

CBT for Social-Emotional Problems in Adolescents with NVLD

A Narrative Study

Ariel Miller

New York University

Abstract

This study will focus on NVLD youth's experiences before, during, and after receiving cognitive behavioral therapy (CBT) for social and emotional problems. This study examines a) how adolescents with NVLD experience cognitive behavioral approaches b) how they discuss treatments that help them communicate in positive emotional and social ways c) how they describe the impact of CBT treatments on their response to social experiences and coping with difficult emotions. The participants for this study are eight to ten people ages 15 to 18 with NVLD. I plan to interview participants and give them surveys about their experiences before, during, and after treatment. After conducting interviews, I will analyze my interview data through categorizing and contextualizing analyses, ultimately combining the two for a more comprehensive understanding of the participants and their experiences (Maxwell, 2013).

Keywords: Adolescents, Autism Spectrum Disorder (ASD), Cognitive Behavioral Therapy (CBT), Emotional Problems, Narrative Study, Nonverbal Learning Disability (NVLD), Social Problems

CBT for Social-Emotional Problems in Adolescents with NVLD

A Narrative Study

Table of Contents

Abstract	2
CBT for Social Emotional Problems in Adolescents with NVLD A Narrative Study	3
Nonverbal Learning Disability (NVLD)	5
Problem and Purpose Statements	5
<i>Purpose Statement</i>	<i>7</i>
Research Questions.....	7
Mini Literature Review: A Qualitative Approach to Social and Emotional Problems in Nonverbal Learning Disorder (NVLD).....	9
<i>Social and Emotional Deficits in People with NVLD</i>	<i>9</i>
<i>Autism Spectrum Disorder (ASD) in NVLD Research.....</i>	<i>11</i>
<i>The Treatments: Cognitive Behavioral Therapy and Drama Interventions.....</i>	<i>12</i>
<i>The Studies.....</i>	<i>12</i>
<i>Conclusion</i>	<i>13</i>
Research Design.....	14
<i>Overall Research Design.....</i>	<i>14</i>
<i>Data Collection Methods.....</i>	<i>14</i>
<i>Site Selection and Participants.....</i>	<i>15</i>
<i>Researcher Positionality.....</i>	<i>15</i>

<i>Data Analysis</i>	16
<i>Validity</i>	17
Conclusion	18
References	19

Nonverbal Learning Disability (NVLD)

Nonverbal Learning Disability (NVLD) is not a widely known or understood learning disability (The NVLD Project, 2019). In fact, NVLD, which currently is not in the DSM-5 (The Diagnostic and Statistical Manual of Mental Disorders), frequently goes undiagnosed or misdiagnosed (The NVLD Project, 2019). Accordingly, many people with NVLD, feel misunderstood by their peers, which causes social and emotional issues. While research documents that adolescents with NVLD have social and emotional issues Galway & Metsala, 201; Metsala, Galway, Ishaik, & Barton (2016), there is insufficient information on treatment for social and emotional problems in adolescents with NVLD (Dhanalakshmi, 2015; Margolis, Pagliaccio, Thomas, Banker, & Marsh, 2019; Petti, Voelker, Shore, Hayman-Abello, 2003; Semrud-Clikeman, Fine, & Bedsoe, 2016). Consequently, treatment for social and emotional difficulties in adolescents with NVLD is essential. Thus, this study will focus on NVLD youths' experiences with cognitive behavioral interventions geared specifically towards helping them navigate the social world and successfully cope with their emotions.

Individuals with NVLD struggle in some of the following areas: nonverbal communication, reading social cues, understanding social interaction, motor skills, attention, organization, spatial awareness, remembering visual information, and executive functioning (The NVLD Project, 2019). They are often ostracized, isolated, and marginalized (The NVLD Project, 2019). As a result, they not only can encounter social barriers, but also can suffer emotional turmoil in the forms of anxiety and depression (The NVLD Project, 2019).

Problem and Purpose Statements

There is more research on social and emotional issues related to Autism Spectrum Disorder (ASD) than there is on Nonverbal Learning Disability (NVLD). A vast amount of the

research also examines ASD and NVLD conjointly. ASD, like NVLD, is a developmental disorder characterized by social deficits (National Institute of Mental Health, n.d.). Even though the *Diagnostic Statistical Manual of Mental Disorders* (DSM-5), the encyclopedia for diagnosing mental disorders, recognizes ASD as a valid diagnosis, it does not include NVLD. Consequently, there is a greater extent of research on social and emotional issues on ASD than there is on NVLD. This gap has not been acknowledged in existing research. Despite the overlap between ASD and NVLD, they are distinct diagnoses. For instance, people with ASD are inclined to have more prominent and severe social problems (University of Michigan, 2012). This study will supplement the sparse body of literature on NVLD, helping distinguish it from ASD and increase people's understanding of this underrepresented disorder.

Despite evidence that people with NVLD have social and emotional deficits, there is insufficient research on treatments for these struggles (Dhanalakshmi, 2015; Galway & Metsala, 2010; Margolis, Pagliaccio, Thomas, Banker, & Marsh, 2019; Metsala, Galway, Ishaik, and Barton (2016); Petti, Voelker, Shore, Hayman-Abello, 2003; Semrud-Clikeman, Fine, & Bedsoe, 2016). The only existing study on treatment for NVLD youth with social difficulties by Guli, Semrud-Clikeman, Lerner, and Britton (2013) shows a lack of research on interventions for social and emotional difficulties in NVLD. Giuli et al. observed the aftermath of participation in a Social Competence Intervention Program (SCIP). SCIP uses creative drama to treat social difficulties in children with ASD, NVLD, and/or ADHD (Guli et al., 2013). With this intervention, 75% of children reported one or more positive effects" which comprised an improvement in their ability to make friends, understand human emotion, and decipher nonverbal cues (Guli et al., 2013, pp. 41). The efficacy of this SCIP intervention illustrates the impact of treatment on the social experiences of people with NVLD. Additionally, social interventions like

SCIP call for further research on various treatments for social difficulties in people with NVLD. The insufficient information of treatments for social and emotional problems in NVLD intensifies the need for further research. Most importantly, this research will benefit people with NVLD, giving clinicians the information on treatments that help people with NVLD, helping them have more positive prosocial experiences.

Similar to drama intervention, cognitive behavioral therapy (CBT) also helps improve social functioning. CBT is a type of psychological treatment that has been substantiated by research to be helpful for a range of problems including depression and anxiety (American Psychological Association, n.d; Carpenter et al., 2018; Keles & Idsoe, 2018; Westra & Constantino, 2016). Maddox, Miyazaki, and White (2016) noticed an improvement in social functioning while observing the change in social skills in adolescents with ASD after they received CBT treatment. A cognitive behavioral approach to social skills and anxiety can lead to longstanding improvements in social functioning.

Purpose Statement

The purpose of this narrative study is to understand the efficacy of cognitive behavioral therapy (CBT) for social and emotional difficulties in adolescents with NVLD at three high schools: a mainstream school, one for students with general learning disabilities, and the other for people with NVLD and ASD. At this stage in the research, the efficacy of CBT for social and comorbid emotional difficulties in adolescents with NVLD will be generally defined as improvements in the social experiences and emotional management of adolescents with NVLD as reflected in reports from interviews and surveys.

Research Questions

- 1) How are cognitive behavioral treatments experienced by adolescents with NVLD?

1a) How do adolescents with NVLD describe their experience with treatments?

1b) How do adolescents with NVLD describe positive social experiences and supports?

This question will address how adolescents with NVLD experience cognitive behavioral treatments. This information does not currently exist in the literature. NVLD youth's perspective is important to drive future treatment.

2) How do adolescents with NVLD describe treatments which support their ability to interact in positive emotional and social ways?

2a) How do adolescents with NVLD describe these treatments?

2b) How do adolescents with NVLD describe their experiences with CBT treatments before and after receiving them?

This question will illuminate how adolescents with NVLD view treatments that support their ability to communicate in a more positive and prosocial manner. The outlook of adolescents with NVLD on these supportive treatments is absent from current literature and is crucial for prospective interventions.

3) How do adolescents with NVLD describe the impact of CBT on their response to social experiences and coping with difficult emotions?

3a) How do adolescents with NVLD describe the way they coped with difficult social experiences and emotions in the past?

This question will demonstrate how NVLD youths perceive the effect of CBT on their reaction to social situations and managing challenging emotions. This information does not currently exist

in the literature. The impact of these treatments on how adolescents with NVLD respond to social experiences and manage their emotions is essential for determining effective future treatments.

Mini Literature Review: A Qualitative Approach to Social and Emotional Problems in Nonverbal Learning Disorder (NVLD)

Social and Emotional Deficits in People with NVLD

The literature on Nonverbal Learning Disorder (NVLD) illustrates that people with NVLD struggle both socially and emotionally (Dhanalakshmi, 2015; Galway & Metsala, 2010; Margolis, Pagliaccio, Thomas, Banker, & Marsh, 2019; Petti, Voelker, Shore, Hayman-Abello, 2003; Semrud-Clikeman, Fine, & Bedsoe, 2016). Galway and Metsala (2010) illustrate these social difficulties in their comparison of social cognitive skills in children with NVLD to normally achieving (NA) children as well as the relationship between social cognitive skills and psychosocial adjustment. NA children denotes participants without a learning disability diagnosis (Galway & Metsala, 2010). While the children with NVLD had the same “repertoire of competent responses as their peers”, these youth participants did not believe that these responses would yield successful outcomes. Consequently, the NVLD youth participants had the most difficulty with formulating “competent solutions to problems” (Galway & Metslala, 2010, pp. 33, 42). According to Galway and Metsala (2010), presumably, the participants’ trouble with “response decision processes” led to them less often selecting competent responses and thereby, fewer successful outcomes in social situations. While Galway and Metsala (2010) demonstrate that NVLD have social difficulties, they do not discuss any specific treatments for these

problems. The social difficulties that people with NVLD face present the need for interventions that concentrate on these problems.

Individuals with NVLD also experience emotional issues and are more predisposed to internalizing disorders such as social withdrawal and depression (Dhanalakshmi, 2015; Petti et al., 2003; Semrud-Clikeman et al., 2016). Metsala, Galway, Ishaik, and Barton (2016) establish the connection between social and emotional difficulties. After examining a clinic-referred group of children with NVLD, Metsala et al. (2016) discerned that social cognitive deficits in children with NVLD have a harmful effect on social competence, which causes “clinically concerning levels” of social isolation and depression (p.609). Social cognitive skills refer to the ability to accurately recognize and comprehend social cues as well as effectively implement them into real-life situations (National Institute of Mental Health, n.d.). These social cognitive deficits involve emotion processes, such as emotion regulation, recognition, and understanding (Metsala et al., 2016). The social and emotional problems evident in children with NVLD illustrate why interventions that address these issues are necessary.

Metsala et al. (2016) also found that children with NVLD had trouble assessing facial expressions and understanding “how emotions work” as well as regulating their emotions (p. 612), resulting in these children having below-average social skills. This research, while illuminating in terms of the struggles youth with NVLD face, does not entirely consider potential solutions that are available for youth with NVLD and the implementation of these interventions. Amongst the need for research on interventions for youth with NVLD is another issue: how current research on NVLD is framed.

Autism Spectrum Disorder (ASD) in NVLD Research

NVLD is often studied alongside another developmental disorder called Autism Spectrum Disorder (ASD). ASD is a neurodevelopmental disorder that impacts communication and interaction with others as well as behavior (National Institute of Mental Health, 2018). With limited research on NVLD, studies on ASD frequently arise when searching for literature on NVLD. People with NVLD share some of these deficits, specifically in the social realm. Margolis, Pagilaccio, Thomas, Banker, and Marsh (2019) affirm the similarities between NVLD and ASD, stating that NVLD “is a putative neurodevelopmental disorder characterized by spatial processing deficits as well as social deficits similar to those characteristics of autism spectrum disorder (ASD)” (p. 135). Additionally, Dinklage (2019) refers to a study by the Yale Child-Study Group, which shows that children who have NVLD and ASD are “socially awkward” and are overly detail oriented.

Despite these similarities, NVLD and ASD are distinct diagnoses. People with NVLD and ASD contrast in the severity of the individual’s social deficits and behaviors. An ASD diagnosis is for individuals who have a more severe “social impairment and behavioral rigidity” (Dinklage, 2019). Dinklage (2019) notes that some symptoms of NVLD may coincide with High Functioning Autism (HFA), a term used to classify individuals with Autistic Disorder (AD) or PDD-Not Other Specified (PDD-NOS) (de Giambattista, Ventura, Trerotoli, Margari, Palumbi, 2019). HFA is separate from low-functioning autism “in terms of clinical presentation, prognosis and need of support and assistance in daily life” (de Giambattista et al., 2019). The discrepancies between ASD and NVLD highlight a significant gap in the literature and call for further research on NVLD, as a distinct condition with its own body of research. Though research on NVLD

needs separation from ASD, people with NVLD and ASD can benefit from comparable treatments.

The Treatments: Cognitive Behavioral Therapy and Drama Interventions

Cognitive Behavioral Therapy (CBT) is a form of psychotherapy that attends to the patient's problems as well as increases quality of life by addressing dysfunctional behaviors, emotions, and thinking patterns (Psychology Today, n.d.). Studies have also established that CBT can help people with ASD manage social deficits in addition to depression and anxiety (Lindgren & Doobay, 2011, p. 15).

Drama-based group interventions also help nurture the development of social skills. Drama activities are a specifically effective intervention for people with NVLD, as they help access social perception abilities, target social cognition, and highlight relationships (Giuli, Semrud-Clikeman, Lerner, & Britton, 2013).

The Studies

In their studies, Giuli et al. (2013) and Maddox, Miyazaki, & White (2016) corroborated the positive effects of treatments on social functioning in children with ASD and NVLD. Giuli et al. (2013) conducted a study on children with ASD, NVLD, and or Attention Deficit Hyperactivity Disorder (ADHD) after participating in the Social Competence Intervention Program (SCIP), a “creative drama-based group intervention” (p. 37). Through SCIP, Giuli et al. (2013) compared changes in the social competence and perception as well as “observed social behavior” of children with ASD, NVLD, and/or ADHD to those in a clinical control group (p. 37). According to Guli et al. (2013), drama activities are successful interventions because they center on relationships and as a result, hinge on social cognitive processes, thereby improving social perception and skills. Ultimately, participants who received the treatment improved significantly

in the areas of observed social behavior in comparison with the control group (Giuli et al., 2013). Maddox et al. (2016) also discovered the benefits of treatment on social functioning for adolescents with ASD and anxiety in a randomized control trial of CBT throughout 3-month and 1-year follow-ups (p. 3872). Maddox et al. (2016) concluded that CBT that focuses on anxiety and social skills can promote longstanding “improvements in social functioning” for youth with ASD. Thus, the findings of these studies demonstrate that treatments, including CBT that address social skills, social anxiety reduction, and drama activities can engender lasting improvements in social and emotional functioning in people with NVLD and ASD (Maddox et al, 2016; Giuli et al., 2013).

Giulli et al. (2013) is the only existing study that addresses treatments for social problems in people with NVLD. Accordingly, expanding these findings with further research is necessary to develop the variety of evidence-based treatments to help people with NVLD have positive social experiences. Maddox et al. (2016) adds to the significant amount of research that has substantiated CBT as an effective treatment for social deficits in people with ASD. However, there are no studies that examines the effects of CBT on the social and emotional experiences of people with NVLD. Therefore, further research is crucial to fill in this literature gap and subsequently, help individuals with NVLD cope emotionally and have successful social experiences.

Conclusion

As this review demonstrates, much of the information on the efficacy of treatments for social issues focuses on ASD. Giuli et al. (2013) is the lone study that discusses interventions for social problems in regards to NVLD. By interviewing adolescents with NVLD on their social

and emotional experiences before and after receiving various treatments, this study will help the fill the gap of literature on NVLD.

Research Design

Overall Research Design

A vast amount of the literature on Nonverbal Learning Disorder (NVLD) focuses on academic success, while overlooking the social and emotional problems with which some people with NVLD encounter. This qualitative study helps fill this research gap through a narrative approach, interviewing adolescents with NVLD about their social and emotional experiences before, during, and after receiving CBT treatment. Through narrative, this study not only elucidates the effects of CBT treatment for people with NVLD, but also helps shed light on this underrepresented and misunderstood population.

Data Collection Methods

Data collection for this proposed study is in the form of interviews and surveys. I plan to conduct three one-on-one in-depth interviews regarding the social and emotional experiences of the participants, one before treatment, one during, and one after. I chose the in-depth interview to “give[s] contour” the “experience and life” of the participants, shedding light on the difficulties and barriers adolescents with NVLD encounter (Marshall and Rossman, 2016, pp. 153). . Additionally, through interview, one gains a three-dimensional picture of each participant from their words and described experiences (Creswell, 2018). Participants will also receive surveys before during and after CBT treatment. These surveys will include open-ended questions reflecting their social experiences before, during and after treatment (Hewitt, 2013). The survey questions will also address coping techniques with distressing emotions resulting from negative social experiences. Ultimately, these interviews and surveys will help people better understand

people with NVLD by illuminating the struggles with NVLD face socially and emotionally as well as how they respond to various treatments.

Site Selection and Participants

The participants for this study are eight to ten people ages 15 to 18 with social and emotional difficulties who have NVLD. Adolescents over the age of 15 can critically assess how CBT impacts their social and emotional experiences. This study takes place at three independent private high schools, 1) a school for people with NVLD and Autism Spectrum Disorder (ASD) with 80 students, 2) a school for people with learning disabilities with 430 students, and 3) a mainstream school with 600 students. Conducting this study at three diverse schools illustrates the effect of an individual's environment on their social relationships and emotional experiences.

Before beginning this research and prior-to the commencement of the school year, I will use the method of purposive sampling to speak to the psychologist in each school to help me recruit (or locate) two to three students with NVLD (Maxwell, 2013, pp. 97). I will ask these students if they are willing to receive CBT treatment for social and emotional difficulties and be interviewed in the form of surveys and a one-to-one interview. I will also change the names of the participants in order to protect their privacy. After getting the consent of the students (and their families) from each school, my research will begin.

Researcher Positionality

I will build relationships by establishing trust with participants. A trusting bond can form by showing genuine interest in each participant, especially in the beginning of the research. Some of the ways I plan to build relationships and a trusting bond with my participants are spending time with them and having informal conversations as way to get to know them prior to interviewing. Getting to know participants helps me foster a caring connection and a trusting

foundation for the relationship (Marshall & Rossman, pp. 153). At the end of each interview, I plan to thank participants. I would thank my participants by helping each of them with their schoolwork (Maxwell, 2013). By giving to my participants in exchange for their contribution to my study, I am showing them that their involvement has been valuable and worthwhile. Therefore, giving thanks to my participants helps maintain a reciprocal connection and create trust.

Data Analysis

After conducting interviews, I will closely examine specific changes in NVLD youth participants' social and emotional functioning before, during, and after CBT treatment. This type of evaluation calls for a categorizing analysis, an in-depth examination of the elements that contribute to these participants' experiences prior to, throughout, and following CBT treatment (Maxwell, 2013). I will start my analysis by creating coding categories, coding data, and building matrices (Maxwell, 2013). Elements such as coping skills, friendships, and social withdrawal versus social activity will be coded. By categorizing information from my interviews, I can focus on certain aspects of this data, illuminated by my research design and commentary from participants (Maxwell, 2013). However, categorizing analysis does not demonstrate the intricacies of social withdrawal versus social activity, for example, which may include information from other elements such as coping skills (Maxwell, 2013). Thus, a supplementary method of analysis is necessary (Maxwell, 2013).

A mode of analysis that captures these intricacies is narrative summary (Maxwell, 2013). Narrative summaries are analytical synopses of participants' accounts. Through these narrative summaries, I can uphold the story and context of the participants' progress before, after, and during CBT treatment (Maxwell, 2013). In these summaries, I will use several quotes from the

interviews to reflect on the participants' experiences in their CBT treatment and the growth they have made.

While narrative summaries will portray the context and story of the participants' development in their treatment, it may not be helpful in lucidly communicating the meaning of this progress for NVLD youth. Therefore, the next step in this analysis is to combine the results of the categorizing and contextualizing analyses to further expand on the elements characterized in the matrices (Maxwell, 2013). The concepts I will focus on in the categorizing analysis will allow me to see new, more nuanced contextual relationships beyond the chronological order of events portrayed in the narratives (Maxwell, 2013). Ultimately, merging narrative summaries with coding and matrices will allow me to attain a more comprehensive understanding of the participants and their experiences (Maxwell, 2013).

Validity

I will establish validity through long-term, intensive involvement and respondent validation (Maxwell, 2013). By interviewing NVLD youths before, during, and after CBT treatment and staying present in the research field throughout the time of the study, I can help prevent untenable connotations of the interviews and thereby increase the validity of my research (Maxwell, 2013). I will also conduct respondent validation by the means of "member checks", continuously acquiring feedback about my notes and deductions from my participants (Maxwell, 2013). By coordinating with NVLD youths, I can eliminate the potential of misconstruing the implications of their statements and perceptions on their experiences (Maxwell, 2013). These "member checks" will also help me pinpoint my biases and thus, improve my understanding of NVLD youth's experiences (Maxwell, 2013).

Conclusion

This study aims to explore the effects of CBT on the social and emotional experiences of adolescents with NVLD through interviews and surveys conducted before, during, and after treatment. Research on intervention is imperative and necessary, as people with NVLD experience social barriers and emotional distress in the forms of anxiety and depression. While much of the current research affirms that people with NVLD experience social hurdles and emotional troubles, it does not fully address treatments for social and emotional difficulties NVLD youth. Accordingly, this study will fill in this research gap by providing information on the impact of CBT on the social and emotional functioning of NVLD youth.

This research brings to light a misunderstood disorder that has yet to achieve recognition as a valid diagnosis. The Diagnostics Statistical Manual of Mental Disorders (DSM-5), the encyclopedia for diagnosing mental disorders, recognizes ASD as a valid diagnosis, but does not include NVLD. As a result, there is a larger amount of research on social and emotional problems on ASD than there exists on NVLD. This gap has not been acknowledged in existing research. The multitude of research on ASD versus the dearth of literature on NVLD highlights another vacuity in present literature. ASD and NVLD are often studied together though NVLD is a separate condition. This study, which solely focuses on NVLD helps to separate NVLD and ASD, showing NVLD as an independent disorder with its own library of research. In addition, information on CBT for social and emotional difficulties will also help educate clinicians on the benefits of this therapy for people with NVLD. In this way, this study can help reduce the potential for individuals with NVLD to go through the loneliness, alienation, and despair that others have suffered.

References

- American Psychological Association. What is Cognitive Behavioral Therapy? (n.d.). Retrieved from <https://www.apa.org/ptsd-guideline/patients-and-families/cognitive-behavioral>.
- Carpenter, J. K., Andrews, L. A., Witcraft, S. M., Powers, M. B., Smits, J. A. J., & Hofmann, S. G. (2018). Cognitive behavioral therapy for anxiety and related disorders: A meta-analysis of randomized placebo-controlled trials. *Depression and Anxiety*, 35(6), 502–514. doi: 10.1002/da.22728
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: choosing among five approaches*. Thousand Oaks, CA: SAGE.
- de Giambattista, C., Ventura, P., Trerotoli, P., Margari, M., Palumbi, R., & Margari, L. (2019, January). Subtyping the Autism Spectrum Disorder: Comparison of Children with High Functioning Autism and Asperger Syndrome. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6331497/>
- Dhanalakshmi, D. (2015). Nonverbal Learning Disabilities. *Indian Journal of Health and Wellbeing*, 6(1).
- Dinklage, D. (2019, May 1). Aspergers Disorder and Non-Verbal Learning Disabilities: How Are These Two Disorders Related to Each Other? Retrieved from <https://www.aane.org/aspergers-disorder-non-verbal-learning-disabilities-two-disorders-related/>
- Galway, T. M., & Metsala, J. L. (2010). Social Cognition and Its Relation to Psychosocial Adjustment in Children With Nonverbal Learning Disabilities. *Journal of Learning Disabilities*, 44(1), 33–49. doi: 10.1177/0022219410371680

- Guli, L.A., M. Semrud-Clikeman, Lerner, M.D., Britton, N. (2013). Social Competence Intervention Program (SCIP): A pilot study of a creative drama program for youth with social difficulties. *The Arts in Psychotherapy*, 40, 37–44.
- Hewitt, K. (2013, March 6.) *Surveys as Qualitative Research Method*. Retrieved from https://www.youtube.com/watch?v=_j22s2PuPQk&feature=emb_title
- Keles, S., & Idsoe, T. (2018). A meta-analysis of group Cognitive Behavioral Therapy (CBT) interventions for adolescents with depression. *Journal of Adolescence*, 67, 129–139. doi: 10.1016/j.adolescence.2018.05.011
- Lindgren, S.D., & Doobay, D.A. (2012). Evidence-Based Interventions for Autism Spectrum Disorders.
- Maddox, B. B., Miyazaki, Y., & White, S. W. (2016). Long-Term Effects of CBT on Social Impairment in Adolescents with ASD. *Journal of Autism and Developmental Disorders*, 47(12), 3872–3882.
- Margolis, A. E., Pagliaccio, D., Thomas, L., Banker, S., & Marsh, R. (2019). Salience network connectivity and social processing in children with nonverbal learning disability or autism spectrum disorder. *Neuropsychology*, 33(1), 135–143. doi: 10.1037/neu0000494
- Marshall, C., & Rossman, G. B. (2016). *Designing qualitative research*. Los Angeles: Sage.
- Maxwell, J. A. (2013). *Qualitative research design an interactive approach*. Thousand Oaks (Calif.): SAGE Publications.
- Metsala, J. L., Galway, T. M., Ishaik, G., & Barton, V. E. (2016). Emotion knowledge, emotion regulation, and psychosocial adjustment in children with nonverbal learning disabilities. *Child Neuropsychology*, 23(5), 609–629. doi: 10.1080/09297049.2016.1205012

Moskowitz, G.B. (2005). *Social Cognition: Understanding Self and Others*. New York, NY: Guilford Press.

The NVLD Project. Non-Verbal Learning Disability. (2019). Retrieved from <https://nvld.org/non-verbal-learning-disability/>

National Institute of Mental Health. (n.d) Autism Spectrum Disorder. Retrieved from <https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index.shtml>

Petti, V., Voelker, S., Shore, D.L., & Hayman-Abello, S.E. (2003). Perception of Nonverbal Emotion Cues by Children With Nonverbal Learning Disabilities. *Journal of Developmental and Physical Disabilities*, 15(1). doi: 10.1023/A:1021400203453

Psychology Today. (n.d) Cognitive Behavioral Therapy. Retrieved from <https://www.psychologytoday.com/us/basics/cognitive-behavioral-therapy>

Semrud-Clikeman, M., Walkowiak, J., Wilkinson, A., Minne, E.P. (2010). Direct and Indirect Measures of Social Perception, Behavior, and Emotional Functioning in Children with Asperger's Disorder, Nonverbal Learning Disability, or ADHD. *Journal of Abnormal Child Psychology*. 38:509–519. doi: 10.1007/s10802-009-9380-7

The NVLD Project. Non-Verbal Learning Disability. (2019). Retrieved from <https://nvld.org/non-verbal-learning-disability/>

United States Environmental Protection Agency (EPA). ACE: Health - Neurodevelopmental Disorders. (2019, October 16). Retrieved from <http://www.epa.gov/americaschildrenenvironment/ace-health-neurodevelopmental-disorders>

University of Michigan. Non-Verbal Learning Disability (NLD or NVLD): Your Child. (2012). Retrieved from <http://www.med.umich.edu/yourchild/topics/nld.htm>

Westra, H. A., Constantino, M. J., & Antony, M. M. (2016). Integrating motivational interviewing with cognitive-behavioral therapy for severe generalized anxiety disorder: An allegiance-controlled randomized clinical trial. *Journal of Consulting and Clinical Psychology, 84*(9), 768–782. doi: 10.1037/ccp0000098

.

