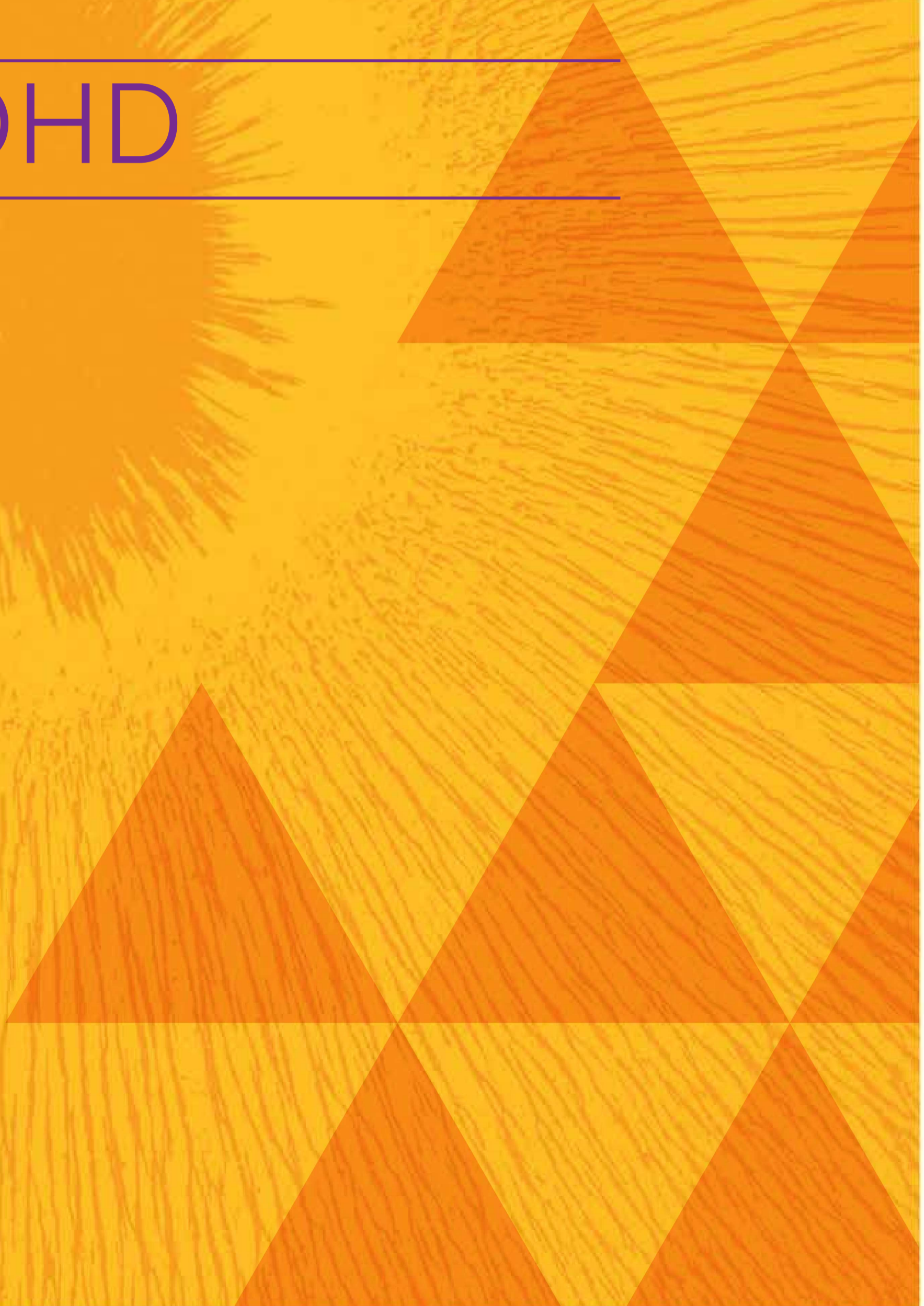

ADHD



Attention-deficit/hyperactivity disorder (ADHD)

ADHD and AOD use frequently co-occur, and there is evidence to suggest that the presence of ADHD is a primary risk factor for the development of AOD use disorders [465-467]. Research has found that untreated ADHD is associated with a more problematic course of AOD use disorder, with clients less likely to gain benefits from treatment, adhere to treatment, and achieve and maintain abstinence [468, 469]. ADHD has also been associated with earlier age of first substance use, greater substance dependence and increased risk of relapse [470, 471]. However, evidence suggests that responding early to ADHD through the provision of appropriate evidence-based treatments can prevent the development of AOD use disorders among adolescents and reduce the risk of AOD relapse among adults [472].

Difficulties can be faced when assessing and screening for the presence of comorbid ADHD, as symptoms can be masked or even resemble symptoms of intoxication or withdrawal (see Chapter A4) [473-475]. Some recommend an abstinence period of one month or more to assist with diagnosis [476, 477], but this is not supported by the broader evidence base or the majority of experts [7, 471, 478, 479].

To assist with clinical decision making, it may be useful to involve family members or friends, who can provide further information and clarification regarding the presence of attention problems, impulsivity, and restlessness over the person's lifetime [471, 480].

Clinical presentation

ADHD represents a persistent pattern of developmentally inappropriate levels of inattention, hyperactivity, and/or impulsivity [24]. It has been estimated that approximately 60% of children will continue to experience symptoms of ADHD as adults, whilst at least 30% will carry the full disorder through to adulthood [481, 482]. Research indicates that attentional difficulties are more likely to persist into adulthood, whilst impulsivity and hyperactivity tend to diminish over time [483, 484]. Adult symptoms are expressed differently to the way in which they are expressed in childhood. These may include [485, 486]:
Difficulties with time management.

- Disorganisation.
- Procrastination.
- Lack of motivation.
- Difficulties sleeping.
- Irritability, frustration, or anger.
- Fatigue.
- Difficulties concentrating or studying (which may present as academic underachievement).
- Occupational or workplace difficulties.
- Problems forming and maintaining relationships.
- Difficulty obtaining and/or maintaining stable employment.
- History of imprisonment or frequent contact with police.

In addition, clients may present with other symptoms which are not unique to ADHD, but are common to many mental disorders (e.g., problems sleeping, irritability, fatigue).

Managing ADHD symptoms

Research indicates that people diagnosed with ADHD in adulthood may require additional psychosocial support to assist them to come to terms with their diagnosis, and reframe their past [487]. The techniques outlined in Table 30 can help AOD workers manage clients with ADHD symptoms.

Table 30: Dos and don'ts of managing a client with symptoms of ADHD

<p>Do:</p> <ul style="list-style-type: none">✓ Assist the client plan activities and organise prompts or reminders (e.g., using a smartphone).✓ Encourage stress-reduction methods, such as progressive muscle relaxation.✓ Encourage physical exercise.✓ Monitor closely during times of stress – these may lead to fluctuations in symptoms and may necessitate the adjustment of medication.✓ Involve family members and friends – educating them about the condition and treatment will provide long-term benefits.✓ Offer to help the client engage with education courses or training, which can assist with attention training. <p>Don't:</p> <ul style="list-style-type: none">× Get visibly upset or angry with the client.× Confuse the client by conducting unstructured, unfocused sessions.
--

Adapted from Gournay [488] and Zulauf [477].

Treating ADHD

There are several treatment options available for the treatment of ADHD, including psychotherapy, pharmacotherapy, e-health interventions, physical activity, as well as complementary and alternative therapies (e.g., dietary supplements). The evidence base surrounding each of these treatments is discussed below. There is a general consensus that the treatment of comorbid ADHD and AOD use should use an integrated multimodal approach, with components of individual and/or group psychotherapy, as well as peer and family support to enhance the effect of treatment [7, 489]. Reviews have found that combined approaches incorporating both psychotherapy and pharmacotherapy interventions have better outcomes than pharmacotherapy alone [477, 479].

Psychotherapy

Psychotherapy is recommended as a critical component of a multimodal approach targeted towards comorbid ADHD and AOD use [478]. There is evidence from the broader ADHD literature to suggest that an approach that combines CBT and pharmacotherapy may result in better outcomes for ADHD symptoms than pharmacotherapy alone [490, 491]. Although CBT has been found to be the most effective psychological approach for ADHD (when delivered in conjunction with pharmacotherapy) [492], positive outcomes have also been associated with the use of other approaches, such as meta-cognitive group therapy [493], structured skills training [494, 495], and cognitive remediation, both as therapist-led programs [496] and self-directed interventions [497].

Common therapeutic elements include psychoeducation, a focus on problem solving, strategies to improve attention, impulsivity management, and cognitive restructuring [492]. It has been suggested that a structured format of repetitive skill practising and reinforcement of coping strategies for core ADHD symptoms are key components for the effective treatment of ADHD [498, 499]. However, these interventions have yet to be evaluated among people with comorbid AOD use.

To date only one integrated psychotherapeutic approach for comorbid ADHD and AOD has been evaluated [500]. The intervention represents is an integration of the primary elements of the CBT programs for both ADHD and AOD, and includes planning and organisational skills, MI, skills training, and relapse prevention [501]. The results from this trial are yet to be published, but two case presentations with early alcohol and ADHD outcomes from the study indicate that this may be a promising treatment [502].


Pharmacotherapy

There has been substantially more research conducted to examine the efficacy of pharmacological interventions for comorbid ADHD and AOD use disorders, either as stand-alone treatments, or in combination with psychological approaches [503]. Table 31 lists some of the pharmacological treatments for ADHD.

In general, pharmacotherapy for ADHD has been found to be effective in AOD clients but the response is more modest than those with single disorder ADHD [504]. In ADHD as a single disorder, the first line of pharmacotherapy is psychostimulants; methylphenidate first line followed by dexamphetamine if methylphenidate is ineffective [505]. Although psychostimulants are recommended as first line pharmacotherapies for ADHD, it is essential that a medical assessment be conducted prior to prescribing to ensure that the client does not have cardiovascular or other conditions that may contraindicate psychostimulant prescription. Atomoxetine, a noradrenaline reuptake inhibitor, is recommended for individuals who cannot take psychostimulants [7, 506, 507].

Table 31: Pharmacotherapy medications for ADHD

Drug name	Brand names	Drug type
Methylphenidate	Ritalin	Psychostimulant
Dexamphetamine	Sigma	Psychostimulant
Lisdexamfetamine	Vyvanse	Psychostimulant
Atomoxetine	Strattera	Noradrenaline reuptake inhibitor



Adapted from Zalauf et al. [477] and Pérez de los Cobos et al. [479]. For a full list of generic brands available, see the Therapeutic Goods Administration website (<https://www.tga.gov.au/>).

Although evidence supports the pharmacological treatment of those with comorbid ADHD and AOD use, there has been contention about whether psychostimulants should be used among people with AOD use disorder, due to their potential for misuse [508], leading some treatment guidelines to recommend that non-stimulants be used as the first-line pharmacotherapy treatment for people with comorbid ADHD and AOD use, despite limited evidence of their efficacy [505]. However, in view of the fact that non-stimulants are less efficacious than stimulants in treating ADHD, and in the absence of evidence of any misuse of long-acting stimulants in clinical trials, there is a need to balance the potential risk of misuse and diversion, against the risk of untreated or inadequately treated ADHD [504].

Several RCTs have examined the safety and efficacy of psychostimulant treatment among people with comorbid ADHD and AOD use disorders [509-513]. A systematic review examining psychological and pharmacological interventions for people with comorbid ADHD and AOD use found that despite variation between studies, the evidence largely supports the use of methylphenidate, with the majority of studies finding significant reductions in ADHD symptoms following treatment [478]. AOD use either significantly reduced or remained unchanged, with no studies finding any worsening of symptoms [478, 479]. Of note, studies that reported AOD use reduction also included some form of psychotherapy as an adjunctive therapy (e.g., relapse prevention, group or individual counselling, CBT), and no cases of medication misuse or abuse were reported [477-479].

Lisdexamfetamine, another type of psychostimulant, was recently listed on the Pharmaceutical Benefits Scheme for the treatment of ADHD in Australia. One pilot RCT has examined the efficacy of lisdexamfetamine as an adjunctive treatment to NRT, to facilitate smoking cessation among adults with

ADHD [514]. There were no differences in smoking outcomes for lisdexamfetamine relative to placebo; however, significantly better outcomes for clinician-rated and self-rated ADHD symptoms were found, suggesting that lisdexamfetamine might be a promising psychostimulant treatment for this comorbid group, pending further and more conclusive evidence.

The use of atomoxetine, a non-stimulant medication for the treatment of comorbid ADHD and AOD use, has been examined in several RCTs [477, 478]. While atomoxetine has demonstrated efficacy relative to placebo for ADHD symptoms, studies report minimal effects for AOD outcomes [477, 478]. Notably, most studies had also included different psychological interventions which were targeted towards reducing AOD use.

E-health interventions

Emerging e-health programs have combined elements from successful CBT treatments for single disorder ADHD into internet-based interventions. These interventions, aimed at assisting people with ADHD structure and organise their lives, incorporate aids such as calendars, schedules, timers, reminders, shopping lists, and cleaning and laundry schedules, all of which are easily accessible on smartphones [515]. Smartphone features such as text messages, cameras, GPS, and voice memos, may also be useful.

One RCT has evaluated an internet-based course teaching people with single disorder ADHD to use smartphone applications to improve their everyday organisation skills [515]. The course, delivered with therapist support, teaches participants how to effectively use their smartphone applications to better organise their lives. Compared to wait-list control, participants randomised to receive the course illustrated a significantly larger decrease in ADHD symptoms, including inattention and hyperactivity. One-third of participants (33%) were deemed to have made a clinically significant improvement in organisation and attention over the study period, as assessed by clinicians. Although this research has yet to be conducted among people with comorbid ADHD and AOD use, the findings from this RCT are promising.

Physical activity

Although ADHD treatment is primarily focused on psychotherapy and pharmacotherapy, there is emerging evidence to suggest that physical activity may have beneficial effects similar to those of psychostimulant medications [516]. Research indicates that exercise interventions (frequent aerobic exercise in particular) may assist with the management of ADHD symptoms, particularly intrusive thoughts, worry, and impulsivity [517]. As such, exercise may be a useful adjunct to pharmacotherapy and psychotherapy for ADHD, however, this has yet to be rigorously evaluated [517], and has not been examined in people with comorbid ADHD and AOD use.

Complementary and alternative therapies

Dietary supplements

There has been very little research examining the use of dietary supplements for ADHD. However, two meta-analyses have concluded that omega-3 supplementation is associated with modest ADHD symptom improvement for single disorder ADHD in children and adolescents [518, 519]. These findings have yet to be replicated among adults, and among people with comorbid ADHD and AOD use, but point to potential avenues of future research.

Summary

For those with comorbid ADHD and AOD use, reviews of the evidence recommend an integrated, multimodal approach, incorporating psychotherapy focused on comorbid AOD use, as well as pharmacotherapy [477, 478]. The use of structured psychotherapies, including CBT with a focus on goals, with active AOD worker involvement, is likely to be the most beneficial [477], and, as with the treatment of other comorbid disorders, treating both conditions concurrently is more likely to produce a positive treatment outcome than treating either disorder alone [504]. Box 13 illustrates such a multimodal approach through the continuation of case study A, following Ali's story after the identification of his ADHD disorder had been made.

Box 13: Case study A: Treating comorbid ADHD and AOD use: Ali's story continued

Case study A: Treating comorbid ADHD and AOD use: Ali's story continued

Based on Ali's symptoms, the AOD worker thought that it may be beneficial for Ali to see a psychiatrist who specialised in adult ADHD. The AOD worker asked Ali whether he would be open to seeing a psychiatrist who could assess him further and help him decide the best treatment plan. He told Ali that he would be pleased to continue seeing him, and would be happy to liaise with both his GP and the psychiatrist. Ali agreed and gave written consent for his AOD worker to contact his GP and the psychiatrist and for the sharing of information between these services.

After sending this form to the GP and psychiatrist, the AOD worker stayed with Ali while he called to make an appointment with both over the coming weeks. At the AOD worker's suggestion, Ali put these appointments in his phone calendar and also arranged a follow-up appointment following these consultations. With Ali's permission, the AOD worker also informed his family of the dates and times of these appointments so that they could remind him and help him get to the appointments. Ali also agreed to the AOD worker discussing his condition with his parents, as they would be able to provide further information about his condition and help him in his ongoing treatment.

The psychiatrist who assessed Ali made a diagnosis of ADHD, noting that Ali had a range of symptoms of inattention, hyperactivity and impulsivity. The psychiatrist told Ali that his earlier experiences with speed and the way he described feeling calmer after a small amount of the drug was significant. He explained that psychostimulants are one of the central treatments for ADHD, which are carefully prescribed and monitored. Following a medical assessment conducted by Ali's GP, the psychiatrist prescribed psychostimulant medication, and advised Ali that it was very important for him to maintain abstinence from the use of any other drugs, due to possible interaction effects. The AOD worker advised Ali that he would be available for a phone call every day for the first week, to see how he was going.

Ali continued with his treatment. In addition to regular monitoring and minor adjustments to the dosage of the ADHD medication, Ali attended individual sessions with his AOD worker, where he was provided with a range of evidence-based interventions to help him with his speed and cannabis use. These began with psychoeducation and information about the substances Ali had been using, focusing on the way in which they affected his ADHD and how his ADHD symptoms impacted on his substance use. Ali was also given coping strategies for occasions when he became tense and he began to practice and enjoy the relaxation exercises he was taught.

Box 13: Case study A: Treating comorbid ADHD and AOD use: Ali's story continued

One important component of the treatment plan was to help Ali organise activities in his daily life. The AOD worker helped him organise a daily timetable, and, using different functions on Ali's smartphone, alarms for important events, reminders and appointments were set up. Ali's parents helped Ali keep a schedule and maintain his reminders and appointments in his phone.

Before his first presentation to the AOD service, Ali had never been able to maintain employment for more than a few days, and had no meaningful educational qualifications because his school performance was so poor. After several months, the AOD worker was able to help Ali find a place in a community education course, and, because of the improvements in his concentration and attention, he was able to obtain part-time work in a local newsagency. Ali and the AOD worker had also begun talking about a plan for independent living.

Key points:

- Treatment for ADHD and AOD use should be concurrent and multimodal.
- Education about the nature of the condition for the client and the family is essential.
- The treatment of comorbid ADHD and AOD use requires long-term follow-up and more general efforts at rehabilitation, including further education.

Psychosis

