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Pharmacists' Perspectives on Deprescribing Psychotropic Medicines in People with Intellectual Disabilities

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ABSTRACT

Introduction: Psychotropic medicines are sometimes inappropriately prescribed for individuals with intellectual disabilities without a clinical diagnosis of a mental illness, increasing risks of side effects and poor physical health. This study aims to understand how attitudes, training, experience, and work settings are associated with pharmacist confidence in deprescribing psychotropic medicines and to identify enablers and barriers to the psychotropic deprescribing process in people with intellectual disabilities.

Methods: An online survey collected data from 64 pharmacists who reviewed psychotropic medication for individuals with intellectual disabilities between July and December 2022. Linear regression examined the relationship between pharmacist confidence and chosen predictors of attitudes, non medical prescriber status, and working in primary or secondary care. Content analysis applied to free-text data identified enablers and barriers of the psychotropic deprescribing process.

Results: Positive attitudes and working in secondary care were associated with greater deprescribing confidence. Enablers included stakeholder support, good communication, specialist interventions, education, and regular medication reviews. Barriers were lack of support, resources and education, poor communication, and fear of negative consequences.

Conclusion: Pharmacists' positive attitudes towards deprescribing were associated with increased confidence. Successfully deprescribing psychotropic medications, while aiming to improve health outcomes, requires the active support and collaboration of all stakeholders. This support is important as deprescribing interventions may carry potential risks such as discontinuation symptoms and the return of previously managed symptoms.

KEYWORDS

Psychotropic; Pharmacists; Deprescribing; intellectual disabilities

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Introduction

Psychotropic medicines, including antipsychotics, antidepressants, and mood stabilizers, are routinely used in psychiatry for the management of a range of mental health conditions (Joint Formulary Committee, 2022). However, they are sometimes prescribed off-label to individuals with intellectual disabilities who do not have a clinical diagnosis, especially to address behaviors that challenge such as aggression, disruption, or destructiveness (National Institute of Health and Care Excellence, 2015). This issue may be further complicated by several factors. Firstly, there is an increased prevalence of mental illness in this population (Cooper et al., 2007) and secondly mental illness may present differently in people with intellectual disabilities making diagnosis more challenging (Cooper et al., 2007). Furthermore, diagnostic overshadowing, where symptoms arising from physical or mental ill-health are misattributed to a person's intellectual disability, can result in delays in diagnosis and treatment (NHS England, 2023). Despite NICE guidance recommending that antipsychotics can be prescribed for short courses to manage behaviors that challenge when other interventions have proven ineffective (National Institute of Health and Care Excellence, 2015), these medications may be used for longer periods than advised, without regular review. In addition, there is evidence that other classes of psychotropic medicines such as antidepressants and mood stabilizers are also being used for this purpose. Overuse of medication may increase the risk of adverse side effects, especially among individuals with intellectual disabilities who already experience health inequalities (Branford et al., 2018). To address these concerns, NHS England introduced the STOMP (Stopping overmedication of people with a learning disability and autistic people) program in 2016, focused upon deprescribing psychotropic medications (NHS England, n.d.). Deprescribing is the process of reducing or discontinuing potentially inappropriate medications under the supervision of healthcare professionals when the risks outweigh the benefits, aiming to manage polypharmacy and improve health outcomes (Reeve et al., 2015; Thompson & Farrell, 2013). In the context of psychotropic medications, deprescribing involves reducing or stopping medications such as antipsychotics, antidepressants, and mood stabilizers that are prescribed in the absence of a documented clinical diagnosis or for the management of behaviors that challenge. This process involves multiple components, making it a complex intervention (Campbell et al., 2000). Deprescribing psychotropic medication can also carry potential risks, such as discontinuation effects, relapse of symptoms and emergence of new symptoms (Adams et al., 2023).

Effective implementation of complex interventions such as deprescribing depends upon changing stakeholders' behavior and understanding the factors affecting behavior change (Craig et al., 2008; Skivington et al., 2021).

Stakeholders of the psychotropic deprescribing process include people with intellectual disabilities, paid carers, family carers, nurses, healthcare assistants, general practitioners (GPs), psychiatrists, pharmacists, other specialist healthcare professionals, and social care professionals (Adams et al., 2024). Pharmacists, as key stakeholders, play a pivotal role in deprescribing psychotropic medicines in people with intellectual disabilities and enhancing overall health outcomes at individual and systemic levels (Bužančić & Ortner Hadžiabdić, 2023). They contribute to deprescribing through their involvement in the medicines optimization process (Hynes-Ryan et al., 2023; van der Meer et al., 2019). Working collaboratively with and within healthcare teams, pharmacists evaluate the suitability of medication regimens, analyze potential risks and benefits, and engage in effective communication with prescribers to taper or stop medications when deemed appropriate to do so (Barnett, 2019; Bužančić & Ortner Hadžiabdić, 2023). With a focus on patient safety, pharmacists mitigate potential adverse effects while also extending their role to include providing education on medication changes and supporting shared decision-making (Rahayu et al., 2021). However, despite the importance of pharmacists in this process, there remains limited understanding of their perspectives on deprescribing psychotropic medications for individuals with intellectual disabilities. This study aims to address this gap by exploring the attitudes and confidence toward the deprescribing of psychotropic medicines in people with intellectual disabilities together with the barriers and enablers of this process in relation to deprescribing psychotropic medicines for this population. Our three research questions were as follows: (1) Are the attitudes of pharmacists associated with their confidence towards deprescribing psychotropic medicines? (2) What is the relationship between a range of other chosen variables and pharmacist deprescribing confidence? and (3) What are perceived enablers and barriers of the process of deprescribing psychotropic medicines for people with intellectual disabilities?

Methods

Participants

UK-based pharmacists, registered with either the General Pharmaceutical Council or the Royal Pharmaceutical Society of Northern Ireland, involved in medication reviews for people with intellectual disabilities as part of their role, were eligible to take part in this study.

A total of 143 people responded to the online link to participate in the survey and 100 people met the eligibility criteria. Of those, 100 people, 17

dropped out before accessing further information and the survey consent questions. Eighty-three people (69.9% female, 39.7% ≥45 years, 39.3% non-white) provided consent to take part, although several dropped out during various stages of the survey, providing incomplete data, with 64 participants providing complete data. Most participants were from England and 38.4% had been working as a pharmacist for 20 years or more. Participant characteristics are described in Table 1.

Table 1. Participants' characteristics.

	n	%
Age		
34 and under	26	33.3
35 to 44	21	26.9
Over 45	31	39.7
Sex		
Male	23	31.1
Female	51	68.9
Gender		
Male	22	30.1
Female	51	69.9
Ethnicity		
White	42	60.7
Asian	16	23.2
Other Ethnicities	11	15.9
Geographical Region		
Scotland	5	8.1
Wales	1	1.6
Northern Ireland	2	3.2
London	12	19.4
South East	9	14.5
South West	6	9.7
West Midlands	2	3.2
East Midlands	6	9.7
North East	4	6.4
Yorkshire and Humber	11	17.7
East of England	4	6.4
Close friend or family member with intellectual disabilities		
No	61	83.6
Yes	12	16.4
Non medical independent prescriber		
No	23	31.1
Yes or currently training	51	68.9
Duration of practice		
9 years or less	19	26.0
10 to 19 years	26	35.6
Over 20 years	28	38.4
Working predominantly with Adults or Children		
Adults	72	97.3
Children	2	2.7
Working in Primary Care		
No	45	60.8
Yes	29	39.2
Working in Secondary Care		
No	21	28.4
Yes	53	71.6

Design and Procedure

This study was an online cross-sectional anonymous survey of registered pharmacists working with people with intellectual disabilities in the UK exploring their perspectives towards psychotropic deprescribing for people with intellectual disabilities who may be inappropriately prescribed these medicines. This includes those without a documented diagnosis of a mental illness or those receiving long-term psychotropic medications such as anti-psychotics, mood stabilizers, and antidepressants for behaviors that challenge. Prior to accessing the questionnaire, potential participants were presented with eligibility screening questions as stated in Table 2 when accessing the link. Participants who indicated they were not pharmacists or pharmacists who stated they did not carry out medication reviews for individuals with intellectual disabilities, were ineligible and therefore unable to proceed with the questionnaire.

An appropriate published validated questionnaire of pharmacists' experiences including their attitudes and confidence of psychotropic deprescribing in people with intellectual disabilities was not available. Therefore the survey questions were adapted from questionnaires from similar studies. Questions related to confidence were adapted from a study by Clark et al. (2020) exploring knowledge and attitudes of pharmacy students towards polypharmacy and deprescribing. To evaluate the three components of attitudes: emotion, behaviour and cognition (Rosenberg et al., 1960), questions were adapted from a community pharmacy deprescribing survey by Heinrich et al. (2022) and a physicians' deprescribing survey by Djatche et al. (2018). Additional questions were developed through research team discussions with further refinement through feedback from pharmacist peers. The attitude questions assessed pharmacists' implicit and explicit views on deprescribing psychotropic medicines for individuals with intellectual disabilities, including their perceptions of impact of psychotropic deprescribing on medication adherence, their preferences for involving carers versus individuals with intellectual disabilities, the importance of deprescribing in their professional development, and their feelings of anxiety, motivation, satisfaction, and frustration regarding the process. The confidence questions evaluated pharmacists' self-confidence in their abilities to identify inappropriate psychotropic medicines, engage and motivate individuals with intellectual disabilities and their carers, devise and implement deprescribing plans, address apprehensions and influence clinical team decisions throughout the deprescribing process.

The study was made available online using Qualtrics^{XM} on July 17, 2022 and closed on December 17, 2022. The survey was advertised via the College of

Table 2. Eligibility questions.

1	I am a pharmacist registered with the General Pharmaceutical Council or the Pharmaceutical Society of Northern Ireland, working in the UK
	I am NOT a pharmacist registered with the General Pharmaceutical Council or the Pharmaceutical Society of Northern Ireland, working in the UK
2	As part of my role, I carry out medication reviews for people with a learning disability
	I do NOT carry out medication reviews for people with a learning disability

Mental Health Pharmacy e-group, the Future NHS STOMP Platform, and social media posts on X (formally Twitter) and LinkedIn. No personally identifiable data were collected from participants. The survey questionnaire (Supplementary file 1) took approximately 10 min to complete. Ethical approval for this study was given by the Humanities and Social Sciences Research Ethics Committee (HSSREC) of the University of Warwick, UK. (Reference number HSSREC 147/21–22)

Demographic Data

A set of questions were developed in line with Higher Education Guidance (www.advance-he.ac.uk/knowledge-hub/guidance-collection-diversity-monitoring-data) to capture demographic data.

Attitudes and Confidence

Participants were asked to rate their level of agreement with a set of attitude and confidence statements associated with psychotropic deprescribing in people with intellectual disabilities using a fully anchored 5-point Likert type scale: strongly agree (score = 5), somewhat agree (score = 4), neither agree or disagree (score = 3), somewhat disagree (score = 2), strongly disagree (score = 1). We checked for reliability of the attitude statements using the method of calculation of discriminative power (DP) to identify the "good" and "poor" items. This was used to ensure that individuals with generally positive attitudes had responded differently to those with generally less positive attitudes on each included attitude statement item. Attitude statements with a DP of 0.7 or higher were retained to be used to calculate the mean attitude score for each participant. Cronbach's α (.73) was used to assess the reliability (internal consistency) of this retained set (9 of the original 16) of attitude questions. The constructed attitude scores (summed across items and divided by nine) ranged from 1 to 5, where 1 was the most negative attitude and 5 was the most positive attitude. All confidence statements were retained and Cronbach's $\alpha = 0.93$. The total confidence score ranged from 1 to 5, where 1 was the least confident and 5 was the most confident.

Enablers and Barriers

Participants were asked to describe up to three enablers and up to three barriers of psychotropic deprescribing using free-text survey boxes with an unlimited word count.

Data Analysis

To address the first and second research questions, Spearman's correlation between attitudes and confidence in deprescribing was calculated and confidence in deprescribing was compared between predefined groups using t-tests (e.g., independent prescribers vs non-prescribers; primary care vs secondary care). Following this, linear regression was used to determine whether attitudes towards deprescribing, working in secondary care, working in primary care, and independent prescriber status were associated with pharmacist confidence in deprescribing medication. Residuals were inspected and approximated with a normal distribution. The variance inflation factor (VIF) and collinearity were not problematic with VIF values ≤ 2.4. Data were analyzed using Jamovi (Jamovi (Version 2.3) [Computer Software], 2023).

The third research question focused on enablers and barriers of the psychotropic deprescribing process in individuals with intellectual disabilities. Content analysis (Crowe et al., 2015; Humble & Mozelius, 2022) was used to analyze the information provided by respondents within the free-text boxes. The free-text data was transcribed and read multiple times to become familiar with its content. Initial impressions were documented, and discussions among the research team were held to ensure a thorough understanding and mitigate biases. A set of categories were then developed to organize the data which underwent iterative review and refinement to enhance accuracy and depth. All authors were involved in the content analysis working collaboratively to finalize this coding framework. The initial coding was completed by DA, and these codes were independently checked by a second reviewer. Near perfect agreement was achieved, and disagreements were resolved through discussion (IRR = 98.9%).

Results

The questions that formed the attitude questionnaire together with the percentage of participants that endorsed each item along the Likert scale can be found in Supplementary file 2. The mean total score for attitudes towards psychotropic deprescribing was $M = 3.99$, Median = 4, SD = 0.52, $N = 63$. Attitude scores ranged from 1 to 5 with 1 being a negative attitude and 5 being a positive attitude towards deprescribing. The mean total score of 3.99 and the median of 4 indicated that overall participants agreed with the positive attitude statements. A majority (92%) of pharmacists were of the view that a core part of their role should include identifying psychotropic deprescribing opportunities in people with intellectual disabilities and 84% felt more satisfied in their job role when they were involved in the deprescribing process. Furthermore, 92% felt motivated to identify people suitable for

deprescribing and 86% felt valued by the clinical team in efforts to describe inappropriate psychotropic medicines. However, a minority (6%) of participants did not think it was worth spending time talking to people with intellectual disabilities about deprescribing and preferred discussing deprescribing with carers.

The questions that formed the confidence towards deprescribing questionnaires together with the percentage of participants that endorsed each item along the Likert scale can be found in Supplementary file 3. The mean total score for confidence in the deprescribing score was $M = 3.80$, Median = 4, SD = 0.80, $N = 63$. The confidence score ranged from 1 to 5 with 1 feeling low confidence and 5 being high confidence toward deprescribing. The mean total score of 3.8 and the median of 4 indicated that overall participants agreed with statements relating to feeling more confident. It was noted that a majority (84%) felt confident in identifying potentially inappropriate psychotropic medicines, 80% felt confident in recommending strategies, 77% felt confident in implementing individual deprescribing plans and 73% felt confident in addressing carer apprehension. However, 42% of the participants did not feel confident in talking about psychotropic deprescribing to people with severe intellectual disabilities.

At the bivariate level, there was a moderate positive correlation between confidence in deprescribing and attitudes toward deprescribing, $r_s(61) = 0.56$, $p < .001$. Pharmacists working in secondary care were more confident about psychotropic deprescribing relative to those who did not work in secondary care, $t(61) = 4.70$, $p < .001$. Pharmacists working in primary care were less confident about psychotropic deprescribing relative to pharmacists who did not work in primary care, $t(61) = 2.79$, $p < .05$. Those who were independent prescribers or training to be independent prescribers were more confident about deprescribing than those who were not, $t(61) = 2.06$, $p < .05$. There was no statistically significant relationship between length of time in clinical practice and confidence, $F(2,60) = 0.04$, $p > .05$.

In the regression model, attitudes, $t = 3.48$, $p < .001$, and working in secondary care, $t = 2.26$, $p < .05$, were significant independent predictors of confidence in deprescribing, while both working in primary care, $t = .36$, $p = .72$, and independent prescriber status, $t = 1.36$, $p = .18$ were not. The overall regression model was significant, $F(4, 58) = 10.6$, $p < .001$, explaining 38% of the variance in pharmacists' confidence as shown in Table 3.

Fifty-four participants provided free-text comments regarding enablers corresponding to 146 participant responses and 55 participants provided free-text comments regarding barriers corresponding to 141 participant responses. Further investigation into these comments using content analysis led to the development of the frameworks, as described below.

Table 3. Regression model for prediction of pharmacists' confidence toward psychotropic deprescribing in people with intellectual disabilities from attitude score, working in secondary care, working in primary care and independent prescriber status.

Independent Variable	Estimate	SE	*t* statistic	*p*	Standardised Estimate
Intercept	0.6823	0.691	0.987	0.328	
Attitude Score	0.6068	0.174	3.478	<0.001	0.396
Working in Secondary Care	0.6377	0.282	2.259	0.028	0.797
Working in Primary Care	0.0856	0.240	0.357	0.723	0.107
Independent Prescriber Status	0.2534	0.186	1.360	0.179	0.317

Enablers of Psychotropic Deprescribing

Building and Maintaining Stakeholder Support for Psychotropic Deprescribing

Building and maintaining stakeholder support was identified as a key enabler for psychotropic deprescribing, with 54 participant responses identifying its importance. Among these, 18 responses reported the importance of an "MDT (multidisciplinary team) approach" including examples such as "support and engagement of clinical team," "MDT support" and "MDT agreement." Additionally, patient and carer buy-in was noted in 27 responses, with examples including "patient engagement," "carer engagement," "patient and carer involvement," "willingness of patient and carer" and "patient and carers/relatives support." Carers were explicitly mentioned in 18 responses although most did not specify whether the carers were paid or unpaid. However, five responses specifically referred to relatives or family. Four responses reported engaging general practitioners (GPs) in the deprescribing process is a priority enabler.

Education, Training, Knowledge, Experience, and Confidence of Stakeholders and Prescribers Regarding Deprescribing Psychotropic Medication

Twenty-four participant responses regarded stakeholder education, training, knowledge, experience, and confidence as key facilitators. Whilst many responses were broad using terms such as "Awareness/knowledge/education," some were more specific. Two participants explicitly mentioned educating family members, three mentioned carers and two mentioned patients. Fourteen responses focussed on knowledge, with examples including references to "guidelines . . . ," "guidance" and " . . . psychiatric therapeutics."

Good Communication Between All Stakeholders, Prescribers, and Health and Social Care Providers with Clear Documentation in Place

Thirty-one participant responses indicated that good communication between all stakeholders with clear documentation in place was a priority in facilitating psychotropic deprescribing. Seven responses specifically emphasized the importance of having plans in place. One participant noted that the plan should include a "slow tapering schedule individualized for each person" whilst another mentioned the need for

"slow reduction plans." Furthermore, seven responses highlighted the necessity for clear documentation.

Availability and Accessibility of Specialist Interventions and Support Including Positive Behaviour Support

Twenty-six responses highlighted the availability and accessibility of specialist interventions and support with 5 specifically mentioning Positive Behaviour Support (PBS). PBS is a collaborative framework that aims to understand and address the function of an individual's behavior (Gerrard et al., 2019). It involves working with the individual and their carers to modify environments and enhance communication skills to better meet their needs (Gerrard et al., 2019). Twenty-one responses mentioned specialist supportsuch as "LD nurses," "LD teams," "LD clinicians," and "LD community service," where "LD" refers to "learning disability," "OT" (occupational therapy), and "SALT" (speech and language therapy).

Regular Medication Review/Monitoring

Six responses mentioned that medication review and monitoring were factors in enabling psychotropic deprescribing.

Barriers of Psychotropic Deprescribing

Lack of Support from Prescribers and Stakeholders for Deprescribing Psychotropic Medication

Forty-four participant responses identified a lack of support from prescribers and stakeholders as a barrier to deprescribing psychotropic medication. Over half the responses pointed to certain characteristics and factors relating to paid carers, family members, and people with intellectual disabilities that made it challenging to deprescribe psychotropic medicines. This included 22 responses reporting carer resistance and seven reporting resistance from people with intellectual disabilities and six reporting resistance from relatives. Eight responses expressed concern at the "lack of wider MDT support . . . .."

Fear of Negative Consequences

Seventeen participant responses identified a fear of negative consequences as a barrier to psychotropic deprescribing with six responses specifically mentioning the concerns of carers. One response specifically referred to "withdrawal effects" and five specifically highlighted the potential for exacerbation of behaviors that are challenging.

Insufficient Staffing, Resources, and Time to Deliver Psychotropic Deprescribing Interventions

Twenty-nine participant responses indicated that achieving a successful withdrawal is difficult without appropriate utilization of resources. Reported resource gaps included a "lack of pharmacist resource allocated to LD teams," "shortage of staff to support and monitor the process of deprescribing," "capacity to plan and implement gradual reductions," "lack of time" and "funding to support non-drug interventions." Three reported lack of PBS and eight highlighted the lack of non-pharmacological interventions.

Lack of education, Training, Knowledge, Experience, and Confidence of Stakeholders Regarding Deprescribing Psychotropic Medication

Twenty-eight participant responses indicated that lack of "knowledge/skills/confidence, "lack of experience/training" and "lack of familiarity with STOMP . . . " are priority barriers. Seven responses mentioned primary care clinicians can be reluctant to deprescribe medicines initiated by specialists.

Poor Communication Between Stakeholders, Prescribers, and Across Health and Social Care Providers

Twenty-two participant responses highlighted that poor communication was a barrier with five specifically mentioning a lack of information about why medication was started.

Discussion

Attitudes and Confidence of Pharmacists Towards Deprescribing Psychotropic Medicines for People with Intellectual Disabilities

Our findings indicated that most pharmacists had a positive attitude towards the deprescribing of psychotropic medicines in people with intellectual disabilities who may be inappropriately prescribed these medicines, e.g. no documented diagnosis of a mental illness or long-term use for behaviors that challenge. They also felt confident in identifying inappropriate prescribed psychotropic medications, influencing clinical decisions, developing monitoring plans, devising tapering schedules, and recommending strategies to the clinical teams. These findings are similar to those found amongst community pharmacists in Ireland who also had a positive attitude and a high degree of confidence (Heinrich & Donovan, 2022) toward deprescribing. When deprescribing, pharmacists act on the basis of their attitudes and beliefs about deprescribing being influenced by subjective norms and perceived behavioral control (Ie et al., 2023). These attitudes, beliefs, and

behavioral control evolve in a dynamic interplay with experience, environment, and education (Ie et al., 2023). We found that pharmacists' attitudes towards psychotropic deprescribing were associated with their confidence toward psychotropic deprescribing, and while this is only an association, nurturing positive attitudes towards psychotropic deprescribing may encourage deprescribing. A minority of pharmacists preferred to talk to carers about deprescribing, rather than to people with intellectual disabilities. Consideration should be given to how we can address this. If pharmacists can engage people with intellectual disabilities and help them feel involved, they are more likely to take on board medicines advice and to act on it, providing safer and more effective health outcomes (Flood & Henman, 2021).

Relationship Between a Range of Variables and Pharmacists Deprescribing Confidence

We found that working in secondary care was associated with deprescribing confidence among pharmacists whilst working in primary care did not. In contrast, previous studies have indicated that physicians working in primary care are generally confident to deprescribe (Djatche et al., 2018; Niznik et al., 2022). However, their confidence may depend on whether the medication was initially prescribed in secondary care or primary care, whether there were multiple healthcare physicians involved, the class of prescribed medication and the population. Historically advanced practice pharmacist roles were predominantly in secondary care (Clews, 2023), although this trend is shifting with an increasing availability of advanced practice roles in primary care (Martin et al., 2022).

Deprescribing strategies in the UK have tended to focus upon older adults due to the prevalence of multimorbidity and polypharmacy, which is similar to the challenges faced by people with intellectual disabilities (Thillainadesan et al., 2018; Ulley et al., 2019). A qualitative study of primary care pharmacist-led deprescribing in care homes in the UK reported that pharmacists were reluctant to deprescribe medicines that had recently been initiated within secondary care without consulting the prescriber. Similar findings were reported by primary care physicians who were hesitant to deprescribe medicines initiated by another physician (Djatche et al., 2018).

We initially also found that being an independent prescriber, including completing prescriber training, was associated with greater confidence compared to pharmacists who were not independent prescribers. However, this relationship did not emerge within our regression model, where attitudes towards deprescribing and working in secondary care were significant independent predictors of deprescribing confidence, while independent prescriber status and working in primary care did not.

Enablers and Barriers

The findings from our content analysis revealed that the most frequently reported key enablers were effective collaboration between primary and secondary healthcare settings, along with robust communication and positive relationships among stakeholders, all of which were of considerable importance in optimizing psychotropic deprescribing. The organization of healthcare systems has been described as poorly suited to deprescribing (Gillespie et al., 2018) with evidence suggesting that GPs receive poor communication from other healthcare providers about patients with multimorbidity, which should be addressed (Reeve et al., 2013; Sinnott et al., 2013). Collaboration among all stakeholders was highlighted within a recent review by Adams et al. (Adams et al., 2024) who emphasized the importance of collaboration involving nurse prescribers, allied healthcare professionals, social workers, and pharmacists for successful psychotropic deprescribing in individuals with intellectual disabilities. Adopting a whole-system approach to promote deprescribing has been highlighted by others (Doherty et al., 2020). Furthermore, we found that MDT working, which brings together groups of healthcare professionals from different fields to determine treatment plans (Taberna et al., 2020), was another important perceived facilitator. Deprescribing interventions can build upon existing systems by incorporating MDT working, drawing upon the knowledge and experiences of all healthcare professionals in a structured and routine way (Heinrich et al., 2022). Annual health checks and regular medication reviews can provide these opportunities (Ciardha et al., 2022; Duncan et al., 2017; Radcliffe et al., 2023).

Another set of key enablers were the education, training, knowledge, and experience of stakeholders which included healthcare professionals, patients, carers, and family members. Strategies should be implemented to identify gaps in education, training, and knowledge, and any challenges should be addressed within professional training programs, tailored to the stakeholder group. Availability and accessibility of specialist interventions were also found to be key enablers in our study, and there is some evidence that using PBS to support psychotropic deprescribing interventions can produce successful outcomes for people with intellectual disabilities (Gerrard, 2020; Gerrard et al., 2019).

We also found that lack of support from prescribers and stakeholders was a key barrier. GPs are frequently reluctant to deprescribe medication that has been initiated in secondary care by a specialist (Abou et al., 2022)' (Doherty et al., 2020). The majority of stakeholder resistance reported in our study involves resistance from carers, which is often cited by prescribers as a barrier to deprescribing (Anderson et al., 2014). Furthermore, we find that insufficient resources are another key barrier to deprescribing as inadequate resources can hinder effective deprescribing reviews (Adams et al., 2024). Similarly, the challenges of time constraints, insufficient PBS planning, and a lack of non-pharmacological

interventions for behaviors that challenge, and inadequate social care provision have been identified in a previous study as obstacles to psychotropic deprescribing of people with intellectual disabilities (Deb et al., 2023

Negative deprescribing perceptions are common barriers to the deprescribing process (Ailabouni et al., 2016; Okeowo et al., 2023). Although fear of negative consequences is likely to be the most important barrier to psychotropic deprescribing for people with intellectual disabilities, this was not described in our data; surprisingly we found this was the least frequently reported barrier.

Practice Implications

Optimizing psychotropic deprescribing in people with intellectual disabilities involves allocating appropriate resources, cultivating positive attitudes, advocating for pharmacist-independent prescribing, good communication between stakeholders, and ensuring that stakeholders receive appropriate training and support. Providing opportunities for pharmacists to undergo specialized training as independent prescribers may enhance their confidence in managing psychotropic deprescribing. This may empower pharmacists to deliver more personalized and person-centered care, address issues related to psychotropic overprescribing, minimize the inappropriate use of medications, and ultimately improve the quality of life for individuals with intellectual disabilities. Furthermore, there is a need to proactively deploy alternative interventions while deprescribing psychotropic medicines to help prevent an increase in behaviors that are challenging and a deterioration in mental health. Whilst deprescribing can play an important role in addressing the inappropriate use of psychotropic medicines in this population, its implementation should align with the broader principles of medicine optimization. Deprescribing should not be viewed as a universal or singular aim, but rather as one component within the complex context of psychotropic prescribing. These complexities include diagnostic challenges, managing behaviors that challenge, systemic pressures, and the historical reliance on psychotropic medications in this population.

Strengths and Weaknesses

Although surveys are a valuable tool for collecting data, there is a risk of response bias whereby survey respondents may provide socially desirable answers. Several of the respondents did not fully complete the survey, which may introduce non-responder bias. Respondents who choose to participate may have characteristics that differ from those who do not participate, leading to self-selection bias, which can affect the generalizability of the findings.

A key strength of our study was the use of both quantitative and qualitative methods within our questionnaire, allowing us to address

distinct research questions effectively. We collected quantitative data to explore pharmacists' attitudes and confidence toward psychotropic deprescribing in people with intellectual disabilities and free text qualitative data to understand the enablers and barriers. These free-text data were analyzed using a standard qualitative data analysis method, thereby offering insights into real-life practices and issues faced by pharmacists in both primary and secondary care. Another strength is the focus upon pharmacists working with people with intellectual disabilities, as similar studies involving pharmacists have focussed on older people (Heinrich et al., 2022; Lundby et al., 2019) or the general population. (Heinrich & Donovan, 2022)

Conclusion

Pharmacists responding to this survey expressed a positive attitude towards deprescribing psychotropic medicines for individuals with intellectual disabilities, an attribute that was associated with increased confidence. Addressing the challenges of perceived carer resistance and insufficient prescriber and stakeholder support is essential for successful deprescribing. However, it is important to note that the positive health outcomes of psychotropic deprescribing cannot be assumed. Whilst deprescribing is generally regarded as beneficial for reducing polypharmacy and preventing medication-related harm (Specialist Pharmacy Service, 2025), it is important to recognize that these outcomes cannot be guaranteed in all cases. Further research and a more nuanced understanding of specific contexts may be needed to fully assess the potential health benefits and risks associated with psychotropic deprescribing in people with intellectual disabilities. Finally, whilst we have found that pharmacists are confident towards psychotropic deprescribing, evidence from NHS Digital (NHS Digital, 2023) suggests that psychotropic medicines are still overprescribed for people with intellectual disabilities (NHS Digital, 2023). It is important to note that although antipsychotic prescribing has fallen slightly in people with intellectual disabilities (NHS Digital, 2023), the prescribing of anticonvulsants and antidepressants has risen (Branford & Shankar, 2022; Branford et al., 2023). Future studies including those using qualitative interviews should explore the views of a broader range of healthcare professionals, carers, and people with intellectual disabilities to allow for a rich exploration of deprescribing enablers and barriers, thereby facilitating a more comprehensive understanding of psychotropic deprescribing.

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Author Contribution

DA, RH, IM, and PL made substantial contributions to the conception and design of this survey of pharmacists. DA significantly contributed to the acquisition of data. DA, PL, and RH were heavily involved in the analysis and interpretation of quantitative data. DA, RH, IM, OH, and PL substantially contributed to the analysis and interpretation of qualitative data. DA drafted the main manuscript with significant input from RH, IM, and PL. All authors (DA, RH, IM, OH, and PL) have approved the submitted version and agree to be personally accountable for their own contributions. Furthermore, they ensure that questions related to the accuracy or integrity of any part of the work, even those in which the author was not personally involved, are appropriately investigated, resolved, and documented in the literature.

Data Availability Statement

The data that support the findings of this study can be found in the supplementary files.

Ethics Approval and Consent to Participate

Ethical approval for this study was given by the Humanities and Social Sciences Research Ethics Committee (HSSREC) of the University of Warwick, UK (Reference number HSSREC 147/21-22). All participants gave informed consent for this study. All methods were performed in accordance with relevant guidelines and regulations.

Transparency Declaration

This manuscript is an honest, accurate, and transparent account of the study being reported; no important aspects of the study have been omitted.

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