A Mixed Methods Investigation of Autistic and Community Provider Perspectives on Adapting Cognitive Behavioral Therapy for Autistic Youth

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Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Psychology

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May 13, 2025
Blacksburg, Virginia

Keywords: autism spectrum disorder, cognitive behavioral therapy, community mental health, stakeholder perspective

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ABSTRACT

Individuals on the autism spectrum are at high risk of experiencing a range of co-occurring mental health problems, such as anxiety disorders, depressive disorders, and obsessive-compulsive disorder. However, clinicians report low confidence in treating autistic youth for such internalizing conditions, and autistic individuals often report that psychotherapy does not meet their needs. Cognitive behavioral therapy (CBT) adapted for autistic youth shows promise in reducing symptomology of co-occurring internalizing disorders; however, minimal published research has sought to systematically include end-users (i.e., autistic youth or community mental health clinicians) in the process of adapting CBT for this population. Therefore, the current study utilized a mixed methods convergent parallel research design in order to obtain community perspectives on adapting CBT for autistic youth. Community consultants, including adolescents on the autism spectrum and community mental health clinicians, aided in the design of qualitative interview questions. Ten autistic adolescents, ages 13-17, and 18 community mental health clinicians completed a battery of questionnaires and a 30-60-minute qualitative interview. Themes were gleaned from the qualitative interview using an inductive approach and were presented alongside quantitative data. Quantitative data suggested that autistic adolescents have moderately positive attitudes toward therapy and endorse significant internalizing symptoms and emotion regulation difficulties, while clinicians endorse relatively positive attitudes toward evidence-based practice and CBT. Qualitative identified in the dataset included (1) *Building Engagement and Relationship*; (2) *"It's Different for Everybody": Individualizing Treatment*; (3) *Considering Autistic Experiences*; (4) *CBT in the Real World*; and (5) *Supporting Clinicians*. Results will inform a set of guidelines for adapting CBT for autistic youth in community settings.

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GENERAL AUDIENCE ABSTRACT

Autistic individuals are at risk of experiencing mental health problems like anxiety and depression. However, therapists often do not feel confident in treating autistic youth for these conditions, and people on the autism spectrum often report that therapy does not meet their needs. Cognitive behavioral therapy (CBT) is a therapy that works well for many mental health problems. When adjusted for autistic youth, it can reduce mental health problems, but research has not studied the opinions of autistic adolescents and mental health therapists in designing these therapies. In this study, we conducted an interview and provided surveys to adolescents and to therapists to better understand their opinions about therapy for autistic youth. Ten autistic adolescents (ages 13-17) and 18 community mental health therapists took part. The survey results showed that autistic teens have moderately positive attitudes toward therapy and have moderate-to-high levels of depression, stress, and anxiety. The adolescents also reported that they have a hard time with using strategies to manage emotions. Therapists reported that they have positive attitudes about research supported therapies, including CBT. The interview data included five themes: (1) *Building Engagement and Relationship*; (2) *"It's Different for Everybody": Individualizing Treatment*; (3) *Considering Autistic Experiences*; (4) *CBT in the Real World*; and (5) *Supporting Clinicians*. The results can help researchers and clinicians in making adjustments to CBT for use with autistic youth.

Acknowledgements

My parents instilled in me the importance of thank you notes as soon as I learned how to write – and honestly, maybe even before. I think this might be my favorite thank you note I've ever written, because it allows me to acknowledge and thank the incredible people who have supported me throughout my academic journey.

First, I am grateful to my mentors over the years. My undergraduate research mentor, Dr. Joshua John Diehl, encouraged me to approach research with an ethos of curiosity and care, which I have carried with me throughout my career. My post-graduate mentors at the Yale Child Study Center helped me find my academic passions, and Dr. Christina McDonnell at Virginia Tech supported my interests and enthusiasm early in graduate school. I am immensely grateful to Dr. Angela Scarpa, my dissertation chair, for welcoming me into her lab and for her steady support and encouragement throughout my doctoral training.

To my dissertation committee: Dr. Rosanna Breaux, Dr. Lee Cooper, and Dr. Jungmeen Kim-Spoon - thank you for your unwavering guidance during the monumental undertaking that is a dissertation. To my INCREDIBLE coding team who worked tirelessly to complete coding for this project: Ashtyn, Dani, Kendyll, Kenza, Lizzie, Samanvitha, and the rest of my analysis team – I am unendingly grateful for your excellent work. And to the participants in this study: I sincerely thank you for sharing your wisdom and experiences with us.

To my graduate school cohort and colleagues: Thank you for every study session at Mill Mountain, the Next Door Bake Shop, and VTAC; every consultation in the PSC kitchen; every dinner at 622 North; every outdoor dining adventure during COVID times; and every game of darts at the pub. Thanks for becoming psychologists with me. We're better because we did it together.

And to my internship cohort and colleagues: you made this dissertation better, because you've made me a better, more thoughtful clinician and researcher. Thank you.

To my friends and family across the country – including my brother Danny, my sister Katie, and my Nonna who once sent a full lasagna to Blacksburg – you have been an endless source of support. And to Mom and Dad; thank you for raising me to be a critical thinker, but never at the expense of kindness. Thank you, too, for always believing in me throughout the long and arduous course of the PhD. You deserve honorary doctorates at the end of this.

And last but not least, to Tyler. Tyler, I love you so much and I do not have words to express how grateful I have been to have you by my side during every step of this process. You have been the steady backdrop to the chaos of graduate school. I'll cherish our memories from the last several years, from long-distance writing dates during the pandemic to my insistence on seeing every Smithsonian during your one-year postdoc in DC. I don't know how I got lucky enough to have a partner who is kind and brilliant in equal measure.

Grad school is hard, and it truly takes a village. I'm so grateful to everyone who has been a part of mine.

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Autism spectrum disorder (ASD) affects up to 1 in 36 children in the United States (Maenner et al., 2023) and is characterized by social communication difficulties and restricted and repetitive behaviors/interests (American Psychiatric Association, 2022). Autistic individuals are at high risk of experiencing a co-occurring mental health concern during their lifetime, such as anxiety disorders, depressive disorders, obsessive-compulsive disorder, or attention-deficit/hyperactivity disorder (Brookman-Frazee et al., 2018). Rates of co-occurring mental health difficulties in autistic youth are overwhelming; more than 90% of individuals on the autism spectrum seen in a community mental health setting experience at least one co-occurring mental health condition, and more than 70% may meet criteria for two or more co-occurring diagnoses (Brookman-Frazee et al., 2018). As such, research on mental health treatment in autism has been identified as a key area for further autism research and is a research priority of the autistic community (Benevides et al., 2020). However, treatment of co-occurring mental health problems in autistic people is still not well understood, particularly during the unique developmental period of adolescence.

Theory suggests that autistic adolescents may be at particularly high risk for developing first-onset mental health difficulties. Many mental health disorders have increased incidence beginning in adolescence among neurotypical youth; for example, social anxiety disorder onsets before age 15 on average (de Lijster et al., 2017), and rates of depression begin to increase in mid-adolescence (Lewinsohn et al., 1986). This pattern may be even more pronounced for youth on the autism spectrum. While adolescence is known to be a challenging time for many, some researchers hypothesize that the developmental period creates a particular challenge for autistic youth, given the combination of increased social demands and the biological changes that occur during puberty (Picci & Scherf, 2015). Autistic adolescents report that while they want and have

friends, they experience a range of social difficulties during the adolescent period that can contribute to significant feelings of loneliness (Cresswell et al., 2019). These experiences are likely to increase the risk of mental health problems in autistic youth. Indeed, research suggests that autistic adolescents experience anxiety and depression at higher rates than their neurotypical peers, and that this effect is particularly pronounced for autistic adolescent girls (Oswald et al., 2016). It has been proposed that the developmental trajectory of autistic individuals may contribute to high rates of anxiety in this population (Bellini, 2006). Given the unique stressors of adolescence, and evidence suggesting high rates of mental health problems for autistic youth during this developmental period, it is critical to consider how therapeutic approaches can best meet the specific needs of autistic adolescents.

Autistic Adolescents and Psychotherapy

Evidence suggests that psychotherapy is beneficial for autistic adolescents with a range of concerns, including autism-specific difficulties as well as co-occurring mental health problems. Therapeutic modalities including behavior therapy, social skills therapy, and cognitive behavioral therapy (CBT) demonstrate strong evidence of their usefulness for adolescents on the autism spectrum. Behavioral interventions based in applied behavior analytic theory are most frequently used with young children on the spectrum, but continue to be an efficacious treatment option for some individuals into adolescence (Ivy & Schreck, 2016). Additionally, group social skills interventions show efficacy in improving social cognition among this population (Miller et al., 2014). However, these behavioral and social skills approaches are largely focused on addressing difficulties which are specific to autism (e.g., social communication, inflexibility). For the treatment of co-occurring mental health concerns, CBT is the most-studied treatment

approach (Keefer et al., 2018), and existing literature is promising in terms of the efficacy of CBT for the treatment of co-occurring internalizing problems in autistic youth.

CBT for Autistic Adolescents

CBT is considered a gold-standard mental health treatment for a wide variety of mental health disorders in the general population, including many anxiety and mood disorders, posttraumatic stress disorder, and obsessive-compulsive disorder (Butler et al., 2006). The approach generally integrates the cognitive, affective, and behavioral components of mental health concerns and utilizes a range of strategies to modify unhelpful cognitive and behavioral processes.

Theoretically, CBT approaches appear to be a natural fit for individuals on the autism spectrum. Emotion regulation difficulties are hypothesized to be a transdiagnostic risk factor for co-occurring mental health problems in autistic people (Mazefsky & White, 2014). A study of autistic adolescents and young adults identified that emotion regulation difficulties are a significant contributor to anxiety and depression symptoms in this population (Conner et al., 2023). Many CBT protocols emphasize the importance of emotion regulation strategies such as reappraisal and acceptance; further, CBT tends to target maladaptive regulatory strategies such as rumination and avoidance (Papa et al., 2012). Therefore, the emotion regulation skills foundational to CBT may be of benefit to autistic populations experiencing co-occurring psychopathology (Scarpa et al., 2013).

In line with this theoretical view, emerging evidence suggests that CBT is a promising treatment for co-occurring internalizing problems in autistic youth; CBT protocols tested with individuals on the autism spectrum demonstrated statistically significant improvements in symptoms of anxiety (Ung et al., 2015) and depression (Keefer et al., 2018). A meta-analysis of

randomized controlled CBT trials demonstrated a large effect of CBT on clinician-rated anxiety symptoms, while youth and parents reported a small effect of treatment on anxiety (Sharma et al., 2021).

Importantly, research has suggested that CBT that has been adapted specifically for use with autistic youth may show stronger treatment effects than non-adapted CBT approaches (Wood et al., 2020). This has been most frequently studied in the context of treating co-occurring anxiety disorders. For example, one CBT protocol specifically adapted for autistic children and adolescents is Behavioral Interventions for Anxiety in Children with Autism (BIACA; Wood et al., 2015). BIACA has consistently shown efficacy in treating symptoms of anxiety in autistic children (Wood et al., 2009) and adolescents (Wood et al., 2015), including work which suggests that the program's autism-specific accommodations make it more efficacious in treating anxiety disorders among autistic youth than non-adapted CBT protocols (Wood et al., 2020). The BIACA protocol includes adaptations such as provision of a modular treatment algorithm for clinicians, addition of autism-specific content related to social skills and circumscribed interests, increased parent participation, and teacher consultation.

Another CBT adaptation, which also targets anxiety in autistic youth, is the Facing Your Fears program (FYF; Reaven et al., 2011). FYF is administered as multifamily group therapy and utilizes many core components of traditional CBT for anxiety (e.g., graded exposure, emotion regulation strategies, cognitive self-control, and somatic management). FYF also utilizes several ASD-specific modifications to treatment delivery including increased structure and use of visuals, focusing on special interests, and a high amount of parent involvement (among other modifications; see Reaven, Blakeley-Smith, Culhane-Shelburne et al., 2012). When administered to adolescents, FYF also utilizes a social skills module, parent-adolescent

dyadic sessions, and use of technology to engage youth. FYF has been shown to be effective in reducing anxiety for both school age children and adolescents with autism (Reaven, Blakeley-Smith, Culhane-Shelburne et al., 2012; Reaven, Blakely-Smith, Leuthe et al., 2012).

Although both BIACA and FYF are aligned with theoretical principles regarding comorbid anxiety and autism and show strong promise in reducing symptoms of anxiety amongst autistic youth, research on these adapted CBT approaches for anxiety has not typically taken into account the perspectives of end-users for whom these approaches are intended (i.e., community clinicians or autistic youth who may receive these treatment approaches). Lack of stakeholder input may contribute to the lack of uptake of such CBT interventions in clinical practice (Duncan et al., 2023; Wotring et al., 2005), which will be discussed in more detail below.

CBT for anxiety has been by far the most studied treatment approach for autistic youth with co-occurring mental health problems (a systematic review found that 78% of CBT studies in autistic youth were focused on anxiety; Lake et al., 2020), but CBT approaches have also been evaluated for autistic youth with other internalizing concerns. For example, in a case-controlled study of autistic and non-autistic adolescents with obsessive-compulsive disorder (OCD), results indicated that autistic youth benefitted from traditional CBT, although they appeared to benefit less than their non-autistic peers from CBT without adaptation (Murray et al., 2015). The authors therefore conclude that adaptations to traditional CBT protocols for OCD may be necessary to optimize treatment outcomes for autistic youth. Regarding depressive disorders, results on the usefulness of CBT in treating depression symptoms in autistic youth are varied (Menezes et al., 2020). Some studies identify that autistic adolescents have modestly decreased depression symptoms following CBT treatment (Santomauro et al., 2016), although others do not identify improvement in depression symptoms following treatment (Mackay et al., 2017). A recent study

provided CBT adapted to target depression in autistic adolescents (in an intervention approach titled CBT-DAY). The youth involved in this study demonstrated decreased depressive symptoms and improved self-esteem and emotional reactivity post-treatment and at follow-up (Schwartzman et al., 2024). Encouragingly, this study did include the involvement of several autistic adults in the development and administration of the adapted CBT program, providing an example of the potential effectiveness of community-informed cognitive-behavioral approaches for autistic youth.

Overall, the CBT literature for internalizing problems in autistic adolescents is promising, but it demonstrates clear room for growth in the efficacy and real-world effectiveness of treatment approaches. In particular, adapted anxiety protocols such as BIACA and FYF, and the recently published adapted depression protocol CBT-DAY, demonstrate the potential of modified CBT in treating co-occurring problems in autistic youth; however, it is clear that further adaptation may be necessary to optimize outcomes. Furthermore, despite the evidence for the efficacy of some CBT programs for autistic adolescents, the uptake of such programs in community practice is minimal (Brookman-Frazee et al., 2010), which suggests a significant research-to-practice gap. It is likely that lack of stakeholder participation in the design of such evidence-based programs may contribute to the lag in uptake; however, many other barriers at the community level must also be considered.

Barriers to Mental Health Treatment

Despite evidence to suggest the efficacy of CBT for autistic youth, clinicians and clients alike consistently report challenges with the implementation of these approaches in community settings. For example, community mental health providers regularly report lack of training in working with autistic people, which results in a dearth of qualified mental health providers for

youth on the spectrum (LaPoint et al., 2024; Maddox et al., 2020). While providers report that they tend to adapt therapeutic protocols for their autistic clients, they often endorse limited confidence in their ability to work with such clients (Cooper et al., 2018). Autistic clients seeking mental health care report this same difficulty, regularly stating that lack of autism knowledge among providers is a substantial barrier to accessing evidence-based mental healthcare (Camm-Crosbie et al., 2019). Furthermore, little research that has sought to adapt CBT protocols for autistic youth has considered the perspectives of autistic adolescents themselves or of the clinicians who are likely to be administering the treatment. Although there has been a move toward including autistic people in the development of CBT approaches (e.g., Schwartzman et al., 2024), this work is still in its infancy. As a result, further understanding of how to best adapt existing psychotherapeutic approaches has been identified as an area for future research and development within the field (Dickson et al., 2022).

As a result of these significant barriers to evidence-based care, autistic youth face an alarming service gap for mental health treatment (Campbell et al., 2020). Parents of autistic youth report significant difficulties in identifying appropriate clinicians to work with their children (Jackson et al., 2020), as well as difficulty with locating appropriate care and care coordination (Vohra et al., 2014). In a study of autistic young adults, the vast majority (greater than 90%) reported seeking out mental health services; however, few participants found these services to be helpful to them (Crane et al., 2019), indicating a substantial problem with the suitability of existing mental health services. Furthermore, autistic individuals seeking mental healthcare also face structural barriers such as long waitlists and financial problems (Crane et al., 2019). Taken together, these obstacles to accessing appropriate and helpful mental health services are associated with increased experiences of hopelessness and suicidality among autistic

people (Camm-Crosbie et al., 2019). While much of this work has been examining experiences of autistic young adults, it is likely that similar roadblocks exist at the adolescent level given that child and adolescent clinicians report decreased likelihood and comfort in working with autistic youth as compared to youth with other neurodevelopmental disorders such as ADHD (Roudbarani et al., 2023).

Given the substantial burdens currently involved in providing and receiving mental health care for autistic youth, including provider comfort/knowledge, past mental health experiences of autistic young people, and structural problems, it is clear that understanding the perspectives of those involved in delivering and receiving CBT is a necessary step toward improving the quality of this care in the community. Therefore, the current study aims to gather provider and autistic adolescent perspectives regarding how CBT can best be adapted for autistic youth seeking care from community providers, as an essential step forward in improving quality of life and reducing the frequency of mental health crises for autistic young people.

Mental Health Services in the Community

When contemplating how CBT strategies may be adapted and utilized, it is also critical to consider the context in which autistic adolescents are seeking mental health services from providers in the community. Mental health providers often employ a range of treatment modalities; for example, while a sizeable minority of providers in community mental health centers define their theoretical orientation as cognitive-behavioral, the majority describe a therapeutic style that is eclectic (i.e., includes CBT as well as other approaches), non-CBT, or not aligned with a specific theoretical approach (Creed et al., 2016). Community clinicians, therefore, typically do not follow a single manualized CBT treatment protocol (Connor-Smith &

Weisz, 2003), which raises questions about the real-world benefits of efficacy and/or effectiveness trials for a specified treatment manual.

While manualized approaches certainly inform clinical practice in community settings, there is a need for flexible clinical tools that can be applied to the work that clinicians are already conducting. Therefore, rather than developing a new approach for treating autistic adolescents in the community context, the current study aims to understand stakeholder perspectives on how to best adapt to the evidence-based CBT practices that are *already being used* in community settings. With this concept of adaptation of current evidence-based practices (EBPs), rather than adoption of new EBPs, the current study aims to reduce the burden of adopting new interventions, thereby increasing uptake of the adaptations identified in the proposed study (and, ultimately, evaluated against treatment-as-usual). This approach is especially critical given that community mental health centers experience significant resource constraints (Carbonell et al., 2020), such that identifying the time and funding to adopt a new treatment protocol are among the biggest barriers to EBP use cited by community clinicians (Stewart et al., 2012). Furthermore, given the widely acknowledged adolescent mental health crisis over the last several years (Sorter et al., 2024), providing clinicians with useful strategies that have a low resource burden is particularly critical.

Community Perspectives

Research studies involving treatment of mental health problems have increasingly emphasized the importance of understanding end-user perspectives with respect to the implementation of specific practices. This has been especially true within the autism research literature, where the growth of the neurodiversity movement has highlighted the importance of understanding autistic priorities and attitudes toward research and mental health support (e.g.,

Kapp et al., 2013). Additionally, recent work has called attention to the importance of studies which highlight the perspectives of autistic people (Keating, 2021). As a result of this call for increased understanding of autistic experiences and viewpoints, several studies have used qualitative and mixed methods designs to elucidate the experiences of autistic adults in receiving mental health services within community settings (e.g., Maddox et al., 2020; Mazurek et al., 2023). However, there is limited research which has sought to understand the perspectives of autistic adolescents in receiving mental health services. Given the high rates of mental health concerns in autistic adolescents, it is critical to understand their unique perspective in the context of their neurodivergence as well as the context of the specific developmental experiences that characterize the adolescent period. Further, while much research has evaluated clinician attitudes toward autism and toward treating autistic clients (e.g., Maddox et al., 2020; Paynter et al., 2022; Roudbarani et al., 2023), strikingly little work has emphasized the unique strengths and challenges that these clinicians may anticipate when conducting CBT with an adolescent population specifically. Given that adolescent therapy is often fundamentally different from child or adult therapy, it is necessary to specifically consider the experiences of clinicians who work with autistic adolescents. Furthermore, it is crucial to develop research which utilizes community consultation to ensure that the perspectives of community stakeholders are prioritized throughout the entirety of the research process.

Psychotherapeutic Adaptation

Previous research on adaptation to psychotherapy is also important to consider. While many studies have adapted therapeutic protocols for autistic youth (e.g., Reaven et al., 2011; Schwartzman et al., 2024; Wood et al., 2009), there is little published literature which explicitly discusses the step-by-step process of adapting therapy for people on the autism spectrum. The

broader literature regarding adapting psychotherapeutic approaches for new populations largely focuses on cultural adaptations of therapy (e.g., Hall et al., 2016; Hwang, 2009; Soto et al., 2018). One example of an adaptation framework, developed by Naeem et al. (2016) is specific to adaptation of CBT approaches for marginalized racial or ethnic groups. There is substantial difference between racial identity and aspects of neurodivergence such as autism; by citing a cultural adaptation protocol, we do not intend to conflate two aspects of identity that may have very different impacts on individuals' experiences of the world. Nonetheless, the process described for adaptation of interventions is an informative and useful framework to consider when evaluating how CBT as an intervention may be adapted for use with autistic adolescents.

Naeem et al. (2016) describe four phases in the adaptation of cognitive behavioral approaches. The first step involves using qualitative and quantitative methodology to gather information from stakeholders, in addition to review of previous literature. In the second step, this information is synthesized in order to produce guidelines for adapting the cognitive behavioral approach. The third step includes translation and adaptation of therapy materials, and the fourth step consists of testing the CBT adaptations and refining them as needed. In the proposed study, we will focus on steps one and two, in which information is gathered and synthesized to produce adaptation guidelines. Future research will emphasize steps three and four, which involves formal adaptations and testing of the adapted approach.

The Naeem et al. adaptation framework also identifies four suggested foci, or areas, which should be considered when making adaptations to CBT. These foci include philosophical orientation (e.g., client beliefs/attitudes about mental health and help-seeking), practical considerations (e.g., system capacity and logistical barriers), technical adjustments of methods/skills (e.g., specific skills taught, adjustments to improve alliance, etc.), and theoretical

or conceptual changes (e.g., changes to recognize client worldview and therapy values; Naeem et al., 2016). Our interview guide and choice of quantitative measures considered these four foci of adaptation; however, our qualitative thematic analysis was inductive in nature and thus was not driven by these specific areas when considering perspectives on adaptation.

Current Study

Because youth on the autism spectrum are prone to experiencing co-occurring mental health concerns and frequently seek care in community settings, the current study aims to obtain perspectives from community mental health clinicians and autistic youth on adapting CBT for autistic adolescents. We conducted a mixed methods study utilizing principles of human-centered design (Melles et al., 2021) in which community consultants aided in the development of a qualitative study interview. The current study uses a mixed-methods convergent parallel approach to address two specific aims. First, we aim to understand the experiences and recommendations of autistic youth regarding adapting psychotherapy to best suit their needs. Secondly, we seek to understand the perspectives of community clinicians on how to best approach adapting CBT within their unique settings. These two aims will fulfill step one of the Naeem et al. adaptation framework. Our ultimate goal is to generate a feasible and flexible set of recommendations that, upon future evaluation, researchers and clinicians can utilize when considering how to approach adapting cognitive behavioral therapies for autistic youth in their settings. This process will fulfill step two (synthesis) of the Naeem et al. adaptation framework.

Method

Participants

Participants included 10 autistic adolescents and 18 community mental health providers. For autistic adolescents, inclusion criteria included: ages 13-17, community diagnosis of ASD,

past experience with mental health therapy, ability to participate in interviews and questionnaires in English, and currently residing in the United States. Evidence of community ASD diagnosis (e.g., assessment report; doctor or provider note; school documentation) was required in order to be eligible for participation. The average age of adolescents in this study was 14.78 years (*SD* = 1.20). See Table 1 for further demographic information. In terms of sex, 60% of the sample was assigned male at birth and 40% was assigned female at birth. Regarding gender identity, 20% of the sample identified as women, 70% identified as men, and 10% identified as nonbinary or another gender identity. All adolescents were above the autism spectrum cutoff on the Social Responsiveness Scale, Second Edition (SRS-2) T-score per parent report, and parent-reported Autism Quotient (AQ) scores ranged from 28 (i.e., 2 points below the parent-report cutoff) to 42. (Of note, while the parent-report AQ is normed for ages 12-15, one adolescent outside this age range had a completed parent-report AQ score.) See Table 2 for adolescent characterization data.

For community mental health providers, inclusion criteria included: licensed or license-eligible mental health provider, working in a community setting per self-report, experience using CBT with at least one client, experience working with at least one autistic adolescent client, ability to participate in interviews and questionnaires in English, and currently residing in the United States. The average age of clinicians in this study was 39.65 (SD=11.63) and 70.6% of clinicians identified as women. Clinicians in this study spanned a range of mental health disciplines, including counseling, social work, psychology, and advanced practice psychiatric nursing. They further endorsed using a range of therapeutic modalities, including CBT, dialectical behavior therapy (DBT), motivational interviewing, solution focused therapy, acceptance and commitment therapy (ACT), eye movement desensitization and reprocessing (EMDR), and trauma-focused CBT, among others. See Table 1 and Table 3 for further

information regarding clinician demographics and theoretical orientation, respectively. Interestingly, although we did not formally collect information about personal experience with autism, during their qualitative interviews several clinicians in the current study self-disclosed aspects of their lived experience with autism. Specifically, multiple clinicians shared that they are parents of autistic individuals, and at least two clinicians identified that they themselves are autistic.

Materials

Youth Quantitative Measurement Tools

All quantitative measurement tools are available for review in Appendix A.

Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). The DERS is a 36-item measure of challenges with emotion regulation that produces the following subscales: nonacceptance of emotional responses (α =0.93), difficulty engaging in goal-directed behavior (α = 0.86), impulse control difficulties (α = 0.96), lack of emotional awareness (α =0.76), limited access to emotion regulation strategies (α = 0.81), and lack of emotional clarity (α = 0.74). Scores on each subscale are calculated by summing item responses. The DERS has previously been used to measure difficulties with emotion regulation in autistic youth and shows good psychometric properties in this population (McVey et al., 2022). Items are scored on a 5-point Likert Scale ranging from Almost Never to Almost Always, with higher scores indicating more difficulty with emotion regulation. This questionnaire may address the technical adjustments focus of the Naeem et al. (2016) framework, as autistic individuals may benefit from adjustments to specific CBT skills or methods related to emotion regulation.

Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski & Kraaij, 2007). The CERQ is a 36-item measure which assesses cognitive components of emotion regulation.

There are nine conceptually-derived subscales: self-blame (α=0.84), other-blame (α=.50), rumination (α=0.73), catastrophizing (α=0.76), putting into perspective (α=0.84), positive refocusing (α=0.48), positive reappraisal (α=0.52), acceptance (α= 0.57), and refocus on planning (α=0.56). Unlike the DERS (described above), the CERQ is focused primarily on specific emotion regulation strategies. Scores are calculated by summing items within each subscale. The CERQ has been previously used to measure change in cognitive emotion regulation strategies associated with psychological treatment (e.g., Dillon et al., 2020) and is valid for use with adolescents (Garnefski & Kraaij, 2007; Garnefski et al., 2005). The measure has also been used in autistic populations (Bruggink et al., 2016). As with the DERS, this questionnaire may address the technical adjustments focus of the Naeem et al. (2016) framework.

Social Responsiveness Scale, Second Edition (SRS-2; Constantino & Gruber, 2012). The SRS-2 is a parent-report measure of social difficulties and restricted/repetitive behaviors and interests which has been validated as a measure of autistic traits in children, adolescents, and adults. For the present study, the School Age form of the measure was utilized. The SRS-2 yields the following subscales: social motivation (α =0.76), social cognition (α=0.82), social awareness (α=0.54), social communication (α =0.85), and restricted and repetitive behaviors (α =0.69). The measure also provides overall social communication and restricted/repetitive behavior index scores, as well as a total score which measures the overall level of difficulty with reciprocal social behavior. Scores are calculated by summing all items within each scale, then converting to T-Scores. The overall SRS-2 demonstrated strong internal consistency in this sample (α = 0.94). Within the larger literature, it tends to have high levels of sensitivity, although specificity estimates are often lower (Bruni, 2014).

Autism Spectrum Quotient (AQ; Baron-Cohen et al., 2006; Baron-Cohen et al., 2001). The AQ is a 50-item measure that was designed as a brief screening tool for autism. For the proposed study, we utilized an other-report form of the measure, and parents were the primary reporters. The AQ is scored on a binary basis, such that responses associated with autistic traits are scored a 1 and responses associated with non-autistic traits score a 0 (α =0.59). The AQ includes the following subscales: Communication, Social, Imagination, Local Details, and Attention Switching. The AQ includes an adolescent other-report (Baron-Cohen et al., 2006) designed for ages 12-15 and an adult self-report for ages 16+; given that we sought caregiver-report scores, the adolescent version was utilized for the present study. The items on the adolescent version and adult version are identical except for the reporter referenced (e.g., "I prefer" vs "S/he prefers"). The authors suggest that a score of 30 out of 50 on the adolescent form may indicate a significant number of autistic traits. Of note, no other-report version of the AQ has been validated for autistic individuals age 16+; however, the measure can still provide a useful indication of overall level of autistic traits. Aggregate scores on the AQ support documented community diagnosis in the current study.

Depression, Anxiety and Stress Scale, 21-item Version (DASS-21; Henry & Crawford, 2005). The DASS-21 measures levels of depression (α =0.90), anxiety (α =0.84), and stress (α =0.84). Each of the three subscales contains 7 items, and scores are categorized into "normal", "mild", "moderate", "severe" and "extremely severe" levels of depression, stress, and anxiety. Scores are calculated by summing items included in each scale. The DASS-21 has been validated for use with adolescents (e.g., Willemsen et al., 2011) and with autistic adults (Park et al., 2020). The measure has also been used in previous studies with autistic adolescents specifically (e.g., Bernardin et al., 2021). This questionnaire may address the technical

adjustments focus of the Naeem et al. (2016) framework, as autistic individuals may benefit from adjustments to specific CBT skills or methods related to how anxiety and depression symptoms present in this population.

Mental Help Seeking Attitudes Scale (MHSAS; Hammer et al., 2018). The MHSAS is a 9-item questionnaire which measures attitudes toward help-seeking. Participants were asked to rate their attitudes toward seeking mental health support on a 7-point scale, with opposing viewpoints on either end of the scale (e.g., “useless” and “useful”). This questionnaire has been validated in U.S. adults and showed good internal consistency in the current study sample (α = 0.94). Scores are calculated by averaging all scale items. Although the measure has not been validated in autistic adolescents, given the paucity of measures assessing adolescent attitudes toward mental health, the MHSAS was utilized in the integration of qualitative and quantitative data. This measure aimed to address the philosophical orientation focus of the Naeem et al. (2016) adaptation framework.

Clinician Quantitative Measurement Tools

Evidence-Based Practice Attitudes Scale (EBPAS; Aarons, 2004). The EBPAS is a frequently used and well-validated measure of attitudes toward EBPs among mental health providers. The EBPAS is a 15-item scale inquiring about providers’ opinions on the usefulness of EBPs and their willingness to adopt such interventions. Sample items include “I am willing to try new types of therapy/interventions even if I have to follow a treatment manual” and “I would try a new therapy/intervention even if it were very different from what I am used to doing.” Questions are rated on a 5-point Likert scale ranging from 0 (Not at All) to 4 (To a very great extent). The measure yields four subscales: Requirements (likelihood of engaging with EBPs if required; α =0.95), Appeal (intuitive appeal of EBPs; α =0.76), Openness (willingness to engage

in new practices; α =0.69), and Divergence (resistance to evidence-based approaches; this subscale is reverse-scored such that higher scores reflect less resistance; α =0.29). Scores are calculated by averaging the item score for each subscale. This measure was included in order to address the philosophical orientation and theoretical foci of the Naeem et al. (2016) framework.

Negative Attitudes toward CBT Scale (NACS; Parker & Waller, 2017). The NACS is a 16-item scale assessing participant attitudes and level of agreement with a range of statements regarding CBT (e.g., CBT … "is dehumanizing"; "uses a one-size-fits-all approach"; "does not work for co-morbid cases"). The measure was designed to capture clinician attitudes toward CBT. It has been previously validated in a sample of mental health clinicians across the United Kingdom and had high internal consistency in the current study (α = 0.90). Participants were asked to rate their agreement with each statement on a seven-point Likert scale from Strongly disagree to Strongly agree. Scores are calculated by summing all items and calculating the mean item score. This measure aimed to address the philosophical orientation and theoretical foci of the Naeem et al. (2016) framework.

Autism Stigma and Knowledge Questionnaire (ASK-Q; Harrison et al., 2017). The ASK-Q is a 49-item measure of autism knowledge and stigma. The measure includes four subscales: diagnosis (e.g., "There is currently no medical test to diagnose autism), etiology (e.g., "Autism is a developmental disorder"), treatment (e.g., "There is currently no cure for autism") and stigma (e.g., "Autism holds a social stigma in some communities"). Participants respond on a nominal scale with the response options "Yes," "No," and "Don't know." Scores are calculated by the number of correct answers given by the participant, with "Don't know" responses considered incorrect. Cronbach's alpha for the overall scale was 0.73 in the current study. In its initial validation study, the measure also demonstrated high face, construct, and cross-cultural

validity (Harrison et al., 2019). This measure may address the practical/structural concerns focus of the Naeem et al. (2016) framework, as clinician lack of comfort/knowledge regarding ASD has emerged as a barrier to treatment in previous literature (e.g., Maddox et al., 2020).

Qualitative Interview

A qualitative semi-structured interview was conducted with all participants. We aimed to have questions which addressed all four foci identified by Naeem et al. (2016)'s adaptation framework: philosophical orientation, practical/structural concerns, methodological/treatment skills, and theoretical or conceptual changes. The contents of this qualitative interview were guided by the structure used by Maddox et al. (2020) in their study conducting semi-structured interviews about mental health care with autistic adults and providers. Prior to conducting the interviews, autistic adolescents and community mental health providers serving as community consultants reviewed the interview questions and provided feedback on the proposed interview questions. See Appendix B for the interview guide used in this study.

Procedure

Prior to data collection, the research team met with community consultants in order to adjust and finalize the list of questions to be utilized in qualitative data collection. Adolescents and clinicians provided feedback on the framing of suggested interview questions (e.g., how to describe CBT for autistic adolescents) and topic areas that may be beneficial to consider (e.g., family involvement in treatment). Following these meetings, the semi-structured interview guide was completed, and recruitment began.

Recruitment targeted adolescents and community mental health providers across the United States. Recruitment methods included leveraging of Virginia Tech resources (such as the Child Study Center listserv, the Center for Autism Research listserv, and the VT Daily News).

Additionally, hundreds of community mental health centers in Virginia and across the country were contacted about the study opportunity and were asked to pass the opportunity along to potentially eligible clients and providers. Study information was shared with relevant professional listservs (e.g., Association for Behavioral and Cognitive Therapies Autism and Developmental Disabilities special interest group), online sources (e.g., Association for Autism and Neurodiversity), and through word of mouth. Additionally, the study flyer was shared widely both through physical flyer postings and posting on relevant social media accounts such as Twitter and Facebook.

Participants expressed their interest in study participation either via email or via a REDCap (Harris et al., 2009) interest form. In order to reduce the risk of including spam responders in the study, all responses from interested potential participants were manually screened for suspicious responses (e.g., dozens of survey completions within a few minutes, email addresses that were random strings of letters and numbers, unclear or suspicious responses to the question "Where did you hear about this study?") and only participants who appeared likely to be real were contacted. As an additional measure of security, interested potential participants were required to be screened for eligibility via phone (rather than email or videoconference software, which are easier to manipulate as they do not require an individualized phone number). Research staff scheduled a virtual study visit during this initial phone call and/or via email for all eligible participants. Participants were then sent the study consent form via REDCap; once consent was complete, they were sent the study questionnaires through REDCap as well and asked to complete these prior to their qualitative interview.

The qualitative interview was conducted via Zoom with a member of the research team. Participants were required to have their video camera on for at least part of the interview to

ensure data integrity. Interviews were initially transcribed either manually or using the transcription feature on Microsoft Office 365. For quality control, research assistants manually completed a second review of all audio transcriptions in order to ensure their accuracy. Transcripts were also deidentified at this stage.

Analytic Plan

Analysis of qualitative data utilized qualitative thematic analysis as described by Braun and Clarke (2006, 2021) and Maguire and Delahunt (2017), wherein data are organized using a coding scheme from which themes are identified and defined. We utilized an analytic method which was primarily inductive and data-driven, rather than conducting a deductive, theory-driven analysis. An inductive approach allowed for themes to be identified naturally from the data, rather than attempting to fit them into existing theories/frameworks which may not apply to the populations being studied here. In this way, the inductive approach allowed for the prioritization of participant perspectives, which was central to the goal of the current study.

Using this methodological approach, the research team first read through the transcribed interviews to become familiar with the data. Then, members of the research team generated initial codes based on data that was relevant to the research question. The research team was divided into a coding team for adolescent transcripts and a coding team for clinician transcripts, with the lead author heading both teams. Members of each team were tasked with identifying a set of codes upon reviewing several randomly assigned transcripts in full. Each team member was asked to identify between 10 and 30 codes. Then, each team met as a group to review all suggested codes, establish a formal list of codes, and create preliminary definitions. The lead author refined the codebook by formalizing discussed code definitions and sent it to the team for review and final approval. The final codebook is available in Appendix C.

After the codebook was completed, team members coded the full transcripts using the previously identified codes. Each transcript was independently coded by two members of the coding team using the software Atlas.ti for web (version 8.7.0), PC (version 25.0.1), or Mac (version 25.0.1). The two team members then met to compare their codes and come to a consensus about the final set of codes applied to each transcript. Coding dyads were intentionally assigned such that there was no power imbalance within the team; specifically, undergraduate research assistants were paired with undergraduate research assistants and graduate research assistants with graduate research assistants. The lead author was involved in developing the initial codes and organizing the codebook, but was not assigned to a coding dyad in order to ensure that all coders felt comfortable voicing their opinions (i.e., did not feel obligated to agree with the person "in charge" of the project). The lead author was available to act as a tiebreaker in the event that coders could not come to a consensus about a specific coding decision, but this need never arose as coding dyads were able to come to consensus independently in all cases.

Following the completion of coding the project data, the lead author began the process of identifying and defining themes from the dataset. Through several iterations of theme development, the lead author identified core ideas that were present in the interview data from both clinicians and adolescents. Initially, the lead author considered whether the clinician and adolescent datasets were best analyzed separately or together. Ultimately, themes were derived from the combined clinician and adolescent dataset as the ideas raised were similar across the sample. An initial list of candidate themes was identified, and through further iterative review of the data, the themes were refined to a set of five key ideas. Definitions for each theme were written and proposed to the rest of the coding team. After review by the coding team, the themes were finalized and are described below.

Quantitative data from questionnaires is also reported in order to characterize the sample, as well as supplement the themes identified in the qualitative analysis. Themes derived from the qualitative interviews were integrated with data collected in quantitative measures, to evaluate the complementarity of qualitative and quantitative data and allow for a more complete understanding of perspectives on CBT adaptation (McCrudden et al., 2021). The relevant quantitative data associated with each theme are discussed within the Results section below, and the qualitative and quantitative data are presented jointly to support the overall study conclusions in Table 5.

In addition to their use for sample characterization and integration with qualitative data, as an exploratory analysis, emotion regulation measures were correlated with internalizing symptoms of anxiety and depression to provide preliminary support for the theoretical perspective that emotion regulation difficulties are associated with internalizing symptoms in this population; replication may support potential benefits of emotion-regulation oriented CBT for autistic youth. Finally, results are presented in a formalized summary of community-perspective considerations regarding ways to adapt CBT for autistic youth, fulfilling phase 2 of the Naeem et al. (2016) framework.

Results

Descriptive Statistics

The clinicians in the current study had moderately positive attitudes EBP in general and toward CBT specifically. On the EBPAS, which measured overall attitudes toward EBP on a scale of 0 [*less positive*] to 4 [*more positive*], clinicians endorsed moderately positive attitudes on the Requirements scale (*M*=2.53, *SD*=1.25), the Appeal scale (*M*=3.18, *SD*=0.68), the Openness scale (*M*=2.88, *SD*=0.67) and the Divergence scale (*M*=3.19, *SD*=0.34). On the NACS, clinicians

endorsed relatively positive attitudes toward CBT (*M*=2.65, *SD*=0.97 on a scale from 1 [*highly positive attitude*] to 7 [*highly negative attitude*]). Clinicians in the current study generally evidenced a high level of autism knowledge, with the average score on the ASK-Q being 42.8 out of 48 total possible points. See Table 3 for full clinician characterization data.

Consistent with higher-than-average levels of psychopathology in autistic adolescents, the adolescents in this sample evidenced a moderate level of stress (M= 22.5, SD=9.78), a moderate level of depression symptoms (M=16.9, SD=11.88), and severe levels of anxiety (M=18.89, SD=11.23) on the DASS-21. With respect to emotion regulation, mean scores for the CERQ and DERS are presented in Table 2. On the CERQ, adolescents endorsed high rates of unhelpful regulation strategies such as self-blame and rumination, although the most strongly endorsed strategy was acceptance. On the DERS, adolescents endorsed a range of difficulties with emotion regulation, and endorsed the highest degree of challenges with Accessing Emotion Regulation Strategies. Consistent with their report on the CERQ, the lowest level of difficulty was reported in the Nonacceptance of Emotional Responses subscale.

Adolescents also completed the MHSAS, which measured attitudes toward seeking help for their mental health. Overall, adolescents demonstrated moderately positive attitudes toward mental health help seeking (*M* = 5.3 on a 7-point scale, *SD* = 1.42). However, as on the internalizing symptom and emotion regulation measures, there was notable variability within the sample, with two adolescents endorsing neutral-to-negative views on mental health help-seeking.

Exploratory Correlational Analysis

Exploratory correlational analyses were run to identify whether there was a statistical association between emotion regulation challenges and depression/anxiety symptoms among autistic youth in this sample. See Table 4 for full correlational analysis. Despite the small sample

size, there were several statistically significant correlations between internalizing symptoms and emotion regulation variables. Specifically, anxiety symptoms were significantly correlated with the DERS subscales Nonacceptance of Emotions (r=0.84, p<.01), Difficulty with Impulse Control (r=0.74, p<.05), and Lack of Access to Strategies (r=0.70, p<.05) as well as the CERQ subscales of Catastrophizing (r=0.74, p<.05), Rumination (r=0.68, p<.05) and Self-Blame (r=0.85, p<.01). Depression symptoms were correlated with Nonacceptance of Emotions (r=0.75, p<.01) and Lack of Access to Strategies (r=0.68, p<.05) on the DERS.

Qualitative Analysis and Integration

Through qualitative thematic analysis of the interview data, the following five themes were identified and will be discussed in detail below: (1) *Building Engagement and Relationship;* (2) "*It's Different for Everybody": Individualizing Treatment*; (3) *Considering Autistic Experiences;* (4) *CBT in the Real World;* and (5) *Supporting Clinicians.* These themes are summarized and synthesized with quantitative data in a joint display in Table 5. Quantitative findings that are relevant to a particular theme are described in the joint display and are also referenced within the text. Furthermore, a plain-language summary of the suggestions for adaptation provided by clinicians and adolescents is provided in Table 6, which also delineates which of the four foci of adaptation from the Naeem et al. (2016) framework each suggestion best addresses. Throughout the text below, quotations provided to exemplify themes have been edited for brevity and to remove repeated words or filler words (e.g., "um," "like," "you know"). Occasionally, words are added to clarify meaning, which is indicated by [brackets].

Building Engagement and Relationship

Clinicians and adolescents both identified a central idea that motivation and engagement in treatment are core to the delivery of effective therapeutic services. This theme explores a

range of ways in which participants identified relational and engagement-related factors as key components of the therapeutic process. Clinicians articulated this idea in the dataset in several ways, including a discussion of strategies for building rapport with autistic clients and the importance of building motivation with autistic clients. Clinicians viewed the process of rapport building as extremely important to their therapeutic work, including with their autistic clients. A common sentiment was the idea that clients on the autism spectrum may require a longer period of time to build rapport as compared to neurotypical peers. One clinician described this process as follows:

> *The other thing I would say … is just slowing down the pace and knowing that as clinicians, we kind of think of what might be a typical timeline for developing rapport. For individuals who are neurodivergent, that is like extended out here (moves hand further apart), you know, so slowing down the pace and just knowing it will take time for them to feel safe, to feel comfortable and to build that sense of trust.* (C15)

Clinicians expressed a sentiment that autistic youth may have had the experience of being invalidated or misunderstood in past therapy or general social experiences, which contributed to the importance of taking their time with the rapport building process. Adolescents tended to agree with this sentiment, with one adolescent saying, *"Certain therapists it took a couple of sessions to feel comfortable, like being in a room, talking to them"* (A19). Another adolescent stated that it would help them to feel like therapy was less "formal" if they were given an opportunity to get to know their therapist before immediately diving into the content of the therapeutic work.

On a closely related note, adolescents expressed a hesitance toward being pushed too hard or asked to discuss difficult concepts before they were ready. One adolescent described the

experience of shutting down when being asked to discuss something difficult in session: *"The counselor that I had been talking to… she did online, and she would bring up a…personal or pretty deep question and I would flat out just get mad at her over the TV and walk out…"* (A11). Another adolescent stated that they liked their therapist because, *"I like that she helped me go through it step by step to talk about it and not push me [to] just talk about it all at once"* (A09). In this way, adolescents also emphasized the importance of feeling comfortable in the therapeutic space and relationship prior to diving into difficult therapeutic work that may have brought them to therapy.

In addition to extending the process of building rapport, other strategies for rapport and engagement were frequently referenced. A common strategy, mentioned often by adolescents and clinicians, was the use of games and activities to make session content more engaging. Clinicians described using "get to know you" games to help adolescents become more acclimated to the therapy space, as well as using more traditional games (such as Uno and chess) to help engage clients in weekly sessions. Adolescents generally seemed to appreciate the use of games in therapy; a common response was that playing games gave the youth something to do with their hands, which made talking about difficult topics more accessible. For example: *"Sometimes we did board games and stuff to… I guess, bring it out into a more comfortable environment. So you're not just sitting there talking about it"* (A20). Conversely, adolescents sometimes referenced that more structured or school-like materials such as worksheets and handouts did not support their engagement, either when introduced during the session or when provided as therapy "homework." There was some variation on this point in the sample, with some teens feeling more strongly than others, but a general sentiment was that activity and discussion were preferable to paper materials.

In addition to the hesitance toward being pushed to open up too quickly discussed above, adolescents emphasized that they wanted to have some degree of agency over what was discussed in their therapy sessions, and they endorsed that they appreciated the opportunity to share their experiences with a neutral party. One adolescent said they appreciated therapy because it meant, "*Having somebody listen, a third party, so you can kind of see both sides to any situation*" (A20) and another youth endorsed wishing they had talked more about their own day-to-day experiences in the therapy setting. This desire from adolescents to have a sense of self-determination within the therapy session appeared important to building their engagement in treatment and the therapeutic relationship.

A final construct captured by the theme "*Building Engagement and Relationship*" is the idea of clients' motivation for treatment and change. Clinicians often framed this discussion around motivation, though it is related to the adolescent experience described above of feeling "pushed" to discuss something difficult too soon. Clinicians described that adolescents often present to treatment because their parents want them to attend, and adolescents themselves may not be intrinsically motivated for treatment as they have not always chosen to be there. They also may have different goals for therapy than their parents, as many clinicians mentioned during the interviews. With all this in mind, clinicians described that an important component of therapy was building client motivation for treatment. Once clinician described this succinctly by saying, "*If you're not motivated, my job is then to find out how can I get you motivated*?" (C26). Another clinician had a similar point and described their view as follows:

> *When they talk with you in in school about working with mandated clients and figuring out how to engage them and it may take you more time to develop that therapeutic relationship, you have to do that every time you get a new child client because most of*

them did not choose to come here. And so that happens a lot with my teen clients too, with my adolescent clients. Autism or no. (C30)

Clinicians describe a range of strategies to aid in building motivation for clients on the spectrum, including spending time on building rapport and games as described above. Additional strategies involved trying to identify a happy medium between parent goals for treatment and client goals for treatment, as well as using adolescent special interests to foster engagement (this strategy is described in more detail elsewhere in this report). However, at times it also seemed as though clinicians struggled to identify strategies for building motivation for their clients on the autism spectrum. One clinician, when asked about challenges working with autistic youth, said,

"They have to be in the right headspace to make changes...there is always going to be day-to-day stressors and I find that sometimes they come in and they're … already are in a negative headspace they're way more resistant to talking about their feelings." (C17)

In this way, clinicians described that working with youth who are not intrinsically motivated presents a challenge that is often difficult to overcome, an important consideration for any intervention adaptation.

Quantitative data support the qualitative theme presented here; on the SRS-2, parents of autistic youth endorsed a range of social traits that may lead to the need to extend the rapport building process; for example, the mean score on the Social Motivation subscale of the SRS-2 was 71.6 and indicated moderate levels of difficulty with social motivation. Per adolescent self-report, although they generally endorsed positive feelings toward therapy, there was some notable range in scores on the MHSAS, which indicates variability in their motivation and buy-in to the therapeutic process.

"It's Different for Everybody": Individualizing Treatment

A frequently mentioned and core concept in this dataset was an articulated understanding that everyone is different, and that effective treatment must therefore consider clients on an individual level rather than autistic people as a monolith. Clinicians and adolescents alike explicitly referenced a need for flexibility and individualization when working with autistic clients due to the wide range of experiences that may come along with autism. At an overarching level, this took the form of participants espousing the view that autism is different for everyone; additional evidence for this theme came from specific aspects of treatment that were discussed as requiring flexibility or variation when engaging with particular clients.

It was striking that many autistic participants hesitated to speak about experiences of the autistic community as a whole. Rather, they emphasized that each individual's experience with therapy was likely to be unique. For example, when considering what therapists should know about autism, one autistic adolescent said:

> *I mean everybody's different… it's different for everybody. How they see things as different, … perspectives, obviously, and also how people cope or react, it's not the same. So I guess with people who can really get to know somebody and like not just have a try to fix all for everybody, but has a specific way of doing something for a specific person that you get to know*. (A20)

In addition to the general idea that autistic experiences may impact individuals differently in the therapy context, several specific components of CBT and/or psychotherapy were mentioned as domains in which patient experiences and needs may differ. This idea was repeated by many adolescents, and clinicians also indicated that their approach was likely to vary between patients with autism who presented to them with different concerns. A few therapists referenced the common quote "If you've met one person with autism, you've met one person with autism."

One clinician highlighted a concern about CBT approaches that emphasized the importance of individualizing the treatment in order to ensure that clients feel heard and their concerns adequately addressed. They stated, *"I think to some of the population [CBT] feels very regimented, not personalized to them and it feels kind of like I'm just reading from a script, from what I see"* (C17), suggesting that this clinician found individualization necessary for therapy to be a positive experience.

The range in scores on quantitative measures further highlights the need to individualize treatment for autistic youth; for example, levels of social difficulties on the SRS-2 ranged from mild to severe, as did levels of anxiety and depression symptoms on the DASS-21. Relatedly, adolescents had highly varied perceptions of their emotion regulation profiles on the CERQ and DERS.

In addition to this broad viewpoint on the heterogeneity of experiences and the need to individualize treatment approaches, clinicians and adolescents referenced several specific domains which are likely to require a flexible approach based on individual client characteristics. In this way, they indicated that therapies such as CBT may benefit from adaptations that consider the variability *within* the spectrum, rather than applying a blanket adaptation to all autistic clients. Several recurrent ideas about individualization of specific aspects of therapy are discussed in the following sections.

Language. Clinicians referenced language as one factor that varies widely within the autism spectrum, and that would thus need to be flexibly adapted. One clinician stated: "*Definitely adapting it to their verbal ability level. Potentially having to pare down the language a lot, make it a lot more concise*" (C37) depending on a client's existing level of receptive and

expressive language. Another clinician described encouraging her staff to be concise and avoid using unnecessary language as well.

Specific Therapeutic Needs and Intervention Fit. Both adolescents and clinicians identified that the approach to therapy broadly and CBT specifically would also be different based on an autistic individual's particular needs in therapy. When youth learned about the CBT model, they gravitated toward different components of the cognitive triangle (i.e., thoughts, feelings, behaviors), and some explicitly identified that an individual's particular difficulties should dictate how CBT is implemented. Participant A20 stated: "*The structure looks good but maybe emphasize more on each one. Like they help, I mean, it correlates with each other, but maybe each person is different in how they, maybe they're more emphasized on thoughts or feelings.*"

Several adolescents specifically resonated with the 'thoughts' component of the CBT model; for example, one adolescent who had previously received CBT stated:

> *I know that one of the biggest things that I learned, I'm pretty sure this had to do with CBT, was the ANTS. The automatic negative thoughts. That has, learning about that has been the most helpful thing because I never really realized that that's what I was doing. And so learning about the fact that, OK, this is an automatic negative thought, this is, you know what it is, how to recognize it and then how to combat it with more positive thoughts and stuff like that had been the most helpful for me.* (A22)

In addition to an emphasis on thoughts from some of the adolescents, there was discussion that for some adolescents on the autism spectrum, emotion recognition and identification may be a component of treatment to spend more time on. This is discussed in more detail in the *Considering Autistic Experiences* theme, but it is mentioned here to illustrate that

clinicians and adolescents alike were contemplating the needs of a specific client when considering adaptations to the CBT approach that may be needed.

Finally, some clinicians endorsed concerns about using aspects of CBT with autistic clients for concern that the model may not fit their particular experiences. Several clinicians referred to the idea that some autistic adolescents with lower cognitive or verbal levels may have difficulty participating in CBT, even with adaptations. Furthermore, some clinicians mentioned thought challenging as potentially problematic, with one concern being that thought challenging may come across as invalidating the experiences of autistic youth. One clinician stated,

> *I do have some concerns about some of the ways we handle thought patterns within CBT because I feel that a lot of the thought patterns people have are usually based on trauma-like situations that have happened to them, and they actually come from a protective place. Not that they're super helpful but they're usually coming from like a really tender vulnerable place, so it doesn't always feel appropriate to just...reframe it"* (C12)

In addition to this idea that thought challenging and reframing has the potential to be unhelpful, some clinicians also referred to the fact that autistic clients may experience a degree of cognitive inflexibility that makes it difficult to challenge unhelpful thinking patterns. One clinician described this as "*internally logically consistent belief structures*" (C35) and clinicians described these strongly held thought patterns as very difficult to challenge. All told, these clinician concerns about CBT further emphasize the need to consider the individual's experiences and perspectives when utilizing CBT skills with autistic clients, rather than attempting to apply skills in the same way with every adolescent.

Metaphor and Analogy. Disparate opinions regarding specific therapeutic strategies further highlighted the need to individualize elements of treatment based on a client's

presentation. In particular, the use of metaphor in session was mentioned frequently by both clinicians and youth, sometimes as a useful strategy in work with autistic clients and sometimes as a strategy that can be unhelpful for this population. Cognitive behavioral and third-wave cognitive behavioral approaches often utilize metaphors to help explain complex cognitive and emotional constructs to clients. Some clinicians indicated that they tend to steer away from metaphor with clients on the autism spectrum, while others reported that the use of metaphor is beneficial, particularly when the metaphor relates to a client's strong interest. One clinician captured the nuance of using metaphor as a strategy as follows:

> *I mentioned I like using analogies, I like bringing in metaphor. And so sometimes that works well, because I can do it in a world building way that fits into something they're interested in, but if they're very concrete about something, then it can sometimes be too abstract, and then it doesn't really land.* (C36)

This clinician described that using metaphors which can be integrated into a "world" that an adolescent is interested in can sometimes be quite helpful. In agreement with this perspective, one adolescent shared the view that metaphor can be engaging when it integrates special interests: *"…If you're going to make a metaphor to make me understand something better and you put it in terms of Nintendo or a TV show or something like that…I would be like this person gets me. I understand this."* (A38). Another adolescent also identified that they find it helpful when therapists use analogies in sessions to explain concepts, stating they appreciate when therapists "*compare it [a concept] to other things like for example a balloon*" (A19). Interestingly, a preference for metaphor or analogy was referenced by several autistic adolescents, despite multiple clinicians articulating weariness about metaphor with this group. This variability in perspective on the use of metaphors and analogies in sessions highlights the

need to understand clients at an individual level when adapting psychotherapeutic approaches such as CBT.

Considering Autistic Experiences

Although it was repeatedly emphasized that every autistic person is an individual and therefore flexible administration of individualized treatment is paramount, several aspects of the autistic experience were mentioned as important considerations for working with autistic youth. Clinicians and adolescents made a range of suggestions for how therapy may take into account common experiences of autistic people; while not every suggestion will apply to every autistic person, a range of domains were proposed as areas worth thinking about when working with autistic adolescents. Several of these components of the autistic experience, ranging from core autistic traits to relevant environmental factors, are discussed in the sections below.

Sensory Experiences. Sensory experiences (including both sensitivity and sensory seeking) were among the most frequently discussed factors, among both autistic adolescents and clinicians. Participants in both groups identified that having sensory/fidget toys available for adolescents on the autism spectrum can help to create a therapeutic environment that supports sensory needs. Youth often referenced the idea that doing something with their hands (such as fidgeting or coloring) helped to make them more comfortable in the therapy space:

> *For me, during therapy I get overwhelmed by the therapist, so I think something like a sensory toy or something like that. For example, one of those things where you like turn it upside down and the bubbles go a certain way.* (A29)

Many therapists mentioned that they already have sensory and fidget toys like this in their offices to help put autistic clients at ease. Along the same lines, some clinicians referenced having other sensory-friendly items available, such as pillows, blankets, and sensory exploration

stations such as rice bins. There appeared to be a general feeling among adolescents and clinicians that access to sensory stimulation could support youth comfort and engagement in the therapy session. An additional sensory consideration raised primarily by clinicians (though also occasionally mentioned by adolescents) was the setup of an office space. Some clinicians described specific approaches to setting up their office spaces in order to increase comfort or reduce sensory overwhelm. For example, clinicians described using softer lighting rather than fluorescent overhead lights, being mindful of using strongly scented candles, and ensuring that tools such as white noise machines are set at a predictable volume at each visit. One clinician mentioned the importance of understanding clients' sensory experience throughout the entire clinical space (e.g., hallways, waiting rooms) rather than solely in the specific therapy room where the session takes place.

Finally, some clinicians referenced sensory strengths and/or using sensory interests to support autistic youth in therapy. One clinician identified that she has had success with progressive muscle relaxation with some autistic clients, and suggested that the strong sensory component of muscle tensing and relaxation may result in this approach working well for sensory seekers. Another clinician identified sensory seeking as a strength and a strategy for connecting with autistic youth:

> *I've had one client come in, very sensory child… Mom's like, do you have any paper, he likes to rip up paper when he's upset. I'm like, yeah, have some paper. And I'm like ripping it up and tearing it with him … And so, like, noticing those things and going OK, this is a very sensory child, right. So any of my interventions need to take advantage of his both sensory needs but also sensory strengths.* (C30)

Overall, there was a broad consensus amongst clinicians and adolescents that sensory considerations such as access to sensory toys, environmental adjustments accounting for a client's sensory needs, and consideration of sensory strengths are crucial to consider when adapting cognitive behavioral strategies to autistic youth. This emphasis on sensory factors is also consistent with quantitative data. That is, caregivers in this sample endorsed high levels of RRBs on the SRS-2, a domain which includes sensory experiences (mean T-Score=80.5, which was the highest score on any SRS-2 subdomain) indicating that a high level of sensory-related experiences were present in the autistic youth in this sample.

Passions and Special Interests. The high degree of RRBs identified on SRS-2 is also in alignment with an additional area of frequent discussion: passions and special interests. Participants mentioned that autistic individuals are likely to have very strong passions; while not all autistic individuals have identifiable special interests, many individuals on the autism spectrum do have passions and interests that they can become engrossed in. There was broad consensus amongst clinicians and adolescents that integrating special interests into therapy has the potential to be beneficial to the therapeutic process. Several adolescents described either talking about, or wishing that they could talk about, their interests in therapy. Examples of interests included history, local university football, cats, Nintendo, military/law enforcement, and music. When asked what therapists should do with autistic youth in therapy, adolescents made comments such as, "*If you know that they like something, try talking to them about that*" (A11). As quoted in the Metaphor section above, one adolescent explicitly suggested that clinicians use special interests to explain therapeutic constructs.

Some therapists reported doing just that; clinicians endorsed several ways that they have successfully integrated special interests into therapy. Some clinicians described using specific

interests to explain or frame a specific therapeutic concept. For example, one clinician described a session in which he mapped the concept of coping skills onto an adolescent's preferred video game, and another clinician described using Pokémon characters to practice identifying and labeling emotions. In addition to infusing special interests into the therapeutic work, clinicians identified value in talking about interests for the sake of talking about interests. Many therapists identified that discussing special interests is useful in building therapeutic rapport and relationship with their clients on the autism spectrum:

> *You could be sort of psychology-oriented and say, you know, they hyperfocused. You know, like these kids, really love stuff… That's how I think about it. A lot of them have real passions for things, right? They get excited. They want to talk to you about it, you know.* (C14)

Discussing special interests was also suggested to serve a second purpose in the realm of relationship building. In addition to building the adolescent's engagement in therapy by allowing them to talk about their interests, several clinicians suggested that these discussions allow clients to feel heard and understood by their clinician, as they sometimes have the experience of their interests being overlooked. As one clinician said, "*If this young person has a particular interest but that interest has never been indulged maybe we, is it possible to indulge that interest to see how they might develop and grow with that interest?*" (C13). This provides an interesting example of how *Building Relationship and Engagement* and *Considering Autistic Experiences* interact, suggesting that incorporating autistic lived experiences may actively contribute to the process of building rapport and engagement within this population,

Somatic and Emotional Awareness. A recurrent component of the autistic experience that was referenced primarily by clinicians was difficulties with somatic or "body awareness."

Clinicians reported that their clients on the autism spectrum did not always understand their experience of physiological body sensations, and how those body sensations may connect in turn to their emotional experiences. Given the importance of emotional awareness to CBT, clinicians identified that they often spend time helping autistic clients build body awareness. One clinician described this component of therapy as follows:

> *…kind of like skills around grounding and building bodily awareness. So I've talked about, how do we know that we feel angry? So what does your body feel like when you're angry, is it hot, is your chest tight, your fist clenched like helping people build more of an awareness based on super specific signs that they might be experiencing, versus getting totally to overwhelmed and almost stunned by an emotion or a need and then feeling like it's coming out of totally nowhere.* (C12)

Another clinician described that the cognitive triangle of "thoughts, feelings, behaviors" seems to be a "diamond" for some of his clients, with physiological sensations making up a fourth "point." He stated that, *"If they are not present in their bodies, and we haven't addressed… that body part…then they'll never make it to the rest of the [cognitive] triangle*" (C30). In order to address this reduced awareness of physiological sensations, clinicians described using a range of mindfulness-based approaches to help adolescents identify and describe their internal experiences.

While adolescents did not routinely reference difficulty with understanding their somatic experiences, there were some references to the concept and to the related concept of difficulty understanding *emotional* experiences. Regarding bodily awareness, an adolescent participant said, "*Last time, you know like whenever we talked about like me getting nonverbal, she* [therapist] *said to pay attention to how it feels in my throat"* (A24). Youth also described

differences in how they understand and describe emotions, which is likely to play a role in CBT. For example, an adolescent described their difficulty with emotional awareness as follows:

> *What I wish that more therapists knew is how difficult it is to really comprehend emotions and stuff like that, because I know that sometimes therapists will ask, OK, such and such has happened and you know, what are your feelings about this? And I'm just like, oftentimes I do not know … certain therapists in the past have not always necessarily understood that I struggled with putting my emotions into words … Sometimes when I'm feeling a certain emotion, I don't really make a certain face or I don't really act a certain way. I may feel really sad, but I may look very happy or I may feel angry, but I look sad or whatever and so, kind of explaining how I'm feeling without having to use the exact emotions has been the most helpful.* (A22)

Overall, clinician and adolescent perspectives demonstrated some variability, but in general, there was a recurrent idea that autistic adolescents may have challenges with identifying or describing their internal (somatic and emotional) experiences, and this should therefore be a consideration within the context of therapy. Adolescents further confirmed difficulties with their emotional awareness by endorsing an elevated level of difficulties on the Emotion Awareness subscale of the DERS (M=19.44, SD=4.36).

Executive Functioning Support, Structure, and Consistency. An additional component of autistic processing that was raised by both adolescents and clinicians was a preference for sameness and structure. This was mentioned in the context of a number of specific adaptations that may be beneficial to autistic individuals. Adolescents identified that having more structure is often useful for them; one youth stated, "*I feel like sometimes my brain works better when it almost has like a plan or a schedule*" (A19). Other adolescents stated that they

appreciate when their therapist asks specific, clear questions rather than providing more open-ended questions that leave the client unsure of how to engage in the social interaction. In addition, some adolescents described that they appreciated when their therapist helped them to make plans, further emphasizing the benefit of structure in working with autistic adolescents.

Therapists also repeatedly referenced the increased importance of structure within a session for an autistic client, with one clinician saying, "*Some kids really like structure, and so having manualized approaches can be really helpful for kids that like that*" (C13) and others describing adding additional structure through the use of visual or written supports, sustaining structured approaches during family sessions, and maintaining a routine in the session so that clients know what to expect. One clinician referenced using written supports both within the session and to support clients in completing out-of-session practice:

> *What I've been doing recently is writing things down for them, like I'll text it to them or I'll have, give them paper to write it down… if you are writing it down and say oh this is what I gotta do this afternoon (looks at phone) and you start to look at that instead of always using your memory. (*C01)

In this way, clinicians identify that structure supports autistic clients' participation in therapy by reducing the executive functioning demands of participating in therapeutic work, allowing them to be more available to engage in the specific goals of a therapy session.

An additional component of the autistic experience that was referenced by some clinicians and adolescents with respect to executive functioning was allowing for increased processing time. In addition to allowing adolescents to take sessions at their own pace in terms of discussing emotionally heavy concepts, as discussed in the *Building Engagement and Relationship* theme, it was sometimes mentioned that some autistic adolescents may simply

benefit from additional time to process information within the session (e.g., longer wait times after asking a question). One adolescent said, "*You may need to be a little bit more patient with the person because it takes a while for at least for me to like, process everything and put it into understandable words...*" (A38) and a clinician shared a similar sentiment: "*[There's] a lot more of letting it sit but then checking in like you know, how does that land for you? Does that make sense? Because they need more time to process I find*" (C35). Additionally, with respect to executive functioning, clinicians described the importance of timing a session appropriately so that autistic clients are not "burned out" by sessions that are too long or too late in the day.

A final component of the autistic tendency toward sameness that was raised primarily by clinicians was an emphasis on generalizing skills learned in therapy across settings. Clinicians described conducting sessions across various locations rather than just in a standard therapy office in order to assist with generalization, such as having a session in a grocery store to conduct OCD exposures. Clinicians sometimes referenced a specific emphasis on generalization for clients on the autism spectrum that they may not have with other clients. Adolescents did not specifically reference generalization; however, at times they did mention having sessions in contexts other than a traditional therapy office, such as in-home therapy and equine therapy.

Exploring Autism, Identity, and Stigma. Finally, an interesting aspect of the autistic experience that was considered by participants was understanding autism, autistic identity, and stigma. Many therapists identified exploring autistic identity and self-concept issues that are related to autism as an important component of their work with clients on the autism spectrum. Clinicians described that their autistic adolescent clients often come to them wondering what it means to have autism and grappling with ways that they may be different from neurotypical peers. In many cases, clinicians described approaching this from a neurodiversity-affirming lens

and reflected a goal to help autistic patients accept and appreciate their different styles of thinking. One clinician described their attitude toward autistic thinking differences as follows: "*Your brain is not broken. It's different. It's not broken though, and you're not weird because you think differently. Your brain is just different. Different is not bad."* (C17). Clinicians described using a range of strategies to help adolescents explore their autism, including using techniques such as acceptance and challenging negative self-talk or self-concept related to autism. For example: "*They get a lot of messages from the world something's wrong with them … So in trying to accept yourself, sometimes that means cherry picking you know a belief that you've developed, challenging that, reframing that*" (C14).

Some adolescents described an appreciation for understanding more about autism and how it affects them. Though it was not common for youth to explicitly reference a desire to explore their autistic identity in therapy, they demonstrated thoughtfulness about autism, including discussion of how they already know autism impacts them and some indication of a desire to learn more. One adolescent described that they enjoyed learning about autism as it helps them to learn more about themselves:

> *I like to learn more about autism and all that type of stuff because some things that I learn about autism I don't realize that it connects to my own, it whenever I read about it, I'm like this is something that I do relate to.* (A24)

Other youth referenced an understanding of how autism impacts their processing and helps them to "see things differently," and one adolescent discussed an interest in exploring the experience of "masking" or camouflaging their autistic traits with their therapist:

> *Appropriate masking. Something that I would love to talk to my therapist about but keeping forgetting to … the masks aren't inherently bad, I'm pretty sure. Like time*

consuming, well, maybe energy consuming rather, yes. But sometimes you kind of need it to just to like get through the day… (A38)

Overall, the data explored here demonstrate that adolescents and clinicians are thoughtful about how autism and autistic identity impact an individual's daily life and may intersect with other mental health concerns. Clinicians, in particular, identified the importance of helping adolescents explore their autism, understand its effect on their lives, and challenge internalized stigma.

CBT in the Real World

A fourth key theme that was observed in this dataset is best captured by simply stating that CBT does not exist in a vacuum. In real-world practice, clinicians do not hold variables constant and do not have tight control over various confounding factors the way that they would in a research study. Rather, CBT is most often practiced by clinicians who use multiple modalities, piece together materials from a range of interventions, and practice in ways that are more flexible than a typical manualized treatment approach. In the same vein, autistic adolescents often have multiple presenting problems and have a range of environmental factors to contend with outside the therapy room – including families, schools, and other providers. In identifying appropriate strategies for adapting CBT for autistic clients, our data suggest that considering these real-world variables is absolutely paramount in addressing the needs of clients and of clinicians.

Other Modalities. One of the most frequent ways in which the theme *CBT in the Real World* was present was in discussion with clinicians about the range of modalities that they use in their practice. While all therapists in the study had used CBT at some point per the study requirements, many of the therapists described their overall approaches as more eclectic or integrative, and some described using CBT only occasionally. For more detail on clinician

therapeutic orientation, see Table 3; overall, 24 different modalities were endorsed by clinicians, and the majority of clinicians endorsed more than one therapeutic orientation. Some therapists indicated that other modalities were a better fit for autistic patients than CBT, but a more common sentiment was that traditional second-wave CBT could be used in combination with, or supplemented by, ideas from other approaches. In particular, ideas from motivational interviewing, solution focused therapy, and third wave approaches such as dialectical behavior therapy (DBT) and acceptance and commitment therapy (ACT) were commonly referenced as strategies that might be used in combination with traditional CBT approaches.

In terms of motivational interviewing, clinicians often referenced the approach as a strategy for building patients' interest in treatment and helping them to develop and understand their treatment goals. Motivational interviewing was commonly referenced as a treatment strategy used in concert with other approaches. In a similar way, some clinicians mentioned that they will intersperse solution-focused work with clients who struggle with problem solving or with reaching their general goals. One clinician described their solution-focused approach as follows:

> *"Just solution focused honestly. We would come up with what…the individual wanted for the result. Let's say an individual wanted to work on a certain job that then their OCD or their anxiety was stopping them from being successful in that job. Instead of having them focus on what was causing the anxiety, I would…have them focus on what the end result was. Okay you want to go work in this office building… but you just walking in and having to say hi to seven people is causing you from even getting to there, so how do we go around that."* (C03)

In addition to motivational interviewing and solution-focused work, DBT was mentioned frequently as a useful augmentative approach because it is concrete and skill based. Clinicians expressed that some of the specific skills in DBT (Linehan, 2015) are useful for their autistic clients. Non-suicidal self-injury and severe depression were mentioned as common concerns for autistic patients, and utilizing DBT distress tolerance skills was suggested as beneficial for youth with these concerns. It was also mentioned that some of the interpersonal effectiveness skills taught during DBT may be beneficial for autistic clients who have a hard time expressing their thoughts and opinions effectively. Additionally, mindfulness and acceptance techniques, common to third wave approaches such as DBT and ACT, were identified to be helpful. One clinician provided an example of how acceptance can be useful for autistic individuals:

> *Sometimes we'll use some of the DBT skills. I'm like the poster boy for radical acceptance. I'm a big fan of that. So that's something that I've done a lot of in the office with clients, especially because some of them have a very social justice focus. Some of my teens do, and so helping them with that, like, OK, maybe we can't, you know, go protest at the capital, but maybe we can coordinate with some of our local friends and build a community here, right?* (C30)

Overall, it was clear that clinicians often pull from third-wave strategies in addition to (or combination with) traditional CBT. As one clinician described, when conducting CBT approaches, "*I find the most success with it when I throw the DBT in on top*" (C18).

Working within Systems. In addition to the reality that providers are often not conducting CBT in isolation from other approaches, it is also critical to consider that autistic adolescents are often involved in several service systems outside of psychotherapy, which is likely to influence the therapeutic process and experience. Both adolescents and clinicians

identified that youth on the autism spectrum often have multiple types of providers, including services like speech and occupational therapy, psychiatric medication management, and provision of services at school. Clinicians expressed that collaborative care can be very helpful, but difficulties with coordination of care can create challenges in treatment:

> *I also think that it's very important to collaborate with other service providers… it is difficult when you're trying to collaborate and people don't get back to you. It also is difficult when others aren't really understanding the mental health field in general. Whether that's from school piece or from the guardian.* (C16)

Clinicians express that when providers are on the same page, collaboration can support an adolescent's goals and outcomes; however, providers or school personnel who are hard to reach or are conducting different types of approaches can make things more difficult or confusing for the youth. Furthermore, many providers mentioned an overall lack of services in their area, or limited availability of needed autism resources such as applied behavioral analysis and assessment providers.

In addition to collaboration between mental and behavioral health providers, clinicians identified that navigating the school system was a component of their treatment with youth in many cases. Many clinicians described helping their clients' caregivers approach the process of requesting and modifying an Individualized Education Program or a Section 504 plan to support clients in the school setting. While collaborating in the development of school programming is not often considered a component of treatment packages like CBT, it was clear that many of the clinicians in this study viewed this as a core part of their work with autistic clients and their families.

The Delicate Balance of Family Work. In another manifestation of core idea that CBT is practiced within a youth's broader ecological system, clinicians and adolescents discussed the role of family work in adolescent mental health therapy. CBT approaches traditionally target specific symptoms that are attributed to the identified patient (e.g., avoidance due to anxiety); however, clinicians and adolescents in this study referenced family dynamics in various ways during the qualitative interviews, highlighting that the interaction between autistic adolescents and their environments is likely to impact the provision of psychotherapy services.

Adolescents referenced a range of family conflict that they discussed in therapy or that contributed to mental health concerns, including parental divorce, conflict between parent and adolescent, and separation anxiety. One adolescent recommended that therapists should sometimes include parents in therapy saying, "*It would be good if they brought the parent or guardian in with them for a couple sessions, cause that's what my therapist did, and it helped…Like for example, my dad, we were able to both understand each other"* (A19). On the other hand, another adolescent expressed that having her mother present during in-home therapy sessions made things more difficult, saying, "*It was hard to be open…with my mom in the room cause she's my mom and I know she doesn't want me to feel that way, so I felt like I could not be fully open about it*" (A22). These varied perspectives highlight the delicate nature of working within a family system, where there may not be a one-size-fits-all approach.

Clinicians, too, expressed a range of perspectives on family work that indicate the need for balance. Many clinicians find it beneficial to include parent and family sessions in their work, though a number of clinicians also referenced concern about the appropriateness of parent work for older adolescents who are building a sense of autonomy. A commonly described approach was to plan periodic family or parent sessions (e.g., once a month or once every three months),

or to involve parents in the session as a specific need arises. Clinicians mentioned that psychoeducation about autism is sometimes necessary as parents may not know very much about autism or how it affects their child's behavior. In addition, clinicians expressed that including parents in session can help with generalization of skills to the home environment as well as understanding and addressing family dynamics as needed. For example, one clinician shared,

> *I would say it depends on the relationship with the parents, and that includes my relationship with the guardian and then also the client's relationship. But I have found that having them in in the session is helpful to have those hard conversations and we can all have them together, whether that's, the clients having an issue or the parents having an issue or anything like that, so having hard conversations and all working together, I find that to be helpful…* (C16)

Another clinician discussed the need to involve parents so that their child was supported in using their skills at home: "*In some cases, no matter how many skills I teach the child, if the parents are not able to support the child's growth and development, they'll continue to burn out and melt down"* (C30). Regardless of their specific perspective on *how* parents and caregivers should be involved in sessions, most clinicians acknowledged that having a rapport with caregivers is beneficial to effective adolescent work. As such, the complex interpersonal dynamics present within family systems are necessary to consider when conceptualizing appropriate adaptations of CBT for autistic adolescents.

Support for Clinicians

A final theme that was represented primarily in the clinician data reflects the need to support clinicians in conducting CBT for autistic youth. One aim of this study was to evaluate whether clinicians feel prepared to conduct CBT with autistic youth and identify tools that may

support their ability to use and adapt CBT strategies in treatment with autistic clients. Overall, the participants in this study did not feel that they had received specific training in conducting CBT with autistic adolescent patients, and many clinicians described never having formal training in working with autistic youth during their graduate training programs outside of one or two lectures. Interestingly, a disproportionate number of clinicians who participated in the study self-disclosed personal experience either as an autistic person themselves or as a parent of a person with autism. Therefore, several of the participants in the current study reported that they relied on their lived experience in informing their work with autistic patients. Others reported that they had primarily been self-taught or had learned about working with autistic patients "on the job." In general, clinicians seemed to feel that they had not had as much training as they would like in conducting CBT, or even therapy more broadly, with autistic populations.

Clinicians provided a wide range of suggestions for trainings or tools that would be useful in conducting CBT with patients on the autism spectrum. They generally endorsed positive attitudes toward continuing education overall, but reported that their continuing education and training opportunities are rarely as specific as conducting a specific approach with a specific population (i.e., CBT for autistic adolescents). Clinicians had several suggestions for how to approach training and continuing education on this topic. One common suggestion was the delivery of specific and applied information. For example, clinicians reported that they would appreciate learning in the form of case studies or examples of how to apply CBT techniques to specific presentations within autism (e.g, OCD, social difficulties). Relatedly, clinicians appreciate opportunities for learning from other clinicians, whether through live observation or having the opportunity for consultation. The clinicians also referenced the benefit of receiving training from individuals with lived experience (i.e., autistic individuals), with clinicians either

explicitly suggesting a training led by an autistic trainer or referencing past trainings with autistic speakers that they found helpful. Furthermore, clinicians recommended that training/resources be relatively short and accessible, since day-long or multiple-day trainings sometimes represent a barrier to participation. Relatedly, it was referenced that trainings should be free or low-cost as financial burdens often create accessibility issues as well.

In terms of the specific format of training and resources, there was no broad consensus among clinicians. Suggestions included live trainings, online trainings, handouts, workbooks, articles, short video courses, and live observation, with none of the suggestions emerging as a clear favorite. Finally, several clinicians identified that having strong psychoeducational resources to share with families may also be helpful to their work with autistic individuals.

Discussion

The goal of the present study was to evaluate both adolescent and clinician perspectives on adapting psychotherapy broadly, and CBT specifically, for autistic youth. Despite several strong CBT intervention approaches that have been developed for autistic adolescents, there is little research on the perspectives of end-users in the context of adapting CBT. Dissemination and implementation science would suggest that involving community stakeholders in the development and dissemination of projects is core to successful implementation across environments (Potthoff et al., 2023); therefore, the current study sought to investigate the needs of autistic adolescents and the clinicians who serve them. Overall, this study suggests that both clinicians and youth see a need for CBT interventions to be flexible and individualized, while still considering aspects of autistic lived experience. The results further indicate a preference for integrative approaches that consider real-world context. In addition, clinicians indicate a desire for support and training that is consultative and applied in nature.

Autism Knowledge, Attitudes Towards Therapy, and Importance of Emotion Regulation

In terms of quantitative data, the results of this study suggest that participating clinicians generally have relatively positive attitudes toward CBT and toward EBPs more generally. This was seen in qualitative interviews as well, with most clinicians endorsing at least some positive attitudes toward CBT, even while pointing out concerns about the approach. The clinicians also had a high degree of autism knowledge; this is perhaps unsurprising, given that the ASK-Q is designed for a general population and mental health clinicians are likely to have had more exposure to autism knowledge than the population as a whole. Additionally, a disproportionate number of clinicians in this study endorsed having a child with autism or being autistic themselves, which may have resulted in a higher degree of autism knowledge than even a typical mental health practitioner sample.

Regarding the adolescent data, the adolescents involved in the study had generally positive attitudes toward therapy on the MHSAS, which was consistent with their report in qualitative interviews. If replicated in larger samples, this finding suggests that adolescents on the autism spectrum can be engaged in therapy, despite clinicians commonly citing challenges with motivation for treatment. Though there was some variation among the sample, adolescents on average reported a moderate level of stress and depression symptoms and a severe level of anxiety symptoms, consistent with existing research suggesting high levels of psychopathology amongst autistic youth (Brookman-Frazee et al., 2018). Additionally, the youth in this study reported above-average difficulties with emotion regulation on the DERS when compared to a community sample of adolescents (Weinberg & Klonsky, 2009). Likewise, the general pattern of responding on the CERQ suggested that adolescents in this sample had higher levels of Self-

Blame, Rumination, Catastrophizing, and Other-Blame than peers in a community sample (Garnefski et al., 2005). They had lower levels of Refocusing on Planning and Reappraisal than peers without internalizing or externalizing problems (Garnefski et al., 2005). Interestingly, the autistic adolescents in this study reported higher levels of Acceptance on the CERQ than same-age peers, as well as higher levels of Putting into Perspective (Garnefski et al., 2005). Although this is a very small sample, these findings suggest potential strengths among autistic adolescents that may be useful in the context of psychotherapeutic treatment.

Despite the small sample size of adolescents, there were significant correlations between several emotion regulation variables and symptoms of depression and anxiety. These associations suggest that in our sample, emotion regulation difficulties are related to challenges with depression and anxiety, which is consistent with existing literature both in autistic samples and in the broader population (Conner et al., 2023; Schäfer et al., 2017). Future research may wish to consider whether this association is an artifact of conceptual overlap between emotion regulation and depression/anxiety symptoms or represents an association between two distinct constructs. Should research confirm a true association between depression/anxiety and emotion regulation, future work may wish to consider whether targeting emotion regulation leads to improvements in anxiety and depression symptoms among autistic adolescents.

In addition to the quantitative results discussed above, there are several key points to consider within each of the identified qualitative study themes, along with important overall implications for future research into conducting CBT with autistic adolescents.

Building Engagement and Relationship

A core idea identified in this dataset was that relationship and engagement are key to conducting effective psychotherapy. This perspective, shared by clinicians and adolescents, is

aligned with existing research on psychotherapeutic processes broadly, which suggests that therapeutic alliance is an "active ingredient" in therapy across a range of treatment approaches (Martin et al., 2000; Stubbe, 2018). The participants in the present study tended to be in agreement with this perspective. Given the nature of autism as a social disability, and theories of autism that have suggested that autistic individuals have decreased social motivation, it may be tempting to assume that alliance and rapport in therapy are less important with autistic patients. On the contrary, research has suggested that therapist-rated therapeutic alliance remains associated with outcomes in autistic youth (Kerns et al., 2018; Klebanoff et al., 2019), consistent with the emphasis on building relationship that was present in our results.

In the context of the literature, it is necessary to consider a point raised by both youth and clinicians: it may take more time to build up the therapeutic relationship with autistic patients. While autistic social differences do not diminish the importance of therapeutic alliance, it is possible that these social differences result in adolescents benefitting from an extended "ramp up" in order to develop comfort in therapy. This, too, is consistent with existing research that suggests autistic patients require more therapy sessions than their non-autistic counterparts (McFayden et al., 2021). While there are many reasons why autistic clients may require longer courses of treatment (and several of these reasons are discussed below) it warrants consideration that it may simply take longer for autistic patients to become comfortable with their therapist. Should future research confirm that this is the case, it may suggest implications for both the design of intervention approaches and for healthcare policy as it relates to care for autistic youth.

In a closely related vein, motivation for treatment was raised repeatedly as a consideration. Clinicians describe that autistic adolescents are not always intrinsically motivated for treatment, or might have goals that diverge from those of their parents. While treatment

motivation and adherence are common concerns among adolescents in general (Gearing et al., 2012; Sommers-Flanagan et al., 2011), it is particularly notable that clinicians brought up engagement and motivation during these interviews given that in-session engagement has been found a predictor of treatment response amongst autistic youth (Albaum et al., 2024). Clinicians mentioned using motivational interviewing and client-directed strategies to begin to build youth motivation for treatment but also indicated that this is sometimes a difficult process. Existing interventions for young people, including autistic young people, often utilize behavioral strategies such as reward systems/token economies to improve engagement in the therapy process (e.g., Ehrenreich-May et al., 2018; Sibley et al., 2016; Wood et al., 2015), and some interventions target parent behavior change in order to circumvent youth motivation entirely (Lebowitz et al., 2014). While these strategies present options for addressing issues of motivation, clinicians in the current study also expressed the importance of understanding a youth's specific goals for therapy and framing the work in the context of those goals as a way to enhance motivation.

Related to considering adolescent motivation, it is worth considering activities that youth described as more and less engaging. Adolescents in this study had generally positive attitudes toward therapy "games;" conversely, some youth expressed a distaste for common types of therapy materials like handouts and worksheets intended to be completed as therapy "homework." Given that psychoeducation and out-of-session practice are common elements of CBT interventions, adaptation may benefit from considering how to best share information and support out-of-session learning in a way that is motivating to adolescent clients.

Along these same lines, the adolescents in this study expressed a desire to have shared control over their therapy sessions. Specifically, they want to be able to choose what topics get

discussed in the session and have a space to share their concerns. This is consistent with existing literature, which highlights that self-determination is important to quality of life for adolescents broadly (Nota et al., 2011) and for autistic young adults (White et al., 2018). Notably, while adolescents in the current study identified a desire for self-determination within the context of therapy, they also often reflected that they appreciate guidance and structure within the session (as discussed in more detail below) suggesting that a collaborative and shared control over the therapeutic process may be beneficial.

"It's Different for Everybody": Individualizing Treatment

Adolescents and clinicians provided a range of examples illustrating the necessity of considering a client's individual presentation and experiences when making treatment-related decisions. Adolescents hesitated to make overarching claims about how autism impacts therapy, demonstrating insight into the vast heterogeneity of the autism spectrum (Lord, 2019) and endorsing a view that each person's experience is likely to be unique. This perspective, also shared by clinicians, highlighted the necessity of flexibility within treatment, as everyone will require a slightly different approach. Modular CBT approaches, which allow clinicians flexibility to choose specific components of the approach based on specific presenting concerns (e.g., the Modular Approach to Therapy for Children, Chorpita & Weisz, 2009) seem to acknowledge the necessity of flexibility to some degree. BIACA (Wood et al., 2015), one of the CBT interventions for anxiety in autistic youth, is a modular program and incorporates some flexibility in intervention content based on specific concerns that may or may not be present. However, clinicians and adolescents tended to prefer a greater degree of flexibility than simply allowing clinicians to choose between a range of sessions, including the ability for adolescents to have shared control over the session as discussed above. Ultimately, the results of this study

suggest the need for intervention developers and implementation scientists to strike a balance between encouraging the use of evidence-based treatment protocols or manuals while also acknowledging the importance of adolescent autonomy and flexibility in treatment delivery (which may, themselves, prove to be “active ingredients” in effective care; Sommers-Flanagan et al., 2011).

Within the overarching theme of individualizing treatment, specific domains which may require individualization were also identified. Clinicians described the need to sometimes adapt CBT based on an adolescent’s language level, a process which is described by some existing adaptations (Wood et al., 2015) and is often discussed as a strategy for youth on the autism spectrum (e.g., Frost et al., 2022). Furthermore, clinicians and adolescents emphasized that within the CBT model, different individuals may be likely to benefit most from different parts of the approach (e.g., some adolescents may benefit more from cognitive restructuring, while some may benefit from affective identification). Finally, the use of metaphor presents an interesting example of the need for treatment individualization. Some clinicians tended to report weariness about the overuse of metaphor or analogy with autistic patients, due to the concern that adolescents would have difficulty following along. However, several autistic adolescents felt differently and expressed that they actually appreciate it when clinicians use analogies to help explain complex therapeutic concepts. Literature on metaphor and autism is similarly varied; while there are studies which suggest autistic people are less likely to follow figurative uses of language (Melogno et al., 2012), some authors have proposed the use of metaphor to support therapy with autistic clients (McGuinty et al., 2012). It is interesting that there was some lack of agreement in opinion on this point between clinicians and youth, paired with variation in the existing literature; it highlights the importance of having a thorough understanding of a particular

adolescent’s interests and communication style in order to best deliver relevant therapeutic interventions.

Considering Autistic Experiences

Despite adolescents and clinicians emphasizing the individual nature of experiences during treatment, there were several considerations relating to the autistic experience that were mentioned as domains for adapting or adjust therapy practice. Many of the autistic experiences referenced in the current study are included within existing CBT adaptations for autistic youth. This is encouraging, as it suggests that the research literature is identifying core aspects of the autistic experience that end-users find important to address. BIACA, FYF, and CBT-DAY all encourage clinicians to utilize special interests to increase engagement and motivation for therapy (Reaven et al., 2011; Schwartzman et al., 2024; Wood et al., 2015), which is aligned with both youth and clinicians identifying that leveraging special interests has the potential to make therapy engaging and help youth build skills. Existing qualitative research has supported the idea that passionate interests can be a useful connection strategy for autistic individuals (Lizon et al., 2024), further reinforcing the potential of this approach.

Existing adaptations likewise emphasize other aspects of the autistic experience described by clinicians and adolescents. In particular, several CBT adaptations for autistic youth (e.g., BIACA [Wood et al., 2015]; CBT-DAY [Schwartzman et al., 2024]) explicitly provide psychoeducation for youth to help understand their internal emotional experiences, an area raised as potentially difficult by clinicians and teens in this study. Indeed, the broader literature supports that autistic adolescents are more likely to experience difficulties with internal emotion recognition and identifying bodily sensations associated with emotions (i.e., alexithymia; Milosavljevic et al., 2016; Vaiouli et al., 2022). In addition to emotion identification, the need to

generalize across contexts was also raised by clinicians in this study. This concern is also targeted by the BIACA adaptation (Wood et al., 2015), which provides an option for clinicians to engage in on-site social coaching for youth who are experiencing social anxiety or more general social difficulties.

ASD-adapted treatments such as BIACA (Wood et al., 2015) and Facing your Fears (Reaven et al., 2011) also tend to be highly structured and formally set an agenda at the start of every session. CBT as an approach lends itself well to structure, and existing autism adaptations seem to lean on this aspect of treatment. Both adolescents and clinicians generally seemed to appreciate a level of structure and knowing what to expect in a given session; however, adolescents also indicated the need for therapy to consider the topics *they* want to talk about, as discussed above. The co-creation of an agenda, then, might be an effective strategy to create a degree of structure within the session and support youth executive functioning while also supporting their autonomy in the therapy setting.

Though several aspects of the autistic experience mentioned in this study are captured in the existing CBT for anxiety in autism adaptations, there were a few aspects of autism that participants emphasized that are less frequently discussed in the literature. First, sensory considerations were commonly referenced by our participants. Adolescents on the spectrum indicated that having sensory stimulation such as fidget toys/tools and sensory-friendly furniture and environments helped them to feel more comfortable, and it was frequently discussed that doing something while talking (fidgeting, playing a game, etc.) made them more available to open up in the therapy space. Clinicians likewise commented on considering the space of their therapy settings, and described using fidgets, avoiding harsh overhead lighting, and considering textures and smells within the space. Empirical research is scant how sensory friendly

environments impact autistic adolescents' engagement or behavior (Manning et al., 2023); however, in qualitative research, autistic people emphasize that their sensory experiences interact with many of the other aspects of their lives such as mental health challenges and social overwhelm (Clément et al., 2022). Sensory considerations (and psychoeducation about autistic sensory experience) may therefore be a useful and low-intensity intervention for clinicians to consider in their work with autistic clients.

A final aspect of the autistic experience that was raised in the present study and is worth discussing here is the exploration of autistic identity and stigma facing autistic youth. Clinicians frequently referenced the need to explore autism with their autistic clients; there was a range in preference on this topic among the adolescents themselves, with some adolescents emphasizing their autistic identity and others not feeling strongly about discussing autism in therapy. Some existing CBT approaches for autistic youth do include a discussion about autism and what it means with clients (e.g., BIACA; Wood et al., 2015); however, given evolution in thinking about autism and neurodiversity, updated guidance about discussing autism with adolescents may be useful in supporting clinicians. In particular, guidance from a strengths-based, neuro-affirming perspective would align which much of the current thinking about autism (see Urbanowicz et al., 2019) and with the many of the perspectives raised in the present study.

Additionally, clinicians discussed stigma faced by autistic adolescents. Research supports that autistic individuals may internalize stigma (Han et al., 2022) as a result of living within a system that was not designed with them in mind, consistent with a social model of disability (Shakespeare, 2006). Furthermore, autistic adolescents may tend to "camouflage" or "mask" their autism symptoms, which is associated with increased internalizing symptoms (Bernardin et al., 2021). In order to cope with societal stigma, autistic adults describe a process of reframing

autism in a more positive way (Botha et al., 2022). This process may align well with a cognitive behavioral framework, and clinicians may wish to consider helping autistic adolescents explore and challenge their own negative self-beliefs that have resulted from experiences of ableism in their lives. Indeed, approaching autism from a strengths-based perspective and helping clients build their self-concept may address concerns raised by clinicians about the potential for thought challenging to invalidate the experiences of autistic patients. The emphasis on stigma referenced repeatedly by clinicians in the current study highlights the need to use CBT strategies to support autistic youth in processing and coping with experiences of stigma and ableism they may face in their daily lives. For their part, youth in this study consistently referenced a desire for self-determination within the therapy context; being provided the opportunity to explore autism, "unmask" in therapy, and present as their authentic selves without concern of being further stigmatized by their clinician may support their identity development and emerging sense of autonomy.

CBT in the Real World

Clinicians and adolescents emphasized the point that when clinicians are conducting CBT with autistic adolescent clients, they are doing so within a broader context which includes other possible interventions, family factors, and broader systems. Thinking about the broader context within an ecological model (Bronfenbrenner, 1994), the participants in this study referenced variables within the microsystem (i.e., choices of interventions within the therapeutic relationship, family relationships), the mesosystem (interaction of approach/relationship and families with the broader system) and the exosystem (specific components of the broader mental health and educational systems that impact adolescents).

While evidence-based approaches such as CBT are often found to have positive outcomes in real-world effectiveness trials (Lee et al., 2013), the process of designing and evaluating interventions tends to start with randomized controlled trials; within these trials, variables that make up a youth's ecological system can be controlled and their impact on the treatment process reduced via randomization. The clinicians and youth in this study indicated that in practice, these environmental variables are critical and are always shaping the administration of a therapeutic approach, including CBT. In line with this idea, emerging research suggests that ecologically minded interventions, such as multisystemic therapy, can be effective for treating co-occurring problems in youth on the autism spectrum (Wagner et al., 2019). Based on this existing literature and the results of the present study, it is clear that these systemic factors must be considered when supporting CBT clinicians in working with autistic youth.

In terms of specific ecological considerations, clinicians often referenced their work within the broader healthcare system and the school system. Adolescents, while not explicitly discussing the interaction between systems, did often reference school and other providers, and there was sometimes a need to clarify mental health therapy versus other types of services that adolescents receive. Clinicians emphasized that collaboration across providers can be exceptionally helpful in some cases, but also that there are significant barriers to collaboration. While these barriers are perhaps not possible to address within the context of providing training or support for a specific client need, it is important to keep in mind that clinicians are conducting this type of outreach and case management on top of their therapy caseload; trainings and supports must therefore seek to work within the confines of clinician capacity.

In an additional example of clinicians conducting CBT within a broader context, the clinicians in this study tended to identify with more than one theoretical approach/orientation.

Despite all having experience conducting CBT, most of the clinicians in this study used multiple approaches, and many clinicians discussed their tendency to combine traditional second-wave CBT skills with tools pulled from third-wave modalities or other approaches. The two supplementary approaches referenced most often were DBT (Linehan, 2015), appreciated by therapists for its structured approach and emphasis on building skills that autistic youth may benefit from, and motivational interviewing (Miller & Rollnick, 2012), which therapists described as a strategy used to build motivation for treatment.

There are multiple ways to integrate this finding of clinician tendency to blend strategies across traditional CBT, third-wave CBTs, and non-CBT approaches together. The first is to explicitly acknowledge that clinicians may consider supplementing traditional CBT with strategies from other interventions, provide suggestions for how to do so, and evaluate the effectiveness of a blended approach. The second is more time intensive and deliberate; researchers could attempt to identify the "active ingredients" of these supplementary strategies and build them into an integrative cognitive behavioral program. For example, clinicians appreciate that DBT skills are highly structured and address issues such as self-injury and interpersonal effectiveness; CBT researchers may consider strategies for framing and describing traditional CBT skills which target these same issues (e.g., step-by-step instructions for using CBT skills like cognitive restructuring, educating on CBT strategies such as problem solving and social skills training). Regardless of approach, it seems clear that clinicians tend to conceptualize themselves as utilizing CBT strategies within an integrative approach; future research should evaluate whether this supports or impedes improved outcomes. In the general psychotherapy literature, integrative approaches have been shown to be effective (Zarbo et al., 2016); given the

tendency for clinicians to utilize this style in practice, it warrants consideration whether it is effective for autistic adolescents as well.

The family relationship was another environmental factor impacting therapy referenced by clinicians and youth alike. There was a range of opinions from both groups regarding the involvement of parents/guardians in therapy. This is interesting because conventional wisdom has suggested that autistic clients tend to require parental support to generalize their therapeutic gains across environments (as discussed in Laugeson et al., 2009; Reaven et al., 2011; White et al., 2010). Existing CBT approaches for autistic youth tend to emphasize increased parent contact compared to treatment-as-usual for this reason. However, clinicians identified that there is a range in how appropriate they find parent involvement in the therapy work, and adolescents similarly varied in their opinions of having families involved in therapy. This idea suggests the need for a flexible approach to family involvement in treatment; if clinicians judge that including families would be unhelpful, it may be beneficial to suggest a range of levels of family involvement and how to optimize treatment in the case of each possibility.

Finally, participants in this study referenced interaction *between* systems (i.e., clinician, school, and family) as an element of their work with youth. Specifically, many providers described working with schools and helping families navigate the special education process as a part of their work. However, the literature widely acknowledges a tendency for schools and the mental health field to act as “silos,” limiting the opportunity for knowledge transfer between disciplines (Short et al., 2018). Furthermore, clinicians may not be required to obtain formal training in special education as part of their degree programs; for example, the American Psychological Association does not explicitly require graduate programs to teach students about aspects of the special education system (American Psychological Association, 2025). This

highlights a clear and significant gap; it is difficult for professionals to support families in navigating the school system if they, themselves, do not have adequate preparation to do so. This suggests that it may be beneficial to provide clinicians with explicit education about navigating the school system, in order to bolster their effectiveness and confidence in doing so with clients. Components of school consultation models such as COMPASS (Ruble & Dalrymple, 2002), originally designed to support parent-school collaboration in the special education process, may be useful resources for professionals as well in supporting their autistic clients.

Supporting Clinicians

A major goal of the current project was to understand strategies that may support clinicians in adapting CBT for autistic adolescents in their practices. With this in mind, our clinician interview sought to understand previous clinical experiences with autistic youth and therapist training with this population. A few important ideas stand out when considering this theme and its implications. First, clinicians generally feel that their formal (i.e., graduate school) training did not prepare them for working with autistic adolescent clients from a cognitive behavioral perspective. Many clinicians described learning on the job or seeking out additional training independently. This is consistent with the existing literature, in which clinicians endorse feeling underprepared by their training to work with autistic clients (e.g., Brookman-Frazee et al., 2012). Interestingly, a disproportionate number of clinicians in the study described having lived experience with autism outside of their professional role; some clinicians mentioned being parents of autistic children, and a few clinicians shared that they had an autism diagnosis themselves. These clinicians sometimes referenced having learned, from personal experience, skills that aid them in working with autistic clients. While research on the lived experiences of mental health professionals regarding their own neurodivergence or mental health concerns

remains limited due to stigma, the extant literature suggests that such difficulties are common within the field (e.g., Victor et al., 2022). Future research in this area will provide valuable insights into how personal lived experience may shape professional practice.

Clinicians provided a range of suggestions for supports that may be beneficial in conducting CBT with autistic clients. Nearly universally, clinicians suggested that they would benefit from training in working with autistic youth. There was a range of suggestions for types and approaches to training, with no clear consensus emerging amongst the clinicians for how they would prefer to learn CBT skills to utilize with autistic youth. This pattern in the data suggests that clinicians would greatly appreciate training, and that there may not be one format of training or support that would be more acceptable than others to clinicians. In the existing literature, clinicians similarly varied in their desire for training format, with many preferring a “mix-and-match" approach delivered across multiple mediums (Spain et al., 2023).

That said, the *Supporting Clinicians* theme did highlight a few factors that clinicians would appreciate in trainings, regardless of the specific format of the information delivery. First, clinicians identified an interest in trainings that were led or organized by autistic individuals with lived experience. Descriptions of trainings led by self-advocates and explicit statements support that clinicians believe they would benefit from learning about autism from people with autism. This suggestion aligns with the current focus on participatory research and co-design within the autism research space, and preliminary evidence suggests that co-designed trainings may increase training effectiveness. A study by Gillespie-Lynch and colleagues (2022) identified that in some contexts, an autism training codesigned by autistic young people was more effective than one designed without autistic input at increasing autism knowledge and decreasing explicit autism stigma amongst university students. Furthermore, training that focuses on sharing

personal stories has been found to be more effective than purely fact-based trainings at increasing attitudes about a different neurodevelopmental condition (i.e., stuttering; Boyle et al., 2016). Taken together, the interest in autistic-led training endorsed by clinicians in this study, coupled with encouraging findings in the existing literature, suggest that co-designed or autistic-led training approaches may be a promising step in the future of training clinicians to feel comfortable working with autistic youth.

Several other considerations for clinician training emerged from the *Supporting Clinicians* theme. Clinicians emphasized that they appreciate trainings that are more applied in nature; for example, they referenced an interest in considering case studies or learning how to apply CBT to specific presenting problems. They also indicated that they benefit from learning from other clinicians through approaches such as direct observation and consultation. Within the psychotherapy training literature, theory suggests that active learning (i.e., using participatory strategies such as modeling, role play, and feedback and consultation) is critical to effective training for therapists (Beidas & Kendall, 2010). One study found significantly improved patient outcomes for therapists receiving active training in schema therapy as opposed to passive training (Bamelis et al., 2014), and in a review of therapist training, many studies cite the importance of active training approaches (Frank et al., 2020). These findings from the literature seem to provide support for participants' general idea that applied and active approaches to training may be important to optimizing training outcomes. Opportunities for ongoing consultation (e.g., through models such as Project ECHO; Komaromy et al., 2016) should also be considered as part of training, both because clinicians in this study emphasized the benefit of learning from other clinicians and because audit and feedback is considered an effective strategy for improving quality of healthcare generally (Ivers et al., 2025).

A final critical factor with respect to *Supporting Clinicians* is the logistical and structural considerations related to training. Clinicians described a range of barriers to training, including cost, time, and not knowing whether a training will be "worth it" (i.e., provide valuable, actionable information). These clinician responses are in line with existing literature which suggests that cost and time burden are a major predictor of hesitance to engage in trainings for specific therapeutic approaches (Stewart et al., 2012). Therefore, it will be essential that any training focusing on CBT for autistic youth seek to strike a balance between opportunities for ongoing consultation and awareness of clinician time constraints.

Toward a Flexible Training Resource

Overall, the clinicians and adolescents in this study provided a wealth of information regarding their experiences and opinions on how to appropriately conduct therapeutic interventions with autistic youth. It is clear that further training and support for clinicians who are interested in conducting CBT with this population is needed. The participants in this study provided evidence that their preference would be a CBT approach that is *flexible*, *client-centered,* and *individualized* while still considering *common components of the autistic experience*. Trainings should be *applied, informed by autistic individuals,* and *provide an opportunity for ongoing consultation.* No specific format of training emerges as a consensus choice of all clinicians, suggesting that one of many existing applied, consultative training approaches may be a strong fit. Approaches such as Mental Health Project ECHO Autism (Dreiling et al., 2022) may check many of the boxes proposed by clinicians in that it is applied and specific; inclusion of a self-advocate in the ECHO team could support a desire from clinicians for learning from autistic individuals.

In addition to more structured training opportunities, it is worth considering ways of delivering information that are easily disseminated to community clinicians. A simple case series, highlighting both autism-specific and individualized aspects of therapy cases, which is available to clinicians in an open-access format may be a helpful way to provide a range of information to clinicians. Co-creation and consultation between expert clinicians, clinicians wanting to learn more about CBT and autism, and autistic individuals could ensure that such a case series is maximally helpful.

Limitations

Although the present study provides a range of useful information regarding end user perspectives on adapting CBT for autistic youth, there are several limitations to consider. First, recruitment was challenging, and despite generalizability not being a goal of the current study, it is possible that a different constellation of autistic participants may have yielded different results. Additionally, given the subject matter of the study, adolescents who self-selected to participate may have different views on therapy than a general population of autistic adolescents, and the rurality of the autistic sample may have also impacted representativeness. Furthermore, although we collected data on co-occurring psychological conditions, we did not have access to full characterization data (e.g., cognitive abilities, medical comorbidities).

Additionally, a number of clinician participants in this study endorsed having a lived experience of being autistic or having an autistic family member; although this is a strength in that it allowed for rich and thoughtful consideration of the autistic experience from these clinicians, it is also likely that clinicians who chose to participate differ from their non-participating peers in that they may have increased levels of motivation to think through autistic youths' experiences and to work with this population.

Conclusions and Future Directions

Despite the aforementioned limitations, this study provides rich evidence for a range of considerations that will be important in adapting CBT for autistic adolescents, collected within the context of the Naeem et al. (2016) CBT adaptation framework. The results of the current study lay the groundwork for future research which examines the effectiveness of community-delivered CBT adapted to the specified needs of autistic youth. Specifically, the present study sought to fulfill steps one and two of the Naeem et al. (2016) framework (i.e., gathering information from relevant parties and synthesis of information and guidelines). The guidelines gathered throughout the current study are summarized in Table 6. According to Naeem et al.'s framework, the third step of the approach would involve translation and adaptation of therapy manuals, and the fourth step consists of testing and refining the CBT adaptations. Given that the range of strategies and adaptations suggested by participants in this study could be shared in many different ways, it would be interesting for future research focusing on steps three and four of the approach to evaluate multiple strategies for translating and disseminating the recommendations generated (e.g., integrating the recommendations into existing consultation/training approaches such as Project ECHO, providing clinicians with more general resources such as case studies, simply providing a list of recommendations) to determine whether there are optimal ways to share the gathered suggestions. In order to fulfill the final phase of the Naeem et al. framework, these various dissemination approaches should be tested versus treatment-as-usual in the community mental health setting.

In addition to the four phases, the Naeem et al. framework suggests four foci to consider when making adaptations to CBT approaches: philosophical orientation, practical considerations, technical adjustments, and theoretical or conceptual changes. Although our ultimate qualitative

analysis was inductive in nature, our study was designed with the intent to consider these four foci. In fact, the perspectives offered by participants in this study did address all four of the foci; the focus of each suggested adaptation is denoted in the summary table of recommended adaptations (Table 6). Adolescents and clinicians identified a need to emphasize relationship and motivation building (philosophical orientation), consider the real-world context in which interventions are delivered (practical considerations), make adjustments to treatment that carefully consider autistic experiences (technical adjustments), and consider individual experiences through a lens of neurodiversity (conceptual changes). In this way, participants offered valuable information across adaptation domains that will support future clinicians in conducting CBT with this population.

With that in mind, the results of the current study will be shared at a community level through the creation of resources and provision of information to community mental health providers (in addition to dissemination through traditional academic channels). Furthermore, future research will seek to evaluate CBT utilizing recommendations generated from the proposed study. Therefore, the current study serves as a stepping stone to future research which will aim to show improved effectiveness of CBT with community-recommended adaptations versus treatment as usual. As such, this line of research will ultimately seek to improve access to evidence-based, community-oriented mental health care for autistic youth.

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Table 1.
Participant Demographics

	M (*SD*) or Percentage	
	Clinician	Adolescent
Age	39.65 (11.63)	14.78 (1.20)
Gender		
Woman	70.59%	20%
Man	23.59%	70%
Nonbinary/Other Gender Identity	5.88%	10%
Sex Assigned at Birth		
Male	28%	60%
Female	61%	40%
Intersex/Other	0%	0%
Race		
Black	5.88%	
White Non-Hispanic	94.12%	
Hispanic/Latino/a	0%	
Bi- or Multi-racial	0%	
Native Hawaiian or Pacific Islander	0%	
Other Not Expressed Here	0%	
Rurality		
Rural	41.1%	70%
Urban	5.88%	0%
Suburban	52.9%	30%
Diagnosed with…		
Attention-Deficit/Hyperactivity Disorder		80%
Intellectual Disability		10%
Learning Disorder		20%
Panic Disorder		0%
Social Anxiety Disorder		30%
Anxiety Disorder (other)		20%
Bipolar Disorder		10%
Posttraumatic Stress Disorder		20%
Obsessive-Compulsive Disorder		30%

Table 2.
Adolescent Descriptive Statistics

	M (SD)
Social Responsiveness Scale, Second Edition	
Social Awareness	71.7 (10.23)
Social Cognition	74.3 (10.00)
Social Communication	72.9 (8.85)
Social Motivation	71.6 (9.50)
Restricted/Repetitive Behavior	80.5 (7.38)
Total Score	76.6 (7.37)
Autism Quotient (AQ) Total Score	34 (4.78)
Mental Health Seeking Attitudes Scale	5.3 (1.42)
Depression, Anxiety, Stress Scale	
Stress	22.5 (9.78)
Depression	16.9 (11.88)
Anxiety	18.89 (11.23)
Cognitive Emotion Regulation Questionnaire	
Self-Blame	13.25 (4.33)
Acceptance	13.33 (3.77)
Rumination	13.2 (3.77)
Positive Referencing	8.67 (2.45)
Planning	10 (2.29)
Reappraisal	9.67 (3.32)
Perspective	11.7 (4.00)
Catastrophizing	9.33 (3.00)
Other-Blame	8.56 (1.51)
Difficulties in Emotion Regulation Scale	
Nonacceptance	15.78 (8.39)
Goal	18.4 (4.30)
Impulse	19.33 (7.09)
Emotional Awareness	19.44 (4.36)
Strategy	22.78 (6.91)
Clarity	16.11 (5.58)

Table 3.
Clinician Descriptive Statistics

	Mean (SD) or Percentage
Number of Autistic Clients	
1 to 5	5.88%
6 to 10	5.88%
11 to 20	23.5%
Greater than 20	64.7%
Treatment Modalities*	
Cognitive Behavioral	94%
Dialectical Behavioral	47%
Motivational Interviewing	29%
Solution-Focused	24%
Acceptance and Commitment Therapy	18%
Eye Movement Desensitization and Reprocessing	12%
Trauma-Focused CBT	12%
Evidence Based Practice Attitudes Scale	
Requirements	2.53 (1.25)
Appeal	3.18 (0.68)
Openness	2.88 (0.67)
Divergence	3.19 (0.34)
Negative Attitudes to CBT	2.65 (0.97)
Autism Stigma and Knowledge Questionnaire	42.76 (3.77)

Note. *represents treatment modalities endorsed by >1 clinician. CBT = Cognitive Behavioral Therapy

Table 4.
Correlation between Emotion Regulation Scales and Internalizing Symptoms

	DASS-21 Anxiety	DASS-21 Depression
DERS		
Nonacceptance	.84**	.75*
Goal-Directedness	.51	.60
Impulse Control	.74*	.58
Emotional Awareness	.00	-.05
Access to Strategies	.70*	.68*
Emotional Clarity	.53	.47
CERQ		
Putting into Perspective	.60	.58
Catastrophizing	.74*	.53
Other-Blame	.17	.33
Reappraisal	.13	.25
Refocus on Planning	.18	.34
Positive Referencing	.22	.35
Rumination	.68*	.63
Acceptance	.17	.45
Self-Blame	.85**	.51

Note. DASS-21 = Depression, Anxiety, Stress Scale – 21 Item Version, DERS = Difficulties with Emotion Regulation Scale. CERQ = Cognitive Emotion Regulation Questionnaire. *p<.05, **p<.01

Table 5.

Joint Display Summarizing Qualitative and Quantitative Convergence

Qualitative theme	Qualitative data contributing to theme	Quantitative data to support theme
Building Engagement and Relationship	*Clinicians and Youth* • May take longer to engage autistic youth in therapy • Games help build engagement *Youth* • Adolescents struggle being pushed too fast • Adolescents appreciate shared control of session *Clinicians* • Motivation for change needs to be cultivated	*Youth* • SRS-2 Social Motivation Mean T-Score=71.6 • MHSAS Scores high but ranged from 2.22 to 6.89
It's Different for Everybody: Individualizing Treatment	*Clinicians and Youth* • Treatment is different for everyone • Specific therapeutic needs vary • Preference for metaphor varies *Clinicians* • Language levels vary	*Youth* • Presentations different on DASS-21 (ranged from no symptoms to very severe) • Range of scores on CERQ and DERS
Considering Autistic Experiences	*Clinicians and Youth* • Sensory experiences • Passions and Special Interests • Somatic and Emotional Awareness • Structure, Consistency, and EF support • Exploring Autism, Identity, and Stigma	*Youth* • SRS-2 RRB Mean T-Score=80.5 • Elevated difficulties with Emotion Awareness on DERS
CBT in the Real World	*Clinicians and Youth* • Family work is a delicate balance *Clinicians* • Clinicians use modalities other than CBT • Clinicians collaborate across systems • Clinicians advocate within schools	*Clinicians* • 24 treatment modalities endorsed, with most clinicians endorsing >1
Support for Clinicians	*Clinicians* • Clinicians feel undertrained in working with autistic youth • Active, hands-on training and learning from clinicians/autistic people • No broad consensus on specific type of training	*Clinicians* • High EBPAS subscale scores ranging from 2.53 to 3.19, indicating positive attitudes toward learning new EBPs

Table 6.

Participant Recommendations for Adapting CBT

- Build in extra time for relationship building, engagement in treatment, and building motivation PO
- Allow adolescents shared control of the session PO
- Consistently consider an individual client's needs and presentation when making decisions CC
- Adjust language style based on adolescent presentation and preferences TA
- Adjust use of metaphor/analogy based on adolescent presentation and preferences, and consider adolescent passions when creating metaphors TA
- Assess adolescent sensory needs and adjust environment accordingly TA
- Have fidgets available TA
- Integrate special interests into treatment (e.g., when explaining concepts, as part of the session structure) TA
- Consider spending extra time on emotion identification including identifying somatic experiences TA
- Use increased structure (e.g., in structuring session) TA
- Be specific – no vague questions! TA
- Explore autistic identity and consider targeting self-stigma and ableism experienced by autistic youth CC
- Consider family involvement on a case-by-case basis PO
- Careful integration of strategies from approaches such as DBT and MI TA
- Support families in navigating special education process PC

Note. CBT = Cognitive Behavioral Therapy, PO=philosophical orientation, PC=practical considerations, TA= technical adjustments, CC=conceptual changes

Appendix A

Measures

Difficulties in Emotion Regulation Scale

Difficulties in Emotion Regulation Scale (DERS)

Instructions:

Please press the response that is most true for you.

		Almost Never	Sometimes	About half the time	Most of the time	Almost always
1	I am clear about my feeling	**5**	**4**	**3**	**2**	**1**
2	I pay attention to how I feel	**5**	**4**	**3**	**2**	**1**
3	I experience my emotions as overwhelming and out of control	**1**	**2**	**3**	**4**	**5**
4	I have no idea how I am feeling	**1**	**2**	**3**	**4**	**5**
5	I have difficulty making sense out of my feelings	**1**	**2**	**3**	**4**	**5**
6	I am attentive to my feelings	**5**	**4**	**3**	**2**	**1**
7	I know exactly how I am feeling	**5**	**4**	**3**	**2**	**1**
8	I care about what I am feeling	**5**	**4**	**3**	**2**	**1**
9	I am confused about how I feel	**1**	**2**	**3**	**4**	**5**
10	When I'm upset, I acknowledge my emotions	**5**	**4**	**3**	**2**	**1**
11	When I'm upset, I become angry with myself for feeling that way	**1**	**2**	**3**	**4**	**5**
12	When I'm upset, I become embarrassed for feeling that way	**1**	**2**	**3**	**4**	**5**
13	When I'm upset, I have difficulty getting work done	**1**	**2**	**3**	**4**	**5**
14	When I'm upset, I become out of control	**1**	**2**	**3**	**4**	**5**
15	When I'm upset, I believe that I will remain that way for a long time	**1**	**2**	**3**	**4**	**5**
16	When I'm upset, I believe that I'll end up feeling very depressed	**1**	**2**	**3**	**4**	**5**
17	When I'm upset, I believe that my feelings are valid and important	**5**	**4**	**3**	**2**	**1**

		Almost Never	Sometimes	About half the time	Most of the time	Almost always
18	When I'm upset, I have difficulty focusing on other things	1	2	3	4	5
19	When I'm upset, I feel out of control	1	2	3	4	5
20	When I'm upset, I can still get things done	5	4	3	2	1
21	When I'm upset, I feel ashamed with myself for feeling that way	1	2	3	4	5
22	When I'm upset, I know that I can find a way to eventually feel better	5	4	3	2	1
23	When I'm upset, I feel like I am weak	1	2	3	4	5
24	When I'm upset, I feel like I can remain in control of my behaviours	5	4	3	2	1
25	When I'm upset, I feel guilty for feeling that way	1	2	3	4	5
26	When I'm upset, I have difficulty concentrating	1	2	3	4	5
27	When I'm upset, I have difficulty controlling my behaviours	1	2	3	4	5
28	When I'm upset, I believe that there is nothing I can do to make myself feel better	1	2	3	4	5
29	When I'm upset, I become irritated with myself for feeling that way	1	2	3	4	5
30	When I'm upset, I start to feel very bad about myself	1	2	3	4	5
31	When I'm upset, I believe that wallowing in it is all I can do	1	2	3	4	5
32	When I'm upset, I lose control over my behaviours	1	2	3	4	5
33	When I'm upset, I have difficulty thinking about anything else	1	2	3	4	5
34	When I'm upset I take time to figure out what I'm really feeling.	5	4	3	2	1
35	When I'm upset, it takes me a long time to feel better	1	2	3	4	5
36	When I'm upset, my emotions feel overwhelming	1	2	3	4	5

Cognitive Emotion Regulation Questionnaire

Subscales	Items (Short sentence)
Self-blame	I am blamed for it
	I am responsible for it
	Thinking about self mistakes
	Cause must lie within myself
Acceptance	Accepting this happened
	Accepting the situation
	I cannot change anything
	I must learn to live with it
Focus on thought	Thinking about experience

John N. Constantino, MD

Assessment ID ____________

SRS-2 AutoScore™ Form School-Age

○ MALE ○ FEMALE

INSTRUCTIONS

For each question, please darken the circle that best describes this child's behavior **over the past 6 months.**

Child's name ____________ Child's age in years ____________

Rater's name ____________ Date of rating ____________

Relationship to rated individual ☐ Mother ☐ Father ☐ Other custodial adult ☐ Teacher ☐ Other specialist

Grade ____________ School or clinic ____________

PLEASE PRESS HARD WHEN MARKING YOUR RESPONSES.

1 = NOT TRUE 2 = SOMETIMES TRUE 3 = OFTEN TRUE 4 = ALMOST ALWAYS TRUE

1. Seems much more fidgety in social situations than when alone. .... ① ② ③ ④

2. Expressions on his or her face don't match what he or she is saying. .... ① ② ③ ④

PLEASE PRESS HARD WHEN MARKING YOUR RESPONSES.

1 = NOT TRUE 2 = SOMETIMES TRUE 3 = OFTEN TRUE 4 = ALMOST ALWAYS TRUE

33. Is socially awkward, even when he or she is trying to be polite. ① ② ③ ④

34. Avoids people who want to be emotionally close to him or her. ① ② ③ ④

35. Has trouble keeping up with the flow of a normal conversation. ① ② ③ ④

36. Has difficulty relating to adults. ① ② ③ ④

37. Has difficulty relating to peers. ① ② ③ ④

38. Responds appropriately to mood changes in others (for example, when a friend's or playmate's mood changes from happy to sad). ① ② ③ ④

39. Has an unusually narrow range of interests. ① ② ③ ④

40. Is imaginative, good at pretending (without losing touch with reality). ① ② ③ ④

41. Wanders aimlessly from one activity to another. ① ② ③ ④

The Adolescent Autism Spectrum Quotient (AQ)

Ages 12-15 years

SPECIMEN, FOR RESEARCH USE ONLY.

For full details, please see:

S. Baron-Cohen, R. Hoekstra, R. Knickmeyer, S. Wheelwright, (2006)
The Autism Spectrum Quotient (AQ) – Adolescent Version
Journal of Autism and Developmental Disorders.

Name:…………………………………… Sex:……………………………………

Date of birth:……………………………. Today's Date……………………………

How to fill out the questionnaire

Below is a list of statements about your child. Please read each statement *very carefully* *and rate how strongly you agree or disagree by selecting the appropriate option opposite each question.*

DO NOT MISS ANY STATEMENT OUT.

Examples

E1. S/he is willing to take risks.	definitely agree	slightly agree	slightly disagree	definitely disagree
E2. S/he likes playing board games.	definitely agree	slightly agree	slightly disagree	definitely disagree
E3. S/he finds learning to play musical instruments easy.	definitely agree	slightly agree	slightly disagree	definitely disagree
E4. S/he is fascinated by other cultures.	definitely agree	slightly agree	slightly disagree	definitely disagree

	Definitely Agree	Slightly Agree	Slightly Disagree	Definitely Disagree
1. S/he prefers to do things with others rather than on her/his own.				
2. S/he prefers to do things the same way over and over again.				
3. If s/he tries to imagine something, s/he finds it very easy to create a picture in her/his mind.				
4. S/he frequently gets so strongly absorbed in one thing that s/he loses sight of other things.				
5. S/he often notices small sounds when others do not.				
6. S/he usually notices car number plates or similar strings of information.				
7. Other people frequently tell her/him that what s/he has said is impolite, even though s/he thinks it is polite.				
8. When s/he is reading a story, s/he can easily imagine what the characters might look like.				
9. S/he is fascinated by dates.				
10. In a social group, s/he can easily keep track of several different people's conversations.				
11. S/he finds social situations easy.				
12. S/he tends to notice details that others do not.				
13. S/he would rather go to a library than a party.				
14. S/he finds making up stories easy.				
15. S/he finds her/himself drawn more strongly to people than to things.				

	Definitely Agree	Slightly Agree	Slightly Disagree	Definitely Disagree
16. S/he tends to have very strong interests, which s/he gets upset about if s/he can't pursue.				
17. S/he enjoys social chit-chat.				
18. When s/he talks, it isn't always easy for others to get a word in edgeways.				
19. S/he is fascinated by numbers.				
20. When s/he is reading a story, s/he finds it difficult to work out the characters' intentions.				
21. S/he doesn't particularly enjoy reading fiction.				
22. S/he finds it hard to make new friends.				
23. S/he notices patterns in things all the time.				
24. S/he would rather go to the theatre than a museum.				
25. It does not upset him/her if his/her daily routine is disturbed.				
26. S/he frequently finds that s/he doesn't know how to keep a conversation going.				
27. S/he finds it easy to "read between the lines" when someone is talking to her/him.				
28. S/he usually concentrates more on the whole picture, rather than the small details.				
29. S/he is not very good at remembering phone numbers.				
30. S/he doesn't usually notice small changes in a situation, or a person's appearance.				
31. S/he knows how to tell if someone listening to him/her is getting bored.				

	Definitely Agree	Slightly Agree	Slightly Disagree	Definitely Disagree
32. S/he finds it easy to do more than one thing at once.				
33. When s/he talks on the phone, s/he is not sure when it's her/his turn to speak.				
34. S/he enjoys doing things spontaneously.				
35. S/he is often the last to understand the point of a joke.				
36. S/he finds it easy to work out what someone is thinking or feeling just by looking at their face.				
37. If there is an interruption, s/he can switch back to what s/he was doing very quickly.				
38. S/he is good at social chit-chat.				
39. People often tell her/him that s/he keeps going on and on about the same thing.				
40. When s/he was younger, s/he used to enjoy playing games involving pretending with other children.				
41. S/he likes to collect information about categories of things (e.g. types of car, types of bird, types of train, types of plant, etc.).				
42. S/he finds it difficult to imagine what it would be like to be someone else.				
43. S/he likes to plan any activities s/he participates in carefully.				
44. S/he enjoys social occasions.				
45. S/he finds it difficult to work out people's intentions.				
46. New situations make him/her anxious.				

	Definitely Agree	Slightly Agree	Slightly Disagree	Definitely Disagree
47. S/he enjoys meeting new people.				
48. S/he is a good diplomat.				
49. S/he is not very good at remembering people's date of birth.				
50. S/he finds it very to easy to play games with children that involve pretending.				

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DASS21

Name: Date:

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree or a good part of time
3 Applied to me very much or most of the time

1 (s)	I found it hard to wind down	0	1	2	3
2 (a)	I was aware of dryness of my mouth	0	1	2	3
3 (d)	I couldn't seem to experience any positive feeling at all	0	1	2	3
4 (a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5 (d)	I found it difficult to work up the initiative to do things	0	1	2	3
6 (s)	I tended to over-react to situations	0	1	2	3
7 (a)	I experienced trembling (e.g. in the hands)	0	1	2	3
8 (s)	I felt that I was using a lot of nervous energy	0	1	2	3
9 (a)	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10 (d)	I felt that I had nothing to look forward to	0	1	2	3
11 (s)	I found myself getting agitated	0	1	2	3
12 (s)	I found it difficult to relax	0	1	2	3
13 (d)	I felt down-hearted and blue	0	1	2	3
14 (s)	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15 (a)	I felt I was close to panic	0	1	2	3
16 (d)	I was unable to become enthusiastic about anything	0	1	2	3
17 (d)	I felt I wasn't worth much as a person	0	1	2	3
18 (s)	I felt that I was rather touchy	0	1	2	3
19 (a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20 (a)	I felt scared without any good reason	0	1	2	3
21 (d)	I felt that life was meaningless	0	1	2	3

Mental Help Seeking Attitudes Scale (MHSAS)

INSTRUCTIONS: For the purposes of this survey, "mental health professionals" include psychologists, psychiatrists, clinical social workers, and counselors. Likewise, "mental health concerns" include issues ranging from personal difficulties (e.g., loss of a loved one) to mental illness (e.g., anxiety, depression).

Please mark the circle that best represents your opinion. For example, if you feel that your seeking help would be extremely useless, you would mark the circle closest to "useless." If you are undecided, you would mark the "0" circle. If you feel that your seeking help would be slightly useful, you would mark the "1" circle that is closer to "useful."

If I had a mental health concern, seeking help from a mental health professional would be...

	3	2	1	0	1	2	3	
Useless	○	○	○	○	○	○	○	Useful
Important	○	○	○	○	○	○	○	Unimportant
Unhealthy	○	○	○	○	○	○	○	Healthy
Ineffective	○	○	○	○	○	○	○	Effective
Good	○	○	○	○	○	○	○	Bad
Healing	○	○	○	○	○	○	○	Hurting
Disempowering	○	○	○	○	○	○	○	Empowering
Satisfying	○	○	○	○	○	○	○	Unsatisfying
Desirable	○	○	○	○	○	○	○	Undesirable

Scoring Key

The MHSAS contains nine items which produce a single mean score. The MHSAS uses a seven-point semantic differential scale. Please note that the scale labels (3, 2, 1, 0, 1, 2, 3) are only provided to assist participants, and are not to be used in scoring the MHSAS. To counteract possible response sets, the valence of the item anchors was counterbalanced across the nine items. For example, the "useless – useful" item had the positively-valenced term (i.e., useful) on the right side of the scale, whereas the "important – unimportant" item had the positively-valenced term (i.e., important) on the left side of the scale. In order to properly calculate the MHSAS mean score, where a higher mean score indicates more favorable attitudes, it is necessary to reverse-code items 2, 5, 6, 8, and 9. After reverse coding, a score of "1" (the circle to the farthest left of the seven-point scale) on a given item should indicate an unfavorable attitude, a score of "4" (the middle circle of the seven-point scale) on a given item should indicate a neutral attitude, and a score of "7" (the circle to the farthest right side of the seven-point scale) on a given item should indicate a favorable attitude. Once reverse-coding is complete, calculate the MHSAS mean score by adding the item scores together and dividing by the total number of answered items. The resulting mean score should range from a low of 1 to a high of 7. For example, if someone answers 9 of the 9 items, the mean score is produced by adding together the 9 answered items and dividing by 9. Likewise, if someone answers 8 of the 9 items, the total score is produced by adding together the 8 answered items and dividing by 8. Per Parent's 20% recommendation (2014; DOI: 10.1177/0011000012445176), a mean score should only be calculated for those respondents who answered at least 8 of the items. For more information about the MHSAS, please visit: http://DrJosephHammer.com

*Please visit http://drjosephhammer.com/research/mental-help-seeking-attitudes-scale-mhsas/ for information on how to administer, score, interpret, discuss the reliability and validity of, consider the limitations of, and obtain permission to use the MHSAS.

Evidence-Based Practice Attitude Scale

EBPAS© Gregory A. Aarons, Ph.D.

Reference:

Aarons, G. A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale. *Mental Health Services Research, 6*(2), 61-74.

The following questions ask about your feelings about using new types of therapy, interventions, or treatments. Manualized therapy refers to any intervention that has specific guidelines and/or components that are outlined in a manual and/or that are to be followed in a structured/predetermined way.

Fill in the circle indicating the extent to which you agree with each item using the following scale:

0	1	2	3	4
Not at All	To a Slight Extent	To a Moderate Extent	To a Great Extent	To a Very Great Extent

Item	0	1	2	3	4
1. I like to use new types of therapy/interventions to help my clients	○	○	○	○	○
2. I am willing to try new types of therapy/interventions even if I have to follow a treatment manual	○	○	○	○	○
3. I know better than academic researchers how to care for my clients	○	○	○	○	○
4. I am willing to use new and different types of therapy/interventions developed by researchers	○	○	○	○	○
5. Research based treatments/interventions are not clinically useful	○	○	○	○	○
6. Clinical experience is more important than using manualized therapy/treatment	○	○	○	○	○
7. I would not use manualized therapy/interventions	○	○	○	○	○
8. I would try a new therapy/intervention even if it were very different from what I am used to doing	○	○	○	○	○
For questions 9-15: If you received training in a therapy or intervention that was new to you, how likely would you be to adopt it if:					
9. it was intuitively appealing?	○	○	○	○	○
10. it "made sense" to you?	○	○	○	○	○
11. it was required by your supervisor?	○	○	○	○	○
12. it was required by your agency?	○	○	○	○	○
13. it was required by your state?	○	○	○	○	○
14. it was being used by colleagues who were happy with it?	○	○	○	○	○
15. you felt you had enough training to use it correctly?	○	○	○	○	○

Appendix A

Negative Attitudes towards CBT Scale

We are interested on your views on CBT. Please rate how accurate you find the following statements that clinicians have made elsewhere:

Cognitive behaviour therapy (CBT)...	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1) ... is dehumanizing	1	2	3	4	5	6	7
2) ... limits the therapist	1	2	3	4	5	6	7
3) ... uses a one-size-fits-all approach	1	2	3	4	5	6	7
4) ... is no more effective than using interventions that are based on my clinical expertise	1	2	3	4	5	6	7
5) ... asks the client to do homework that is too hard	1	2	3	4	5	6	7
6) ... does not work as well among patients from minority groups	1	2	3	4	5	6	7
7) ... is restricted by the use of treatment manuals and protocols	1	2	3	4	5	6	7
8) ... does not work for comorbid cases	1	2	3	4	5	6	7
9) ... is the therapist telling the client what to do	1	2	3	4	5	6	7
10) ... is too hard to implement in real-life settings	1	2	3	4	5	6	7
11) ... downplays emotions and over-emphasizes logical thought	1	2	3	4	5	6	7
12) ... doesn't focus on specific disorders	1	2	3	4	5	6	7
13) ... offers no hard evidence to support many of its claims	1	2	3	4	5	6	7
14) ... is superficial and does not get at the underlying core problems	1	2	3	4	5	6	7
15) ... only works for those who fit a specific profile	1	2	3	4	5	6	7
16) ... is too stressful for clients	1	2	3	4	5	6	7

NACS scoring key:

- All items are positively scored 1-7
- The Negative Attitudes towards CBT scale only has one factor.
- The overall score is the mean of all 16 items (total the 16 items and divide by 16).
- Up to two items can be missed from this scale, and the 25 scale mean can be adjusted accordingly. However, if more are missing, then the scores are invalid.

Autism Stigma and Knowledge Questionnaire

16. Autism is more frequently diagnosed in males than in females	Etiology		
48. The number of diagnosed cases of autism has increased over the past 10 years	Etiology		
36. Autism occurs more commonly among higher socioeconomic and educational levels	Etiology		
50. Autism is something that is very rare	Etiology		
19. Autism affects people of all races and ethnicities	Etiology		
53. The cause of autism is not yet known for sure	Etiology		
13. Autism happens mostly in middle class families	Etiology	Stigma	
9. It is important that all children diagnosed with autism receive some form of special education services at school	Treatment	Stigma	
22. The earlier treatment of autism starts, the more effective it tends to be	Treatment		
45. Early intervention demonstrates no additional benefit to children with autism	Treatment		
8. We now have treatments that can cure autism	Treatment		
20. Children with autism need extra help to learn	Treatment		
12. There is currently no cure for autism	Treatment		
21. Children with autism are never too old to benefit from treatment	Treatment		
42. Children with autism cannot learn any social skill	Treatment		
39. Early intervention can lead to significant gains in children with autism's social and communication skills	Treatment		

38. Behavior therapy is an intervention most likely to be effective for children with autism	Treatment	
11. Medication can alleviate the core symptoms of autism	Treatment	
27. Most children with autism are extremely impaired and cannot live independently as adults	Treatment	Stigma
17. Children with autism can grow up to live independently	Treatment	
2. Autism exists only in childhood	Treatment	
49. With the proper treatment, most children diagnosed with autism eventually outgrow the disorder	Treatment	
30. Autism holds a social stigma in some communities	Stigma	
31. In some communities, people would feel ashamed if someone in their family was showing symptoms of autism	Stigma	
5. There is a negative opinion towards children diagnosed with autism in some communities	Stigma	
1. I have prior knowledge of autism		

43. Many times children with autism get excessively focused on one thing	Diagnosis/symptoms		
41. A lot of children with autism have problems with being aggressive or hyperactive	Diagnosis/symptoms		
23. Children with autism do not enjoy the presence of others	Diagnosis/symptoms		
6. Children with autism may have strange reactions to the way things smell, taste, look, feel, or sound	Diagnosis/symptoms		
24. Most children with autism are also intellectually disabled	Diagnosis/symptoms		
32. Autism is a result of a curse or evil eye put upon/inflicted on the family	Etiology	Stigma	
51. Autism is caused by God or a supreme being	Etiology	Stigma	
47. Traumatic experiences very early in life can cause autism	Etiology		
33. Genetics plays an important role in the development of autism	Etiology		
35. Autism is a communication disorder	Etiology		
37. Autism is a developmental disorder	Etiology		
55. Autism is due to cold, rejecting parents	Etiology	Stigma	
26. Vaccinations cause autism	Etiology		
14. Autism is preventable	Etiology	Stigma	
52. Autism is a brain-based disorder	Etiology		
4. Autism tends to run in families	Etiology		

Item wording	Primary subscale	Secondary subscale	Original citation
3. Some children with autism may lose acquired speech	Diagnosis/symptoms		Al-Sharbati et al. (2015)
46. There is currently no medical test to diagnose autism	Diagnosis/symptoms		Kuhn and Carter (2006)
44. Many children with autism have difficulty using everyday language to communicate their needs	Diagnosis/symptoms		Kuhn and Carter (2006)
54. Many children with autism get upset if their routine is changed	Diagnosis/symptoms		Kuhn and Carter (2006)
28. Most children with autism may not look at things when you point at them	Diagnosis/symptoms		Campbell et al. (2014)
10. Some children with autism do not talk	Diagnosis/symptoms		Stone (1987)
40. Autism can be diagnosed as early as 18 months	Diagnosis /symptoms		Ables et al. (2011)
29. Some children with autism show intense interest in parts of objects	Diagnosis/symptoms		Bakare et al. (2008)
25. Many children with autism show the need for routines and sameness	Diagnosis/symptoms		Ables et al. (2011)
18. All children with autism usually have problems with aggression	Diagnosis/symptoms	Stigma	Campbell et al. (2014)
15. Many children with autism have trouble tolerating loud noises or certain types of touch	Diagnosis/symptoms		Kuhn and Carter (2006)
7. Many children with autism have trouble understanding facial expressions	Diagnosis/symptoms		Kuhn and Carter (2006)
34. Many children with autism repeatedly spin objects or flap their arms	Diagnosis/symptoms		Kuhn and Carter (2006)

Appendix B
Interview Guide

For autistic adolescents:

Thank you for being a part of our study! We want to find out how teenagers on the autism spectrum experience mental health services like therapy, and get help for managing their emotions. This can include getting help for your emotions and things that stress you out, and it also includes getting help for mental health problems like anxiety or depression. I want to learn what you think would make therapy better for autistic teens, and will ask some questions about your experiences and opinions. Let me know if you have any questions.

[Note to interviewers: make language adjustments as needed to match participants description of events]

1. Can you tell me about a difficult time you've had with your feelings or your mental health?

2. What did you do to try to feel better when you had a hard time with your feelings or your mental health?

3. Did you go to therapy or counseling? What was it like?
    a. Optional follow up prompts: How often did you go to therapy? When was this? What did you do in therapy? *(If needed, clarify mental health therapy as opposed to speech therapy, OT, ABA, etc.)*

4. What did you like or not like about your therapist or counselor?
    a. If teen only gives response to one part of question probe for the other (i.e., if they only state things they didn't like, ask if there was anything they did like and vice versa)

5. What kind of things did you do in therapy? What helped you?

6. What things did you do in therapy that didn't help you?

7. What do you wish therapists knew about working with teens on the autism spectrum?
    a. If teen has difficulty with this question, probe: What do you wish your therapists had known about autism?

8. What types of activities in therapy would be helpful for you?
    a. Probe: What kind of topics would be helpful to talk about?

9. One type of therapy or counseling is called cognitive-behavioral therapy. Have you ever heard of this type of therapy before?

   a. Follow up: Cognitive behavioral therapy is a type of therapy/counseling that focuses on understanding how our thoughts, behaviors, and feelings are all connected to each other. It helps us learn how we can change what we are doing, thinking, or feeling to feel better when our mental health isn't good. (*Show visual if needed, see slides)* Do you think this type of therapy/counseling would be helpful for you?

10. If participant seems to grasp CBT: What ways do you think therapists can make cognitive behavioral therapy better for autistic teenagers?
    a. If teen does not seem to grasp CBT, ask instead: What ways do you think therapists can make therapy better for autistic teenagers?
        1. You can also ask this as a follow-up if they do not seem to be sure how CBT could be better for teens

11. Is there anything else you would like to tell me about your experiences with getting help for your feelings, emotions, or mental health?

For clinicians:

Thank you for being a part of our study! We want to find out how community mental health clinicians work with teenagers on the autism spectrum, and specifically hope to understand what adaptations to cognitive behavioral therapy would be beneficial for autistic teens in community settings. I will ask some questions about your experiences and opinions as a clinician who has worked with autistic youth. Let me know if you have any questions.

1. What is your current job title and responsibilities? What is your caseload like?

2. What type of mental health concerns or other challenges do you typically treat?
    a. If mostly mentioning adjustment or general psychological distress → probe for specific mental health problems
    b. What therapy formats do you use (e.g., group, individual, family)?

3. Tell me about your experiences working with adolescents on the autism spectrum.
    a. How many autistic teens have you treated?
    b. What did you treat them for?
        1. If seems relevant, ask: What are common parent/caregiver concerns? What are common teen concerns?
    c. What treatment approach did you use?

4. What strategies have worked well when working with autistic teens?
    a. Optional probe: What strategies are helpful in establishing rapport with teens on the autism spectrum?
    b. Optional probe: What specific therapeutic techniques or modalities have been helpful?

5. What have been the challenges you have experienced in working with autistic teens?
    a. What therapeutic strategies have been unhelpful?
    b. Have you noticed barriers to implementing specific strategies or modalities? *(can reference things they have discussed earlier)*

Note: In question 4 or 5, can probe about format (i.e., group, individual, family treatment. Ask something like: You mentioned you do [group/family] therapy, what have been strengths or challenges in using this approach for autistic youth?)

6. What have been your experiences involving others in treatment (e.g., parents, other family members, teachers)?
    a. If needed, ask: Do you typically have parents or others in the session? How does that tend to work for autistic youth?

7. What has your education or training in working with autistic youth been like?
    a. Was the training helpful or effective? Why or why not?
    b. Optional probe if they report unhelpful or no training: What training/education do you wish you had had?

8. Do you think that cognitive behavioral therapy is a good fit for the teen clients on the autism spectrum that you have worked with? Why or why not?

9. What adaptations to CBT do you think would be beneficial for autistic clients?
    a. Can probe for adaptations to CBT content or strategies, adaptations to delivery method, adaptations to rapport building strategies, or other adaptations may be relevant based on interview so far

10. What tools or supports do you think would be beneficial in helping community therapists conduct CBT with autistic teens?

11. Is there anything else you would like to mention regarding your experiences with autistic youth and/or conducting CBT with this population?

Appendix C
Adolescent and Clinician Qualitative Codebooks

Adolescent Codebook.

Code	Description of Code	Example Quote
Increased Structure	Participant discusses the use of an increased level of structure in therapy sessions, such as using lists or visuals, sequential problem solving approaches (e.g., one thing at a time), or other strategies related to increasing the structure of the session	"I tend to almost um, I feel like sometimes my brain, umm works better when it almost has like a plan or schedule. Almost like for example I use like umm lists"
Independent coping strategies	Participant references any independent coping strategy that they use to manage emotions on their own (e.g., taking a break, taking deep breaths, art activities, music, etc.)	Let's see, I said music, sketching, um my animals, like playing with my pets and stuff, um let's see, music, um sketching, pets, and then something else, my legos, um like like playing with my fidgets
Internalizing problems	Participant references bringing any internalizing problems to therapy (e.g., anxiety, depression, somatic symptoms, low self esteem, etc.)	Yeah, so my separate anxiety was bad, so when like I was real young, I would like tear up the whole house, any time my mom would leave, I would tear up the whole house like y'all flipping TV's and stuff just because my mom was away.
Externalizing problems	Participant references bringing any externalizing problems to therapy (e.g., acting out behavior, yelling, anger control	Yeah, so my separate anxiety was bad, so when like I was real young, I would like tear up the whole house, any time my mom would leave, I would tear up the whole house like y'all flipping TV's and stuff just because my mom was away.
Rapport with therapist	Participant discusses their relationship/connection with their therapist, level of comfort, things the therapist does/does not do to increase comfort, etc. (can be positive or negative impressions)	"Xxx in-home therapist, I like that uh we have some things in common"
Games in therapy	Any reference to playing games (including traditional board games, therapy specific games, etc.) in the therapeutic context)	I remember there was a game where, xxx just like almost like board games, but I also remember there was like a game, where it's almost like, it was almost like I almost had to cover up certain things. Certain like shapes on a board and only use a certain amount

		of pieces. I don't know how, we just called it the Pirate game.
Fidgeting/doing something while talking	Reference to wanting to have something to do while in therapy other than just talking face to face. E.g., need to do something with your hands, need for a fidget	So like my hands like to do things. So it was kind of helpful to be able to like move around stuff.
Peer socialization/ communication	Any reference to peer difficulties. This can include troubles with peer communication, making friends, peer conflict, bullying, etc.	"Because I'm not, like, super social, I don't like almost like meeting new people or stuff like that."
Family conflict/ communication	Any reference to communication difficulties within the family. Can include miscommunication/conflict. Can also use this code to capture any involvement of parents/caregivers in therapy	Sometimes, like when I'm talking to like people, I almost like. I'm almost using a tone, even though I don't mean to use like the tone, so kind of like with my dad sometimes like I tell him stuff almost like a in a mean, almost like disrespectful tone and like sometimes I don't feel like I'm saying it in a disrespectful tone, and sometimes that makes me I get mad.
Talking about peer challenges in therapy	Specifically referencing that the child works on (or wants to work on) peer conflict, social skills, bullying, etc. in therapy	"So almost like after we got we fixed like my stress then we started working on on like the social interaction."
Worksheets/ handouts	Any time the participant is specifically discussing their feelings about using worksheets or handouts in therapy	"Then like worksheets cause I don't really like writing. It’s kind of like not my favorite subject"
Therapist style of presenting information	Reference to the way that the therapist presents information in therapy. This can include use of metaphor, visuals, etc.	"Maybe more like understanding, kind of almost like like almost like compare it to certain things like for example like a balloon"
CBT Opinion	Any discussion of what the participant thinks about CBT or how CBT should be utilized	"it’s like working on my thoughts, then process my behaviors, then my behaviors, my thoughts and behaviors process my feelings so then they work together and like like you can feel like you can not- notice how you’re how what’s happening around you, what’s your your reaction to everything."

Therapists using specificity in therapy	Participant discusses the idea that therapists should be specific in their suggestions or questions, or discusses that therapists should not be vague	I how like how do I say like how their questions how to answer their questions if you gotta be specific
Client directed	Reference to the idea that the client should be able to direct or lead the session. This includes references to the idea that clinicians should not push too hard or "make" adolescents talk about something they do not want to, the idea that the client can choose the topic of the session, making time to discuss the client's day to day worries, etc.	I like that she helped me, like go through it step by step to talk about it and not push me like just just talk about it all at once. She lets me get it out of the way I feel like the way I I want to.
Outlet for expressing emotions	Adolescent describes a specific outlet for expressing their emotions such as art	, I was in therapy in North Carolina, I had this therapist, in home therapist, so we were like, how would I put it? Yeah she took, she bought me this canvas, and she bought me some paint, so and she went 'cause that's what I like to paint. So she bought me this canvas and some paint. She told me to um paint like a emotion canvas, like emotion, and I made it like a weather emotion, like it was going like, up happy moods, down to sad moods, like how I feel, like how my emotions are
Trauma informed therapy	Reference to trauma and/or the importance of considering trauma in therapy	I: Is there anything else that you wish therapists knew about working with teens on the spectrum? P: Um, like how they like wanna talk about their trauma.
Therapy is helpful	Any reference to therapy being helpful or why therapy is helpful	we do a lot of coping like the stuff I told you that I cope w-, that I can help myself cope with, yeah we work on that and stuff, we find ways to cope and all that. I: Okay, cool. Is that helpful? P: It's helpful.
Therapy is not helpful	Any reference to therapy not being helpful or why it is not helpful	I told him I was like, I don't feel, I think I need to be discharged intensive in-home right now because like I'm progressing with it, but she's not like what would you say? She's

		not like actually teaching me or helping me cope with anything.
Ideas for therapy	Client's ideas about things they would like to do or talk about in therapy	I think it would be good if um they brought almost like the parent or guardian in with them for a couple sessions cause that's what my therapist did, and it helped.
Therapy setting/environment /frequency	Child refers to the physical environment of the therapy room and/or the telehealth experience, or talks about the frequency/length of their therapy sessions	It was quiet, you know? It was, it was nice and kind of serene. It was dark. Um I could take a nap in there if I wanted. Not that I would, but um
Individualizing treatment	This code captures any reference to how a clinician should personalize treatment or adapt it for a person's individual characteristics. This can include spending more time on some things than others based on what the person needs, etc. This code also includes reference to therapists understanding that autistic processing styles may differ from NTs AND the concept that everyone with autism is different	I mean everybody's different, but um maybe talk ab-, I guess. I wish everybody knew that like it's different for everybody. Um how they see things as different, you know, like perspectives, obviously, but and also how people like cope or you know react, you know it's not the same
Learning coping/ emotion reg strategies	reference to explicitly learning coping or emotion regulation strategies in therapy	I've gone to like a therapist to help with um, like a therapist to help with um like staying focused and how cope with like some anger and other feelings.
Learning problem solving in therapy	reference to learning problem solving skills in therapy	I liked how we tried to like we worked on almost fixing the problem.
Concerns about starting therapy	hesitation to start or any other concerns participant mentions about starting therapy	I feel like it could be difficult, like when before I started therapy, I thought it was, I thought it was like a idea I didn't really want to do. But I mean, once you do it, it's kind of it helps kind of like a lot.
Talking about interests in therapy	reference to talking about the client's own interests (including their passions/specific interests) in therapy	I told him I went to Virginia Tech football games.
No opinion	client does not have an opinion about a particular topic	That's hard. I have no idea.

Stress Source	Participant describes/identifies where stress occurs in daily life	" Um maybe with school. Or relationships with, you know, people some, you know, either disagreements or just with the school aspect, the amount of work I do, maybe."
Therapy Description	What the participant refers to as the use for therapy and how it works	" Yes, I remem- remember going to therapy um before COVID, so, and I haven't gone after besides the horse lessons, but I'm usually when we when I was in therapy, we kind of like talked about like certain things like how I dealt with certain emotions and and like ways to kind of deal with it and like, talk to somebody about it. Um nowadays, with the horse stuff, um it's kind of just finding right ways to cope or deal with emotions."
Therapy Timeline/history	Participant describes what therapy looked like for them through time	"Yeah then. Every year you take the yearly assessment. And then. They usually do things that they have at occupational therapy, which I had that when I was in my Pre-K through 7th grade year. Yeah, I had that through 7th grade."
Autism Description In Therapy	Participant describes talking about autism in therapy	"Me and my client hasn't really talked about autism pretty much."
Therapy Outcome	Specific reference to the outcome of being in therapy (what therapy did for me)	Um I don't, I don't know cause I feel like everything that I've been doing that like I did in thera-. All the problems I went for I feel like we're all fixed. Maybe my like, we were working on some like social interaction. Because I'm not, like, super social, I don't like almost like meeting new people or stuff like that.
Medication + Therapy	Participant describes the use of medication and therapy and its side effects	Don't feel like I have like all like for example, one of them was, uh, one of the problems that we were working on was me trying to focus better because I had taken like a medication.

Clinician Codebook

Code	Description of Code	Example Quote
Advantages of CBT	Clinician describes positive attitudes about using CBT for autistic youth , state it is effective in helping autistic patients, or describes specific benefits of CBT with autistic youth	"Um I think that it is helpful because it gets to the heart of those cognitive distortions and helping us challenge and reframe them and identify them. I think it helps us put um our ABCs is in order, our antecedents, behaviors and consequences so that they can see the logical progression of it. Um I think that all of those parts of it are super helpful"
Disadvantages of CBT	Clinician describes negative attitudes about using CBT with autistic youth, states ways that it is ineffective/unhelpful in treating autistic patients, or describes specific disadvantages of using CBT with autistic youth	" I think this is where CBT just falls short because I don't, I think it's only it, it's mostly concerned with the individual. And then I think we have to ask a question about what's the impact on others."
CBT + other modalities	Clinician describes using CBT in conjunction or combination with other modalities	"I think adding the DBT on top is helpful. Um I think that adding some mindfulness and some present focus focused-ness, that's not a word, but I'm going to make it one, um is very helpful to add to the CBT."
Environmental adaptations	Adapting therapy or CBT by making adjustments to the environment. Examples could include sensory adaptations, way that the room is set up, providing more control over the therapy space, and things related to adapting telehealth for autistic youth	my normal office, I have a couch and some pillows and a blanket and some soft stuff that they can snuggle with. We have a basket of fidget toys that they can play with and and fidget with and they have full control over all of those things.
Content adaptations	Changes to WHAT is delivered (i.e., specific content than clinicians spend more or less time on, strategies that clinicians use with autistic patients more or less than nonautistic patients)	Um like for some kids, it's like the emotion identification is very, very challenging. Like they just I, they know that they don't feel good. But they don't know why or they don't know how to describe it. So like giving them more language around that.

Adaptation for individual characteristics	Making adjustments to therapy based on what the clinician knows about the person's presentation (e.g., based on language level, cognitive level, etc.)	the only downside really that I see is it just depends on where they are on the, on the spectrum. You know if they're able to to process things. You know, in a certain way um and open to CBT, of course
Method adaptations	Changes to HOW content is delivered (e.g., using a visual schedule or adjusting how language is used in the session, having a shorter session length taking longer to get through information, using specific tools to present information or avoiding specific ways of delivering info like metaphors)	definitely adapting it to their verbal ability level. Um, leaning like potentially having to pare down the language a lot, make it a lot more concise
CBT Strategies	e.g. challenging automatic thoughts, exposure therapy, core beliefs, thought logs, identifying emotions, psychoeducation, relaxation techniques, "thinking traps" or cognitive distortions, behavioral activation, other CBT strategies	I think um I think identifying um the negative thought patterns, you know, the what ifs, the why's the shoulds, you know, all of those things I think are super helpful. Just to be really aware of those and I think being able to reframe them in a more positive way because um I tell people this all the time.
Other modalities	Clinician references using a modality other than CBT (e.g., DBT, ACT, EMDR, motivational interviewing, person focused, unconditional positive regard, gestalt, psychodynamic, any other description of a non-CBT intervention).	But I'm also trained in EMDR and I find that to be really helpful as well um with some, with some issues too not just with trauma, but even with anxiety and depression too"
Family involvement	Clinician describes involving family in treatment. Can include positive experiences, negative experiences, why they do or don't include families, the content of family sessions, family psychoeducation, family conflict, etc.	I prefer to meet with parents separately because I find that kids may be less likely to open up in front of their parents or parents are often in a mode of trying to get their kids to do things or force their kids to do things, and I don’t want that to be the dynamic of therapy

Building rapport with special interest	Clinician describes learning about special interests to build rapport or help patients to feel supported/cared for	"...a lot of them have um real passions for things, right? They get excited. They want to talk to you about it, you know."
Other rapport building	Clinician describes strategies for rapport building that do not relate to special interests (e.g., games, music, any other strategy they describe in the rapport building process	Um and so we spend a good amount of time building rapport, and I use a dice game. So I have a a 20 sided dice um that we will roll and I have created a little questionnaire that has 20 questions on it and we roll the dice and we both answer the question
General strategies	Strategies that clinicians use that are not specific to any particular treatment modality. E.g., use of patience and consistency or other very general overarching strategies	"...it is a lot of patience and it is a lot of consistency and reinforcement because they are struggling with a lack of support everywhere else..." -718
Advocacy	Reference to the importance of advocacy for autistic youth	"They often come in reporting difficulties at home, at school um and really benefit from support in those places with advocacy and with um trying to get accommodations and 504 plans and IEP's in place and stuff like that." | " I think um I mean I've had teachers um and professionals who have been really fantastic advocates for young people, um for adolescents on the spectrum"
Internalizing concerns	Clinician describes internalizing concerns that they treat such as depression, anxiety, OCD, low self-concept	anxiety, just a lot of general or social anxiety
Externalizing concerns	Clinician describes externalizing concerns that they treat such as behavior problems, hyperactivity or impulsivity, etc.	"I mean they could be lots of different things it might be truancy, just re-refusing to go to school, um not able to get to school um sometimes it was aggression, aggression in the household
Trauma	Clinician describes treating traumatic stress or PTSD, or	Um and then for some of the bullying and the trauma that go

	using facets of trauma-informed care	with it, I will use my EMDR for them as well.
Social and communication concerns	Clinician references social or communication concerns	Social stuff. Um trouble getting along at school, trouble developing friendships, feeling lonely
RRBs	Clinician references restricted and repetitive behaviors and interests *as a presenting concern*	At 10 years old he liked to twirl down the hallway and he liked to chew on his clothes
Provider preparation/training	Provider's previous education/training, including general training as well as specific training or preparation for working with autistic youth. Can also use this code if clinicians describe LACK of training or preparation. For training needs code "provider training suggestions/needs"	"So I didn't get any specific training on it when I went to grad school, like when I went to go get my masters this was not a thing that we talked about."
Provider training suggestions/needs	description of specific types of training or didactic resources clinicians would like to have, including qualities that make a good training, or other suggestions regarding clinician needs for training or resources to treat autistic youth	"I think trainings...I think um more funding to to have more of the things in the room that support them. So like all of the soft, fuzzy things that my clients tend to gravitate toward are things that I paid for." | "It would also be super helpful to have access to information that is digestible that we could give to parents." | " I think there's a real need for more group work, group therapy modalities getting other kids with particular lived experience"
Neurodivergent or autistic identity	Reference to either positive or negative perceptions on autistic identity or neurodiversity. Can also include autism self-diagnosis, the neurodivergent community broadly, etc. Can also include reference to leveraging autistic strengths	"a lot of that is shifting towards like uh neurodiverse, affirming viewpoints from them"

Challenges of working with autistic youth	Clinician describes challenges that are specific to working with youth on the autism spectrum. Can include systemic challenges but can also include challenges specific to the way autism presents such as rigidity	I think the the biggest challenge is working through um that cognitive rigidity um or rig- rigidity in thought um it's tough, right? You know, if um and kind of like working through that mindset um and understanding that progress
Stigma and misconceptions about autism	Any reference to stigma or misconceptions about autism from families, community providers, etc.	"When they come in for individual, they're always in tears by the end of session because they feel so unsupported and and misunderstood at home because to their family, autism is not a a valid diagnosis. Autism is not a valid thing, and they should just be able to suck it up and deal with it and do what is being asked of them." | "um lack of understanding about the diagnosis itself and an expectation that medication is going to fix everything."
Lack of support for autistic youth	Identification that youth on the autism spectrum do not have strong community supports	"...lack of support from other providers, lack of support at the school, lack of support from parents..."
Collaborating across service systems and access issues	Clinician references barriers that patients face in accessing care, including structural barriers, trouble navigating systems, etc. Also can use this code to capture general experiences in collaborating across service systems (e.g. with schools, medical doctors, etc.)	"ABA therapy not super available in this area. Not super easy to get our hands on, especially not ones that go into the schools or ones that do in home work there, I think there's a company in Roanoke that you can go to their office and they do it within their own office. But I don't know that they do a lot of community based stuff and they often don't come to the NRV to do it either"