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## **Substance Use, Coping, and Compensation in Autism**

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Autistic people employ coping strategies<sup>1-2</sup> to manage autism-related difficulties (e.g., in social communication) and co-occurring mental and physical health problems (e.g., anxiety, depression, sleep difficulties). One relatively unexplored coping strategy is substance use/abuse (e.g., binge drinking, smoking, illicit drugs). This is surprising, given the well-documented role of substance use/abuse in other psychiatric<sup>e.g.,3</sup> and neurodevelopmental<sup>e.g.,4</sup> conditions as a mechanism driving poor outcomes, and the strikingly high rates of mental and physical health challenges faced by autistic people<sup>5</sup> that they might cope with through self-medication.

Using a mixed-methods survey, Weir and colleagues<sup>6</sup> compared 1,183 autistic and 1,203 non-autistic adults on the frequency of self-reported substance use behaviours (drinking, smoking, drug use) and derived themes from qualitative data on the motivations for these behaviours. Quantitative analyses showed that autistic people were actually *less* likely to report drinking frequently (16.0% vs 22.2%) and binge-drinking (3.8% vs 8.2%), and autistic males (but not females) were less likely than their non-autistic counterparts to have ever smoked (50.8% vs. 64.6%) or used drugs (35.4% vs. 52.7%). Yet, qualitative content analyses revealed that autistic people were nearly nine times more likely to report substance use to 'manage behaviour' and three times more likely to 'cope with mental health difficulties'. Therefore, this suggests that although autistic people are generally less likely to use substances compared to non-autistic people, when they *do*, this could be for very different and more maladaptive reasons. Indeed, using substances in this way could have numerous negative consequences for autistic people; any positive impact or temporary relief associated with using substances to manage autistic behaviour (e.g., reduce sensory overload) cannot be sustained over time, and self-

medicating for mental health difficulties is likely to exacerbate these problems in the long-term.

Why some autistic people use substances to cope, despite possible negative effects, is unclear. A closer look at Weir *et al.*'s 'managing behaviour' theme suggests one possible beneficial function of substance use; it alters or disguises autistic characteristics to other people. For example, one participant reported that drugs "*got me...thinking clearly and I could chat to people*" and another that drugs "*alter my behavior in a way I become more sociable*". Although Weir *et al.*'s participants did not specifically use the terms 'compensation' or 'camouflaging', these descriptions appear relevant to the growing literature on compensatory strategies and camouflaging in autism. Indeed, some autistic people employ strategies in social situations to compensate for social-cognitive difficulties (e.g., modelling others' social behaviour) and mask atypical behaviours (e.g., reduce repetitive movements), such that they might 'pass' as non-autistic and/or do not receive a timely diagnosis<sup>1-2,7-8</sup>. The mechanisms by which substances could potentially alter individuals' autistic presentation remains to be investigated. It is possible that they could: 1) reduce anxiety such that individuals have greater resources to employ social compensatory strategies; 2) provide a 'social glue', for example, using substances with someone else provides an obvious topic of conversation and shared experience; 3) draw attention away from an autistic person's atypical behaviour, for example, smoking gives one something 'to do' in a social setting; or 4) actually make no difference to or even increase observable autistic behaviours.

Unpacking the possible link between substance use and compensation is critical, given the poor outcomes associated with compensation<sup>1-2,7-8</sup>. For example,

heavily employing compensatory strategies – whilst providing benefits to some autistic people (e.g., employment, social relationships) – is linked with poor mental health, support needs being overlooked, and characterises those who receive a late autism diagnosis in late adolescence or adulthood. The extent to which substance use could be driving and maintaining compensation, thus contributing to poor outcomes, and whether this is particularly the case for those diagnosed late, warrants further attention. To address this, longitudinal research designs will be beneficial, as there is currently no causal evidence to indicate how compensation and mental and physical health difficulties interact and unfold over development, let alone any role of strategies such as substance use. Drawing on lessons learned from another neurodevelopmental condition, Attention-Deficit Hyperactivity Disorder (ADHD), where more robust methods have been used, could be useful. Evidence suggests that individuals with ADHD are at risk for later substance use problems and subsequent poor outcomes, and this is partly driven by shared genetic liability for ADHD and substance use disorder<sup>9</sup>. Interestingly, late diagnosis of ADHD is also a risk factor for substance use problems<sup>4</sup>.

Weir *et al.*'s study gives us an important first look at *why* autistic people might use substances to cope. Further research is now required to understand the possible mechanisms underlying the coping and compensatory function of substance use in autism, and the consequences for mental and physical health and diagnosis. Such insights will be important for clinicians who diagnose and support autistic people with a range of health problems and potentially, particularly those receiving a late diagnosis. As is the case for delineating causal mechanisms in developmental psychiatry, robust longitudinal and genetically-informed research designs are required<sup>10</sup>.

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