained to the ground in a prone position (4.65%) or held against a surface, such as being pinned to the wall (4.65%). Seclusion was reported to be used infrequently, being utilised for 3.43% of the supported population. Seclusion was most often reported to occur in either the individual's bedroom (13.95%) or other non-descript room (11.63%). It was reported that while individuals are not locked in these rooms in most cases, other mechanisms, such as psychological restraint and fear, keep the individuals from leaving, which constitutes restraint.

> "The control and the fear element of the staff person's power is an invisible barrier that prevents the person from leaving their room"

Other restrictive practices that were mentioned include restricted access to certain websites and the removal of personal technology and devices.

Perceptions of Behaviours of Concern

A behaviour of concern was most commonly defined as behaviour that poses some risk of harm to the individual exhibiting the behaviour or to the people around them (46.51%). Behaviours of concern were also defined as behaviours that decrease an individual's quality of life or general well-being (27.91%). This was reported more often by participants with university-level qualifications X^2 (2, N = 43) = 6.04, p = .049. Behaviour of concern was reported to be an escalation or elevation in behaviour (9.30%), most commonly by participants with health and well-being certificates X^2 (2, N = 43) = 8.33, p = .016. Definitions can be found in Table 6. The most common behaviours of concern reported by participants included physically aggressive behaviours (53.54%), such as hitting (27.91%), kicking (16.28%), and biting (18.60%) other people. Self-injurious behaviour was also commonly reported (46.51%) and was more likely to be reported by staff without formal qualifications or with university degrees X^2 (2, N = 43) = 10.1, p = .006. Self-injurious behaviour included head banging (11.63%), self-hitting of either the body or head (11.63%) or self-biting (11.63%). See Table 7 for a full list of reported behaviours of concern.

Causes of behaviour of concern were generally in line with established functions of behaviour according to the literature such as access to tangibles (30.23%), escape or avoidance (16.28%), access to attention (18.60%) and autonomically reinforced (11.63%). Participant responses also included causes attributed to the individuals emotional state such as frustration and anxiety (46.51%), deficits in functional skills (30.23%), physical discomfort (20.93%), and individual diagnosis (25.81%). Participants with professional roles were more likely to report access to tangibles X^2 (1, N = 43) = 6.95, p = .008 or attention X^2 (1, N = 43) = 5.82 p = .016 as the causes or functions of behaviours of concern, while paraprofessionals were more likely to attribute these behaviours to changes in routine X^2 (1, N = 43) = 4.43, p = .035, hunger X^2 (1, N = 43) = 5.44, p = .02, or mentalistic explanations such as the supported individuals specific diagnosis X^2 (1, N = 43) = 4.42, p = .036. A full list of hypothesised causes of behaviours of concern can be found in Table 8.

The most common effective interventions for behaviours of concern were function-based interventions, grounded in positive behaviour support and applied behaviour analysis (20.93%), supporting communication skills (34.88%), such as with augmentative communication devices, or through avoiding the triggers of behaviours of concern (18.60%). A full list of reported intervention is available in Table 9. Staff with one to four years of experience were more likely to highlight the need for education for staff and careers as an effective means of intervention X^2 (3, N = 43) = 8.81, p = .032. 93.02% of participants report having received formal training in the use of least restrictive practices, with the most commonly reported training being grounded in positive behaviour support principles (23.26%). Respondents who had not received formal training were more likely to hold paraprofessional roles X^2 (1, N = 43) = 5.44, p = .02 and have completed a health and well-being trade certificate X^2 (2, N = 43) = 8.33, p = .016 rather than specialised training.

Barriers to restraint reduction

Attitudinal factors

The most frequently reported barrier to the reduction of restrictive practices was the knowledge, attitudes, and beliefs of care staff and parents (*N* = 19). Attitudinal factors can be further defined into two sub-themes of beliefs and attitudes about restraint and beliefs and attitudes about safety. In terms of beliefs about restrictive practices, there was a perception amongst staff and caregivers that restrictive practices work. When a kitchen or a front door is locked, or a harness is utilised in a vehicle, the individual is no longer able to engage in that target behaviour of elopement, unsafe eating, moving about the vehicle, etc. Participants discussed that some staff have been working in the sector for several decades and have engaged in the use of restrictive practice for many years, can display a reluctance to use the least restrictive practices. Particularly when restraints can be seen as effective in reducing behaviours that put an individual at risk, require less effort to implement, and or are perceived as cost-effective. It was reported that, restrictive practices are often used as the 'go-to'

intervention to manage a behaviour of concern for the reasons outlined above. Those working in home environments report that parents of people who display behaviours of concern have found that using restrictive practices is an effective means of managing their family members' behaviour and have done so for many years before receiving support and are also reluctant to try other strategies.

"There is a reluctance to let go of practices they perceive 'work'"

Other methods of intervention were reported to be viewed as less effective or may create further behavioural escalation from the individual by staff, which can lead to poor adherence to alternative intervention strategies. Knowledge or experience about alternative interventions was reported to be limited, and 'on the floor' training and experience was discussed as leading individuals to believe that restrictive interventions are more effective. Participants also expressed beliefs that, in certain circumstances, when these practices are prescribed or endorsed by other professionals, such as occupational therapists or medical practitioners, they are not restrictive but instead therapeutic.

"Sometimes the policies/instructions given by other institutions or organisations for when challenging behaviour occurs "

Lastly, the harm associated with most restrictive practices is not visible. Especially in individuals who display a limited verbal behaviour (i.e., communication) repertoire. It was reported that it can be difficult to see the frustration of feeling more tired than usual and unable to engage in unusual activities, or the anxiety and fear towards staff following the use of personal restraint when they are unable to communicate this themselves. Several participants discussed that people to underestimate the harm that may be caused through the use of these practices, leading to the belief that they are safe and effective in the management of behaviours of concern.

"The biggest challenge is understanding why it is so harmful to others"

Participants also discussed that many staff and families have concerns for their own and others' safety when supporting individuals with intellectual or developmental disabilities. Staff are reported to

feel as though the use of restrictive practices is the only way to ensure their safety at work, while families often feel that they are the only way to keep their loved ones safe from harm, both at home and in the community.

"Most staff feel they have to use physical restraint and PRN just to keep themselves safe"

"Parents feel that this is the only way to keep their child and others safe"

Participants also discussed that caregivers and support workers often have to balance an individual's right to self-determination and autonomy with professional and organisational responsibility, and their duty of care to ensure the safety of individuals that they support. The proposed reduction in restrictive practices generates anxiety and uncertainty as to how these risks will be managed without restraints. When the use of a restrictive practice has led to the absence of serious harm, there is an incentive to follow the status quo rather than try a less restrictive practice than expose an individual to what may be considered an unnecessary risk.

"They've had this since they were fifty. Why would we change it now [at seventy]?"

Organisational constraints

Participants expressed that when deciding how to best mange potentially harmful behaviours, organisations can be risk-averse. When presented with individuals who engage in behaviours that place them at risk of harm, organisational responses tend to lean on the side of increasing staffing numbers to "manage" the behaviour through restrictive means, rather than to increase staff capacity to use less restrictive options.

"More people are employed to implement restrictive practices rather than less, more skilled people".

"There is pressure from managers to use chemical restraint"

It was also reported that support workers feel unsupported by their management teams when supporting people who display behaviours of concern. There can exist a culture of blame which leads

staff to under report, and in some cases, cover up, the use of restrictive practices, which can prevent steps to minimise its use through debriefing and support planning.

"Managers blame the support staff for client behaviour and are very unsupportive when we get hurt or are abused"

Further it was indicated that managers are not immune to this downward pressure. With the publication of complaints through the Health and Disability Commission, as well as public scrutiny, particularly following the abuse in care inquiry, there is pressure on managers to ensure that there are no practices being utilised that would attract unwanted media or public attention. This can work to reduce the use of certain restrictive practices but also promotes the use of others in order to reduce perceived preventable incidents of harm, which may reflect poorly to regulatory bodies and funding providers.

"There can be a lot of pressure to stay out of the headlines"

Caregiver Capacity

Several participants reported that in organisational settings, having sufficient staffing on shift to support people in the least restrictive ways was a significant barrier raised by participants of the survey (*N* = 7; 16.28%). Workplaces report frequently not having enough staff to fill shifts or relying on less experienced or unfamiliar staff to support individuals with complex needs. Not being able to maintain sufficient staffing levels leads to an over-reliance on the use of restrictive practices, while staff attend to other service users or other tasks in the workplace. Staff going into these environments who are less experienced or without sufficient training in least restrictive practices may tend to rely on restrictive practices to support individuals safely with decreased collegial support.

"Services seem to be constantly challenged around having enough staff to fill shifts"

Data also indicated that in home environments, parents supporting children who engage in behaviours which place people at risk are described as displaying signs of caregiver burnout. They are

described as having high levels of stress and fatigue or being "at wits' end" trying to ensure their family is safe. Families may also experience other multiple stressors and intergenerational trauma, which may limit their ability to respond to behaviours of concern in a less restrictive manner. They have also been described as feeling criticised or otherwise uncomfortable having professionals assess their child-rearing practices. This may lead to families being less likely to seek help in addressing these issues. These compounding factors culminate in families feeling tired and unmotivated to explore alternative strategies in addressing the behaviours their loved ones engage in.

Resource Limitations

Lack of funding for disability support services was another barrier frequently raised by survey participants (*N* = 6; 13.95%). Funding can directly impact the number of staff available on shift, but also the quality of training, supervision and support offered to staff. In addition to funding constraints, specialist care services are also difficult to access. There are often long wait times when accessing care services, including residential, respite, and specialist services, with some participants citing up to two-year waitlists to access support. While some participants report that there has been an increase in the complexity of needs for individuals who have been referred to support services over the years, leading to increased complexity of the supports required. Under-resourcing, both in terms of financial resources but also support services, leads families and organisations to rely on restrictive practices to ensure safety while they wait for support services, or they find ways to increase the support provided in place of additional funding.

"None of the clients receive any kind of psychological intervention, organisation-wide, only medications"

Limitations in Support Planning

Respondents reported that support plans were not detailed enough to support individuals with complex needs. With difficulty accessing specialist support services, support plans can lack safety

planning or behaviour support information that would help staff and other carers to work in less restrictive ways. When these sections are present in individual support plans, they can provide too few strategies to support individuals proactively, or strategies may not be deemed as being effective at managing behaviours of concern. This, in turn, undermines staff's belief that less restrictive options are effective, reinforcing beliefs about restraints and leading them to be less likely to implement strategies effectively. Information contained in support plans may not always align with best practice, nor provide staff with the information to support individuals in the least restrictive manner.

"Support plans may not align with least restrictive practices"

Enablers of Restraint Reduction

Ongoing Training and Development

Many survey respondents highlighted the need for sufficient training and education to enable staff and families to use less restrictive practices (*N* = 8; 18.60%). One of the important requirements for training was that staff leave with an understanding of why the behaviour occurs or the function of behaviours of concern (*N* = 5; 11.63%). Other specific training opportunities for focus group participants include understanding the rights of people with disabilities under the United Nations and specific training on the use of restrictive and least restrictive practices. Training should include opportunities for ongoing discussion and development, such as through coaching and supervision. It was suggested that beliefs that restrictive practices are effective when staff are working in environments for long periods of time without oversight or guidance, staff drift toward more restrictive practices. The use and regular ongoing training and coaching helps to change these beliefs and ensure that less restrictive practices go beyond the classroom.

"People are qualified, have knowledge, but that knowledge is not necessarily transferred to the workplace, so behaviour is often negatively and harmfully managed"

Formal Behaviour Support Plans

The most frequently raised enabler to the reduction of restrictive practices from both the survey and focus group participants was access to services for the development and implementation of positive behaviour support plans that were of high quality (*N* = 12; 25.00%). Data highlighted that behaviour support plans should be individualised to the person they are developed for and based on rigorous assessment of the function of that particular person's behaviour, and that plans should be proactive in nature to prevent the onset of behaviours of concern and negate the need for restrictive practices. Data also indicated that there should be sufficient information on triggers and early warning signs of more harmful behaviour so that staff are able to identify these and intervene earlier. Plans should focus on improving the quality of life of the supported individual and the people around them, and not only on the reduction of harmful behaviours. Data also noted that reactive strategies should be non-aversive or restrictive, and staff should be provided with many alternative strategies so that they have access to a strategy that will work on the day. And organisations have been progressively moving towards hiring their own in-house behaviour practitioners, which has helped to ensure that staff and supported individuals can have access to well-designed support plans promptly.

Regular Interdisciplinary Reviews

Based on the discussion during the focus group, any approved restrictive practice should be subjected to rigorous assessment and approval process, be subjected to regular reviews and oversight. It was reported that many organisations have policies around the approval process for restrictive practices. Many of these rely on the completion of a pre-approval assessment to ensure that any other less restrictive alternatives have been trialled or are otherwise unsuitable before submitting a request to a review board. Review boards are normally made up of a group of diverse backgrounds, including both internal and external representatives from various stakeholders, including registered professionals and supported individuals or their families. Participants indicated that this process helps to reduce bias towards the use of restrictive practice from any one party and provides a larger pool of knowledge from

which to brainstorm potential alternatives to restrictive practices than may otherwise be available. Once a restraint has gone through this process, it needs to be reviewed at regular intervals. Participants also stated that It was important that these review activities look to assess any changes to the individual, environment, or staff. Focus group participants stated that reviews were sometimes viewed as necessary administrative tasks for certification, and it is important that the focus remains on the needs of the individual. Individual needs may change over time, as may technology or interventions for addressing behaviours they display and it is important that these needs continue to be reviewed. Participants also highlighted that ensuring plans are regularly reviewed will safeguard individuals so that they are not subjected to unnecessary restraints long-term in an environment where needs and abilities are not always fixed.

Relationship Building

Data highlight that staff building a positive, therapeutic relationship was an important protective factor against the use of restrictive practices. Responses to the survey identified several strategies to build therapeutic rapport such as, treating individuals who are receiving support services with empathy, compassion and respect, but also engage in active listening, with the intention of trying to understand what an individual may be communicating through their behaviour. Engaging in active listening can help to understand the functions of behaviour so that they may be more accurately addressed in the long term instead of relying on restrictive practices. Many participants highlight the need to get to know the people that they are supporting so that staff are able to better recognise any potential triggers that may lead to behaviour of concern. This also helps staff to have a greater repertoire of items and activities that an individual likes that may be used to improve their learning, or to direct them away from potentially harmful behaviours helping them to intervene more quickly and effectively before having to resort to restrictive practices.

Organisational Support and Leadership

Another important theme highlighted by participants was that in order to reduce the use of restrictive practices, the entire organisation needs to be oriented towards this goal. Organisations that have reported success in reducing restrictive practice use have had buy-in from the board of directors down to front-line support staff. In addition to approval and review systems, clear policies and guidelines that outline how restrictive practices will be utilised and who will be responsible for their oversight are felt to be helpful by participants from a range of backgrounds. It was felt that managers should encourage staff to constantly reflect on their practices and develop less restrictive strategies in their support of people. Frontline staff should advocate for the people that they support to ensure that any changes or policies reflect the unique needs of the individuals that they support. During incidents, staff reported having available support, both from within their immediate colleague group, but also from wider systems, such as additional resources during an emergency, and debriefing or periods of reflection after incidents help in the reduction of restraint. This allowed them to identify alternative strategies and protect staff and caregivers from burnout, in addition to safety training, equipment, and spaces that ensure staff safety and freedom from injury, without needing to resort to restraint. Knowing that help is available, or that there is an area where they will be safe, helps staff to feel more confident in managing behaviours of concern and less anxious about being harmed themselves when utilising less restrictive practices.

Caregiver and Whānau Involvement

Discussions during the focus group highlighted the need for adopting a collaborative approach with all relevant stakeholders to help ensure that efforts to reduce restrictive practices are successful. As has been previously mentioned, at times, staff and families are resistant to efforts to reduce restrictive practices due to their own beliefs about these practices, their capacity, level of training, or concerns for safety and well-being. Additionally, paraprofessional respondents report often feeling left out of decision-making or that the rationale for practice changes is not clearly communicated by

managers. It was discussed that engaging families and support staff in the planning and development of less restrictive practices can help to address some of their concerns relating to the practices and improve adherence and implementation of alternative strategies. Involving all stakeholders also helps to draw from a wider knowledge pool to identify the best ways to support an individual, ensuring their cultural needs and lived experiences are respected.

Discussion

Prevalence of restrictive practices

The first aim of this study was to determine the prevalence of the use of restrictive practices in Aotearoa, New Zealand. Survey responses indicate that between 48.61% and 77.00% of individuals with an intellectual or developmental disability were subjected to at least one form of restrictive practice in New Zealand over the past year. Compared to the international average range of restrictive practice use of 3.8% to 51.3% (Moyles et al., 2023), the prevalence in New Zealand is currently high. New Zealand remains high when compared to youth support services in the United States, which estimates 12.8% to 29% over the last year (Sunseri, 2025) and 8%-12% of individuals accessing services for intellectual disability support in Victoria, Australia, excluding chemical restraint (Richardson et al., 2020). Meta-analysis in the United Kingdom found prevalence rates of 11%-78% (Fitton & Jones, 2020) of which New Zealand prevalence rates are at the higher range. These findings indicate that restraint use in New Zealand appears higher than in other Western countries.

When evaluating individual restraint categories, New Zealand's rate of chemical restraint is low compared to other countries, with Australia reporting that between 90% and 95% of individuals on the statewide database receive chemical restraint (Richardson et al., 2020; Webber et al., 2011). As per discussions during the focus group, New Zealand’s comparatively low use of chemical restraint may be attributed to under-reporting by the participants. Databases from Victoria, Australia, have previously included the reporting of medications that are prescribed for off-label uses in the absence of an

appropriate psychiatric diagnosis as chemical restraint in addition to PRN medications (Richardson et al., 2020). Support workers in New Zealand are likely unaware of the diagnosis that specific psychotropic medications are used to treat, and would therefore be unlikely to identify off-label or restrictive uses of regularly prescribed medication, which may explain their low occurrence. Research demonstrates that non-pharmacological interventions are rarely trialled by medical practitioners (Moore & Haralambous, 2007), and that pharmacological practices rarely have therapeutic justification for their use (Khatri & Sondheim, 2025). As the use of regular medication may be under-reported in this study, further research is required on the prescribing rates and use of regular medications as chemical restraint in New Zealand.

Additionally, New Zealand appears to be below international averages for rates of seclusion. In a literature review, Larue et al (2018) found that the prevalence of seclusion ranges from 6% to 68%, while the results of the current study report 3.43% in community settings. This low rate of use of seclusion in community settings may be attributed to the national strategy of reducing restraint and seclusion in New Zealand (Shalev, 2017). Research has demonstrated that focusing on one form of restrictive practice can lead to a compensatory increase in other forms of restrictive practices (Cranshaw et al., 2025; Kong et al., 2017). Thus, it may be likely that efforts to reduce the use of seclusion may have contributed to higher use of other forms of restrictive practices.

Some organisations report that they are supporting very few people who require pre-approved personal restraints, and consequently, are no longer offering restraint or holds training to all staff outside of these services, which has been demonstrated to reduce the frequency of restraint use (Craig & Sanders, 2018; Sturmey, 2015; Sunseri, 2025). This appears to be reflected in the high frequency reporting of positive behaviour support as the provided restrictive practices training as opposed to CPI, NVCI, or other similar trainings. While it was noted during the focus group that the use of personal restraint may be under-reported, survey participants report a rate of 27.90% of supported individuals

per year receiving personal restraints, which remains high when compared to other countries, such as Australia's previously reported rates (Richardson et al., 2020). As organisations stop providing widespread training, some of these restraints being implemented may fall outside of safe practice, as evidenced by the reference to prone restraints and pinning individuals to walls. Staff with less or no training on implementing restrictive practices safely increases the risk of restraint-related death (Sturmey, 2015), of which prone restraints have been strongly linked to through restraint-related asphyxia (Paterson et al., 2003). Thus, highlighting the importance for organisations that are reducing their training to have systems in place to ensure that staff are not utilising untrained or unplanned restraints in other areas. It is also important to note that it is outlined in the New Zealand disability standards (Standards New Zealand, 2021) that all organisations that implement restrictive practices should ensure their staff are trained in the safe and competent use of restrictive practices, as well as alternative de-escalation strategies. It is unclear from the standards if this refers to those supporting specific people who have restrictive practices or to the wider organisations as a whole that use restrictive practices. Regardless, it is possible that reduced staff training could lead to increased use of unsafe practices though this will require further examination. The data from the current study aligns with the previous literature that restrictive practices are generally employed to reduce harm such as from aggression to self or others, or to limit risk from a perceived lack of safety behaviours (Chavulak et al., 2025; Kinner et al., 2017; Webber et al., 2011). Similar to previous research, restrictive practices in New Zealand are often employed as the first and only method of managing these behaviours (Richardson et al., 2020; Webber et al., 2019).

Perceptions of the behaviour of concern

The second aim of this study was to examine the workforce's perceptions of behaviours of concern and any differences that may exist between groups. Definitions of behaviours of concern were consistent with generally accepted definitions in the literature of causing harm to the individual or

others, negatively affecting their well-being, and leading them to be excluded from the community (Emerson & Einfeld, 2011). Paraprofessionals' perceptions that behaviours of concern are directly caused by, or are symptoms of, specific diagnoses such as ASD or attention deficit disorders (ADHD) may highlight a gap in existing knowledge that leads to some of the attitudes reported towards restrictive practices. It was highlighted that understanding the function or causes of behaviour is an enabler to restraint reduction, believing that these behaviours are merely a characteristic of these diagnoses may lead to a reluctance to adequately address them, viewing them as "just the way they are". This effect may help to explain why attitudes that restrictive practices are more effective. Future research that investigates the correlates between staff perceptions of developmental disabilities or behaviours of concern and restrictive practice may be warranted to explore these attitudes.

Participants highlighted that the most effective interventions to reduce restrictive practices were those that addressed the function of the behaviour that led to the need for the restrictive intervention, and based within the fields of applied behaviour analysis and positive behaviour support. They highlighted the need for prevention and alternative communication, as well as the need for augmentative communication, which aligns with function-based interventions (Hayward et al., 2023). These ideals appear to reflect the training that the majority of participants have completed, namely, positive behaviour support. It is interesting to note that participants who held a health and well-being certificate were less likely to have completed training in the use of restrictive or least restrictive practices. Reviewing the course descriptions available on the Career Force website (www.careerforce.org.nz), it does not appear to be one of the learning objectives included in level three or level four certificates. The largely homogenous view of the participants that behaviour serves a function and that these behaviours should be addressed functionally, as well as a research aligned definition of behaviours of concern, may reflect the quality of training in New Zealand in instilling these views and attitudes towards behaviour and restraint. It may demonstrate that the workforce is well

placed to support widespread interventions to reduce the use of these practices nationwide. It is also possible that this level of shared views, as well as the high percentage of individuals having received formal training, are due to a sampling bias caused by the study design. The widespread advertisement of the research may have also attracted participants who already hold particular views on restraint and the need to reduce restrictive practices that have led to the largely homogenous views on behaviours of concern. Thus, more widespread replication and extensions of this research across professionals and service providers are needed to further evaluate practices in New Zealand.

Barriers to restraint reduction

The last aim of this study was to determine if there were unique barriers and enablers to restraint reduction in New Zealand. Barriers to restraint reduction in New Zealand are similar to previous research in other countries and support sectors. Staff training previously has also supported the use of restrictive practices, which helps to explain why some staff who have been employing these practices for a long time may be reluctant to trial alternative methods. Leif et al., (2023) had similar findings to the current study, interviewing behaviour support practitioners in Australia, that families' and staff's reluctance to change is the biggest barrier to restraint reduction. It is also not a given that having completed formal training is associated with knowledge on restrictive practice, as demonstrated by Subih et al., (2025), who found that 34% of variance in nurses' views of restraint is accounted for by knowledge, experience, and attitudes despite formal training. These factors will need to be considered when designing training interventions for restrictive practice use. Similarly, previous research has also found that concerns for safety, both of the staff's safety (Gerace & Muir-Cochrane, 2019; Larue et al., 2018; Moore & Haralambous, 2007; Rose & Cleary, 2007), and the safety of people receiving services (Chavulak et al., 2025; Kinner et al., 2017) are barriers to restraint reduction. High percentages of staff report being fearful at work (Gerace & Muir-Cochrane, 2019) or report being assaulted at work (Rose & Cleary, 2007), which may provide insight for understanding why staff turn to restrictive practices to

alleviate their stress of being harmed in the workplace. Under-resourcing of the disability support sector is also a common theme across the literature (Gerace & Muir-Cochrane, 2019; Leif et al., 2023b; Moore & Haralambous, 2007) and reflected in the findings of this study. While many studies cited a lack of resourcing leading to high restrictive practice use, only one study identified a lack of service providers or long wait times in accessing services, as was found in this study (Leif et al., 2023b). This may be due to the majority of studies taking place in inpatient or institutional settings where these resources are more readily available in service, making accessing other professionals a unique barrier in community settings. This may be worthy of further investigation and has been so far unexplored in the literature.

The most commonly cited resource that is lacking in the support sector is staff (Kong & Evans, 2012; Moore & Haralambous, 2007; Wilson et al., 2018). Research frequently cites understaffing and high turnover leading to a reliance on less familiar, less experienced staff, with less training, leading to high levels of restrictive practices (Dowse et al., 2019;Kong & Evans, 2012; Moore & Haralambous, 2007). Participants in the current study did not raise staff experience or the use of less familiar or casual staff as barriers. Common concerns in relation to staffing in the current study centred on understaffing, staff well-being and burnout. As shown in the literature, poor staff mental health and burnout lead to high turnover and, in turn, the likelihood of barriers listed above (Dowse et al., 2019; Kong et al., 2017; Leif et al., 2023b). It is then possible that the above barriers still exist in New Zealand, or that if current trends in staff burnout continue, then they may become barriers in the future. Lack of education was not a barrier raised as it has been in other studies, likely owing to the high rate of training in the sample (Kong et al., 2017). Future research examining the impact of these factors on educational opportunities of supported people may help to identify how these factors affect supported peoples care and the long term use of restrictive practices through the addressing of potential skill deficits.

The quality of behaviour support plans has long been associated with the use of restrictive practices (Carberry et al., 2024; Wardale et al., 2018; Webber et al., 2012). In an audit in Australia, it was

found that the majority of behaviour support plans were considered weak or were too complex to be followed by staff (Wardale et al., 2018). Challenges with support plans in New Zealand appear to differ from Australia. Participants in both the survey and the focus group reported that there was difficulty accessing behaviour support services. This may be due to New Zealand having few providers and long waitlists up to two years as reported by the focus group. This appears to have led to organisations either not having behaviour support sections in plans, or having to rely on internal staff knowledge to develop these, rather than the barrier being with the quality of plans written by specialists, such as in Australia (Wardale et al., 2018). Outside of the development of interventions, however, there is the inconsistent implementation of interventions as a barrier. For a behaviour support plan to be implemented, staff require enough time to be able to implement strategies effectively, as Fox et al. (2021) found in educational settings. Given the challenges in New Zealand with having sufficient staff on shift, it is possible that this may also be a limitation in the support planning that has not yet been identified. Further research is required to examine the access, development, and use of formal intervention plans for reducing behaviours of concern in New Zealand.

Organisational constraints have also been found to be a barrier in existing literature, but were less common than other barriers. Specifically, policy and procedures can be a barrier, not often aligning with the least restrictive practices (Moore & Haralambous, 2007). External pressures leading to negative views from auditing or review processes (Sunseri, 2025), but also in the form of media scandals such as individuals with disability being subjected to inappropriate restraint in Australian (Armstrong, 2018) and American (Sturmey, 2015) schools. The current study supports these findings. Although not identified in the present study, the impact of legislation and government policy on the use of restrictive practices may also result in barriers, which can lead to organisations reliance on more restrictive practices compared to function-based interventions. This can be linked to reports of under-resourcing such as funding cuts. Funding cuts can also contribute largely to previously discussed resourcing constraints such

as under staffing and lack of access to specialist services. Future research will need to be conducted on the specific links in New Zealand between legislative policy and funding, and the current studies identified enablers and limitations to restraint reduction.

As indicated by prior research, legislation can sometimes contradict itself, particularly with reference to protecting autonomy and human rights and the responsibilities of organisations and individuals to protect individuals from preventable harm (Serra, 2025). Furthermore, government policies and legislation can sometimes provide confusing and difficult-to-follow definitions of restrictive practices (Leif et al., 2023b) leading to confusion and inconsistent approaches.

Enablers of restraint reduction

Consistent to the findings of this study, the need for appropriate staff training has been a common theme across the literature (Craig & Sanders, 2018; Kong & Evans, 2012; La Barrass et al., 2025; Wilson et al., 2018). With many staff reporting that not having access to enough alternative intervention strategies and perceptions of restrictive practices were a barrier. While levels of training were high in the sample, providing additional training will help to combat these. In the literature, the use of debriefing as an ongoing learning opportunity, trauma-informed care, and positive behaviour support have all been shown to reduce the use of restrictive practices (Craig & Sanders, 2018; Hayward et al., 2023; Leif et al., 2023a; Sanders, 2009). Participants in the current study have highlighted that additional training on the rights of people with disabilities and the specific risks related to restrictive practices appears to be related to a reduction in restrictive practices in New Zealand. This is somewhat supported by literature displaying nursing staff often have poor knowledge on restrictive practices even in trained professionals (Subih et al., 2025) and likely requires further investigation.

The use of effective and high-quality function-based intervention, rooted in positive behaviour support and applied behaviour analysis, has been demonstrated to reduce or eliminate up to two-thirds of restrictive practices (Carberry et al., 2024; Fox et al., 2021; Hayward et al., 2023; Leoni et al., 2018;

O'Hagan et al., 2008; Webber et al., 2012). The quality of support plans has also been directly linked to their effectiveness at reducing restrictive practices (Webber et al., 2012). Functional interventions have also been effective in addressing caregiver capacity concerns, such as burnout, leading to lower motivation or resistance to try alternative strategies (Larue et al., 2018). The use of functional behaviour interventions in New Zealand, as with other countries, seems negatively impacted by the availability of resources. There are not enough practitioners or providers, leading to long waitlists to access services, and staff do not have time in their shift to implement strategies correctly (Fox et al., 2021; Leif et al., 2023b). The use of functional behaviour support is generally the cornerstone of interventions effective at reducing restrictive practices (Carberry et al., 2024; Craig & Sanders, 2018; Hayward et al., 2023; Huckshorn, 2006; Leoni et al., 2018). Individuals who display behaviours of concern often do not have access to formal behaviour support interventions, even in inpatient settings (Leoni et al., 2018). As there is no New Zealand data currently available, future research may examine the number of individuals with developmental disabilities in New Zealand who display behaviours of concern and have received or have access to specialist behaviour interventions to ensure we are able to meet demand to reduce restrictive practices.

Survey and focus group participants felt that having support from leaders throughout the organisation as well as clear policies and procedures helped them to work in a less restrictive way. Strong organisational leadership has been a consistent requirement in any successful intervention to reduce restrictive practices (Craig & Sanders, 2018; Larue et al., 2018; Leoni et al., 2018) and is the first strategy of the six-core strategies model adopted by the New Zealand government (Huckshorn, 2006; *Six Core Strategies Checklist*, 2013). An Organisation's leadership is responsible for outlining policy and procedure staff will work under regarding restrictive and other practices. They are responsible for keeping data and records of restraint use, especially in New Zealand, where these are not currently required to be reported to an external or government agency, except for unplanned or emergency

restraints. Organisations are also required to assemble and coordinate review boards to oversee the administration of restrictive practices within their organisation. Some of these interventions, such as maintaining internal databases, convening review boards, and training staff who use restrictive practices, are outlined in the national disability standards (Standards New Zealand, 2021), but focus group participant responses indicated that there was not enough clear guidance as they received conflicting interpretations of the standards from auditors and colleagues.

How staff interact with service users has been found to be a preventative factor in both the use of restrictive practices, but also in preventing the harmful side effects associated with their use (Griffin et al., 2025; Moyles et al., 2023). Participant responses relating to treating individuals receiving support with respect, compassion and empathy were also referenced in the current study. Getting to know the people they are working with, including likes and triggers, has also been highlighted to be a protective factor. These approaches to individuals who were distressed began to form the approach to restraint reduction on psychiatric wards, such as the use of Safewards (Bowers, 2014). Research shows that these models are effective in reducing restrictive practices (Gerace & Muir-Cochrane, 2019; Wilson et al., 2018). While Te Pou has adapted the use of the six core strategies for New Zealand use (*Te Pou*, 2013) , there is currently no evidence that the principles associated with the Safewards model have been incorporated into the New Zealand restraint reduction strategy (Ministry of Health, Manatū Hauora, 2023)

In the present study, staff report often feeling left out or disempowered during the decision-making process about restrictive practices. Research indicates that the involvement of all stakeholders, including staff and families, is important in the reduction of restrictive practices (Curran, 2007; Kong et al., 2017; Kong & Evans, 2012; Moore & Haralambous, 2007). Failing to involve all parties can lead to siloing of information, which has been cited as a general barrier to supporting individuals with complex needs in a variety of settings (Armstrong, 2018; McVilly et al., 2023). Staff often feel that they are not

involved in decision-making or multidisciplinary teams in relation to restraint reduction, leading to less adherence to intervention strategies (Kong et al., 2017). Reducing restrictive practices generally requires a change in organisational culture, which requires normalising some degree of risk (Moore & Haralambous, 2007). If staff are not provided with an opportunity to express their concerns as well as their views, gaining support for alternative strategies will be difficult (Curran, 2007). Ongoing training opportunities can be an opportunity for two-way discussions with staff so that, in addition to imparting information on learners, front-line staff can also share information in a bottom-up approach to help inform policymakers. Further research is needed to identify how the current network of communication operates in the sector and where there may be opportunities to improve caregiver and staff involvement in decision-making processes as at local and national level.

Limitations

Although the findings of this study are promising to help guide organisations and service providers within New Zealand, only 43 participants in the disability sector completed the survey, which is a relatively small sample size. Participants were from diverse roles and levels of experience and education; however, their responses may not be representative of the wider support network. It is important to note that while participants have shared their thoughts and experiences with restrictive practices, however data was not collected on the frequency with which these barriers and enablers were present in the workplace. Although findings indicate restrictive practice use is high, and the New Zealand faces many of the same challenges to its reduction as other countries, this study highlights that there is still limited knowledge about the use of restrictive practices in New Zealand and that more research is required to fully evaluate staff attitudes, level of training, as well as access to behaviour support services. Thus, it is important to take these limits into consideration when interpreting the results. A number of factors such as organisational resourcing, caregiver or staff capacity/burnout, or

lack of incentivisation, may have contributed to lower rates of responding. Further research should consider these limitations and barriers to participation to increase response rates.

Given the recruitment method, it is possible that respondents have come from a population with pre-established ideas of restrictive practices and behaviours of concern, leading to a sampling bias. This may explain certain results, such as high levels of training and similar definitions of behaviours of concern. Similarly, it is impossible to rule out that some responses are from individuals working in the same environment or with the same individuals as other participants. This may lead to over- or underestimating of rates of restrictive practices. It may also potentiate results that are representative of only a few organisations rather than the support sector as a whole. This study expands previous research, including and comparing the responses of individuals in diverse roles in the support of individuals with intellectual or developmental disabilities. There were few participants from certain roles, and comparisons between populations should be viewed tentatively. Limited demographic data was collected for the study. Between-group comparisons could be strengthened by including age, gender, ethnicity, and region data in future studies. Lastly, data collected in this study included open-ended questions that were analysed using thematic analysis, which relies on subjective interpretation of responses. The inclusion of more objective, quantitative data in future studies may help to increase responses and enable better analysis of responses between groups.

Implications for practice

While more research is required, many of the identified barriers and enablers from the current study are similar to those that have been identified in similar fields and in other countries. Many studies in other related disciplines (e.g., hospital and mental healthcare) have had success in reducing restrictive practices by up to 90% through addressing some of these barriers, whether through the six-core strategies, safe wards, or other models (Bowers, 2014; Craig & Sanders, 2018; Huckshorn, 2006; La Barrass et al., 2025; Leoni et al., 2018). In New Zealand, organisations should focus on ensuring that

there is strong leadership throughout the organisations, with an underlying culture driven towards reducing restrictive practice, which allows staff to receive ongoing coaching in the use of alternatives and increasing the rights of people with disabilities. Changes to behaviours associated with restrictive practice use should be informed and function-based strategies that not only reduce behaviours of concern but also grow an individual's abilities and autonomy. The use of restrictive practices should be monitored regularly by multi-disciplinary teams that include individuals with lived experience of restrictive practice use. Individuals should be supported in respectful and dignified ways that uphold their rights while treating them with empathy and respect. Lastly, families and support workers should be involved in the decision-making process to ensure that their knowledge and experience are included in reducing restrictive practices while also providing them with opportunities to have their concerns heard and addressed to maintain the safety and well-being of all parties involved. In sum, these combined elements may help to improve outcomes and long-term use of effective and least-restrictive support strategies.

Conclusion

Despite staff displaying a high level of training and a good understanding of behaviours of concern, restrictive practices in New Zealand remain high. The experiences of staff and professionals working in the New Zealand disability sector are similar to those who use restrictive practices in other care sectors and countries. There have been many studies demonstrating reductions in the use of restrictive practices by addressing some of the barriers and limitations identified by participants, such as six-core strategies and Safewards. Additional research is required to better understand the prevalence of behaviours of concern and the use and attitudes towards restrictive practices in New Zealand.

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Tables

Table 1

Participant Characteristics

Characteristic	N (%)
Role	
Support Worker	17 (36.53)
Service Delivery Manager	4 (9.30)
Care Co-Ordinator	2 (4.65)
Specialist Care Provider	18 (41.86)
Other	2 (4.65)
Experience	
0-11 Months	10 (26.26)
1-4 Years	16 (37.21)
5-9 Years	7 (16.28)
10+ Years	10 (26.26)
Relevant Qualifications	
No Qualifications	*4 (9.52)*
Health and Wellbeing Level 3	*4 (9.52)*
Health and Wellbeing Level 4	*8 (19.05)*
Bachelor's degree	*10 (23.81)*
Graduate Certificate	*2 (4.76)*
Master's Degree	*14 (33.33)*
Doctoral Degree	*1 (2.38)*

Table 2

interrater Reliability

Scale	% Agreement 1	% Agreement 2	Kappa (95% CI)	P-Value
Environmental restraint	88.57	94.76	0.846 (0.77, 0.90)	< .001
Mechanical Restraint	95.24	97.62	0.826 (0.65, 0.84)	< .001
Personal Restraint	87.91	93.40	0.717 (0.65, 0.84)	< .001
Chemical Restraint	91.90	95.24	0.747 (0.66, 0.84)	< .001
Seclusion	85.71	96.43	0.837 (0.69, 0.98)	< .001
Behaviours of Concern	93.94	96.21	0.848 (0.81, 0.88)	< .001
Causes of behaviour	92.68	96.78	0.839 (0.8, 0.88)	< .001
Effective Interventions	90.91	94.2	0.643 (0.57, 0.71)	< .001
Training	87.24	96.43	0.817 (0.74, 0.9)	< .001
Enablers	93.12	93.92	0.408 (0.32, 0.50)	< .001
Barriers	91.30	94.41	0.726 (0.65, 0.80)	< .001
Total	91.85	95.53	0.785 (0.77, 0.80)	< .001
Focus Group Enablers	90.00%		0.734 (0.49, 0.98)	< .001
Focus Group Barriers	100%		1 (1, 1)	< .001

Table 3

Types of Restrictive Practices

Type of Restrictive Practice	N (%)
Environmental	187 (30.51)
Mechanical	214 (34.91)
Physical	171 (27.90)
Chemical	200 (32.63)
Seclusion	21 (3.43)

Table 4

Specific Restraints

Specific Restraint	N (%)
Environmental Restraints	
Locked Doors	27 (62.79)
Locked External Doors	15 (34.88)
Locked Internal Doors	12 (27.91)
Door Sensors	12 (18.60)
Gates	8 (18.61)
Internal Gates	5 (11.63)
External Gates and Fences	4 (9.30)
Locked Cupboard	8 (18.60)
Locked Kitchen	5 (11.63)
Locked Fridge or Freezer	4 (9.30)
Locked Pantry	6 (13.95)
Vehicle Child Safety Lock	4 (9.30)
Specific Items Locked	4 (9.30)
Mechanical Restraints	
Harness	14 (32.56)
Straps/Belts	11 (25.58)
Belt Lock	2 (4.65)
Lap Belt	11 (25.58)
Angle Guard	2 (4.65)
Bed Rail	5 (11.63)

Tray	2 (4.65)
Specialty Clothing	2 (4.65)
Arm Splints	2 (4.65)
Helmet	2 (4.65)
Physical Restraints	
Holding	21 (32.56)
Trained Hold	3 (6.98)
CPI	2 (4.65)
Hand Holding	7 (16.28)
Arm Holding	4 (9.30)
Bear Hug	4 (9.30)
Held Down	2 (4.65)
Held Against Surface	2 (4.65)
Body Blocking	6 (13.95)
Physically Moving	8 (18.60)
Pushing	1 (2.33)
Redirected to another area	5 (11.63)
Chemical Restraints	
Regular Medication	7 (16.28)
PRN Medication	17 (32.56)
Psychotropic Medication	14 (39.53)
Antipsychotics	6 (13.95)
Risperidone	3 (6.98)
Periciazine	1 (2.33)

Mood Stabilisers	10 (23.26)
SSRIs	1 (2.33)
Anxiolytics	9 (20.93)
Benzodiazepines	8 (18.60)
Clonazepam	3 (6.98)
Lorazepam	8 (18.60)
Diazepam	2 (4.65)
Sedatives	12 (27.90)
Off Label or Misuse	4 (9.30)
Seclusion	
Enclosed in their Bedroom	6 (13.95)
Enclosed in the Classroom	1 (2.33)
Enclosed in Other Room	5 (11.63)
Doors Held Closed	1 (2.33)

Table 5

Training

Training	N *(%)*
Yes	40 (93.02)
NVCI	1 (2.33)
Positive Behaviour Support	10 (23.26)
Team Teach	1 (2.33)
Trauma Informed Care	2 (4.65)

	CPI/MAPA	3 (6.98)
	Sensory Modulation	1 (2.33)
	Restraint Minimisation	2 (4.65)
	Ngā Parewa Standards	1 (2.33)
	Ongoing	3 (6.98)
	Requests More	2 (4.65)
No		3 (6.98)

Table 6

Definitions of Behaviour of Concern

Type of Restrictive Practice	N (%)
Decreases in Quality of Life or Well-Being	12 (27.91)
Risk of Harm to Self or Others	20 (46.51)
Elevation/Escalation	4 (9.30)
A form of Communication	1 (2.33)
A sign of Distress	3 (6.98)
Causes Distress	2 (4.65)
Causes Decreased Opportunities	3 (6.98)

Table 7

Specific Behaviours of Concern

Specific Behaviours	N *(%)*
Physical Aggression/Assault	23 (53.54)
Throwing Items at People	3 (6.98)
Hitting	12 (27.91)
Punching	6 (13.95)
Kicking	7 (16.28)
Spitting	5 (11.63)
Grabbing	1 (2.33)
Pushing	3 (6.98)
Biting	8 (18.60)
Scratching	4 (9.30)
Slapping	1 (2.33)
Hair Pulling	2 (4.65)
Strangulation/Choking	1 (2.33)
Pinching	2 (4.65)
Self-Injurious	20 (46.51)
Head Banging	5 (11.63)
Hitting-Self	7 (16.28)
Biting Self	5 (11.63)
Skin Picking	1 (2.33)
Self-scratching	3 (6.98)
Self-Pinching	1 (2.33)
Pulling Own Hair (trichotillomania)	2 (4.65)

Jumping from Heights	1 (2.33)
Kicking or Stubbing Toes	1 (2.33)
Property Damage	12 (27.91)
Throwing Items	6 (13.95)
Breaking Glass	2 (4.65)
Breaking Items	2 (4.65)
Disassembling Furniture	1 (2.33)
Fire Lighting	1 (2.33)
Flooding	1 (2.33)
Verbal Aggression	11 (25.58)
Yelling	4 (9.30)
Name-Calling	1 (2.33)
Profanity	3 (6.98)
Intimidation or Threats	2 (4.65)
Lying/Manipulation	1 (2.33)
Safety/Security	10 (23.26)
Fecal Smearing	2 (4.65)
Elopement	9 (20.93)
Accessing Sharp Objects	1 (2.33)
Oven safety	1 (2.33)
speaking to strangers	1 (2.33)
Putting Oneself in Unsafe Situations	1 (2.33)
Overeating	1 (2.33)
PICA	1 (2.33)
Skill deficits	3 (6.98)
Toileting Challenges	2 (4.65)

Sleep disturbances	2 (4.65)
Dressing Challenges	1 (2.33)
Sexualized Acts	4 (9.30)
Inappropriate Touching	1 (2.33)
Inappropriate Nudity	2 (4.65)
Rape	1 (2.33)
Non-Compliance	1 (2.33)
Stealing	1 (2.33)

Table 8

Causes for Behaviours of Concern

Causes	N *(%)*
Access to Tangibles	13 (30.23)
Preferred Objects	2 (4.65)
Preferred Activities	1 (2.33)
Escape/Avoid	7 (16.28)
Escape Demands	1 (2.33)
Avoid Situations	1 (2.33)
Attention	8 (18.60)
Seeking Connection	5 (11.63)
Autonomically Reinforced	5 (11.63)
Sensory Seeking	3 (6.98)
Boredom	1 (2.33)
Emotional State	20 (46.51)
Emotional dysregulation	6 (13.95)
Fatigue	4(9.30)
Fear	1 (21.33)
Frustration	7 (16.28)
Grief	1 (2.33)
Stress	4 (9.30)
Trauma	2 (4.65)
Skills Deficits	13 (30.23)
Lack of Understanding	4 (9.30)
Communication Impairment	6 (13.95)

Physical Discomfort	9 (20.93)
Hunger	3 (6.98)
Pain	4 (9.30)
Sickness	1 (2.33)
Diagnosis	11 (25.81)
Depression	1 (2.33)
ADHD	1(2.33)
Anxiety	6 (13.95)
ASD	1 (2.33)
Eating disorders	1(2.33)
Staffing	3 (6.98)
Staff Changes	2 (4.65)
Stakeholders not understanding	1 (2.33)
Hormones	1 (2.33)
Changes in routine	5 (11.63)
History of Reinforcement	1 (2.33)
Life Situation	1 (2.33)

Table 9

Effective Interventions for Behaviours of Concern

Intervention	N *(%)*
Function-Based Interventions	9 (20.93)
Applied Behaviour Analysis	1 (2.33)
Positive Behaviour Support	3 (6.98)
Behaviour Support Plans	3 (6.98)
Redirection	3 (6.98)
Verbal De-escalation	4 (9.30)
Alternate Activities	6 (13.95)
Supporting Communication	15 (34.88)
Giving Space	3 (6.98)
Understanding their needs	4 (9.30)
Setting Expectations	2 (4.65)
Sensory Modulation	1 (2.33)
Early/Preventive Interventions	5 (11.63)
Teaching Skills	6 (13.95)
Avoid Triggers	8 (18.60)
Teaching Coping Skills	5 (11.63)
Predictable Routines	1 (2.33)
Improving Quality of Life	2 (4.65)
Positive reinforcement	1 (2.33)
Use of Visuals	1 (2.33)
Empathy	1 (2.33)
Compassion	1 (2.33)

Patience	1 (2.33)
Connection and Relationship with the Individual	5 (11.63)
Staff/Caregiver Education	6 (13.95)
Medication	3 (6.98)
Environmental Modification	6 (13.95)

Figures

Figure 1

Rates of Restrictive Practice Use by Country

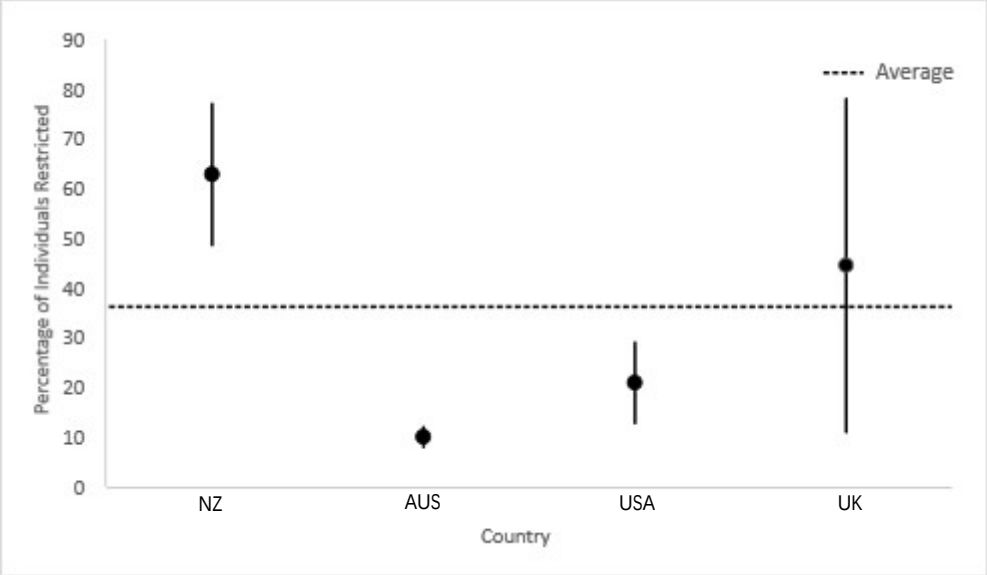

Figure 2

Prevalence of Restrictive Practice Types

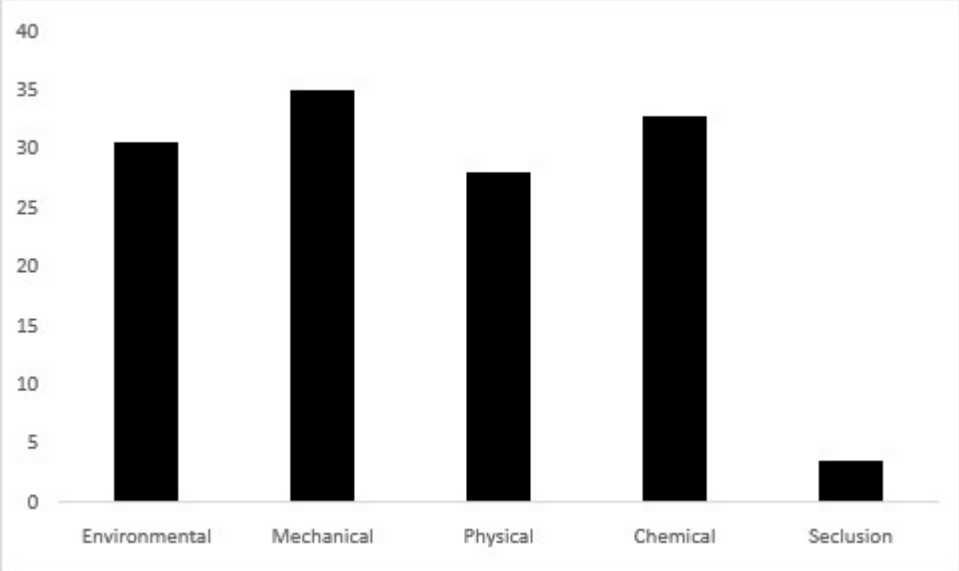

Figure 3

Prevalence of Training Types