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Pattern of psychotropic prescribing in adults with intellectual disabilities in the community settings in the UK: A cross-sectional view

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ABSTRACT

Background: A high proportion of adults with intellectual disabilities receive psychotropic medicines, often in the absence of a mental illness but primarily off-licence for behaviours that challenge.

Aim: To provide a cross-sectional view of the pattern of psychotropic medicine prescriptions with the reasons for their use among adults with intellectual disabilities in community settings in the UK.

Method: We collected psychotropic prescription data on 112 adults with intellectual disabilities who lived in community homes or supported accommodations in the UK. This was done in the context of a feasibility RCT involving a staff training programme, SPECTROM, designed to help reduce the overmedication of adults with intellectual disabilities.

Results: The most commonly prescribed psychotropics were antipsychotics (47 %) followed by antidepressants (23 %), anti-epileptics (13 %) and benzodiazepines (7 %). In 45 % of cases, there was a polypharmacy of more than one psychotropic class of medicines, and in 20 %, a combination of antipsychotics and antidepressants. Antipsychotics were used for severe mental illness only in 19 % but for behaviours that challenge in 40 %, and 17 % of the time for anxiety. Antidepressants were prescribed 47.7 % of the time for depression, 11.4 % for anxiety, and 9 % for behaviours that challenge. Antiepileptics were prescribed more often for behaviours that challenge (40 %) than epilepsy (32 %). In the SPECTROM training group, the antipsychotic dose was reduced in 18.6 % of prescriptions compared with 6.5 % in the non-training group at six months follow-up.

Conclusion: Psychotropic medicines are still prescribed in a high proportion of cases off-licence for behaviours that challenge than mental illness.

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What this paper adds

The study showed that a high proportion of adults with intellectual disabilities living in community homes and supported living accommodations in the UK received psychotropic (mental health) medicines often off-licence for behaviours that challenge in the absence of a severe mental illness. The most commonly prescribed psychotropics were antipsychotics, followed by antidepressants, antiepileptics, and benzodiazepines. Antipsychotics were prescribed more often for behaviours that challenge than psychosis or bipolar disorder for which they are licenced. Antiepileptics were prescribed more often for behaviours that challenge than epilepsy. Whereas benzodiazepines were used 50 % of the time for anxiety, they were also used 29 % of the time for behaviours that challenge. Long-acting benzodiazepines like diazepam were used more commonly than short-acting ones like lorazepam and clonazepam. Psychotropics polypharmacy was common, particularly the combination of antipsychotics with antidepressants. As required (PRN), benzodiazepines were prescribed in a high proportion of cases for behaviours that challenge in adults with intellectual disabilities. Antihistamines were also used as PRN for behaviours that challenge. There was a higher proportion of antipsychotic and antidepressant dose reduction at six-months follow-ups among adults with intellectual disabilities whose support staff received the SPECTROM training, designed to help reduce the overmedication of people with intellectual disabilities, than those whose support staff did not receive the training.

1. Introduction

Approximately half (range 32–85 %) of the adults with intellectual disabilities receive psychotropic (mental health) medicines (see review in Deb, 2024). A recent meta-analysis of 24 prevalence studies found a pooled prevalence for any psychotropic prescription was 41 % (95 % confidence interval (CI) 35–46 %). In a UK general practice register-based study, the rate of psychotropic prescribing among adults with intellectual disabilities increased from 49 % in 1999 to 63 % in 2013 (Sheehan et al., 2015). One Dutch study reported the prevalence of antipsychotic prescribing among 32.2 % (95 % CI 30.1–33.9 %) of adults with intellectual disabilities (de Kuijper et al., 2010). Psychotropic medicines are often prescribed outside their licenced indications for behaviours that challenge in the absence of a psychiatric diagnosis in adults with intellectual disabilities (Mehta & Glover, 2019). The rate of psychotropic prescription among adults with intellectual disabilities has not changed in the last three decades since Deb and Fraser (1994) reported that 50 % of adults with intellectual disabilities received psychotropic medicines even after discharge from long-stay institutions. This is despite the national (National Institute for Health and Care Excellence, NICE, 2015) and international guidelines (Deb et al., 2009) recommending the use of non-pharmacological intervention for challenging behaviour first and NHS England initiative, STOMP (STopping Over-Medication of People with learning disabilities, autism or both) and STAMP (supporting treatment and appropriate medication in paediatrics) encouraging optimising psychotropic medicines prescriptions in people with intellectual disabilities and autism (Branford et al., 2018). Whereas the evidence for the effectiveness of psychotropics for behaviours that challenge in adults with neurodevelopmental disorders is weak, the evidence for the harm caused by them is strong (Deb et al., 2023).

A recent meta-analysis found pooled prevalence for antipsychotics 31 % (95 % CI 27–35 %), antidepressants 14 % (95 % CI 9–19 %), anxiolytics 9 % (95 % CI 4–15 %), and hypnotics/sedatives 5 % (95 % CI 2–8 %) among people with intellectual disabilities (Song et al., 2023). Similar findings were reported from the analysis of the Czech Republic's central health database of 62,636 adults with intellectual disabilities in 2022 (Deb et al., 2025). This study found prescription of any psychotropics in 59 %, antipsychotics in 37 %, mood stabilisers including some antiepileptic medicines in 28 %, antidepressants in 25 %, anxiolytics in 13 %, and hypnotics/sedatives in 1 % of cases. The Czech follow-up study between 2010 and 2022 also found in 2010, among those with challenging behaviour, 82 % received psychotropics, 62 % antipsychotics, 20 % antidepressants, 17 % anxiolytics, 30 % mood stabilisers, and 0·4 % hypnotics and sedatives. In 2022, there was a statistically significant increase in all apart from anxiolytics, as 87 % received psychotropics, 63 % antipsychotics, 33 % antidepressants, 14 % anxiolytics, 37 % mood stabilisers, and 1 % hypnotics/sedatives. The incidence rates of new prescriptions for challenging behaviour fell by 1·1 % for any psychotropics, 0·8 % for antipsychotics, 0·7 % for antidepressants and 0·1 % for anxiolytics, but increased by 0·3 % for hypnotics/sedatives and 0·4 % for mood stabilisers.

Previous studies recruited participants from clinic populations or those who were in contact with health and/or social services. In the current study, we have presented data taken directly from community homes and supported living accommodations within the UK. These data were collected anonymously in the context of a feasibility RCT involving a staff training programme, SPECTROM, designed to help reduce the overmedication of adults with intellectual disabilities and implement the NHS England STOMP initiative.

Based on the literature review, we addressed the following research questions in this study.

(a) Is the rate of psychotropic prescriptions for adults with intellectual disabilities still very high?
(b) Is polypharmacy of psychotropics still common in adults with intellectual disabilities?
(c) Is the off-licence use of psychotropics for adults with intellectual disabilities still common?
(d) Does a staff training programme help to reduce psychotropic prescriptions?
(e) Are the PRN psychotropic prescriptions for behaviours that challenge common?

2. Methods

The data for this paper were collected during a feasibility RCT involving a support staff training programme, SPECTROM (Short-term psychoeducation for caregivers to help reduce the overmedication of people with intellectual disabilities) (https://spectrom.wixsite.com/project). SPECTROM was recently co-produced in the UK, involving all stakeholders, including adults with intellectual

disabilities and their families. Although the primary aim of developing SPECTROM was to help with the implementation of the NHS England STOMP initiative by helping to reduce the overmedication of people with intellectual disabilities, its remit goes far beyond that. Although primarily developed for the support staff, SPECTROM could be helpful to many other stakeholders, including family members and multidisciplinary team members.

SPECTROM has 14 modules, of which two are core modules, (a) Medicine/STOMP, and (b) Alternatives to medicine (ATM), which are used for face-to-face training and through which the rest of the modules and other online resources are introduced. SPECTROM has a large number of handouts and internal and external online resources for use as a source of reference during person-centred care planning. Pilot studies in the UK and Australia have shown that the training increased staff's knowledge of psychotropic medicine and made them more confident to discuss psychotropic medicine use with the prescribers. The training also increased their attitude toward addressing behaviours that challenge without relying on medicine.

As the previous pilot studies were not designed as RCTs, we assessed the feasibility of conducting a future large-scale RCT involving SPECTROM training in the current study. We recruited support staff from 39 community homes/supported living services from six social service provider organisations in the UK. Further details are provided in the SPECTROM protocol paper (Limbu et al., 2025).

We have collected prescription data anonymously from participating homes. We asked the service manager in each participating home to send us anonymously the data on those adults with intellectual disabilities who received psychotropic medicines. The service managers sent the data on psychotropic prescriptions with their daily dosage for each adult with intellectual disabilities residing in their respective homes at baseline before the start of the training and six months after the SPECTROM training. These data were collected from the homes where the staff teams received the SPECTROM training (training group) but also from homes where the staff team did not receive the SPECTROM training (non-training group).

We have not carried out any hypothesis testing as the study was not powered. Instead, we have done descriptive analysis, providing proportions and numbers for each variable. In the reasons for prescription Table, we have provided separate data on behaviours that challenge but also on the combination of agitation, hyperactivity, irritability and behaviours that challenge, as the support staff often used these descriptions interchangeably. The reasons for prescriptions are provided by the support staff, which may not have been confirmed by the prescribers.

This study was approved by The UK West Midlands-Coventry & Warwickshire Research Ethics Committee (REC reference: 23/WM/0211).

3. Results

3.1. Demographic data

We received anonymised prescription data at baseline and six months follow-up after SPECTROM training on 52 adults with intellectual disabilities from the community homes where the staff team received SPECTROM training (training group) and 42 from the homes where the staff team did not receive SPECTROM training (non-training group). We have received only baseline prescription data but not any follow-up data from an additional 18 adults with intellectual disabilities. Therefore, in total, we received baseline prescription data on 112 adults with intellectual disabilities. We received prescription data on 90 individual antipsychotic prescriptions and 44 individual antidepressant prescriptions.

3.2. Rate of psychotropic prescribing

Table 1 shows the number and percentage of each class of psychotropics prescribed. The data were available on antipsychotics, antidepressants, benzodiazepines as anxiolytics (anti-anxiety medicines), lithium as a mood stabiliser, anti-epileptics, hypnotics/sedatives, methylphenidate as a psychostimulant, atomoxetine, and others out of 190 individual psychotropics prescriptions. The category of others included propranolol (n = 2), melatonin (n = 6), procyclidine (n = 1) and hyoscine (n = 1). The most commonly prescribed psychotropics were antipsychotics (47 %), followed by antidepressants (23 %), antiepileptics (13 %) and benzodiazepines (7 %).

Table 2 shows the total number and the mean daily dose and dose range for each individual psychotropic prescription. This Table also shows the percentage of these individual psychotropic prescriptions as a proportion of all prescriptions and also of each

Table 1
The rate of different psychotropic prescriptions.

Psychotropic type	N (Total N = 190)	%
Antipsychotics	90	47 %
Antidepressants	44	23 %
Benzodiazepines	14	7 %
Antiepileptics	25	13 %
Others	10	5 %
Psychostimulants (methylphenidate)	1	1 %
Hypnotics/sedatives	1	1 %
Mood stabilisers (lithium)	1	1 %
Atomoxetine	4	2 %

Table 2
Individual psychotropics within each group with dosage.

Antipsychotics				
Medicine's name	All psychotropics (n = 190)	% out of all psychotropics (n = 190)	% within each psychotropic group	The daily dose in mg. Mean (range)
Risperidone	31	16 %	34 %	2.16 (0.15–6)
Olanzapine	18	9 %	20 %	9.53 (2.5–20)
Quetiapine	11	6 %	12 %	327.27 (25–1000)
Aripiprazole	11	6 %	12 %	9.09 (5–20)
Clozapine	6	3 %	7 %	262.5 (100–400)
Haloperidol	5	3 %	6 %	406.70 (0.5–2010)
Chlorpromazine	4	2 %	4 %	312.5 (200–400)
Amisulpride	2	1 %	2 %	300 (200–400)
Flupentixol	1	1 %	1 %	19.05 (N/A)
Periciazine	1	1 %	1 %	5 (N/A)
Antidepressants				
Sertraline	15	8 %	34 %	95 (25–200)
Fluoxetine	9	5 %	20 %	37.78 (10–60)
Citalopram	8	4 %	18 %	55 (10−200)
Mirtazapine	5	3 %	11 %	39 (15−45)
Venlafaxine	3	2 %	7 %	200 (150−225)
Amitriptyline	2	1 %	5 %	10 (10−10)
Clomipramine	1	1 %	2 %	200 (N/A)
Trazodone	1	1 %	2 %	50 (N/A)
Antiepileptics				
Sodium valproate	11	6 %	44 %	1154.55 (200–2000)
Carbamazepine	5	3 %	20 %	800 (400–1200)
Pregabalin	4	2 %	16 %	312.50 (75−500)
Topiramate	2	1 %	8 %	200 (100−300)
Levetiracetam	2	1 %	8 %	1500 (1500–1500)
Lamotrigine	1	1 %	4 %	200 (N/A)
Benzodiazepine				
Diazepam	9	5 %	64 %	6.83 (0.5–15)
Clonazepam	3	2 %	21 %	7 (0.5–20)
Lorazepam	2	1 %	14 %	1 (1−1)

individual psychotropic class. Among antipsychotics, the most commonly prescribed was risperidone (34 %), followed by olanzapine (20 %), quetiapine (12 %), and aripiprazole (12 %). The mean daily dose of risperidone was lower (mean 2.16 mg; range 0.15–6 mg) than the recommended dose for psychosis. The mean daily doses of other antipsychotics were within the recommended dose range for the treatment of psychosis or mania/hypomania.

Table 2 shows that the most commonly prescribed antidepressant was sertraline (34 %), followed by fluoxetine (20 %), citalopram (18 %) and mirtazapine (11 %). The mean daily dosages of antidepressants were within the range of recommended doses for adults with depressive disorders. Among antiepileptics, the most commonly prescribed was sodium valproate (44 %), followed by carbamazepine (20 %) and pregabalin (16 %). Among benzodiazepines, the most commonly prescribed was diazepam (64 %), followed by clonazepam (21 %) and lorazepam (14 %).

3.3. Rate of polypharmacy of psychotropics

Table 3 shows the extent of polypharmacy of any psychotropics and the individual classes of psychotropics. Overall, 45 % showed polypharmacy involving any psychotropic, 29 % received two psychotropics together, 9 % three psychotropics, 6 % four, and 1 %

Table 3
The rate of polypharmacy.

Number of polypharmacy	Number of participants (N = 112)	%
Overall polypharmacy	50	45 %
Two psychotropics	32	29 %
Three psychotropics	10	9 %
Four psychotropics	7	6 %
Over four psychotropics	1	1 %
Antipsychotic polypharmacy	8	7 %
Antidepressant polypharmacy	1	1 %
Antipsychotic and antidepressant polypharmacy	22	20 %
Antipsychotic and benzodiazepine polypharmacy	11	10 %
Antidepressant and benzodiazepine polypharmacy	5	5 %
Antipsychotic, antidepressant and benzodiazepine polypharmacy	4	4 %

received over four psychotropic medicines together. The most common interclass psychotropic combination is antipsychotics with antidepressants (20 %), followed by antipsychotics with benzodiazepine (10 %), antidepressants with benzodiazepine (5 %), and antipsychotics with antidepressants and benzodiazepines (4 %). The most common within-class polypharmacy was for antipsychotics (7 %), followed by antidepressants (1 %).

3.4. Reasons for prescribing psychotropics

Antipsychotics were prescribed mostly for behaviours that challenge, agitation, irritability and hyperactivity (40 %), followed by anxiety (17 %), psychosis (16 %) and bipolar disorder (3 %). However, in 23 % of cases, the reasons for the prescription of antipsychotics have not been described. The most common reason for using antidepressants was depression (47.7 %), followed by anxiety (11.4 %), and behaviours that challenge, agitation, irritability and hyperactivity (9 %). However, in 31.8 % of cases, the reasons for prescribing antidepressants were not known. Antiepileptics were prescribed for behaviours that challenge, agitation, hyperactivity and irritability in ten (40 %) cases, followed by eight (32 %) for epilepsy, two each (8 %) for anxiety and bipolar disorder, but in two (8 %) cases the reason for prescription was not stated. Similarly, benzodiazepines were prescribed for anxiety in seven (50 %) cases, followed by behaviours that challenge, agitation, hyperactivity and irritability in four (29 %) cases, and in two (14 %) for epilepsy, but in one (7 %) case the reason for prescription was not stated (Table 4).

3.5. Psychotropic prescription data at six months follow up

Six months of follow-up data are presented in Table 5. Psychotropic prescription data were available at baseline and six-month follow-ups for 43 antipsychotics in the SPECTROM training group and 31 in the non-training group, for whom a risperidone equivalent daily dose could be calculated for all antipsychotics. In the SPECTROM training group, the total daily risperidone equivalent dose of antipsychotics was 116.75 mg at baseline and 108 at follow-up. This constituted a 7.5 % reduction in the total group dose in the SPECTROM training group at follow-up compared with the baseline. However, in the non-training group, the total daily risperidone equivalent dose was 74.15 mg at the baseline and 72.15 mg at the six-month follow-up. This constituted a 2.7 % dose reduction at six months compared with the baseline dose. At follow-up, there was antipsychotic dose reduction in eight of 43 (18.6 %) prescriptions in the SPECTROM training compared with two of 31 (6.5 %) in the non-training group. Table 5 shows the number and proportion of (a) any dose reduction, (b) over 50 % dose reduction, and (c) complete discontinuation of antipsychotics at follow-up compared with the baseline prescriptions in the training and the non-training groups.

Data were available for ten antidepressant prescriptions in the SPECTROM training and 22 in the non-training group at baseline and six-month follow-up for whom a citalopram equivalent dose could be calculated for all antidepressants. In the SPECTROM training group, the total daily citalopram equivalent dose of antidepressants was 410 mg at baseline and 400 at follow-up. This constituted a 2.4 % reduction in the total group dose in the SPECTROM training group at follow-up compared with the baseline. However, in the non-training group, the total daily citalopram equivalent dose was 820 mg at the baseline and 810 mg at the six-month follow-up. This constituted a 1.2 % dose reduction at six months compared with the baseline dose. At follow-up, there was an antidepressant dose reduction in one of ten (10 %) prescriptions in the SPECTROM training compared with 1 of 22 (4.5 %) in the non-training group. Table 5 shows the number and proportion of (a) any dose reduction, (b) over 50 % dose reduction, and (c) complete discontinuation of antidepressants at follow-up compared with the baseline prescriptions in both SPECTROM training and non-training group.

3.6. Pro re Nata (PRN) prescriptions

Table 6 presents the rate of PRN (as required) prescriptions available for 62 adults with intellectual disabilities. Benzodiazepines were prescribed in 51 cases (82.3 %), followed by antipsychotics in five (8.1 %), antihistamines in four (6.5 %), and hypnotics in two (3.2 %) cases. The most commonly prescribed benzodiazepines were lorazepam (61.3 %), followed by diazepam (19.4 %), and clonazepam (1.6 %). In 43 % of cases, benzodiazepines were prescribed for anxiety, 37 % for behaviours that challenge, agitation, irritability, and hyperactivity, and 12 % of cases, the reason for their prescription was not stated. In 60 % of cases, antipsychotics were

Table 4
The reasons for psychotropic prescribing.

Reasons	Antipsychotics	Antidepressants	Anti-epileptics	Benzodiazepines
Not stated	21/90 (23 %)	14/44 (31.8 %)	2/25 (8 %)	1/14 (7 %)
Behaviours that challenge	23/90 (26 %)	4/44 (9 %)	10/25 (40 %)	4/14 (29 %)
Agitation/irritability/ hyperactivity	13/90 (14 %)	0	0	0
Behaviours that challenge and agitation/ irritability/ hyperactivity	36/90 (40 %)	4/44 (9 %)	10/25 (40 %)	4/14 (29 %)
Anxiety	15/90 (17 %)	5/44 (11.4 %)	2/25 (8 %)	7/14 (50 %)
Treatment-resistant psychosis	1/90 (1 %)	0	0	0
Psychosis	14/90 (16 %)	0	1/25 (4 %)	0
Bipolar disorder	3/90 (3 %)	0	2/25 (8 %)	0
Depression	0	21/44 (47.7 %)	0	0
Seizures/Epilepsy	0	0	8/25 (32 %)	2/14 (14 %)

Table 5
Baseline and follow-up data of antipsychotics and antidepressants.

Antipsychotics		
	SPECTROM training group	Non-training group
Number of antipsychotics	43	31
Dose at baseline (mg)	116.75	74.15
Dose at follow-up (mg)	108	72.15
Reduction in total dose (mg)	8.75 (7.5 %)	2 (2.7 %)
Any dose reduction	8 (18.6 %)	2 (6.5 %)
> 50 % dose reduction	1 (2.3 %)	0
complete discontinuation	3 (7 %)	2 (6.5 %)
Antidepressants		
Number of antidepressants	10	22
Dose at baseline (mg)	410	820
Dose at follow-up (mg)	400	810
Reduction in total dose (mg)	10 (2.4 %)	10 (1.2 %)
Any dose reduction	1 (10 %)	1 (4.5 %)
> 50 % dose reduction	1 (10 %)	0
complete discontinuation	0	1 (4.5 %)

Table 6
Number and percentage of psychotropics used as PRN prescriptions.

Psychotropic medicines	Total (n = 62)	%
Benzodiazepines (n = 51, 82.3 %)		
Lorazepam	38	61.3 %
Diazepam	12	19.4 %
Clonazepam	1	1.6 %
Antipsychotics (n = 5, 8.1 %)		
Risperidone	3	4.8 %
Chlorpromazine	1	1.6 %
Olanzapine	1	1.6 %
Antihistamines (n = 4, 6.5 %)		
Promethazine	4	6.5 %
Hypnotics (n = 2, 3.2 %)		
Zolpidem	1	1.6 %
Zopiclone	1	1.6 %

prescribed for behaviours that challenge, agitation, irritability, and hyperactivity, and in 1 % of cases (n = 1), either the reason for their prescription was not stated, or they were prescribed for psychosis. In 75 % of cases, antihistamines were prescribed for behaviours that challenge agitation, irritability, and hyperactivity, and in 20 % of cases, for sleep disorders.

4. Discussion

4.1. Demographic data

Although not a proper epidemiological study, the current study provides a cross-sectional view of the pattern of regular and PRN (as required) psychotropic medicine prescriptions and the reasons for their use among adults with intellectual disabilities in community settings from different parts of the UK. The number of participants recruited for data collection is adequate to provide an accurate picture of what happens in practice.

4.2. Rate of psychotropic prescribing

Antipsychotics were the most commonly prescribed psychotropics in the current study, followed by antidepressant medicines. This is similar to what was reported before (de Kuijper et al., 2010; Deb, 2024; Deb et al., 2025; 2015, Sheehan et al., 2015; Song et al., 2023). Anti-epileptic medicines were the third most commonly prescribed psychotropic classes in the current study. This was expected because of the high rate of epilepsy among adults with intellectual disabilities (Deb et al., 2020). However, as shown in the reasons for prescription section, a higher proportion of anti-epileptics was prescribed for behaviours that challenge than epilepsy among adults with intellectual disabilities. Risperidone was the most commonly prescribed medicine within the antipsychotic group. A similar trend has been reported in previous prevalence studies (Deb et al., 2015; Song et al., 2023). Although in the current study, after risperidone, olanzapine, quetiapine, and aripiprazole were the most commonly prescribed antipsychotics, this order of frequency varied from study to study in the past (Branford, 2016; de Kuijper et al., 2010; Deb et al., 2015; Song et al., 2023). Among the antidepressants, sertraline was most frequently prescribed in the current study, followed by fluoxetine, citalopram and mirtazapine. This order of frequency

varied from study to study in the past (Branford, 1996; de Kuijper et al., 2010; Deb et al., 2015; Song et al., 2023). In the current cohort, three participants were prescribed the old generation of antidepressants, tricyclics, which clinicians usually tend to avoid nowadays for their unfavourable adverse effects profile. This constituted 7 % of all antidepressants prescribed and 2 % of all psychotropics. Thus, it is possible that these medicines were initially prescribed a long time ago but have not been changed since. Among benzodiazepines, diazepam was most commonly prescribed as a regular dose, followed by lorazepam and clonazepam. This trend tends to differ from some previous studies where short-acting benzodiazepines like lorazepam were prescribed more frequently than long-acting ones like diazepam (Deb et al., 2015). As for the dose of antipsychotics, in the current study, 6.7 % of adults with intellectual disabilities were prescribed more than 6 mg daily risperidone equivalent dose, which is equivalent to 300 mg daily chlorpromazine dose, which is the maximum recommended in the datasheet. In contrast, in Deb et al. (2015) study, 23 % received antipsychotics in over 300 mg daily chlorpromazine equivalent dose, and in Branford's (1996), the proportion was 28 %. So, there may be a trend of less use of higher than recommended antipsychotic doses in recent times. It is an encouraging trend, if it is a true reflection of current prescribing practice. However, there is scope for further improvement in this area as some adults with intellectual disabilities are still prescribed a higher than the recommended antipsychotics dose.

4.3. Polypharmacy of psychotropics

Despite the widespread condemnation of and lack of evidence for the use of polypharmacy of antipsychotic medications, this practice remains widespread (Taylor, 2010). On the other hand, the merits and demerits of combining an antipsychotic with another group of psychotropic medications specifically for the management of aggressive behaviour in adults with intellectual disabilities are currently unknown. Unfortunately, psychotropic polypharmacy, which is prevalent in the current study, has not changed since the publication of previous studies (Branford, 1996; Deb et al., 2015). Four or more psychotropics were prescribed together in 4 % of cases in the current study, which could be worrying. It is difficult to estimate in what proportion of cases polypharmacy included a combination of anti-epileptic medicine with other psychotropics, where anti-epileptics were prescribed for epilepsy and the other psychotropics prescribed for a mental illness or behaviours that challenge. Similarly, it is difficult to anticipate in what proportion of cases polypharmacy may have happened during a changeover from one to another psychotropic medicine. Although widely anticipated by clinicians, for the first time, we showed that the most common inter-class psychotropic polypharmacy is between antipsychotics and antidepressants. Similarly, the combination of antipsychotics with benzodiazepines was also common in the current study population. This has not been reported previously. As for the individual psychotropic class polypharmacy, antipsychotics constituted the most common combination. Similar trends have been reported previously (Deb et al., 2015; Song et al., 2023). Worryingly, in the current study, a small proportion (4 %) were still prescribed a combination of antipsychotics, antidepressants and benzodiazepines. It is shown that with a concerted effort, it is possible to discontinue long-term antipsychotic prescriptions among 25–61 % of adults with intellectual disabilities and over 50 % dose reduction in another 11–19 % (see review by Deb, 2024).

4.4. Reasons for prescribing psychotropics

In the current study, antipsychotics were prescribed only in a small proportion of cases for severe mental illnesses like psychosis and bipolar disorder (19 %), for which they are indicated. This finding is similar to Sheehan and colleagues (2015), who reported a severe mental illness only in 12 % of cases among whom antipsychotics were prescribed. In a recent Czech Republic population-based study, Deb and colleagues (2025) found that among those who were prescribed antipsychotics, only 19 % had a diagnosis of severe mental illness. Instead, the majority of the time, antipsychotics were prescribed for behaviours that challenge (52 %). In the current study, we reported data separately for behaviours that challenge but also combined that with agitation, irritability and agitation, as many support staff reported the latter to mean behaviours that challenge. Similarly, it appears that in many cases, the diagnosis of anxiety was used as the reason for antipsychotic prescriptions, although the effectiveness of antipsychotics in treating anxiety, apart from the role of quetiapine in generalised anxiety disorder, is far from clear at the moment (Garakani et al., 2024). However, it is also possible that in many cases, clinicians prescribed antipsychotics for behaviours that challenge, assuming that anxiety caused the behaviour and, therefore, used the diagnosis of anxiety for prescription instead of behaviours that challenge. The off-licence use of licenced medicines like antipsychotics in the current and previous studies is not necessarily inappropriate as long as appropriate safeguards are put in place (see guidelines from the Royal College of Psychiatrists, 2017).

4.5. Psychotropic prescription data at six months follow up

As the study was not powered, we did not conduct hypothesis testing, but there was a clear trend of the SPECTROM training being more effective than the absence of training in reducing the overall dose of antipsychotics and the proportion of cases where antipsychotic dose reduction was possible. The rate of total group antidepressant dose reduction was also higher in the SPECTROM training than in the non-training group. Similarly, there was a higher proportion in the training group where dose reduction was possible compared with the non-training group. This is encouraging, given the current evidence that antipsychotic dose reduction may have been achieved at the expense of an increase in antidepressants and other non-antipsychotic psychotropic medicines prescriptions (Branford & Shankar, 2022; Deb et al., 2025). In the current study, antipsychotic dose reduction in the SPECTROM training group was achieved without having to increase the antidepressant dose. If anything, both antipsychotic and antidepressant doses were reduced at six months of follow-up.

4.6. Pro re Nata (PRN) prescriptions

In the current study, the most commonly prescribed PRN medicines was lorazepam, followed by diazepam, promethazine, and risperidone. In contrast, in Deb and colleagues' (2015) study, the most commonly used PRN prescription was for lorazepam, followed by risperidone and diazepam. So, in the current study, the rate of PRN prescription of risperidone is much lower than that in Deb and colleagues' previous study (2015). In the current study, both PRN antipsychotics and benzodiazepines were prescribed primarily for behaviours that challenge, hyperactivity, irritability, agitation or anxiety. In the current study, PRN antihistamines were also used mostly for behaviours that challenge, hyperactivity and irritability, followed by sleep disorders. In contrast, no PRN antihistamines were prescribed in Deb et al. (2015) study. It is not clear whether the use of antihistamines for behaviours that challenge is a recent trend or a regional variation in practice.

4.7. Strengths and weaknesses

This is not a proper population-based epidemiological study. However, identifying all people with intellectual disabilities, particularly those with mild intellectual disabilities and not diagnosed as someone with intellectual disabilities within the GP register, may be difficult for any epidemiological study. The total number of participants in the current study is reasonable to provide a cross-sectional picture of psychotropic medicine prescription pattern and their indications in a community-based sample. The way the participants were recruited was, to some extent, random. Therefore, we believe this paper's findings represent those of a community-based cohort of adults with intellectual disabilities. The reasons for the prescription provided may be unreliable as they were provided by the support staff rather than taken from any medical records. We could not gather demographic information on the participants for inter-group comparisons as the data were collected anonymously.

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Conflict of interest

None declared.

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Data availability

Data will be made available on request.

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