The diagnosis of personality disorders in those with intellectual disabilities can be a contentious issue. Difficulties in eliciting the information necessary for the diagnosis due to communication difficulties, the overlap between characteristics of either the person’s intellectual disability or other developmental disabilities such as autistic disorders with some of the personality disorder criteria, the lack of valid and reliable instruments, differences in the criteria adopted by various classificatory systems and the overlap of transient psychotic and affective symptoms in both mental illnesses as well as some personality disorders all contribute to this challenge.\textsuperscript{1} The variability in prevalence figures as well as issues around diagnostic reliability and validity have been extensively reviewed and commented on recently.\textsuperscript{1,17,50,51} Whatever the controversies, the personality disorder diagnosis still appears to be clinically relevant because it may affect a person’s acceptance into community placements,\textsuperscript{36} predict subsequent psychiatric disorders,\textsuperscript{19} determine the rate of referral to specialist services,\textsuperscript{27} influence the mode of treatment\textsuperscript{25,32,58} and affect long term treatment outcomes.\textsuperscript{3}

Because of the pragmatic (not to mention the philosophical) difficulties in making this diagnosis in those with severe degrees of disability, there appears to be a general consensus that it should, at present, be limited to those within the mild and moderate ranges of intellectual disability.\textsuperscript{1,30,34,37} Adopting these parameters, it appears that the prevalence figure for the diagnosis within individuals who are in contact with community services for intellectual disability would be around 7\% and for those within forensic services around 49 to 59\%.\textsuperscript{2,9,10,30,34}

To clearly establish the efficacy of any treatment in personality disorder, four strict conditions would need to be satisfied.\textsuperscript{53} These include the following:

1. The treatment should be effective in the pure form of the personality disorder (i.e., independent of co-morbidity).
2. Efficacy should be established using the methodology of the randomized controlled trial (despite the inherent difficulties of using this methodology for personality disorders).
3. Because there are no established drug treatments, any treatment tested has to be superior in efficacy to a placebo pill using the methodology described above.
4. It should show evidence of its efficacy over a period of at least six months in view of the long duration of personality disorder.

None of the current drug treatments would satisfy all of the above criteria.

The conventional approach to drug treatment in the field of mental health is one based on clinical diagnosis. This works very well particularly if the syndrome being treated is a clear-cut mental illness. However, in personality disorders a “symptom based” approach is favored, and the reasons for it have been well
elucidated.\textsuperscript{11,12,13,38} The American Psychiatric Association's\textsuperscript{5} guidelines on the treatment of borderline personality disorder reflect this approach, which has also been commented on by other authors.\textsuperscript{21,35} The following symptom domains have been proposed for people with personality disorders and intellectual disability:\textsuperscript{6}

1. **Cognitive-perceptual (psychosis-like) symptoms:** Chronic low level features like ideas of reference, hallucinations or pseudo hallucinations, persecutory thoughts, etc. as well as apparent acute worsening of these features.

2. **Symptoms of affective dysregulation:** Affective instability and mood swings as well as chronic dysthymia-like features and emotional detachment.

3. **Symptoms of behavioral dyscontrol, impulsivity, aggression:** Affective aggression (impulsive, hot tempered behavior associated with mood changes), predatory aggression (associated with hostility, cruelty, etc.), organic aggression (impulsive, episodic, etc.) and ictal aggression (often associated with abnormal EEGs and epilepsy).

4. **Symptoms of anxiety:** Although possibly a part of the affective dysregulation spectrum, this is considered separately in intellectual disability, because it appears to significantly impact on the realistic dependency needs of this population and worsen the overall clinical picture. It can include both somatic and cognitive elements.

5. **Self-injurious behavior:** Although this can be a part of either the affective dysregulation or behavior dyscontrol domains, it is considered separately in intellectual disability because of the very high prevalence rate in this population. The biomedical model\textsuperscript{6} suggests five subtypes including repetitive stereotyped behavior, extreme tissue damage, co-occurrence of self-injury and agitation, self-injury with agitation if interrupted and one with multiple clinical features.

Although not licensed specifically for the treatment of personality disorders, psychotropic medication has been used often in clinical practice.\textsuperscript{26,44,46,48,55} Our earlier work in intellectual disability showed that although only around a third of those with personality disorders had a comorbid mental illness, about 90% were on psychotropic medication.\textsuperscript{34}

This paper extends that baseline audit\textsuperscript{34} to explore the predominant symptom domains in those with intellectual disability and a personality disorder, and it selectively reviews published papers on pharmacotherapy in personality disorders and suggests treatment guidelines in intellectual disability.

**METHOD**

People with the diagnosis of personality disorder were identified from the outpatient caseload of two consultants in the psychiatry of intellectual disability. The process of identification and the diagnosis was described in detail in our earlier paper.\textsuperscript{34} Information regarding the predominant symptom domains was collected from case notes and clinicians using a proforma designed for this study.

**RESULTS**

The two consultants covered a total population of 444,900 and the size of their active outpatient caseload was 430. Twenty-nine out of this 430 (7%) had a personality disorder, as defined by DSM-IV\textsuperscript{4} criteria—13 borderline, 15 antisocial and 1 with both. The mean age of those with a personality disorder was 41 years (from 19-69 years). Fifteen (52%) were female and 17 (59%) were living in residential homes. Diagnostically, 27 (93%) had a mild and the rest moderate intellectual disability. Twenty (69%) did not have any mental illness. Of the 9 who had an additional psychiatric diagnosis, 4 (14%) had a depressive disorder, 4 (14%) had a bipolar disorder and 1 (3%) had a psychotic disorder.

The predominant symptom domains were present as follows:

1. **Cognitive-perceptual (psychosis-like) symptoms:** 14 (48%);
2. **Symptoms of affective dysregulation:** 23 (79%);
3. **Symptoms of behavioral dyscontrol, impulsivity, aggression:** 28 (97%);
4. **Symptoms of anxiety:** 10 (34%); and
5. **Self-injurious behavior:** 15 (52%).

As expected, most patients had features from 2 or more domains: all 5 symptom domains being present in 3 (10%), 4 domains in 10 (34%), 3 domains in 6 (21%) and 2 domains in 5 (17%).

Psychotropic medication use was present in 27 (93%). Twenty-five (86%) were treated with antipsychotic medications—this included 5 with
typical antipsychotics, 14 with atypical antipsychotics, 14 with atypical
antipsychotics, 1 on both and 7 treated with depot preparations, 13 (45%) treated with antidepressants, 3 (10%) with anxiolytic
medication and 6 (21%) with mood stabilizers.

**DISCUSSION**

Though lesser in number, when compared to those for mental illnesses, there has been a fair
degree of primary research into the use of psychotropic medication in personality disorders.
This has included a few randomized control trials. These trials of drug treatment are at least as good
as those of other interventions, although the treatments have seldom persisted beyond a few
weeks and have limitations. In trying to formulate drug treatment approaches for personality disorders in intellectual disability, it
would be useful to first summarize the key papers from general psychiatry literature, which reported
beneficial effects, and then go on to those from intellectual disability literature.

**Studies from General Adult Psychiatry**

The different clusters of personality disorders, as described in DSM-IV, are shown in Table 1.
Most drug treatment studies have been on Cluster B personality disorders, which includes borderline
and antisocial. Here, there is Randomized Control Trial (RCT) evidence that low dose antipsychotics
as well as SSRIs, such as fluoxetine, and mood stabilizers, such as valproate, are useful for
irritability and aggression (See Tables 2-A, B, C). Most of these studies are hampered by
the relatively short follow-up periods. It has been
suggested that cognitive-perceptual (psychotic-like) symptoms should be treated with low dose
antipsychotics; affective dysregulation symptoms with SSRIs (first choice), MAO inhibitors (second
choice) and mood stabilizers (third choice); and
impulsive-behavioral dyscontrol symptoms with SSRIs (first choice), MAO inhibitors or lithium
(second choice), valproate or carbamazepine (third
choice) and clozapine (fourth choice).

Within Cluster A personality disorders there is
evidence from RCTs of beneficial effects from low
dose thiothixene, risperidone and phenelzine in
schizotypal disorders.

Within Cluster C personality disorders, it is
difficult to interpret drug efficacy data because a
mood state-anxiety predominates in this group,
and the beneficial effects of drugs may well be a

**Studies from Intellectual Disability**

The literature on drug treatments of personality disorders in intellectual disability is
limited to case reports or small case series. The main studies are summarized in Table 3. As is clear, almost all published work is limited to
Cluster B personality disorders, and the use of antipsychotics, antidepressants, anxiolytics and mood stabilizers have been described. The sustained and remarkable improvement of a
person with borderline personality disorder from
the current sample after using a very low dose of
an atypical antipsychotic medication has been
reported before. Though not specifically dealing with
personality disorders, the antiaggressive effects of
lithium in intellectual disability have been
described. Likewise, Singh and Owino described an RCT, which showed the superiority
of zuclopenthixol over placebo in the treatment of
aggression. The treatment of aggressive behavior
using risperidone has been described.

**Treatment Guidelines**

An algorithm approach to drug treatments in
those with personality disorders and intellectual
disability was proposed recently. This was part of
a wider project to formulate treatment guidelines
in intellectual disability and involved the
participation of over 49 clinicians in the speciality
working in the United Kingdom. In personality
disorders, these focus on Cluster B disorders
(mainly borderline and antisocial). These
guidelines follow the “targeting of a predominant
symptom domain” approach and in that sense, is
an adaptation of the similar approach in general
psychiatry. The key points are summarized below:
### Table 1. DSM-IV Personality Disorders

<table>
<thead>
<tr>
<th>Cluster A</th>
<th>Paranoid personality disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Odd and eccentric)</td>
<td>Schizoid personality disorder</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cluster B</th>
<th>Histrionic personality disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Flamboyant)</td>
<td>Narcissistic personality disorder</td>
</tr>
<tr>
<td></td>
<td>Antisocial personality disorder</td>
</tr>
<tr>
<td></td>
<td>Borderline personality disorder</td>
</tr>
</tbody>
</table>

| Cluster C                  | Avoidant personality disorder |
|----------------------------| Dependant personality disorder |
| (Anxious avoidant)         | Obsessive–Compulsive personality disorder |

### Table 2A. Cluster B Personality Disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soloff et al.</td>
<td>Randomized control trial</td>
<td>Low dose haloperidol superior to placebo and amitriptyline in reducing borderline behavior.</td>
</tr>
<tr>
<td>Goldberg et al.</td>
<td>Randomized control trial</td>
<td>Low dose thiothixene superior to placebo in reducing borderline behavior.</td>
</tr>
<tr>
<td>Cornelius et al.</td>
<td>Randomized control trial</td>
<td>Haloperidol superior for irritability symptoms alone in borderline personality.</td>
</tr>
<tr>
<td>Zanarini and Frankenburg</td>
<td>Randomized control trial</td>
<td>Olanzapine superior to placebo for borderline symptoms, except depression.</td>
</tr>
<tr>
<td>Bogenschutz and Nurnberg</td>
<td>Randomized control trial</td>
<td>Olanzapine superior to placebo for global improvement in borderline personality.</td>
</tr>
<tr>
<td>Zanarini et al.</td>
<td>Randomized control trial</td>
<td>Olanzapine and olanzapine-fluoxetine combination superior to fluoxetine alone for impulsive aggression and depression in borderline personality.</td>
</tr>
</tbody>
</table>

### Table 2B. Cluster B Personality Disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soloff et al.</td>
<td>Randomized control trial</td>
<td>Phenelzine superior to haloperidol and placebo for borderline symptoms, depression and anxiety.</td>
</tr>
<tr>
<td>Salzman et al.</td>
<td>Randomized control trial</td>
<td>Fluoxetine superior to placebo in reducing impulsivity and aggression in borderline personality.</td>
</tr>
<tr>
<td>Coccaro and Kavoussi</td>
<td>Randomized control trial</td>
<td>Fluoxetine reduced impulsiveness and aggression in an antisocial group.</td>
</tr>
</tbody>
</table>

### Table 2C. Cluster B Personality Disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheard et al.</td>
<td>Randomized control trial</td>
<td>Lithium superior to placebo in preventing major aggression in antisocial personality.</td>
</tr>
<tr>
<td>Frankenburg and Zanarini</td>
<td>Randomized control trial</td>
<td>Valproate superior to placebo for aggressive behavior and interpersonal sensitivity in borderline personality.</td>
</tr>
<tr>
<td>Hollander et al.</td>
<td>Randomized control trial</td>
<td>Valproate (divalproex sodium)—superior to placebo for borderline symptoms.</td>
</tr>
<tr>
<td>Hollander et al.</td>
<td>Randomized control trial</td>
<td>Valproate (divalproex sodium)—superior to placebo for impulsive aggression in Cluster B (Flamboyant) personality disorders.</td>
</tr>
</tbody>
</table>
### Table 3. Personality Disorders in Intellectual Disability—Drug Treatments

<table>
<thead>
<tr>
<th>Study</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day et al.16</td>
<td>Case series</td>
<td>Twenty people with intellectual disability and borderline personality disorder with offending history. Seventy percent were on psychotropic medications (tranquilizers, sex suppressants, hypnotics, anxiolytics and antidepressants).</td>
</tr>
<tr>
<td>Goldberg et al.19</td>
<td>Case report</td>
<td>Two people with intellectual disability (one with paranoid and the other with obsessive personality disorder). Drug treatment included a low dose major tranquilizer (details not given) for the former and fluvoxamine for the latter.</td>
</tr>
<tr>
<td>Mavromatis52</td>
<td>Case series</td>
<td>Three people with intellectual disability and borderline personality disorder. Drug treatments included olanzapine in two cases and a fluoxetine—divalproex sodium combination in the other.</td>
</tr>
<tr>
<td>Wilson58</td>
<td>Case report</td>
<td>Reported a case study illustrating the effective implementation of the four-stage model for the management in a 48-year-old woman with borderline personality disorder. Drug treatment in this case included venlafaxine, trazodone, carbamazepine, risperidone and lorazepam.</td>
</tr>
<tr>
<td>Thalayasingam et al.59</td>
<td>Case series</td>
<td>This retrospective study on the use of clozapine in intellectual disability describes three patients with a personality disorder who were treated beneficially with the drug.</td>
</tr>
<tr>
<td>Biswas et al.7</td>
<td>Case report</td>
<td>Low dose clozapine in a person with borderline personality disorder was associated with significant improvement in mood and impulsivity. A four-year follow up revealed that the improvement was sustained.</td>
</tr>
</tbody>
</table>

1. Carry out a comprehensive assessment, which will lead to a multi-axial diagnosis covering the patient’s mental and physical health as well as psychosocial factors. If any co-occurring mental illnesses are present, they are treated using the appropriate guidelines.

2. Psychotropic medication is considered as an adjunct to psychosocial interventions. The clinician should be aware of the transient nature of some psychotic and/or affective disturbances in personality disorders and prescribe only after careful consideration. If indicated, this will be based on the predominant symptom domain.

3. For cognitive-perceptual (psychosis-like) symptoms, the first line would be to treat with low dose antipsychotics. Any acute exacerbations would need antipsychotics at the normal doses.

4. For symptoms of affective dysregulation, if dysthymia-like features are prominent, SSRIs followed by mood stabilizers may be needed. If mood swings are more prominent, then mood stabilizers such as lithium or valproate followed, if necessary, with low dose antipsychotics may be required.

5. For symptoms of behavior dyscontrol, impulsivity and aggression, if affective aggression is prominent, either mood stabilizing drugs (lithium or valproate) or SSRIs may be the first line. This can be followed, if necessary, with low dose antipsychotics. Ictal aggression may need mood stabilizers followed by benzodiazepines. Predatory aggression, relatively less frequent in intellectual disability, may need antipsychotics as the first line. Although there is RCT evidence for the efficacy of zuclopenthixol in aggression, many clinicians prefer atypical antipsychotics because of a more favorable side-effect profile. (Zuclopenthixol, though used in the UK, is not available in the US.)

6. For symptoms of anxiety, SSRIs can be the first line, followed by short-term use of low dose benzodiazepines or low dose antipsychotics. If somatic symptoms predominate, beta-blockers such as
propranolol can be the first line (provided there are no contra-indications).

7. For self-injurious behavior, it would be useful to identify the specific sub-type as mentioned earlier. Low dose antipsychotics may be useful for those with repetitive stereotyped behavior; opiate antagonists such as naltrexone for those with severe self-inflicted tissue damage; mood stabilizers and beta blockers for those with self-injury and agitation; and SSRIs where a compulsive element is suspected in the self-injury.

As is evident from the first part of this paper, the different symptom domains that are proposed here are not mutually exclusive, and there is a considerable degree of overlap between them. A potential danger with this approach to pharmacotherapy is that because all patients with personality disorder suffer symptomatically, prescribing in personality disorder will shift from being an occasional intervention to "normal" practice. The experience from our audit suggests that although the drug treatments seem to depend on the balance of the most prominent symptom domains that are causing problems at that time, due to the very long treatment histories that many of these patients had, it was difficult to discern the exact sequence in which psychotropic medication was started and how it linked to the predominant symptom domains at each of those stages. With no drug being specifically licensed as a treatment for personality disorders, it is important that clinicians are aware that any medication use in this population would be "off label" prescribing. It is therefore prudent to have audit standards to measure your practice. We would suggest the following, by no means exhaustive, list for this purpose:

1. The patient’s multi-axial diagnosis should be recorded in the case notes.
2. Pharmacological treatment should only be part of a multi-disciplinary treatment package.
3. The predominant symptom complex(es) being targeted for drug treatment should be recorded.
4. Expected improvements and behavioral targets should be identified in discussion with the patient and recorded, before the start of treatment.
5. Discussions about the rationale, effects and potential side-effects of the proposed treatment, with the patient, and if appropriate, with his caregiver/advocate should be recorded.
6. There should be regular follow-up appointments to monitor progress on these expected changes. A clear record of any symptomatic improvement, worsening or side-effects should be kept during this follow-up.
7. There should be an agreement on the length of time that the patient will be tried on a drug. If there are no beneficial effects within that time, the drug should be stopped.

The view concerning the drug treatment of personality disorders remaining “a clouded area governed more by opinion than fact” seems to have even more of a ring of truth when it comes to the psychiatry of intellectual disability. At the same time, clinical experience suggests that the use of psychotropic medication is, in many cases, sustained because of beneficial effects for patients. Systematic audits using some of the audit standards proposed here will help in generating a body of evidence that will indicate the efficacy or otherwise of the drugs that are used. Patients and practicing clinicians would greatly benefit from such an understanding.

References


