Chapter 4
Digital Interventions for Dual Diagnosis

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ABSTRACT

Dual diagnosis is a leading contributor of disease burden worldwide. Whilst integrated treatment is recommended, there are considerable barriers that may inhibit access to integrated care, including a lack of training and resources. Digital interventions may enable access to support, providing a space for people to engage in treatment when they need it most. This chapter reviews the current literature on the efficacy of digital interventions for dual diagnosis. Computer-based interventions were effective at improving dual diagnosis outcomes; however, the combined effect of computer-based interventions and therapist support was found to be more effective than the effects of computer-based interventions alone. The evidence-base around smartphone applications is lacking, and there are perceived difficulties with this technology in addressing the complexity of issues faced by people with dual diagnosis. Future research should include standardised terminology to describe techniques used within interventions and consider a variety of research methods to understand implementation.

INTRODUCTION

What Is Dual Diagnosis?

The World Health Organisation (2010) has defined dual diagnosis as “comorbidity or the co-occurrence in the same individual of a psychoactive substance use disorder and another psychiatric disorder”. The term “dual diagnosis” is not without critics (e.g. Bhalla & Rosenheck, 2018), as this may not sufficiently capture the complexity of issues faced by individuals. Those with dual diagnosis are not a homogenous group, and this reflects a broad array of psychological disturbance, including anxiety, depression,

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schizophrenia, bipolar disorder, and obsessive-compulsive disorder, in combination with various types of substance use disorders ranging from tobacco to opioid dependence (Nigam et al., 1992; Ridgely et al., 1990). Furthermore, a person with dual diagnosis can present with multiple conditions in terms of mental health, substance use, and physical health and lifestyle difficulties (Bhalla & Rosenheck, 2018) and these conditions may even exacerbate each other (Rorstad & Chechinski, 1996). It has been argued that comorbidity (Rorstad & Checkinski, 1996) or even multimorbidity (Bhalla & Rosenheck, 2018) may more accurately define this condition. Even though the term dual diagnosis is used here to describe those with co-morbid mental health and substance use difficulties, it is important to acknowledge that these conditions do not typically occur in isolation and the term dual diagnosis still persists in the literature and clinical practice.

Substance use and psychological disorders coexist at a higher than chance level in the population, and this is particularly the case in patients who are being treated for either mental health or substance use alone (Drake & Wallach, 2000). Weaver et al. (2003), showed that between 75% and 85% of individuals attending substance misuse treatment facilities also have psychiatric disorders. In addition, about half of those who are diagnosed with mental health disorders are likely to experience substance use disorder at some point in their lives (Kessler, 2004). Epidemiological evidence suggests that psychological disorders typically have an earlier onset than substance misuse (Kessler, 2004) with psychiatric disorders usually developing in middle childhood to adolescence, and substance use disorder appearing in late adolescence or early adulthood (Soderstrom et al., 2005). This suggests that in some cases, substance misuse may be a consequence of psychological disorder, however it may be more complex than it seems.

Boden and Fergusson (2011), identify three trajectories by which dual diagnoses can develop. An individual could develop a psychiatric condition that then leads to substance use as a form of self- medication, or in response to heavy prescribed psychotropic medication use. An individual could develop a problem with substance use, that then leads to psychiatric conditions, for example alcohol and major depressive disorder. Alternatively mental health and substance use problems may be causally related and simultaneously increase the risk of each other via a feedback loop. Kessler, (2004), argues that there is a link between the types of substances abused and characteristics of the psychiatric disorder. For example, substance use disorders are more strongly associated with disorders such as bipolar depression, attention deficit hyperactivity disorder, conduct disorder, and antisocial personality disorder, which are considered externalising types of psychiatric disorder (Kessler, 2004). In particular, individuals with mood disorders typically are drawn to substances which have antidepressant effects, and those with anxiety disorders are drawn to substances with anxiolytic effects (Schulte & Hser, 2014). This suggests that individuals might be seeking self-medication to relieve symptoms of their psychiatric condition. However, it can be argued that it might not be as simplistic as this, as substance users typically abuse more than one type of substance dependent on availability (Riggs et al., 2008).

Individuals who suffer with both psychiatric disorders and substance use disorders tend to have more severe symptoms, that are more persistent and more resistant to treatment than those with just a single diagnosis (Kessler, 2004). Substance use has been shown to exacerbate symptoms of psychiatric conditions resulting in hospitalisation, poor prognosis and suicidality (Ridgely et al., 1990). The severity of psychiatric symptoms has been shown to predict successful responses to treatment, with those with the most severe symptoms being indicative of poor treatment outcomes (Case, 1991). Dual diagnosis can exist without formal diagnoses as substance users may withhold information about their substance use, due to the legality of such behaviour and fear of punishment for illegal activity (Mueser et al., 2016). In addition, some symptoms of substance use can mimic psychiatric symptomology such as psychosis

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