Gaming For Growth: Reimagining Counseling for Folks on the Autism Spectrum

by

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Abstract

Autism Spectrum Disorder (ASD) is an extremely common developmental disability, affecting just under 2% of the population in Canada (Public Health Agency of Canada, 2018). This population faces many of the same mental health struggles as neurotypical individuals, often at much higher rates, and yet accessing counseling often comes with a series of additional barriers due to the complexities of life on the Autism spectrum. As such there is a clear need for a deeper examination into the way we offer counseling to this oft-neglected segment of the population, and this capstone will attempt to address that need. In chapter one I will provide an in-depth examination of this problem and explain why the development of ASD-sensitive forms of therapy is necessary. In chapter two I will address the five forms of therapy most used when counseling clients with ASD, identifying their benefits and highlighting their drawbacks. Finally, in chapter three I will outline a new model of counseling for this population based around the popular roleplaying game Dungeons and Dragons.

Keywords: Autism, Counseling, Dungeons and Dragons, Roleplaying Games, Group Therapy, Anxiety, Depression, Social Skills

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Chapter 1: Introduction

As an entirely person-centered field, counseling and its' interventions are typically tailored to the specific needs and circumstances of each individual client. A cursory glance at CounsellingBC.com, an online therapist directory focused on British Columbia, Canada, shows just under 100 unique approaches and over 100 areas of focus boasted by the hundreds of counseling professionals listed within this directory, numbers which highlight the importance of clients being able to filter through counselors and find one whose skills and interests line up properly with the client's needs. However, this also demonstrates how underserved some categories are. One such area which is lacking in options is support for folks with cognitive/developmental disabilities; CounsellingBC.com includes only 12 counselors who list this as one of their specialties. What makes this even more problematic are the empathic challenges that come with counseling a client with a disability such as Autism Spectrum Disorder (ASD), since the experience of living with ASD cannot be shared by a neurotypical therapist. A close parallel can be drawn with multicultural/minority counseling and research supports the suggestion that minority clients report higher satisfaction when working with minority therapists (Constantine, 2002). As such it is our duty as neurotypical counseling professionals to educate ourselves so we can offer informed care and reduce some of the barriers to mental health supports that neurodiverse clients can face.

While neurodiversity-informed practice covers a wide spectrum of conditions, this research will be centered around ASD specifically. There are many reasons why this research matters, the most important of which will be outlined below. These five problems will inform the interventions that are subsequently discussed throughout chapter two and will be specifically highlighted in the proposed training program outlined in chapter three. I hypothesize that through

my examination of the problems which currently exist and some successful interventions which have been identified across the literature I will be able to develop an ASD-sensitive program for helping therapists learn to approach their work with this client population from a properly informed perspective. The interventions that will be covered in chapter two include Applied Behaviour Analysis, Cognitive Behaviour Therapy, mindfulness, social skill development, and Occupational Therapy, and the research problems I will examine in this first chapter involve a lack of interventions tailored to the needs of the ASD population; the rates of clinically significant anxiety, depression, and substance use within this population; and the social struggles folks with ASD often face.

Problem 1: Lack of Tailored Interventions

This is the premise upon which this capstone is based, and there is ample evidence to support the claim that current counseling methods are not sufficiently sensitive to the needs of individuals with ASD. In fact, researchers have suggested that traditional counseling interventions may in fact be counterproductive to the psychological healing process when applied to folks with ASD due to the fact that psychotherapy is typically predicated on the idea of creating psychological change (Strunz, 2018). A significant source of anxiety-related stress for folks with ASD is a fear of change and as such the way that the therapist presents the goals for therapy when working with these individuals is likely to have a significant impact not only on their willingness to engage in therapy but also in the eventual outcomes (Bearss et al., 2016). Therefore, to deliver psychotherapy services to individuals with ASD in a disability-informed manner it is essential that we reimagine the way we as practitioners engage with this population.

Traditionally, the way that therapeutic interventions have been applied to individuals with ASD has been via applied behaviour analysis (ABA) and other forms of behavioural

interventions. While effective at addressing issues with behaviour, where this fails as a counseling substitute is in its' inability to assist folks with ASD to recover from their mental health concerns in the same way that a more mainstream psychotherapeutic intervention might. In fact, ABA-style interventions have a history of stunting or even damaging the individual's social capabilities, which becomes increasingly problematic when considering that difficulty with social interactions is frequently one of the hallmarks of many folks' experiences with ASD. To this point, one common way that individuals with ASD attempt to overcome their struggles with navigating the social world is by acting like a neurotypical person. This may include accessing traditional psychotherapy for relational issues, but sadly these individuals are often unsatisfied with the results of therapy in large part because therapists are generally not trained in effective ways to make their services accessible and tailored to people with ASD (Strunz, 2018). Removing the barrier to effective counseling that this population faces is therefore predicated on our ability as practitioners to understand what aspects of traditional therapy honour the unique aspects of living with ASD or create a disconnect between the therapist and the client.

Problem 2: Rates of Anxiety

One of the major mental health issues that folks with ASD often struggle with is anxiety. It has been found that 30%-42% of youth who meet the diagnostic criteria for ASD also meet the criteria for an anxiety disorder, with a prevalence of 30%-60% over the lifespan (Bearss et al., 2016; Parr et al., 2020). These numbers are staggering when compared to the rates of anxiety in the general population, which are commonly found to fall somewhere between 3%-5% (Lau et al., 2020). Problematic by itself, this becomes even more of an issue when combined with the unique ways that anxiety can present in folks with ASD, as the challenges they face and anxiety-provoking situations they encounter vary greatly both from the general population and from

other people with ASD. Some of these unique triggers include social anxiety not based on a fear of negative evaluations, concerns regarding potential change or future uncertainty, or compulsive beliefs, fears, and behaviours that are not necessarily motivated by stress reduction, with the exact reactions to these triggers varying wildly depending on how the individual's ASD presents. Furthermore, folks with ASD face a significant number of typically anxiety-provoking situations in day-to-day life, from victimization and engagement with the criminal justice system to financial and employment-related struggles, at a higher rate than members of the general population do. Findings also suggest that the anxiety experienced by adults with ASD resulting from the many factors outlined above have a noticeable impact on their education and employment prospects as well as their overall quality of life which can amplify their anxieties further (Parr et al., 2020).

Complicating this issue is the difficulty many people face when it comes to recognizing anxiety in folks with ASD. Issues such as struggling to recognize and display emotions in themselves and others or difficulty communicating can make it hard to identify and apply appropriate anxiety interventions, especially since individuals with ASD frequently experience symptoms from a range of anxiety disorders simultaneously (Parr et al., 2020). Furthermore, these symptoms sometimes overlap not only with one another but also with other symptoms of ASD such as general social avoidance or fear of change which can further obfuscate what is treatable anxiety and what is a component of a client's ASD presentation (Kerns, 2017). Clearly anxiety is a problem that could benefit from an ASD-informed therapeutic intervention strategy, but it is far from the only one.

Problem 3: Rates of Depression

Depression is another common form of mental illness that affects folks with ASD at a disproportionately high rate, as it has been found that rate of current depression amongst this population is as high as 23% (Russel et al., 2020) while the rate of current depression within the general population has been found to range from 2.5% for men to 3.7% for women (Wigham et al., 2017). The rate of lifetime depression amongst folks with ASD is even higher, with as many as 37% of adults with ASD meeting the criteria for diagnosable depression at some point in their lives (Russel et al., 2020). In many ways this mirrors the high rate of anxiety amongst this population, a claim which is reinforced by a brief examination of the underlying factors.

As discussed above, folks with ASD often feel pressure to hide their disability and behave as if they were neurotypical to conform to societal norms. This can be triggered by peer pressure and bullying, factors that are implicated in the development of depression, which can leave the person unwilling to reveal their disability to others which in turn can leave them unable to seek out support that is sensitive to their unique needs. This is exacerbated by the communication difficulties many folks with ASD face both due to the way these difficulties can lead to bullying from peers and due to links between social communication struggles and depression (Wigham et al., 2017). As mentioned previously there is a lack of ASD-specific counseling training available for therapists, which means that even if an individual with ASD manages to access therapy and identifies their ASD diagnosis as contributing to their depression there is a high likelihood the therapist will not be appropriately trained to work with this individual.

Another factor unique to the relationship between ASD and depression is rumination, or the tendency for an individual to perseverate on some aspect of a negative emotion or situation. Rumination tends to consume extensive cognitive resources and has been linked to the

development and maintenance of a wide range of mental health concerns, most strongly to depression. In fact, the preeminent measure of ruination tendencies specifically asks clients to highlight times when they felt sad or depressed. Shifting focus to ASD, a common symptom of this disorder is the tendency to perseverate on specific topics, items, or even emotions. Additionally, folks with ASD typically have lower inhibitory control, a factor that has been similarly linked to one's tendency to ruminate. Studies have supported this link, as adolescents and adults with ASD report fixating more frequently in their own symptoms of depression compared to controls and higher levels of rumination have been linked to higher levels of non-clinical ASD symptomology (Patel et al., 2017). As such folks with ASD may be predisposed to be more vulnerable to depression simply by virtue of the way their disorder presents, a claim which emphasizes the need for an ASD-sensitive counseling intervention for depression.

Problem 4: Rates of Problematic Substance Use

Traditionally substance use disorders (SUD) have been believed to be rare among folks with ASD, largely because one of the major risk factors for developing SUD is a tendency towards sensation-seeking behaviours while one of the telltale symptoms of ASD happens to be low levels of sensation-seeking. That assertion has been challenged recently and current research suggests that individuals with ASD may in fact be significantly more susceptible to developing SUD than the general population. Problematic rates of substance use have been observed among 19-30% of individuals with ASD within clinical settings, and a doubled risk of SUD development among this population when compared to the neurotypical community (Arnevik & Helverschou, 2016; Butwicka et al., 2017). One proposed reason for this heightened rate of SUD involves the comorbidity of attention-deficit hyperactivity disorder (ADHD) and ASD, and there is indeed a link not only between ASD and ADHD but also between ADHD and SUD. That

being said it appears unlikely that the increased susceptibility to SUD development among folks with ASD can be attributed to comorbid ADHD as studies controlling for ADHD have still found a higher rate of SUD among subjects with ASD when compared to neurotypical controls (Butwicka et al., 2017). As such it is important to understand the other factors that may contribute to SUD susceptibility.

One potential reason folks with ASD may choose to use addictive substances concerns their ability to reduce tension and enhance social skills. As discussed previously, difficulties in social situations are one of the well-documented symptoms of ASD which can in turn lead to anxiety and discomfort; therefore, folks may turn to substances such as alcohol in an attempt to reduce these feelings. Second, many forms of treatment for SUD involve mandatory group-based interventions in the form of 12-step programs, self-help groups, or inpatient facilities. This forced social engagement may be anxiety-provoking for people with ASD which in turn may dissuade this population from seeking treatment at a higher rate than neurotypical individuals. This reluctance to participate and social aloofness may also be misinterpreted by helping professionals as a lack of engagement in the healing process, which can lead to lessened motivation on the part of the addiction counselor or group facilitator and in turn worsen the patient's symptoms while also pushing them away from treatment. Having said that, this reduced willingness to engage with peers can also be a protective factor insofar as it reduces the influence of other people on behaviour which helps people with ASD avoid peer pressure (Arnevik & Helverschou, 2016). This speaks to the importance of having ASD-sensitive interventions for problematic substance use that not only avoids the group-based pitfalls of traditional addiction treatment but also works with the unique resiliencies to substance use that folks with ASD have,

despite the fact that difficulties with social engagement are often viewed as a negative and in fact may drive members of this population to seek out therapy.

Problem 5: Difficulties With Social Engagement

Social engagement issues are a well-documented symptom of ASD. Many individuals diagnosed with this disorder report struggling with both communication and socialization at many points throughout their lives and this can result in the creation of many different barriers to success in a variety of areas (Ashbaugh et al., 2017). These struggles typically begin to manifest in the first year of life and immediately begin to negatively affect the individual's development by reducing their engagement with certain types of social learning opportunities such as facial cues, visible social behaviours, and group activities, subsequently stunting growth in these areas. This in turn damages the individual's ability to learn from more complex social situations later in life; hence, many social interventions for folks with ASD tend to be targeted at young children (Jones et al., 2016). However, while early intervention may be the ideal standard for limiting the effects of ASD on one's later social skills it is both unrealistic and unfair to assume that this is possible for all individuals, and it ignores those who are past the point of early intervention.

One group of folks with ASD we can look at to examine the effects of social difficulties after early childhood is college students. The number of individuals with ASD attending post-secondary institutions is growing as time progresses, and these people consistently report feelings of loneliness and isolation. These side-effects of poor socialization skills have been shown to affect academic success, engagement with university life, and mental well-being overall. This in turn can affect future employment outcomes, so these issues extend well beyond an individual's student years. Part of what contributes to this issue is the lack of inclusive and diverse supports in place at many post-secondary institutions, including mental health counseling

that is tailored to the types of social difficulties this population tends to face. When supports do exist they often focus on peer support systems and scheduled engagement in campus social activities, which may work within the confines of a university but have limited applicability outside of this context or at the very least require much more effort to seek out and implement (Arnevik et al., 2016). As discussed previously, supports for individuals with ASD are often behavioural in nature and as such are very surface level, helping to address the issue in the moment but having limited applicability to the deeper emotional issues the behaviours may be related to, especially once the early intervention period has passed. That is certainly the case with social engagement interventions, with many being child-oriented and/or intrinsically linked a specific setting such as university. More broadly applicable techniques are needed to better serve the emotional and psychological needs of this population across age groups and physical locations.

Purpose

The purpose of this capstone is to investigate the relationship between therapeutic modalities and effective therapy for people with ASD. The questions it will seek to answer are as follows:

- What therapeutic techniques lead to positive outcomes for folks with ASD?
- What therapeutic techniques display significantly lower effectiveness for clients with ASD compared to neurotypical clients?
- What components are shared by effective interventions?
- What aspects of therapy do clients with ASD value?
- What aspects of therapy do not honour the experience of living with ASD?

By answering these questions, I hope to provide a sufficient overview of how counseling clients with ASD is different from counseling neurotypical individuals. Following this I will propose a framework for working with this population which takes into account the answers to the above questions, and in doing so I hope to help other therapists broaden the range of clients to whom they can offer informed, disability-sensitive care.

Definition Of Terms

***Autism Spectrum Disorder* -** A form of developmental disability characterized by difficulties in two primary areas: social communication/interaction and repetitive/restrictive patterns of behaviour, interests, or activities (Strunz, 2018).

***Neurodiverse* –** possessing a neurodevelopmental disorder, especially ASD (Patton, 2019).

***Neurotypical* –** someone who does not have a neurodevelopmental disorder (Houghton Mifflin Publishing Company, 2015).

Significance Of Study

The primary benefit to this study is how it will provide clarification to other practitioners about some of the ways that they can ensure their treatments are sensitive to the unique challenges of living with ASD. This may involve using the intervention outlined in chapter 3, but even if therapists are not prepared to attempt a new method of counselling they may still be able to take away some lessons and points of learning which they can incorporate into their own practices. As mentioned previously, the rate of mental health concerns amongst the ASD population is much higher than in the general population and yet there are issues with the types of interventions currently offered for disorders such as anxiety, depression, and SUD that may prevent them from being effective for folks with ASD. This capstone will aim to provide a model of group-based therapy for a population that often struggles with many forms of social and group

interactions, and by rethinking the way we apply well-established therapeutic techniques and working to extricate the useful pieces from those that might be less than effective, we should be able to open up our practice to clients who may have experienced limited or no benefit from counseling historically.

Further to that point, the other significant benefit to this research is the way it encourages a reimagining of well-established models of counseling to better align practice with the realities of marginalized clients' lived experiences. It is important to challenge the structures that surround us and revisit the practices we engage in so we can ensure we are doing the greatest good for the greatest number of people. With regards to counseling specifically this means making ourselves aware of barriers to accessing supports and acting to reduce those where possible by examining the therapeutic models we rely on and being willing to view them as general guides rather than rigid structures. In doing so we can better fit our therapy to the client's needs and get our clients genuinely excited about engaging in counseling. To this end the current research is significant not only because it presents an in-depth discussion about the challenges that come with accessing and benefiting from therapy as a client with ASD, but also because it challenges the reader to think about therapeutic modalities as not just methods of counseling that clients can try out but rather collections of ideas that can be borrowed and inserted into unique structures tailored to each individual client's experience and to each individual counselor's strengths as a practitioner and as a human being.

Personal Relevance

Disability justice and ASD have long been a passion of mine. I have supported individuals with cognitive and developmental disabilities since completing my undergraduate degree and currently supervise an independence skills program for adults with ASD or Fetal

Alcohol Spectrum Disorder. Having the opportunity to support this population has allowed me to see the need that exists for tailored mental health supports and has afforded me the opportunity to talk to folks with various disabilities and ask them about their mental health struggles. A common theme has been difficulty with social connections and this inspired me to consider group interventions that may allow members of the disability community to connect with one another. As one of my favorite forms of social connection is tabletop gaming it was natural for me to seek a way to use these games as a vector for social connection amongst the disability community, and as such the intervention outlined in chapter three is truly a representation of who I aspire to be as a therapist.

In sum there are multiple challenges which are often faced by folks with ASD at a significantly higher rate than the general population, many of which fit the profile of issues which tend to respond well to mental health counseling. These problems include clinically significant anxiety, depression, struggles with drug and alcohol abuse, and difficulties engaging socially with peers. This is further complicated by the lack of counseling interventions designed with ASD in mind, as mental health supports for this population have traditionally focused on decreasing problem behaviours rather than addressing the underlying mental health concerns. These issues are significant, and unless we act to address them by rethinking how we support these clients the ASD population will remain underserved relative to their needs.

The next chapter of this capstone will therefore focus on research examining the ASD population, counseling interventions and techniques that work well for this population as well as those that do not, and reasons why those with ASD react differently to traditional mental health supports than neurotypical individuals often do. In doing so I hope to provide sufficient support

for the validity of the training program outlined in chapter three and provide the reader a solid foundation of understanding about how they can effectively support clients with ASD.

Chapter 2: Literature Review

Before we can fully appreciate the complexities that come with counseling clients with ASD it is important to have a thorough understanding of the diagnosis. As such this chapter is going to begin with a summary of ASD including its' etiology, methods of screening and assessment, common comorbid conditions, and some points on the impacts to family members. This will lead into a discussion on how ASD-related barriers that may interfere with the process of counseling in its' various forms, followed by an introduction to the primary therapeutic interventions for folks with ASD, why they work, and what aspect of each are ineffective. In presenting this info I hope to provide support for the efficacy of the group-based intervention I discuss in chapter three.

ASD: An Overview Via the DSM-V

The DSM-V defines ASD as consisting of "persistent deficits in social communication and social interaction across multiple contexts" (American Psychiatric Association, 2013). Exactly how these deficits manifest varies from person to person, as it is a spectrum, but clinically there are five separate diagnostic criteria which must be met for a diagnosis of ASD to be reached. These criteria can be thought of as *Social, Behavioural, Developmental, Impairment,* and *Not Attributable To Other Issues*. During the process of diagnosis each area is assessed separately and the first two are given their own degrees of severity.

Firstly, we have the *Social* criteria which consists of three primary domains: social-emotional reciprocity, such as the ability to engage in typical back-and-forth conversation or share interests/emotions with another person; nonverbal communication behaviours related to social interaction such as eye contact and physical distance; and proximity to and the ability to create and maintain relationships, including the desire to form relationships and/or understanding

why these relationships matter. Deficits must exist across all three of these domains, and severity is based on the level of social communication impairment (American Psychiatric Association, 2013; Budman et al., 2019).

Second, the *Behavioural* criteria. This area is concerned with four patterns of behaviour: repetitive/stereotyped movements, speech, or use of objects; rigid routines, extreme resistance to change, or ritualized behaviours; highly restrictive and fixated interests which are abnormally intense; and hyper- or hypo-reactivity to sensory input or an atypical interest in sensory feedback from the environment, such as high pain tolerance, sensitivity to sounds, or fixation on certain types of textures and smells. These can result in increased impairment across many domains, in turn contributing to issues such as greater frequency of hospital visits and increased need for behavioural support services. An ASD diagnosis requires the presence of two out of these four behavioural patterns, and severity is based on the level of restrictiveness or repetition in the behaviours present (American Psychiatric Association, 2013; Soke et al., 2018).

The latter three criteria are more straightforward. The *Developmental* criteria requires that symptoms be present early in the individual's developmental period, and although diagnosis can be made later in life this typically involves the symptoms being masked by learned behaviours or a low severity of symptoms such that their effect on the individual's functioning does not become apparent until social demands reach a certain threshold (such as engagement with peers in school). The *Impairment* criteria simply states that the symptoms must cause clinically significant impairment in some area or areas of functioning. Finally, the *Not Attributable To Other Issues* criteria requires that the symptoms not be attributable to another diagnosis, most notably global developmental delay or intellectual developmental disorder. For both ASD and an intellectual disability to be diagnosed the individual's social communication

skills must be significantly worse than expected based on their developmental level (American Psychiatric Association, 2013). Unfortunately, while these criteria may be simplistic to understand in theory, the way they may manifest is complex and varied (hence the use of the term “spectrum”). For example, the historical diagnosis of Asperger’s Disorder was reimagined as a component of ASD with the DSM-V for the sake of eliminating inconsistencies in the application of the diagnostic labels “Asperger’s” and “Autism”, with both being captured under the more inclusive label of ASD (Lord et al., 2020). To this end, understanding what the experience of living with ASD means for any given individual requires a much deeper knowledge of the disorder than simply being able to state the diagnostic categories, so it is important to examine the process of diagnosing ASD.

Determining the presence and severity of deficits in the *Social* category ideally involves gathering information from multiple people within the individual’s life, up to and including the individual themselves whenever possible. These deficits must be “pervasive and sustained” (American Psychiatric Association, 2013), and cross both the verbal and nonverbal domains. Verbal deficits may include difficulty learning or understanding speech, repetitive use of specific words or phrases, mimicry or echoing others’ speech, or a blunted and overly literal use of language, with the exact pattern varying from person to person. It is also possible for folks with ASD to have seemingly well-developed speech, with deficits instead manifesting in the way they engage in reciprocal communication. Nonverbal deficits are also varied, with the frequent presence of atypical facial expressions relative to cultural norms speaking to the necessity of clinicians being culturally sensitive to avoid misdiagnosing patients. However, while these are all individual signs that may or may not be present the central theme that diagnosing clinicians tend to look for is the integration between the different forms of verbal and nonverbal communication

that the individual uses. This means both cohesion between what the individual says and the gestures or expressions that accompany their speech as well as the ability for the individual to integrate nonverbal communication into their social behaviours via deficits such as failure to follow another's gaze (especially in young children), and examining this cohesion is preferable to scoring symptoms individually as the way that each symptom interacts with and alters the others is equally as important as the severity of each individual symptom. Furthermore, behavioural symptoms can overlap and interact with the other main social communication issue folks with ASD face: struggles understanding and maintaining relationships (American Psychiatric Association, 2013; Budman et al., 2019).

As with communication difficulties, relationship issues can be assessed via self-report, witnessed by others, or observed by the clinician. This may include reduced interest in social relationships, as evidenced by struggles to modulate their behaviour in order to act appropriately within whatever context they are in or displays of emotion that do not match with those of the people around them. In children with ASD there is often a lack of imagination when they are engaged in play by themselves or with others, a trait which often morphs into a rigid adherence to rules later in life. Older individuals may also have a poor understanding of what a healthy reciprocal relationship looks like or may wish to form friendships with other people based solely on a specific shared interest without regard for the relational aspects of friendship. Clinicians may choose to look at established relationships with family members or co-workers as examples to assess the level of reciprocity they display towards others, especially in cases where there is no interest in forming friendships (American Psychiatric Association, 2013; Pask, 2015;).

Assessing the degree of impairment within the *Behavioural* criterion involves attending to the patterns of behaviour displayed by the individual. These can include simple motor

movements such as snapping or wiggling fingers, use of objects in a fixed and repetitive way such as clicking pens or sorting playing cards by colour, or specific patterns of speech including echolalia or mechanical tones and use of language. This desire for repetition and ritualized set of behaviours contribute to the resistance to change common among those with ASD and can include distress towards what may seem to be insignificant issues such as the discontinuation of a specific toothpaste or a new bus driver. The fixations associated with the individual's routines are typically abnormal in intensity and level of focus. Finally, these ritualistic situations frequently involve sensory input reflective of either hyper- or hyposensitivity to stimuli such as pain, heat, or smells (such as the toothpaste example). Much like the *Social* criterion, this can be assessed both by observation from the clinician and by reports from the individual or those they interact with, and evidence is more valid when it comes from multiple sources (American Psychiatric Association, 2013). Ideally the diagnosing clinician will have the opportunity to observe the individual's social behaviours both with parents and with people the individual does not know, as many early interventions involve working to overcome communication difficulties which are easier to assess when the clinician is able to observe the individual's patterns of communication (Lord et al., 2020).

While observation of symptoms is important and useful, when working with adult clients the behavioural symptoms of ASD may be missing not because the underlying mental processes are nonexistent but because the individual has either disguised their behaviours or incorporated them into their lives. To this end the *Behavioural* criterion does not require that the behaviours be observable at the present time, rather that they have existed at some point in the individual's history (typically in childhood). On the other hand, the *Impairment* criterion does require that the individual's symptoms must be causing current difficulty in important areas of their life;

historical accounts are not considered when assessing the level of impairment the individual faces. For all criteria there are psychometric tests and standardized questionnaires that clinicians can choose to apply in addition to their own observations, although as mentioned the raw scores on testing materials are only moderately useful since the different patterns of behaviour and the way each individual's symptoms interact with one another vary much more wildly than raw numerical scores can properly communicate (American Psychiatric Association, 2013; Budman et al., 2019).

Lastly, as professionals it is important to be aware of the high rates of comorbidity among the ASD population. In a study conducted by Mattila et al. (2010) 74% of individuals with ASD met the requirements for a single comorbid disorder with many meeting the criteria for two or more, with 26% of respondents being diagnosed with tic disorders, 42% with anxiety disorders, and 44% with anxiety disorders. These comorbid disorders were often correlated with further impairment of functioning, most notably in the case of Oppositional Defiant Disorder, Major Depressive Disorder, and anxiety disorders.

Development & ASD

Symptoms of ASD typically manifest when individuals are between 12 and 24 months old and can include either a loss of skills or a developmental delay, with clear and significant sensory symptoms often developing shortly after 24 months. Identification of these symptoms often comes via parent report. Furthermore, loss of self-care ability or motor skills may also be present but are not a prerequisite for an ASD diagnosis, and where these are a concern, the individual may require a more extensive medical examination to assess for comorbid concerns. Where skill development is delayed, clinicians will also look to language and social skills but will focus instead on abnormal patterns of speech and play (such as carrying books but never

reading them or knowing a range of words but not being able to relate names to people). As the individual continues to age into their second year these behaviours become more pronounced and the repetitive tendencies also become more apparent, although it can be difficult to distinguish less severe cases from appropriate toddler behaviours at this point as neurotypical toddlers often prefer fixed activities as well. Compared to the behavioural markers of ASD however, it is unclear how sensory symptoms change through early childhood, and evidence supports not just an increase in symptom severity over time but also a stabilization of symptoms in many cases and even a reduction of sensory symptoms. This may be due to different studies being focused on different classes of sensory symptoms (ie. taste versus sound), but this seems to be an area in need of further research (American Psychiatric Association, 2013; McCormick et al., 2016).

As individuals enter adolescence their behavioural and social symptoms typically improve in terms of social/communication impairments, restrictive interests, and repetitive behaviours, although the majority continue to meet the criteria for ASD diagnosis despite their improvements (Woodman et al., 2015). Some folks may manage to successfully develop to the point they can live and work independently, but even this group tends to be prone to victimization, naivety, anxiety, depression, and difficulties with certain aspects of daily living such as organization. Others may display a worsening of their symptoms, although this group is in the minority. In some cases previously undiagnosed adults may seek testing for ASD, and in these cases the standards are much the same as when a child is being examined with one main adjustment: an adult may not be diagnosed with ASD if there are reports (such as by friends or family) of typical healthy relationships in childhood reflective of normal social development (American Psychiatric Association, 2013).

The functional consequences of ASD vary depending on age and severity and are influenced by the developmental trajectory of the individual. While the potential difficulties folks with ASD face in their daily life are far too numerous to describe here, understanding some types of issues that can result from the different symptom clusters can provide greater insight into the lived experience of many folks with ASD. Firstly, sensory issues can impact one's ability to engage with different stimulating activities. This can mean an individual is unable to go to a concert or a movie at a theater but may also mean they find putting on clothes or touching other people to be unpleasant if not unbearable. Second, social difficulties can present a significant barrier to forming friendships, gaining employment, or finding a romantic partner. This is often exacerbated by their difficulties with pragmatic language and subsequent struggles to understand sarcasm or metaphors. Third, many individuals struggle with executive planning difficulties which can impact their ability to manage their household chores or cope with sudden changes, as discussed above. Changes can also cause excessive emotional reactions which others may find inappropriate, contributing to their social difficulties. Ultimately this is a small fraction of the possible functional difficulties folks with ASD may face, but it serves to illustrate the types of challenges that can accompany this diagnosis (Rudy, 2021).

ASD-Related Barriers to Counseling

As mentioned above, one of the hallmarks of ASD is difficulty adjusting to changes. This can manifest in many problematic ways both within and outside the therapy room, such as emotional outbursts when faced with changes in the environment or nutritional issues related to restrictive food choices, however these can generally be divided into two distinct symptom categories: lower-order and higher-order. Lower-order behaviours are those involving restrictive simple actions such as playing with toys in a specific way or twirling one's hair obsessively,

while the higher-order behaviours are those that involve more engaged and intricate activities. While both are important fundamental components of ASD, the lower-order behaviours are often effectively addressed via behavioural intervention techniques steeped in classical and operant conditioning as mentioned in chapter one, extinguishing problematic behaviours and replacing them with better alternatives. Lower-order behaviours are also less likely to be encountered in the therapy room as they are not necessarily emotion-driven while higher-order behaviours are often linked to various emotional reactions (Fisher et al., 2019). Therefore, these higher-order behaviours are a key area to understand as counselors are likely to encounter this in their work with folks with ASD.

Central to many types of higher-order behavioural struggles faced by folks with ASD are various deficits in metacognition, which we can define as a cluster of five distinct cognitive abilities: “initiating activities, working memory, planning, organization, and self-monitoring” (Pugliese et al., 2015, p. 1580). Deficits can lead to mental health concerns in many ways, such as difficulty planning for the future resulting in anticipatory anxiety regarding the unknown, to perseveration which can maintain and amplify existing mental health issues, to struggles with self-organization which lead to a lack of control and subsequent anxiety (Paxton & Estay, 2007). Each of these areas are especially problematic amongst those with ASD compared to the neurotypical population and each of them can impact the outcome of psychotherapy.

Firstly, folks with ASD often have difficulty with forward-thinking and planning. This seems to hold true across the lifespan, with consistent deficits in planning ability versus typically developing individuals regardless of biological age; results are less clear when considering cognitive age instead. However, it should be noted that there is a lack of longitudinal research in this area with this conclusion instead being based on individual studies looking at independent

groups of people with ASD at various points in their lives. Beyond this, planning deficits are apparent across various experimental conditions and IQ scores and appear to become more significant as ASD symptomology increased, lending support to the claim that ASD is consistently associated with struggles related to planning. This effect may be influenced by comorbid conditions or other individual differences, but the effects are significant and consistent regardless of any extra factors that may be contributing (Olde Dubbelink & Geurts, 2017). Other researchers have examined this deficit from a motor skills perspective and have found similar challenges in the ability of children with ASD, when presented with a multi-stage physical task, to plan out a series of steps that enable them to complete the task in an efficient way (Scharoun & Bryden, 2016). While research examining the specific levels of subjective distress caused by planning difficulties is limited, it has been reported that planning difficulties can lead to fear of the unknown, specifically unknown outcomes or future experiences, and anxiety often follows from there (Paxton & Estay, 2007). As such, rehearsing and strengthening planning skills may be beneficial for those folks whose anxiety stems from planning difficulties.

Perseveration is slightly more complex. Of the five metacognitive categories it is most closely tied to working memory in that deficits in this area can impair one's ability to complete complex tasks or engage in rich conversations (Pugliese et al., 2015), which may restrict the individual's development and leave them with a narrow range of simple and intense interests. Struggles with self-monitoring may also contribute as the individual may be unable to recognize the inappropriateness of their fixations or their growing emotional attachment to their perseverations. Whatever the case there are myriad individual responses to it, as some folks with ASD enjoy possessing restrictive interests and are not interested in interventions designed to reduce or eliminate them, and indeed there are benefits to being extremely focused on a small

amount of intense interests such as the ability to commit to a specific career field or forge strong bonds with other people who share their specific interests. They can even be a source of coping strategies to reduce anxiety. However, attempts to interrupt perseveration can also be linked to aggressive outbursts, perseveration itself can be linked to socioemotional stunting as people refuse to engage in different types of developmentally necessary activities, and in cases where anxiety coping mechanisms are ineffective there can be significant resistance to other options (Smerbeck, 2019). To this end researchers have examined whether incorporating individual's perseverative interests into different types of tailored intervention and found support for the idea that token economies aligned with these interests can be useful for reducing challenging behaviours and increasing individuals' success rates in various simple task-based studies. This suggests that motivation can be enhanced by the presence of an interest-adjacent reinforcers, something that is supported elsewhere in the literature (Carnett et al., 2014; Verive, 2020).

Finally, struggles with organization can be tied to a wide range of behavioural symptoms common to many folks with ASD. This can include poor time management, difficulty comprehending instructions or assignments even after multiple explanations, limitations in critical thinking skills, or an inability to focus on a task for extended periods. One specific population where these issues have been examined in detail is among university students with ASD since this setting by virtue of its' increased focus on independence both in one's personal life and in the classroom seems to highlight the challenges these limitations can impose on people. As discussed by McKeon et al. (2013), supporting students with ASD often involves a combination of diverse and uniquely engaging assignments, carefully designed assignment instructions intended to reduce ambiguity, and an intentional effort on the part of the professor to focus on the most important and salient pieces of information rather than allowing unimportant

information to distract students. Folks with ASD seem to struggle in classrooms where the learning and assignment structure is relatively "freeform" and does not involve a rigid organizational structure, as their ability to impose their own personal structure onto the course is limited. Outside of the classroom it has been found that people with ASD score lower on measures of daily living skills which heavily draw on an individual's ability to organize their belongings, including everything from money management to food and clothing (Pugliese et al., 2015). This reinforces the idea that the transition to university can be extremely challenging if the individual has difficulties with organization and we can assume that these challenges extend to other phases of life as well, although research supporting this assumption is limited. As we know a lack of control due to organizational struggles can lead to anxiety (Paxton & Estay, 2007), but it also introduces a unique barrier to counseling engagement since time management and engagement difficulties are liable to clash with typical 50-minute talk therapy sessions. Furthermore, difficulties with organization seem to frequently overlap with initiation struggles as individuals who have trouble making plans often lack the self-starting skills to reliably begin those tasks that are sufficiently laid out for them (Pugliese et al., 2015). To this end traditional therapeutic homework may be ineffective as folks with ASD may struggle to both come up with their own techniques and test out any techniques provided to them by the therapist.

Current Interventions

Applied Behaviour Analysis

One of the most well-known therapeutic interventions for folks with ASD is applied behaviour analysis (ABA). This is an approach that was first pioneered in the late 1940s, with its' origins in the behaviourist teachings of psychologists such as B.F. Skinner and Ivan Pavlov. Just over 10 years after it was first discovered that certain behaviourist techniques could be

modified and applied to humans, a researcher named Charles Ferster became the first to propose using them specifically when working with children with ASD. Shortly after this another psychologist named Sydney Bijou decided to divide behaviour into two components: antecedents and consequences. This division formed the core of modern ABA teachings. Over the decades that followed this approach was further studied and refined, eventually leading to the model of ABA which continues to see widespread use to this day (Kirkham, 2017).

ABA, much like most other forms of therapy, involves a very individualized treatment plan that varies from patient to patient. At its' core ABA still draws heavily from its' behaviourist roots, being built entirely upon a series of rewards or disincentives meant to encourage or dissuade certain patterns of behaviour. This is a very outwardly focused form of therapy, with the behaviours themselves being the sole focus of the intervention and the underlying internal reactions of the client being largely ignored (Wilkenfeld & McCarthy, 2020). ABA practitioners subscribe to a "teaching" model of intervention, where a problematic target behaviour is identified and then the ABA professional designs a treatment program which may involve such "lessons" as how to make socially appropriate eye contact, when to say certain words or phrases, or how to play with a certain toy in a unique or unintuitive way. Put a different way, ABA involves treating the symptoms of ASD and not the inner processes (Ford & Petry, 2005). Unfortunately, this intervention comes with its' fair share of controversies.

The primary argument against ABA is that it only creates superficial change and rarely if ever results in any sort of cognitively deep improvement in those individuals who go through the process. Wilkenfeld and McCarthy (2020) describe ABA as an intensive process wherein the individual is trained to act as though they are neurotypical but does not respect the individual's ability to choose their own behaviours and self-interests nor the internal experience the

individual may be having in any given situation. ABA does not seem to change how an individual mentally reacts to a stimulus, merely how they react behaviourally, and in doing so it strips the individual of their own autonomy. To quote autistic self-advocate Max Sparrow, "…it just makes them into an Autistic who can fake being not-autistic with some relative measure of success" (as cited in Wilkenfeld & McCarthy, 2020, p. 50). Measures of psychological well-being are also not in favor of ABA as an effective intervention, with self-reports indicating serious psychological problems such as post-traumatic stress symptoms and suicidality linked to attempts to hide one's autistic tendencies. In short, researchers argue that ABA is a problematic intervention because it attempts to use conditioning techniques (including negative reinforcement and punishment) to train the individual to hide their natural behavioural tendencies, which risks damaging the individual's self-esteem, reducing their sense of individuality or autonomy, or inflicting psychological damage on them by ignoring the reasons behind their behaviours. Put another way, ABA is focused on helping the patient with ASD fit into a world that stigmatizes them for their diagnosis rather than helping them to overcome self-identified barriers in ways that honour what is important to them (Sequenzia, 2016), however despite these flaws there are benefits to the approach.

The primary appeal of ABA is in its' ability to reduce or eliminate potentially harmful behaviours and to grow the ability of clients with ASD to interact with the world by fostering skills such as language (Axelrod et al., 2012). Beyond this, ABA intervention techniques have shown some amount of efficacy in reducing resistance to change among the ASD population. For instance, there is a considerable amount of overlap between some forms of lower-order behaviours such as food preferences and resistance to change; in this case there is a considerable negative emotional response to novel types of food even though the attachment to familiar foods

is rooted in lower-order behaviour patterns which do not generally provoke genuine emotional distress. In such cases as these it can be effective to apply reinforcer-based behaviour intervention techniques break these restrictive patterns, as demonstrated by Crowley et al. (2020). Similarly, preferred foods seem to be a powerful motivator for some folks with ASD to attempt novel tasks, meaning that emotional reactivity to changes in routine may be able to be moderated by the promise of a familiar and enjoyable reward (Lionello-DeNolf et al., 2010). As discussed above ABA techniques are frequently intended to reduce the sometimes problematic lower-order behavioural aspects of ASD by focusing on consequences, an approach that does not inherently address resistance to change (Kirkham, 2017). However, the research suggests that rewards linked to an individuals' lower-order behaviours may also help to limit negative emotional reactions. Overall, while ABA techniques have proven effective in achieving their stated goal of modifying behaviours to achieve a more normative overall behaviour profile for clients, there are many problems that arise from the approach which contradict the claim that ABA "greatly [improves] the lives of individuals" (Axelrod et al., 2012, p. 11).

Mindfulness

If ABA involves a focus on external behaviours, mindfulness is the focus on recognizing and reacting to one's internal states without becoming overwhelmed by them. Mindfulness seeks to help individuals understand and accept their thoughts and emotions by separating the self from these internal processes via the use of various mindful awareness practices such as breathing and yoga. When taking part in mindfulness practices the individual is encouraged to try and notice their thoughts and feelings occurring without allowing themselves to react to them or judge them, instead merely allowing them to enter and exit one's conscious awareness. Mindfulness has a long history of effective use, having its' roots far back in traditional Buddhist teachings but

being modified for use in the broader modern world, and is often a component of more comprehensive psychological interventions such as Acceptance and Commitment Therapy (ACT) and Mindfulness-Based Cognitive Therapy (MBCT). Research supports its' efficacy at reducing various types of psychological distress from depression and anxiety to bipolar disorder and has also been used to help patients cope with chronic disease stress in patients with diseases such as AIDS (Connor & White, 2018).

Until recently mindfulness practices were not commonly viewed as an intervention for those with ASD. This has started to change over the last few years however, and there is a wealth of current research examining its' efficacy as an option for both folks with ASD and their care providers to learn how to cope with ASD-related struggles. There are many potential benefits to this: for example, mindfulness is useful for improving attentional deficits (Ridderinkhof et al., 2020) and cognitive flexibility (de Bruin et al., 2015), two areas where many folks with ASD typically struggle. Beyond this, mindfulness has been found to effectively lessen emotion regulation issues which may help folks with ASD to moderate their intense emotional reactions to various stimuli, and the way mindfulness practices work to separate one's sense of self from one's emotional experience may be useful for those with ASD to reduce the sense of stigmatization that can come with ASD symptomology. Structured mindfulness and acceptance interventions have also shown some efficacy at improving impulse control in clients with ASD (Connor & White, 2018), while other techniques such as yoga have been found to stimulate the parasympathetic nervous system which reduces heart rate and slows breathing, which is of particular interest since certain types of ASD-adjacent sensory processing can trigger fight-or-flight responses at a much lower rate than among the general population (Semple, 2019).

While mindfulness has many potential benefits for the ASD population, it is not without its' issues. Firstly, mindfulness practices and intentional usage of them can take time and effort to achieve which may be difficult for those who struggle with sustained attention (Semple, 2019). Second, mindfulness training is not necessarily concerned with reducing problematic behaviours which means that absent of other forms of intervention the client with ASD may not adjust any maladaptive or acting out behaviours in any meaningful way, even if they manage to successfully learn and use mindfulness to regulate their emotional state. This claim is supported by de Bruin et al. (2015) who identified that mindfulness training for children with ASD alone did not translate into any significant reduction in parenting stress, while parents who attended their own mindfulness-based stress reduction program in parallel with their children did report a reduction in parenting stress. There are complicating factors here however: Ridderinkhof et al. (2020) argue that children and parents who spend time and effort learning mindfulness practices may become more aware of any negative thoughts, feelings, and behaviours which may in turn cause them to report greater frequency of them, causing positive outcomes to be mitigated by greater awareness of negative ones. Finally, there is some concern that mindfulness practices may in fact serve to increase anxiety symptoms, restlessness, and cognitive disturbances due to similarities between ASD and post-traumatic stress disorder in how they involve vagal system dysregulation (Semple, 2019). Much like many other forms of psychological intervention, it seems that mindfulness should be looked at less like a comprehensive intervention by itself and more like a potentially beneficial component of a more complete treatment plan, one that incorporates both emotional and behavioural strategies.

Cognitive Behavioural Therapy

Cognitive Behavioural Therapy (CBT) has some similarities with ABA in that both approaches have foundations in the behaviourist movement and both are concerned with addressing problematic patterns of behaviour. It also shares with mindfulness a focus on the harmful thoughts and feelings that cross our minds either consciously or unconsciously. However, while ABA is concerned solely with behaviour and mindfulness focuses on cognitions, CBT includes aspects of both in its' approach to psychotherapeutic treatment. CBT typically includes six main components: "psychoeducation, somatic management, cognitive restructuring, problem solving, exposure, and relapse prevention" (Rotheram-Fuller & MacMullen, 2011, p. 264). In short, by gaining greater insight into their thoughts, feelings, and behaviours and subsequently discussing ways to interrupt the underlying processes while replacing them with more effective ones, followed by a gradual process of incorporating new strategies into the problematic areas in their lives while addressing any regression that happens, clients can ideally learn to move beyond concerns such as anxiety, social struggles, or independent problem solving, amongst others. For these reasons CBT has been used extensively to address the symptoms of ASD, albeit with modifications in place to account for the unique aspects of living with ASD.

A major reason why CBT must be modified for use with this population is because CBT is a heavily communication-based therapy. The use of Socratic questioning is common, and psychoeducation relies heavily on the client's ability to comprehend the information the therapist is trying to teach. Clients with ASD are often diagnosed with associated learning difficulties and will frequently default to literal interpretations of language, so an assessment of the individual's cognitive capabilities is important before deciding how to edit the therapeutic materials. For instance, one common adjustment made for folks with ASD is the use of a list of rules as a tool

to aid in the cognitive restructuring process rather than the more typical approach of helping clients learn to challenge their own negative thoughts in the moment. Other options may include the use of scripts when repeating lessons, focusing on physical sensation rather than subjective emotional language when working to identify triggers, using physical tools or visual aids to help ground conversations, and using traditional behaviourist techniques such as token economies to improve active participation and client engagement (Rotheram-Fuller & MacMullen, 2011). It can also be beneficial to include family supports in the treatment process, especially if the client's family plays a significant role in their life (Iniesta-Sepúlveda et al., 2018). However, even with these modifications in place some researchers have suggested that CBT may not be comprehensive to address the many different deficits those with ASD report.

Most prominently, many people with ASD have significant social difficulties and those may serve as a notable barrier to implementing CBT interventions in real-world situations. For example, if a youth has anxiety around engaging in games with their peers but also lacks the necessary social skills to engage with those peers and ask to join in their games then it may be necessary to include a friendship training component before adding gradual exposure work into the client's CBT treatment plan. A related concern involves the general adaptive skills deficits many folks with ASD face, as while CBT is typically focused on addressing unrealistic concerns it is less effective when the client faces genuine adaptive difficulties in areas such as self-care and long-term planning; helping a client overcome their fear of going on dates with members of their preferred gender or applying for work may be challenging if the client struggles to maintain basic hygiene, and may even invite embarrassment or humiliation. Therefore, it is important to assess and discuss these types of functional barriers prior to identifying goals to work on within a CBT framework, although even this may be tricky since a client's perseverative interests may be

at once a barrier to successfully overcoming an identified issue and something that would be harmful to ask them to supress for reasons similar to those outlined in the above segment on ABA. It may be necessary to incorporate their interests into the treatment model, especially when social skills are a concern, as some typical CBT interventions such as graded exposure can be a challenge when these perseverative interests prevent the client from effectively engaging with the exposure stimulus (Wood et al., 2009). In sum there is a careful balance that must be maintained between helping the client recognize where their ASD symptoms are impeding their ability to achieve their goals while also allowing them to incorporate those symptoms into a healthy and realistic view of the person they would like to be.

As a final note, effective use of CBT-related skill building with the ASD population seems most effective when training takes place in real-life situations. Prior to an attempt at skill-building, Socratic questioning should be used to describe and define the concrete benefits of developing the skill, allowing the individual to put them into their own words while offering hints towards the answer if the individual is struggling. Involving peers and caregivers in the skill-building and subsequent rehearsal can further reinforce these skills, and entertaining activities can help to increase both engagement in the skills training and increase the distinctiveness of the training memories in the client's mind which should in theory lead to improved recall in natural situations (Wood et al., 2021). These points will be revisited in chapter three as they support the use of a group-based behavioural intervention designed as a game.

Social Skill Development

As an aspect of many CBT interventions but also one which can be applied beyond the boundaries of CBT, social skills training warrants further discussion to fully appreciate the importance of this type of intervention. Social skill development is vital as a means of combating

isolation amongst a population that is traditionally quite vulnerable to it. Folks with ASD frequently report difficulty in developing positive social relationships, and parents or caregivers often report that children with ASD may seem unaware of their peers or make attempts to connect with them in ways that appear awkward or ineffective (Shih et al., 2016). This social isolation can be dangerous, as there is an extensive list of negative effects related to isolation and loneliness such as poorer health behaviours including smoking, lack of exercise, and poor sleep; higher blood pressure; poorer immune system functionality; and increased mortality (Holt-Lunstad et al., 2015). Attempts are being made to increase inclusion of folks with disabilities, but when a disorder such as ASD impedes the development of social skills the act of inclusion alone is likely to be insufficient to enable the formation of genuine social bonds. Evidence from a meta-review by Williams White et al. (2007) suggests that social skills training does seem effective at increasing client usage of social skills such as eye contact and appropriate questioning as well as decreased levels of self-reported isolation, however it is unclear how generalizable those findings are to real-world environments as most studies took place within clinical settings. More recent studies have examined the use of interventions such as the PLAY Project which rely on parents or caregivers to play with their child in the child's normal environment as part of the treatment plan (Rust & Thanasiu, 2019), and while these also show positive results they may be difficult to translate to older age groups or individuals who do not have a parent or caregiver who can facilitate treatment in the client's normal environment. To this point, I argue that designing a social skills training program which attempts to replicate a real-world social event in a setting which the clinician can facilitate may allow us to provide effective social skills training for folks with ASD who may not have access to current evidence-based models.

Occupational Therapy & Sensory Integration

While the counseling interventions described above are often the primary approach used to address ASD-related concerns, many other individuals with ASD and their caregivers turn to occupational therapy (OT) to help with the functional or adaptive skill deficits often associated with ASD. OT is a broad therapeutic approach consisting of many possible forms of intervention, and much like traditional counseling OT looks to help people solve the problems preventing them from doing the many different activities that are important to them. Unlike counseling however, OT focuses primarily on physical modifications that can be made to improve one's natural abilities or to overcome barriers to success. This often includes environmental changes such as unique toilet seats or steering wheels but may also include education about specialized community resources or training to refine motor skills (Canadian Association of Occupational Therapists, 2016; Poquérusse et al., 2018). Looking specifically at clients with ASD, many OT approaches closely mirror the behavioural counseling interventions discussed throughout this paper and will not be examined in detail here, but there is one approach unique to OT: sensory integration (SI).

SI looks to help clients with ASD to overcome sensory impairment, a highly prevalent aspect of ASD that is not often addressed within the counseling room. As mentioned at the beginning of this chapter folks with ASD frequently experience either hyper- or hypo-arousal in response to sensory input. Due to this many of these individuals can be seen to engage in various behaviours to either encourage stimulation (such as clapping one's hands excessively) or to avoid stimulation (such as leaving a noisy room) in an attempt to bring their arousal level to an acceptable point, and as these behaviours can sometimes be maladaptive intervention is often sought out to help reduce or eliminate the sensory issues or to learn more appropriate ways to

adjust one's level of arousal, such as through the use of weighted vests (Devlin et al., 2011). As a physical aspect of ASD sensory impairment requires a different approach than many of the other ASD-related concerns outlined in this paper, although sensory issues contribute to concerns such as social isolation, willingness to participate in recreational activities, and overall problematic behaviours which are often treated using traditional counseling interventions such as CBT and ABA. SI involves engaging the client in a series of activities specifically designed to target and highlight different sensorimotor experiences. These activities slowly increase in challenge and variety, which helps the individual's nervous system to integrate different sensory experiences over time and provide the client with the ability to use sensory information in a wider range of adaptive ways. Treatment may include a focus on learning new tasks, imitation, sequencing, or appropriate social behaviours among many other possibilities, and the end goal is to guide the client to a place of greater participation in the social aspects of life as well as a greater ability to engage in typical daily living activities (Schaff et al., 2012). Due to the rigid structure and purported benefits, SI it has become an extremely popular OT intervention for clients with ASD: SI approaches are used with more than 80% of OT clients with this diagnosis (Devlin et al., 2011). Unfortunately, there is mixed support for the efficacy of SI.

Devlin et al. (2011) conducted a review of the SI literature and found multiple studies which suggested that behaviour intervention is superior to SI as an intervention for ASD-related behavioural concerns, as well as some that demonstrated no difference between SI experimental subjects and no-treatment controls. What benefits do exist can be partly attributed to a scheduled decrease in aversive stimuli over the course of most models of SI training, as well as to unconditional attention from the therapist acting as a form of positive reinforcement, with no other beneficial therapeutic aspects of the treatment being apparent. A separate study by

Seiverling et al. (2018) found that behavioural treatment is superior to SI training when applied to ASD-related eating concerns, while Tzang et al. (2019) found that SI interventions were correlated with an increased rate of comorbid psychiatric concerns among clients with ADHD. In response to concerns such as these, Schaaf & Davies (2010) claimed that many negative claims about SI as an approach are being directed at programs that do not represent genuine SI. Because the theory behind SI is still evolving to this day there is a lack of cohesion with regards to the terminology and requirements necessary to be considered a true SI intervention and as such the authors claim that with further refinement and development this model will start to show greater effectiveness. Nevertheless, at this point SI does not have enough support to be seen as a comprehensive treatment approach for behavioural ASD symptoms.

Chapter Summary

In this chapter I discussed ASD as a diagnosis, what it consists of, how it can manifest in the therapy room, the different types of therapeutic interventions which are currently used to counsel clients with ASD, and the benefits and flaws to each of them. In sum, counseling clients with ASD is a complex task. The most frequently used therapeutic interventions for this population all have their own strengths and deficits, with none of them appearing to be suitably comprehensive approaches. Clients with ASD frequently present with a wide range of issues, many of which are in some way related to social struggles, whether those struggles are the core issue themselves or a symptom of an underlying mental health concern. Attention and social connection can also be a motivator to engage in therapy, especially when the therapeutic activities themselves are interesting to the client. Additionally, many folks with ASD struggle with issues such as flexibility, organization, problem solving, and maladaptive behaviours. These are not only well-documented in the literature but are a core part of diagnosing someone with

ASD, meaning that a program designed from the ground up to address them should in theory be relevant for many folks with this disorder. To this end the final chapter will focus on describing an intervention that borrows aspects of those covered in chapter two while attempting to address the issues with each of them. In doing so I hope to provide readers with a solid perspective on what a tailored theoretical ASD intervention looks like, perhaps aiding in their own individual practice with this population.

Chapter 3: Discussion

As I have established throughout the course of this paper, the range of issues folks with ASD face is vast and often goes beyond the scope of many current interventions. Because of this it is necessary to be creative and consider alternative options to support this population. One such option which has started to receive attention in the literature is the use of the tabletop role-playing game Dungeons & Dragons (D&D) as a model for group therapy. The potential social and emotional benefits to playing D&D are numerous, and it is for this reason that I believe D&D can be a legitimate form of therapy for individuals with ASD who wish to access counseling but may not be interested in a more mainstream approach such as those outlined in chapter 2. However, given that D&D is a game and not a typical counseling intervention I wish to spend this chapter delving deeper into the different facets of D&D in detail, how the different ways that each component of the game can help folks with ASD, and how one might initiate a D&D therapy group. First though I will discuss some cases where D&D has been used in therapy successfully to provide support for its' use as a legitimate intervention.

Support in the Literature

The use of D&D in therapy has been researched sporadically throughout the years but there are multiple recent studies examining its' efficacy. Gutierrez (2017) surveyed multiple practitioners who used therapeutic D&D groups in their practices and found widespread positive support for them. The author posits that adolescents often develop a sense of self attached to characters they play as in role-playing games, and through that sense of self and identification of presenting issues the therapist can develop scenarios which allow the clients to explore their issues and be exposed to challenging situations indirectly. Participants also felt that sessions could benefit people of any age range despite focusing on adolescents but felt that this approach

would not be appropriate for clients who do not have a strong grip on reality versus fantasy. Finally, it was identified that therapeutic D&D groups should only be facilitated by trained therapists due to the significance of the issues that arise. All these points are important to keep in mind as we break down the steps involved in running a D&D campaign.

Wright et al. (2020) found an improvement in moral reasoning abilities among clients who took part in a therapeutic D&D group, expressing that cooperative pretend play amongst children is correlated with increased emotional expression, improved perspective-taking and empathy, and increased feelings of responsibility for the success of group objectives. Coe (2017) discussed how participating in tabletop roleplaying games such as D&D can facilitate identity exploration, socialization, and cognitive flexibility as well as driving motivation via a process the author refers to as dissociation. These improvements initially take place within the game but can be transferred to a participant's real life with time and practice. Finally, Abbott et al. (2021) found that their group of adults with social anxiety and depression felt it was easier to take part in a structured D&D group rather than a regular therapy group because of the reduced pressure to talk about their feelings, and yet they were still able to noticeably improve their confidence, their comfort with making mistakes, their feelings of belonging, and their ability to handle confrontation. While the use of D&D as a group intervention strategy has not yet been standardized the research that exists suggests that this area is deserving of further exploration, so providing an outline of how one might establish a D&D-based group for folks with ASD should provide a foundation for future research in this area.

Dungeons & Dragons: An Overview

D&D is a tabletop roleplaying game set in a world of swords and sorcery. As opposed to other types of games where players move physical game pieces around a board to try and earn

points, a game of D&D is more of a collaborative storytelling experience where one player, named the Dungeon Master (DM), plays the part of the world's narrator and the rest of the players act as their own characters within the DM's world. Games of D&D utilize a fixed set of rules to provide structure for the adventure players are taken on and to allow players' decisions to have genuine consequences that may affect the trajectory of the story in any number of ways. Maybe a player chooses to attack a bandit on the road and accidentally causes that bandit's colleagues to pursue the player characters in a quest for vengeance, or maybe a player chooses to help a downtrodden beggar who is in fact a powerful sorceress who decides to help the party in thanks for their purehearted deed. In this way D&D rewards players who are willing to engage with the story and share in the creation of the group's unique world, as their engagement provides more avenues for other players to not only interact with the world but also with each other. While this may seem intimidating on the surface, especially if one considers themselves to be unimaginative, the benefit of D&D being a group-based activity is that other members of the group can play a more active role in group decision-making and world-building which can in turn invite the other members of the group to participate (for example, the barbarian character may investigate a locked door and discover that the door is sealed shut by a magical charm which the group's wizard may be able to dispel). Real-world friendships may even develop through games of D&D as players develop shared in-jokes and reminisce about epic challenges that they were able to overcome through collective ingenuity along with a dash of luck. In this way D&D can serve as a genuine tool for players to use to develop social skills and gain confidence which they can take away from the table and into their everyday lives (Wiley et al., 2014).

A typical game of D&D is broken into multiple phases which often take place over many sessions, sometimes spanning many real-world years, although it is possible to run shorter campaigns or even miniature campaigns in a single lengthy session (Abbott et al., 2021). Each of these different phases can be therapeutically useful in different ways depending on the individual and their reasons for attending therapy. The phases in question are *Character Creation*, *Exploring the Game World*, *Engaging with Other Characters,* and *Combat*, each of which will be outlined below. Before discussing actual gameplay however, it is important to cover the assessment of potential participants and establishment of expectations, a standard process for many therapists looking to initiate a therapy group.

Assessing Readiness for Group Therapy

As with many other forms of group therapy it is important to assess people for their level of suitability before attaching them to a therapeutic D&D group. D&D is very heavily reliant on the cohesion of the group and the engagement of the players, and as all members of the group are generally working towards the same end goal it is beneficial if they share certain key traits such as personality style, commitment to the group, and vision for how the game should be played. All players should ideally have positive expectations of change as well as an openness to forming therapeutic relationships both with the therapist and with their fellow group members. Clients do not need to have similar levels of experience with D&D or role-playing games, but all members should be willing to engage at a level consistent with the capabilities of the most novice player. Group therapy in general is indicated primarily for clients with interpersonal struggles, low levels of self-reflectiveness, those who are action-oriented, and those who are attracted to the group setting, all of which should be assessed for when determining readiness (American Group Psychotherapy Association, n.d.). The therapist should also ensure they have

some familiarity with D&D so they can engage clients in discussions about the game to determine both their level of interest in this type of group specifically as well as their level of experience with the game. After identifying a group of three to five individuals who the therapist believes would be well-suited to a D&D therapy group the next step is to set the stage for the game and establish expectations for everyone in the group. In D&D this is typically done through what is termed “session zero” (Level 1 Geek, 2020).

Session Zero

Session zero is the name given to a session held before any actual gameplay occurs where players and the DM meet up to discuss expectations for the group. This is a great opportunity for initial team building via icebreakers, questions about role-playing game experiences, areas they are interested in, and what strengths they bring to the group as a participant (Level 1 Geek, 2020). The idea of a structured introductory session is especially important when working with folks with ASD since their struggles with social relationships may make it difficult for them to engage in a less structured ‘meet and greet’-style event. By making sure that the group is the focus of session zero the therapist can allow participants to become familiar with one another in a setting where the emphasis is not on socializing while also gaining valuable insights into the participants’ personalities and goals for the group. Besides the initial meeting aspect of session zero, some important ground rules for the group can be set here: scheduling, frequency of sessions, length of sessions, how to handle player absences, the tone of the game, the level of engagement the therapist expects from the players, and what the players are expecting or hoping for from the game. Asking players for potential triggers may also be beneficial and can be done via a suggestion box or an email address players can reach the therapist at. Depending on the players’ levels of experience it may even be useful to discuss specifics about the game world,

cover common house rules such as how character death works or how players might earn extra rolls of the dice. I recommend using the rules as written in the Player's Handbook (Wiley et al., 2014) for the sake of consistency and clarity. There are many free online resources outlining the types of topics that should be covered in session zero, however there is one rarely discussed topic that is worth highlighting when working with folks with ASD: the nature of role-playing within the group.

Role-playing is typically done in either a descriptive style, where players narrate their character's thoughts and feelings from a third person perspective, or an active style where participants assume the role of their characters as if they were acting in a play (Wiley et al., 2014). Both methods are equally viable but within a therapeutic context may have different impacts on the players. Research on these differences is limited, but it seems possible that an active style of role-playing may increase players' empathic engagement with their characters' experiences while a descriptive style may facilitate the process of reasoning through a characters actions amongst clients with ASD in particular since this population often struggles with rule-based reasoning that contradicts the person's lived experiences when it occurs within a pseudo-realistic setting (Morsanyi & Handley, 2012). While D&D is fantasy-based, the intent of a D&D therapy group is to engage participants in situations that reflect those they could encounter in real life and as such a player with ASD may find it difficult to act in a way that contradicts the way they would in similar real-life scenarios should they be actively role-playing. In this case descriptive role-playing may allow the player to talk through the situation in a more comprehensive way. This is not to imply that a D&D therapy group for those with ASD must involve descriptive role-playing, but this decision should be made with each group's unique player composition in mind. Once player expectations have been set the group can proceed to

character creation, a phase which has received little attention in the literature but holds significant therapeutic potential.

Character Creation

The first step in any grand adventure is to familiarize oneself with the story's main characters, and D&D is no exception. Creating a character in D&D can be as complex or as straightforward as the DM and players wish, with some people preferring to play premade characters and others wanting more control over their in-game avatar. From a therapeutic lens there can be significant benefits to players creating their own characters rather than playing one designed by the DM, and so for this reason my first suggestion is for the DM/therapist to encourage players to build their own character from scratch with some assistance from the DM. Much like we see with online role-playing games, one's avatar can serve an important role in allowing a player to temporarily become someone vastly different than who they are in real life in terms of gender, behaviour, appearance, skills, and so on (McEvoy, 2016). This serves two distinct purposes with regards to therapy: firstly, it can allow the client to act in ways that are not necessarily aligned with how they act in the real world but may align with ways they wish they could act; and second, it communicates to the therapist some areas that may be important to the client. A player who designs a strong and physically imposing character likely has different priorities than one whose character is charming and sociable, for example, and the therapist should keep this in mind when talking to their players.

The process of designing a character in D&D can be confusing for novices, so before starting any sort of D&D therapy group it is important that the therapist is familiar with the different types of races, classes, and statistics that can affect how a character plays so that if a player has an idea for a character the therapist is able to help that player to translate their idea

into a functional D&D version. There are a total of nine races, twelve classes, and six broad statistics which are in turn connected to a wide range of skills. The races and classes are generally fantasy staples such as Dwarves, Elves, Wizards, and Barbarians, while the statistics are Strength, Dexterity, Constitution (or healthiness), Intelligence ('book smarts' or mental acuity), Wisdom ('street smarts' or awareness and intuition), and Charisma. To create a character players select one race, one class, and then distribute a predetermined number of points across the 6 statistics depending on what they want their character to be particularly proficient in (Wiley et al., 2014). Choices are recorded on pre-printed character sheets. During this process it is optimal for players to have access to the character guides outlined in the Player's Handbook as they include comprehensive explanations of the different choices players must make during character design, but this process can be heavily adjusted to fit the developmental levels of the game's players. While one group may enjoy picking through the minutiae of the different classes and races in order to fit their desired playstyle to a specific 'build' or finished character (necessitating the use of the detailed player guides), others may be uninterested in that level of investment and instead prefer to play as an Elf because they like elves in fantasy movies. However, all players in a group should approach character building in the same way for the sake of group cohesion as games of D&D can become very technical or be kept quite simple depending on the will of the group and players may get frustrated if the game does not play out the way they had hoped.

Further to this last point, the group-based nature of D&D should be emphasized as early as the character creation stage. Part of this is pragmatic: if all players independently create characters with the same strengths and weaknesses then different parts of the game may become extremely challenging or overwhelmingly easy. More relevant therapeutically is the initial team-

building that can be done at this point. As seen with the PLAY program (Rust & Thanasiu, 2019), the development of social skills amongst folks with ASD is more successful when socialization takes place within a natural social environment instead of in a therapist's office. Assuming players in a D&D game are motivated to take part in the game and are not viewing it strictly as therapy, engagement with peers during character creation should in theory feel naturalistic. Teamwork and cooperation is encouraged during this phase in order to decide whether characters know one another, how they met, what roles they fill within the group, and what each player's strengths are to make sure that the party is well-balanced and the DM can create appropriate quests for the group (Wiley et al., 2014). From a therapeutic perspective this can not only help players to put themselves in a strengths-based mindset, something we see in counseling modalities such as solution-focused therapy (Lutz, 2013), but it also facilitates conversations about what each player can be trusted to contribute to the group. For example, a player who wishes to play a character skilled in the art of negotiation should be the one attempting to barter with shopkeepers and quest-givers assuming the group is interested in having the greatest chance of success. This in turn increases the chance that each player is going to experience their own successes through the game, hopefully earning them praise and encouragement from the other group members when they accomplish a difficult feat that only they are skilled enough to succeed at.

Finally, it is important to know that player characters will accrue experience and 'level up' as the game progresses. This should be made clear to everyone at the outset of the character creation session for one main reason: a starting character at level one is not going to be capable of performing every task they set their mind to. It takes practice to learn how to forge the best weapons or cast the most powerful spells, so players may not be able to make a character with

their entire preferred skillset at the beginning of the game. If a player wishes to have high level skills the therapist should help them decide what type of build may be able to grow into their idealized character, emphasizing the idea of growth and the ability to learn may help to keep players in the strengths-based mindset mentioned above.

Exploring the Game World

Adventuring is at the core of any fantasy adventure. Whether a group's quest takes part in an abandoned dungeon, a mucky swamp, or within the walls of a grand city, much time during a game of D&D is going to be spent engaging with the players' surroundings. Exploration in D&D consists of three steps: the DM describes the players' environments, one or more players describe what they want to do, and then the DM narrates the outcomes of their actions (Wiley et al., 2014). Sometimes the DM's narration may be read verbatim from campaign notes or a prewritten campaign book (a recommended option for those who have not run a campaign before), while other times the DM may need to improvise and react to a player's actions based on their own knowledge of the situation and interpretation of what is likely to happen. Often a DM may use a physical map of an area to help players visualize the layout of their surroundings. This can be useful for those players whose ability to visualize imaginary situations and environments may be impaired, and it has been noted that struggles with imagination may be related to the resistance to change and repetitive behaviours symptomatic of ASD (Morsanyi & Handley, 2012). Further to this point players may wish to have a visual representation of their character to move around the game map such as a plastic miniature to better visualize their engagement with the environment.

Engaging with the environment typically happens in one of two ways. If a character wants to try and do something simple such as open an unlocked door the DM will typically allow

this to happen and narrate the results of their action (ie. ‘You swing the door open and take in the sights and sounds of the bustling inn’). If a character wishes to do something more challenging such as breaking down a door though, they will have to pass what is known as a skill check. This involves rolling a 20-sided dice, or D20, adding on any bonuses afforded by the skills they chose when creating their character, and then having the DM compare the result to a difficulty score known as a DC. If the player’s score is higher than the DC they succeed and if it is lower they do not, although not succeeding does not necessarily mean they fail. A player may not be able to break down the door, but they may trigger some other type of consequence such as a non-player character (NPC) noticing what they are doing (Wiley et al., 2014). Ensuring players are still able to proceed even if they do not succeed at the tasks they try to do is important as a DM and especially in a therapeutic setting when working with folks with ASD, since the lack of flexibility displayed by this population may otherwise prevent them from seeking out other solutions to problems in the game as well as disincentivizing them from engaging with the game world in future if their attempts are met with failure. Encouraging and rewarding player engagement is vital as a DM and is even more important in a therapeutic setting when working with clients who struggle socially.

There are a variety of rules to use when players are moving about the game world, none of which need to be described here. However, I encourage therapists to consider adding some extra rules which encourage the players to think about and describe how they might cope with situations they encounter in the game world which provoke anxiety, fear, sadness, or other mental health struggles they might face in the real world. For example, a player might wish to explore a dark room in a dungeon. The therapist could respond by telling the player, ‘As you enter the room you notice your heart rate increase and your hands start to tremble. You feel like

running back out the doorway. What do you do?', prompting the player to respond with some form of coping mechanism such as deep breathing. There is lots of room to be creative and respond to players' specific difficulties, something which can be asked about in session zero or at intake, by incorporating those difficulties into the game world as it is created. Conversely, players can be encouraged to describe the struggles their characters are having and talking about how they overcome these strategies, such as a player stating, 'Although my character is normally afraid of talking to strangers, he realizes how important this woman's information is and decides to approach her after psyching himself up'. This type of player engagement can then be rewarded with positive outcomes in the game, "inspiration" (Wiley et al. 2014, p. 125), or praise outside of the game. The other group members can also be involved in this process by offering suggestions or encouragement. Regardless of the situation it is important to allow players the space to think through their actions in the game or even to provide the players with specific options to choose from, encouraging reflection and patience over reactivity and impulsiveness. This ability to rehearse adaptability and consider alternate options before committing to one course of action is a core part of what makes D&D a strong therapeutic tool (Causo & Quinlan, 2021).

Engaging With Other Characters

At many points throughout a game of D&D players will be required to interact with other characters in the game world. These may be characters controlled by the other players which the DM can encourage and monitor, or they may be characters who do not belong to another player at the table known as nonplayer characters (NPCs) who are controlled by the DM. Both methods of social interaction are valuable and can provide different benefits to the players both within the game and outside of it. In-game, social interaction is typically the method through which players discover new quests, gain new equipment, sell valuable treasures, and otherwise progress the

story forward. The DM will often have multiple NPCs prepared going into any given session and may even be forced to improvise characters depending on choices made by the players. As these characters can fill any number of roles depending on the needs of the DM, NPCs can be valuable tools for the players to practice socializing with. The DM may choose to design a plot-essential character who is gruff and rude to see how the players react to someone unpleasant who they are forced to be in contact with, or the DM could create a group of NPCs within the game (such as a guild) who the players need to join to progress the story. Depending on the goals of the players as participants in a group therapy session there can be any number of engineered social situations for the players to navigate with the DM able to not only control the situations themselves but also the way that NPC characters respond, which is one of the most significant benefits to approaching social skill building via the use of games such as D&D.

When players are engaging with NPCs in a typical game of D&D the DM is expected to play the characters as realistically as possible for the sake of immersion. However, a change that can be made for a therapy group is to either adjust NPC behaviours to encourage certain responses from the players or have NPCs respond to the players' statements in ways that encourage them to retry their attempts to interact. For example, while a typical game of D&D may involve a potential quest-giver getting angry at the party if they speak inappropriately to her, a modified game may instead involve the quest-giver acting confused or assuming the party is making a joke in the same situation. In doing so the party is afforded the chance to think of a different approach, get advice and guidance from the other members of the group, revisit notes that might prompt a specific line of questioning, or even having a conversation with the therapist out of character about the situation and how it should be approached. While D&D is a game and as such has rules to be followed around interacting with characters in-world which are meant to

maximize player engagement, in this context it is important to allow players to learn from the social situations they encounter rather than punishing them for approaching them incorrectly. This is especially true when working with folks with ASD, as struggles with reciprocal relationships are common among this population (Pask, 2015) and providing a facilitated space to make social mistakes before being supported to correct them should be beneficial.

The other main source of social interaction in any game of D&D occurs between players. Generally, conversation in therapy groups tends to start out as radial, where participants speak primarily to the therapist, and over time becomes more circular as participants become more comfortable and start to talk to each other more frequently (American Group Psychotherapy Association, n.d.), a process which should in theory be facilitated within a D&D-based therapy group because of the nature of the game and the fact that participants are entering into the group expecting to share an exciting experience. Turn-taking should be intentionally facilitated by the therapist since different participants often have different comfort levels and there can be a risk of some individuals taking over the session. This can be amplified by the comfort different participants have when disclosing their own struggles to others, a barrier which D&D as a framework for therapy can help to overcome, and by the impaired understanding of appropriate social relationships many folks with ASD struggle with (American Psychiatric Association, 2014). Clients may choose to create characters whose backstories mirror their own challenges which then allow them to talk about the impact of these challenges with the other players and the therapist from behind the veneer of their character's experiences. Further to this point, over the course of the game a player's character may undergo some forms of growth or personal resolution which may in turn allow the player to feel a motivational sense of self-improvement thanks to the depth of role-playing and engagement that D&D as a game system facilitates.

Finally, some participants may struggle with building a social network and in these cases having an opportunity to join a group with others who share similar challenges can be a significant benefit. This becomes even more relevant when working with folks with ASD because they often have higher rates of social isolation and loneliness than their peers despite the push over recent years to include those with ASD in neurotypical classrooms and workplaces (Chamberlain et al., 2007). Sometimes a person's most significant barrier to improvement is opportunity, and a therapy group such as this with the potential to evolve beyond the walls of the therapy room can serve to provide that opportunity to those who may not know where else to look for it.

Combat

While socialization is a wonderful tool in many situations throughout a D&D campaign, sometimes the only option is for the party to draw their weapons and fight their way out of danger. There are far too many rules pertaining to combat in D&D for us to cover in this paper, so a brief overview will be offered instead. Combat involves a series of rounds where players and enemies take turns moving around the combat area and then taking one of an endless list of actions limited only by the player's imagination. Oftentimes this will be an attack with success and damage dealt based on a die roll and modified by the statistics players select when creating their characters. Sometimes players may instead choose to use magic, which will not be covered in detail here but has its' own set of rules for each unique spell, and this is also influenced by die rolls and player statistics. If neither of these options appeal to the player in a given situation they may choose to hide, help another player, or even perform an action not covered in the written rules in which case the DM must be creative and wield their knowledge of the rules to improvise how that action might play out. Combat typically lasts until all characters on one side of the conflict are incapacitated, hopefully the enemies but potentially the player party. Enemies

themselves come in dozens of varieties with each class of enemy having its' own set of statistics and behaviours in combat, and the flexibility afforded to DMs when deciding on enemy types for a given session can enable some interesting therapeutic opportunities for players.

While many combat scenarios in D&D involve players facing off against goblins, wolves, or ghouls, one potential avenue that has not been explored in the literature is using enemies as representations of the struggles players are bringing to the group. Perhaps a magical enemy casts a spell on a player which makes them believe that the other members of their party are angry at them, or maybe a bear confronts them with a ferocious roar which makes the party members feel overwhelmed by fear. As identified by Causo and Quinlan (2021) it is important to make sure that the issues players identify as wanting their characters to share are the only ones that players themselves encounter in the game world to maintain safety and to keep the boundary between the players and the game world in place, and it stands to reason that this would extend to combat scenarios despite this not being the focus of the authors' study. There are two main advantages to this happening during combat: one, combat is the one point in the game that is explicitly turn-based meaning even the most introverted player in the group would be given space to work towards growth if it happened in the middle of a fight; and two, overcoming a weakness-based attack and responding by vanquishing the foe performing it should provide a very clear metaphorical instance of success over adversity. This is another area where the DM must be creative and flexible in their approach to the game, as the situation may call for the player to successfully kill their enemy for the sake of emphasizing their growth even if the rules of the game indicate that the enemy in question should still be alive (for example, if the enemy had 20 hit points left and the player only rolled enough dice to deal 18 damage with their retaliatory attack). Almost more than any other area of the game, the rules for combat should be viewed as

guidelines which can be edited to improve the overall experience rather than ironclad requirements for a successful session.

The other aspect of combat that is significant therapeutically is the teamwork involved. Combat is the part of D&D that involves the most cooperation between party members since all members of the group will typically be engaged in combat with the same enemies and teaming up to attack specific targets will often prove much more effective than having each person acting independently. Furthermore, as the various player characters will be of different races, classes, and have different skills, coordination between group members becomes important to make sure certain players are not abandoned to fight creatures they are weak against. To this end, encouraging lively discussion between group members and providing as much time as needed for players to discuss their approach to a fight is important. This can be done by explicitly suggesting that players talk about their strategy before a fight, or it can be done more subtly by rewarding players for creative teamwork via damage bonuses, rare equipment, or interesting outcomes such as enemies fleeing from battle. Encouraging discussion and involvement of all group members within the game can even help players feel more comfortable talking with their peers outside of the game, as often folks who are reluctant to speak up are more focused on what might be lost should they speak up rather than what might be gained (Coplan & Evans, 2009). Counteracting this by focusing the discussion on a player's character and their actions or role in the group could help participants become more comfortable contributing to discussions moving forward, especially since the DM can manipulate the outcome of player actions to make sure their choices are never actively wrong. Overall combat may be the most social aspect of the game when it comes to engaging the players in group discussion despite it being the least social part of D&D in theory.

Getting Started

Aside from the basic recruitment steps involved in establishing any sort of therapy group, there is very little in the way of materials necessary to begin a D&D group. All participants need a set of tabletop RPG dice, which can be purchased from any hobby shop for a small fee. The therapist should have access to a physical copy of the Player's Handbook (Wiley et al., 2014) as a convenient reference material, although all players are also able to download apps to their mobile phones which outline the various items, character types, and spells available in the game. The therapist should also print out character sheets to hand out to all players, which are available for free via a brief internet search. Finally, for first time DMs it is recommended that a pre-built campaign be purchased either in physical book form or via the internet. These are convenient as they allow the DM to provide the players with well-built, balanced quests without the DM needing to have a deep understanding of the game's mechanics. These campaigns outline characters, locations, and enemies for the players to encounter while leaving enough space for the DM to add in their own modifications and flavour to the game world. Once these items are collected all that is needed is to plan a date for session zero and prepare the group for the adventure to come!

Limitations to this Capstone

There are two primary limitations to this capstone. First, there are currently no standardized therapeutic D&D materials that I am aware of. While this chapter contains many suggestions for therapists who wish to either create a campaign of their own or modify an existing one to fit within a therapeutic framework, there is no option for therapists who prefer to use unaltered and tested tools when conducting therapy. This also leaves the tuning of a campaign for the purposes of aligning it with a group's presenting issues up to the therapist,

which invites the risk of human error that may not occur if a standalone therapeutic D&D campaign was available.

Second, many of the claims throughout this chapter are unsupported by empirical research at this point. Without the use of human subjects we are limited to hypotheses, and while the research highlighted at the beginning of this chapter outlines the types of issues that have been shown to benefit from D&D-based therapy groups no research has yet been completed looking at the use of D&D for counseling clients with ASD. As such, readers should view this capstone as a proposal for further research rather than a comprehensive discussion of an established therapeutic framework.

Areas for Future Research

Generally, adding to the literature surrounding the use of tabletop roleplaying games in therapy would be a worthwhile direction. Having therapy take the form of a fantasy game could open up mental health supports to a wide range of people who would not be interested in accessing traditional counseling, in turn lightening the burden on existing mental health supports. It may also inspire other therapists to see if there are ways to add a therapeutic framework over top of other hobbies, which would help therapy continue to become more accessible and more mainstream.

More specifically, researching the use of D&D for clients with ASD would help support the claims made throughout this paper and would help to legitimize it as a genuine option for those clients who often struggle with different aspects of traditional therapy. This could then be expanded to other populations and could potentially be used to create tailored pre-made campaigns for therapists to use when running their own groups rather than requiring the creation of original work or modifications to existing campaigns. Developing prebuilt, empirically

supported therapeutic D&D modules would be a major step forward for this modality and would make it far more accessible to those therapists who do not have an extensive familiarity with tabletop roleplaying games.

Conclusion

Folks with ASD face many mental health issues at a significant rate. These are frequently the types of issues that respond well to counseling such as anxiety, depression, and substance use, but there are a lack of ASD-sensitive counselors and few interventions designed to accommodate the unique experience of life on the Autism spectrum. ASD is a complex disorder with many unique symptoms covering both the behavioural and interpersonal realms, many of which can manifest in the therapy room and complicate the process of counseling. While there are multiple widely used counseling modalities which have varied levels of support in the literature, they all have issues and none are specifically designed to address mental health concerns such as social anxiety amongst the neurodiverse population.

Support for the use of D&D as a form of group therapy has been increasing over recent years. While the game itself has many components and can be quite complex if the therapist is not already familiar with the game, the therapeutic benefits are numerous and often line up well with the types of issues and barriers to counseling that those with ASD face. Moving forward it would be important to conduct formal research studies to assess the validity of the claims made throughout this chapter as well as developing some campaign outlines specifically designed for use in the therapy room.

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