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Australian Psychiatrists and Trainee Psychiatrists' Perceptions of Chemical Restraint of Adults with Intellectual Disability

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ABSTRACT

Background: Psychiatrists prescribe the psychotropic medication that is usedto manage behaviors of concern (BOC) in people with intellectual disability(ID) (i.e., chemical restraint), and their attitudes and perceptions towardsthis treatment are important topics for study.
Methods: 133 Queenslandpsychiatrists and psychiatry trainees completed a survey on attitudes andperceptions of ID and psychotropic medication. Exploratory cluster analysis wasperformed on 14 Likert items from this survey to detect groupings within thedata.
Results: Cluster analysis indicated the existence of two distinct clusters.While both groups were willing to be involved in the treatment of adults with ID,Cluster 1 held attitudes that showed inconsistencies with human rights principlesand with international guidelines regarding psychotropic medication use for BOC.
Conclusions: Our study highlights that the attitudes and perceptions ofa significant subgroup of psychiatrists may contribute to the overprescribingof psychotropics for BOC.

KEYWORDS
Chemical restraint; intellectual disability; behaviours of concern; psychiatrists; prescribing attitudes

Introduction

"Chemical restraint" (CR) is defined in Australian legislation as the "use of medication or chemical substance for the primary purpose of influencing a person's behavior" (National Disability Insurance Scheme NDIS, 2020). Importantly, the legislation also clarifies that CR "does not include the use of medication prescribed by a medical practitioner for the treatment of, or to enable treatment of, a diagnosed medical disorder, a physical illness or a physical condition."

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The use of CR in people with ID is contentious. Australia is a signatory to the United Nations Convention on the Rights of Persons with Disability (CRPD). Article 15 of this convention identifies that this population has the right to freedom from torture or cruel, inhuman, or degrading treatment or punishment. A recent report from the Royal Commission into Violence, Neglect and Exploitation of People with Disability assessed Australia's compliance with the CRPD in relation to restrictive practices and argued for Australia and all other signatory nations to eliminate restrictive practices and protect all people with disability from off-label prescriptions under the guise of "behavior modification" (McCallum, 2022).

The literature details the impact of CR on the rights of people with ID (Chandler et al., 2014), the side-effects associated with psychotropic medication use (Divac et al., 2014; Grajales et al., 2019), and the lack of clear evidence for its effectiveness in treating behavior of concern (BOC) in the absence of mental illness, including across different BOC and in different groups of people with ID (Gormez et al., 2014; Ji & Findling, 2016). However, the literature also attests to the persistent and often confronting nature of BOC and the difficulties encountered by family and support persons in treating and dealing with them (e.g., Tam et al., 2015; Womack et al., 2020); international guidelines acknowledge that the prescription of medication for BOC may be necessary in absence of medical or mental illness (Deb et al., 2009; National Collaborating Centre for Mental Health NICE UK, 2015; Royal College of Psychiatrists RCP, Faculty of Psychiatry of Intellectual Disability, 2016). Given the contentious nature of CR and the need to balance the rights and safety of people with ID, it is important to consider how healthcare workers understand and navigate the care of people with ID and the use of CR.

Psychiatrists in Australia and elsewhere are significant prescribers of psychotropic medication for people with ID. However, as of late 2022, neither the Royal Australian and New Zealand College of Psychiatrists (RANZCP) nor the Australian Health Practitioner Regulation Agency (AHPRA) hold official guidelines or position statements on this issue. In contrast, the RCP in the United Kingdom has a position statement (Royal College of Psychiatrists RCP, Faculty of Psychiatry of Intellectual Disability, 2016); NICE published guidelines (National Collaborating Centre for Mental Health NICE UK, 2015) and the National Health Service (NHS) in England also launched the 2016 STOMP (Stop the Over-prescribing of Medication in People with Intellectual Disability) campaign (Deb et al., 2020). The World Psychiatric Association has an International Guide on prescribing psychotropic medication in the management of behavior of concern (BOC) in adults with ID (Deb et al., 2009). Except for UK and Ireland, psychiatrists in most countries including Australia, are offered little or no postgraduate training in ID psychiatry (Kaushal et al., 2020).

International research has examined how psychiatrists understand and navigate the use of CR and the prescribing process. This research has found among psychiatrists and psychiatrist trainees a self-perceived deficits in knowledge and experience, low confidence, and a degree of frustration and reluctance toward working with people with ID (Ruedrich et al., 2007; Werner et al., 2013). The attitudes of Australian psychiatrists toward people with ID have been examined through survey studies conducted between 1995 and 2007, finding that the proportion of psychiatrists who prefer not to work with adults with ID increased from 29% to 58% during this time (Edwards et al., 2007; Lennox & Chaplin, 1995, 1996). These studies did not explicitly explore attitudes to CR but reported that approximately 20% of psychiatrists did not believe antipsychotic medication is overused among adults with ID who exhibit aggressive behavior (Edwards et al., 2007; Lennox & Chaplin, 1995, 1996).

In Australia, if a person lacks capacity to make certain decisions, a guardian can be legally appointed to make those decisions for them. In a recent qualitative study with 13 Australian statutory guardians of people with ID who are subject to CR, participants described how some prescribers, including psychiatrists, used a diagnosis of mental illness to circumvent the restrictive practices administration regime mandated under Queensland legislation (Edwards et al., 2020). Guardians reported that prescribers saw the legislated regime as cumbersome, time-consuming, and expensive. Qualitative research from the UK examining the prescribing process from the perspective of people with ID, family members, carers indicate that while these groups valued decision-making where they had a genuine voice and input they were often marginalized in this process (Sheehan et al., 2018, 2019).

The Current Study

Against the backdrop of under-developed ID training and in the absence of official guidelines or position statements on CR, the current study sought to examine Australian psychiatrists' views of the care of people with ID, including the use of CR. Research investigating prescribing tendencies (e.g., polypharmacy and off-label prescribing) within mainstream psychiatry suggest that there is considerable variability both across practice settings and between individual practitioners (Kukreja et al., 2013; Vijay et al., 2018). As such, investigations should allow for the exploration of both differences and similarities in attitudes among psychiatrists. The identification of attitudinal sub-groups groups could reveal points of consensus as well as disagreement and can allow inferences to be made regarding contributing factors for such differences and implications they might have for clinical care.

Method

Exploratory cluster analysis, an analytical technique designed to identify homogenous groups within data where the groupings are not previously known (Hennig & Meila, 2015), was used to explore the aim of this study.

Measure and Recruitment

Items were drawn from a survey used in a larger study measuring psychiatrists' views on ID psychiatry and the clinical care of people with ID. This survey was based on findings from previous literature that has explored theoretically relevant aspects of psychiatrists' involvement with adults with ID (Edwards et al., 2007, 2020; Lennox & Chaplin, 1995, 1996) and was trialed with a small group of Queensland psychiatrist members of the Royal Australian and New Zealand College of Psychiatrists (RANZCP) Section of Psychiatry of Intellectual and Developmental Disability. The Queensland Branch of the RANZCP reviewed the project and agreed to address and mail the blank stamped enveloped survey to their Queensland Psychiatrists and trainee members (around 600). Answers were collected anonymously.

The current study made use of items measuring the participants' professional background: previous specialized ID training, history of having worked with adults with ID, work setting (private vs. public), and position (practicing psychiatrist vs. psychiatry trainee). Fourteen Likert scale items were included in the cluster analysis. These items measured attitudes and perceptions toward adults with ID and attitudes toward BOC, perceptions of CR, perceptions of the restrictive practice regime, attitudes toward legislative oversight and involvement, and the role of psychiatrists in the management/assessment and prescription of CR (see Table 1).

Cluster Analysis

All analyses were performed using IBM SPSS Statistics 26. Missing data were handled using listwise deletion, resulting in a sample size of 123 for these analyses. Although there is no generally accepted rule of thumb for sample size in cluster analyses (Siddiqui, 2013), validity is improved when larger samples are used. In a simulation study using artificial data sets with known cluster structures, Dolnicar et al. (2016) demonstrated that the identification of clusters improves substantially when the sample size increases from 10 to 30 times the number of cluster variables. Improvement levels off after this point but continues until the sample reached around 100 times the number of variables. As such, the current sample was considered small for the purpose of cluster analysis. However, recruitment had proven difficult in the current study and analyses were therefore completed with the sample at hand.

Table 1. Cluster items: mean scores and participant agreement with items.

Cluster variables	Total sample	Cluster 1 $n = 48$	Cluster 2 $n = 75$	p value	Cohen's d
	M (*SD*) % agreeing with statement[a]				
Adults with ID and behaviors of concern					
Problem behaviors are commonly a presenting feature of mental illness in adults with severe ID	4.94 (1.15) 91.6	4.85 (1.32) 87.5	4.95 (1.05) 93.3	.668	
I would prefer not to work with adults with ID	2.93 (1.53) 36.4	3.04 (1.62) 37.5	2.68 (1.39) 32.0	.190	
Chemical restraint					
Antipsychotic drugs are overused for adults with ID who have problems with aggression	4.40 (1.31) 77.9	3.75 (1.39) 56.2	4.87 (1.03) 93.3	<.001	−0.95
I think the use of medication to manage problem behaviors in adults with ID constitutes chemical restraint	4.02 (1.52) 64.4	2.85 (1.41) 27.1	4.73 (1.09) 88.0	<.001	−1.56
Inadequacy of community social support often makes the inappropriate prescription of antipsychotic drugs necessary	4.60 (1.19) 84.1	4.13 (1.27) 72.9	4.85 (1.10) 89.3	.001	−0.63
Inadequacy of community psychiatric services often makes the inappropriate prescription of antipsychotic drugs necessary	4.28 (1.30) 77.3	3.67 (1.39) 56.2	4.61 (1.15) 88.0	<.001	−0.76
Restrictive practice regime					
Involvement with the government department/office responsible for guardianship/restrictive practices is time consuming	4.90 (1.05) 92.5	5.08 (0.90) 97.9	4.73 (1.08) 89.3	.064	
It is easier to diagnose adults with ID with a mental illness rather than to negotiate the restrictive practises regime managed by the government department/office responsible for guardianship/restrictive practices	3.80 (1.43) 60.2	4.27 (1.28) 72.9	3.49 (1.44) 50.7	.003	0.57
Oversight and involvement					
I do not believe the restrictive practices legislation and associated administrative requirements are necessary for adults with ID	2.60 (1.15) 16.0	3.25 (1.10) 31.2	2.12 (0.93) 5.3	<.001	.86
I feel that the prescription of medication for the management of problem behaviors should be a medical decision, and there is no need to legislate around this issue	3.54 (1.53) 49.2	4.48 (1.24) 77.1	2.84 (1.35) 28.0	<.001	1.56
I believe that the prescription of medication for the management of problem behaviors should be the decision of the doctor in charge of the patient's treatment	4.74 (1.23) 84.2	4.92 (1.15) 87.5	4.59 (1.32) 80.0	.157	
The prescription of medication for the management of problem behaviors in adults with ID should not involve non-medical decision makers	3.14 (1.54) 33.8	3.69 (1.49) 52.1	2.75 (1.47) 76.0	.001	0.67
Role of psychiatrists					
There is no role for a psychiatrist in assessing/managing problem behavior in adults with ID	1.49 (0.82) 3.1	1.35 (0.60) 0.0	1.56 (0.93) 5.3	.139	
I believe Psychiatrists must be involved in the development of positive behavior support plans for adults with ID	4.74 (1.25) 85.7	4.69 (1.37) 83.3	4.72 (1.19) 86.7	.890	

Note. ID = intellectual disability.
[a]Dichotomised score (1–3 = disagree, 4–6 = agree; derived from a 1–6 Likert scale)

Independence among variables was confirmed (all $r < .7$) before they were entered into the cluster analysis. A two-step exploratory procedure was followed to identify cluster groups. First, a hierarchical agglomerative clustering analysis using Ward's clustering method and squared Euclidean distance as a measure of similarity was performed. This was followed by a nonhierarchical k-means clustering analysis, using a predetermined number of clusters in the analysis. Comparisons of cluster solutions were conducted to evaluate cluster stability, and repeated analyses with random deletion of items were performed for the same purpose. Once clusters were defined, *t*-tests were conducted to test mean differences in responses to the cluster variables. Chi-square tests and Fisher's Exact test were used to assess if cluster affiliation was associated with ID training, work setting, position, and history of having worked with adults with ID.

Ethical Approval

All procedures involving human subjects/patients were approved by University Human Research Ethics Committee at the Queensland University of Technology (QUT), approval number 1,400,000,049. Participants were provided with information about the study before starting the survey and were advised that by completing the survey, they indicated their consent to involvement in the study.

Results

Participant Characteristics

A total of 133 participants completed the survey, of whom 68.9% were practicing psychiatrists. Although the survey targeted Queensland psychiatrists, a small proportion (6.6%) reported practice in other Australian states or New Zealand. Most participants (93.9%) had experience of assessment and/or treatment of adults with ID, and 34.8% had received specialized training in assessment and management of mental illness in adults with ID. The majority of participants (59.7%) had worked with adults with ID in public settings only, 19.4% had worked in private settings only, and 17.7% of participants had worked across both settings.

Cluster Analysis

The initial hierarchical cluster analysis (Ward's method, using Euclidean distance) produced a dendrogram indicative of a two-cluster solution. A two-cluster solution was therefore specified for the nonhierarchical k-means cluster analysis. The two methods produced similar cluster distributions, although the classification of cases demonstrated some variability across methods; a 22.8% change in cluster affiliation was noted between methods. Random deletion of individual items produced similar cluster solutions, further indicating stability in the data.

Table 1 provides an overview of the descriptive statistics for each cluster variable. *t*-tests revealed significant differences between the clusters on eight of the 14 cluster variables. Consideration of items with no significant differences indicated that a majority of participants in both clusters were positive toward working with adults with ID, and believed that BOC are a common presenting feature of mental illness; that involvement with the department/office responsible for guardianship/restrictive practices is time-consuming; and that psychiatrists should be involved in the assessment and management of BOC and in the development of positive behavior support plans (two items), but that prescription of psychotropics should be the decision of the doctor in charge.

In terms of significant differences, Cluster 1 tended to respond to items in a way that indicated a more favorable attitude toward continued use of CR. Participants in this group scored significantly lower for the statements that: antipsychotic medications are overused among adults with ID; using medication to manage BOC in adults with ID constitutes CR; and antipsychotic drugs are necessitated by inadequate community social support and psychiatric services (two items). Cluster 1 also scored significantly higher on the statement that it is easier to diagnose adults with ID with a mental illness than to engage with the restrictive regime practice, and on items reflecting a preference for less legislative oversight regarding the restrictive practice process. Specifically, Cluster 1 reported significantly higher scores for the statements that administrative requirements for restrictive practices are unnecessary, that prescription of medication for the management of BOC is a medical and not a legal issue and that non-medical decision-makers should not be involved in this process. Effect sizes for the differences between Cluster 1 and Cluster 2 ranged from moderate to large. Overall, the two items relating to the definition and use of CR and the two items measuring views on legislative oversight contributed most to the distinction between the two groups.

Associations between clusters affiliation and specialized ID training, work setting (both private and public practice, private practice only, or public practice only), position, and experience with adults with ID were calculated. The result of these analyses found no significant associations between cluster affiliation and psychiatrists' professional background.

Discussion

The use of CR and other restrictive practices for people with ID is a topic of increasing international focus and concern. The current study examined psychiatrists' and psychiatrist trainees' attitudes and perceptions of CR in adults with ID with the use of an exploratory cluster analysis. Two distinct clusters were found in the data. Differences between these grouping indicated that Cluster 1, overall, showed less concern over the use of CR and was less favorable toward legislated oversight. These findings are notable, as the prevalence of psychotropic medication in people with ID significantly exceeds the prevalence of mental illness in this population (Gomes et al., 2019; O'dwyer et al., 2019; Song et al., 2020), suggesting its use for behavior modification. For instance, a large UK cohort study of people with ID found that only 26% of those treated with antipsychotic medication had a record of severe mental illness, and that challenging behavior was independently associated with prescription after adjustment for neuropsychiatric diagnosis (Sheehan et al., 2015).

Notably, 72.9% of Cluster 1 disagreed that the use of medication to manage BOC constitutes CR and 43.8% did not believe that psychotropics were overused among adults with ID who have problems with aggression. The corresponding proportions in Cluster 2 were 12.0% and 6.7%. Participants in Cluster 1 were also significantly less likely to believe that the CR could be a consequence of inadequate community services and social supports. These findings may be linked. If the current CR prescribing practices are seen as appropriate and clinically motivated, potential non-medical influences on prescribing such as lack of community support, may not be seen as important. A lower tendency to problematize CR and to recognize the influence of non-medical factors could reduce the impetus to review the use of CR, engage with alternative non-clinical treatments, and eliminate use where possible.

Cluster 1 reported significantly lower support for the legislative and administrative requirements for restrictive practices (68.8 vs. 94.7%), for the need to legislate around the use of CR (22.9% vs. 72.0%), and for additional involvement of non-medical decision-makers in the prescription of CR (52.1 vs. 76.0%). These findings mirror earlier studies where family members/carers and public guardians have reported a reluctance among some prescribers to include non-medical decision-makers (Edwards et al., 2017, 2020; Sheehan et al., 2018, 2019). Legislative and administrative regulation of CR is part of efforts to reduce or eliminate use (NDIS Quality and Safeguards Commission, n.d.), and more broadly, to protect a vulnerable group who often rely on others to protect their rights. Additionally, the inclusion of non-medical decision-makers, particularly family members, can improve care outcomes by providing a nuanced understanding of BOC causation and enabling the exploration of alternative treatment options (Edwards et al., 2017). Greater resistance toward legislative oversight and involvement of non-medical decision-makers could therefore undermine efforts toward evidence-based best practice interventions addressing BOC and the safeguarding of the rights of people with ID.

Cluster 1 agreed more strongly that it is easier to diagnose adults with ID with a mental illness than to negotiate the restrictive practices regime. One interpretation of this is that a disinclination toward legislative and administrative oversight in Cluster 1 fostered a lower tolerance toward the time commitment associated with this process. Such reluctance, combined with less negative attitudes toward CR, could render psychiatrists more susceptible to using diagnoses of mental illness to circumvent the restrictive practice regime. Circumventing the restrictive practice regime in this way could result in a failure to consider problem behavior support plans and other nonpharmaceutical approaches to the management of BOC.

The identified clusters were compared against several characteristics relevant to the pychiatrists' practice. Although previous studies have shown that work setting, experience, and exposure to research impact psychiatrists' prescribing patterns (Chang & Kim, 2014; Huskamp et al., 2016; Vijay et al., 2018), no significant relationship between practice characteristics and cluster affiliation were found in the current study. This was somewhat surprising as participants with more knowledge/experience with ID could, for instance, hold less favorable attitudes toward CR as they have had greater exposure to people with ID and existing research and CR guidelines. Similarly, psychiatrists in public practice could have had greater exposure to government involvement/legislation than those in private practice, potentially resulting in greater alignment with current clinical guidelines and regulations around CR. In terms of experience, it could be expected that the training of recently-qualified psychiatrists may have been more influenced and shaped by changing attitudes toward people with disability, including societal shifts toward rights and inclusion. It is possible that factors not measured in this study, such as orientation toward evidence-based practice, the prescribing practice of supervisors and colleagues (Lum et al., 2018), and personal prescribing habits (see Eguale et al., 2012; Latimer et al., 2014) are more important influences.

Limitations and Future Directions

Limitations include the small sample size and although random deletion of items and different clustering methods resulted in similar cluster solutions, it is possible size impacted the ability to accurately detect naturally occurring groupings within the data. Moreover, the sample was almost exclusively derived from Queensland psychiatrists against which generalization of findings must be considered. Queensland has had state government restrictive practice legislation since 2009 so the views of Queensland psychiatrists may have been colored by this longer exposure to CR legislation than the rest of Australia.

A purpose-developed survey was used in this study; lack of standardization may have impacted the validity and reliability of the data. It should also be acknowledged that to capture theoretically relevant findings from the literature some questions were by necessity double-barreled (e.g., *It is easier to diagnose adults with ID with a mental illness rather than to negotiate the restrictive practices regime managed by the government department/office responsible for guardianship/restrictive practices*), which could have introduced bias in the data. Last, CR is a controversial topic, which may have influenced data accuracy. Despite the anonymous nature of the survey, it is possible psychiatrists were reluctant to truthfully report their perceptions and attitudes. Alternatively, and perhaps more likely, the controversial nature of the topic may have motivated those with strong opinions of CR (for or against) to respond, which if true, could amplify the differences found in the data between the two clusters.

The current study measured the influence of specialized ID training, work setting, position, and involvement with adults with ID, finding neither of these anticipated factors influenced attitude differences. As such, the study did not contribute to the understanding of mechanisms responsible for attitudinal differences, and future research should continue to explore and identify these. Qualitative methods would be well-suited to this purpose; further illuminating reasons for inappropriate prescription of medication, when it occurs, and psychiatrists' views on alternative methods to address BOC. It is also important that future research measures prescribing behaviors among psychiatrists and how they relate to attitudes.

Conclusions

This study found a distinct sub-group of psychiatrists that was likely to view the use of medication to manage BOC in adults with ID as CR and was less favorable toward its legislated oversight. Specifically, this sub-group was less likely to view CR as problematic or the result of non-clinical factors, resistant to involvement of non-medical decision-makers, and were more positive toward using a psychiatric diagnosis to circumvent the restrictive practice regime. While Australia has developed improved services for people with ID, informed by the CRPD, concerns remain around medication prescribed to manage BOC and changes may not have been embraced by the psychiatric community as a whole. This is notable, given Australia's lack of formal psychiatry subspecialty training opportunities, in addition to a lack of official guidance, such as RANZCP or AHPRA guidelines. The findings in this study, support the call for further research in this area and inform directions for intervention. Priority areas include how best to explore CR is communicated to, and understood by, psychiatrists; and the importance of psychiatrists' involvement in strategy development to reduce overprescribing in people with ID, including training, and prescribing guideline development and implementation.

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[retracted to protect anonymity]

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Declaration of Conflicting Interests

The authors report there are no competing interests to declare.

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