THE COMORBIDITY OF ATTENTION-DEFICIT HYPERACTIVITY DISORDER AND AUTISM SPECTRUM DISORDER IN CHILDREN AND ADOLESCENTS

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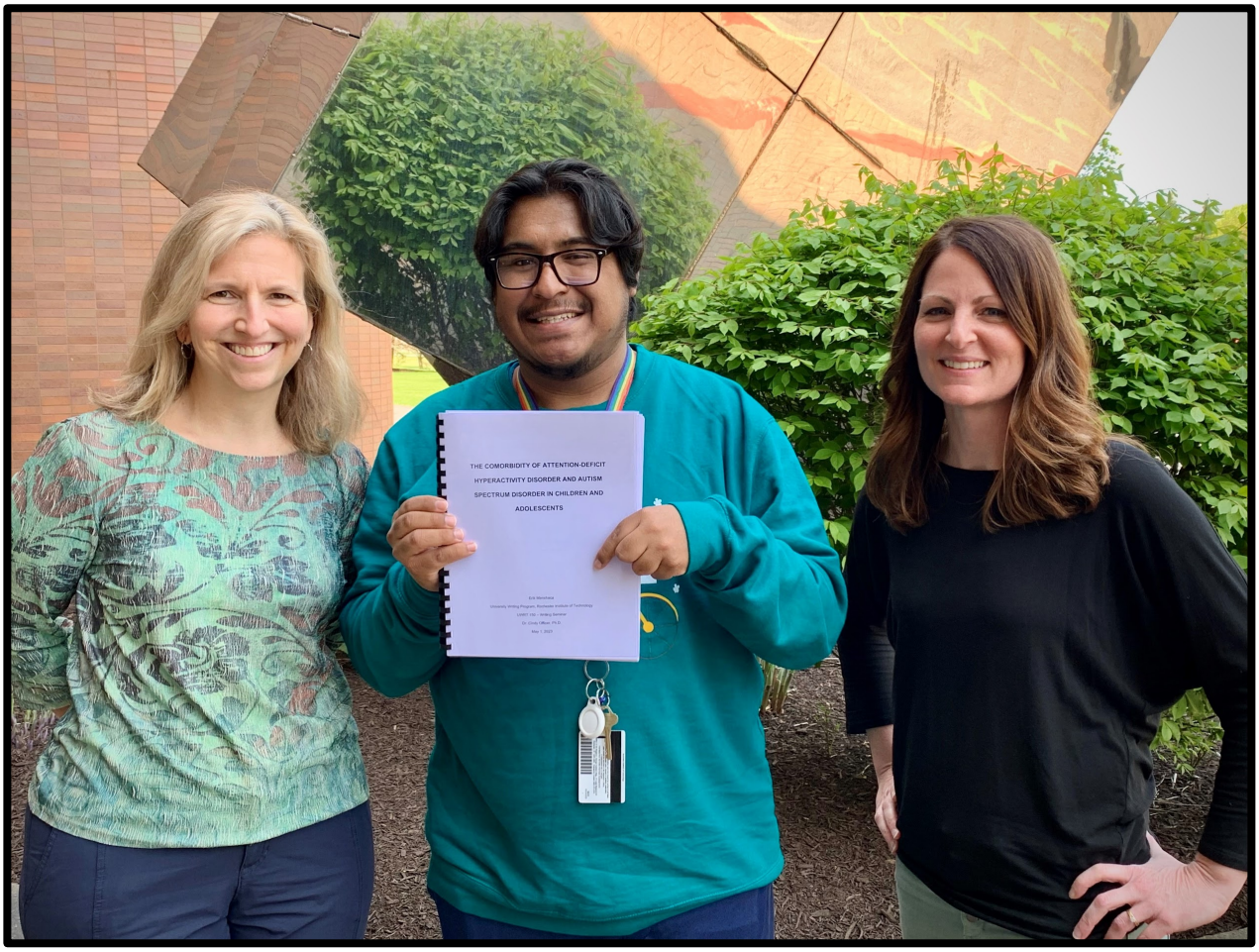
DEDICATION

To Cindy, Bonnie, and Mom: you are my person,

You are the sun, my soul, beacon of hope, and the shining light.

This paper is dedicated to you.



ABBREVIATIONS

ADHD - Attention-Deficit Hyperactivity Disorder

ASD - Autism Spectrum Disorder

ID - Intellectual Disabilities

APA - American Psychological Association

DSM - Diagnostic and Statistical Manual of Mental Disorders

ICD - International Statistical Classification of Diseases

IEP - Individualized Education Plan

ACKNOWLEDGEMENTS

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ABSTRACT

This literature review focuses on the co-occurrence, comorbidity, correlation, diagnosis, and treatments of attention-deficit hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) in children and adolescents. The review examines various sources to gain insights into these topics. In the methodology section, the researcher conducted a survey that included demographic questions and several questionnaires on ADHD and ASD. The review identifies areas for improvement in the survey, including the need for more precise and focused questions and concerns regarding participants' understanding of language and meaning.

The literature review presents evidence of the high rate of co-occurrence and comorbidity of ADHD and ASD in children and adolescents, highlighting the need for improved diagnosis and treatment strategies. The study also investigates the correlation between these two disorders, including shared symptoms and traits, such as inattention and hyperactivity.

The literature review discusses the challenges of diagnosing ADHD and ASD in children and adolescents, including the overlap of symptoms and the need for specialized assessments. It also examines various treatments, including behavioral and pharmacological interventions, and emphasizes the importance of a personalized approach to treatment. Overall, this review provides valuable insights into the co-occurrence, comorbidity, correlation, diagnosis, and treatment of ADHD and ASD in children and adolescents.

The review discusses the challenges of conducting a survey, including the difficulty of formulating clear and focused questions. For example, one question, "Does the child/pupil ‘on the go’ or often act as if ‘driven by a motor’?" is vague and ambiguous. The author acknowledges this issue, which may have led to invalid results in non-native users of English. Nevertheless, the author proceeds with the survey results. Additionally, the author wishes to use an extensive number of questions to survey to facilitate the analysis of the correlation between ADHD and ASD comorbidity.

The findings suggest the need for further research to develop improved diagnostic and treatment strategies that can effectively address the unique challenges of these disorders. The researcher also emphasizes the importance of using clear and focused language in surveys and assessments to ensure accurate and meaningful data collection.

CHAPTER 1: BACKGROUND AND REVIEW OF THE LITERATURE

Introduction

The correlation between ADHD and ASD has been the subject of extensive research, with many studies reporting a high co-occurrence of these two disorders. This has led to the hypothesis that individuals diagnosed with one disorder are more likely to be diagnosed with another. The article "Diagnosis and Treatment for Children and Adolescents with Autism and ADHD" written by Burt Hatch, Girija Kadlaskar, Meghan Miller, published on October 7, 2022, discusses the methodologies and strategies for diagnosing and treating these conditions. The American Psychological Association stated in 2013, "Autism is characterized by pervasive challenges with social communication and the presence of restricted and repetitive behaviors and interests, while ADHD is characterized by developmentally inappropriate symptoms of inattention and hyperactivity-impulsivity." This quote illustrates people with ADHD can experience problems with impulsivity, hyperactivity, and inattention, while people with ASD can experience being unable to reason, blurting out inappropriate comments or statements, and not considering other people's feelings. While it is understood that people with dual diagnosis of ASD-ADHD can experience symptoms of both disorders, the research is continuing to investigate the comorbidity of both disorders.

The same article also cites Santosh and Mijovic's 2004 study, which found that children with ADHD who experience social communication difficulties are more likely to exhibit repetitive behavior patterns, developmental issues, and speech-language difficulties, like those seen in children with autism. This suggests that children with ADHD may exhibit behaviors like those of children with autism. Hartman et al. (2016) also noted that the co-

occurrence of autism and ADHD could change with age. Their research has shown that monitoring for co-occurrence should be consistent over time based on available evidence.

Other studies have shown that individuals with ADHD exhibit higher autism symptom severity than their typically developing peers, (Kotte et al., 2013 and Reisersen et al., 2007). Individuals with ASD participate in more hardships with interpersonal social transmission as well as limited, redundant, and stereotyped manners (Hollingdale et al., 2020; Jang et al., 2013). This means that people with ADHD may be more likely to develop severe symptoms of autism spectrum disorder compared to those with ASD only. For example, if the researcher were to teach students in one classroom with only autism, while in the other classroom, those with ADHD and ASD. In the second classroom those students would be expected to show more severe ASD symptoms. However, additional analyses are required to confirm this hypothesis.

An article by Sprenger quoted an investigation by Lutejin et al. (2000), which found that children with a diagnosis of ASD+ exhibited similar levels of autistic psychopathology (as rated by the Children's Social Behavior Questionnaire (CSQB) analogized to children with non-comorbid ADHD diagnosis (hereafter referred to as ASD). Parents rated their children with ASD as more socially withdrawn. Additionally, a population-based study by Montes and Halterman (2007) found that children with ASD were more than five times more likely to display bullying behavior than the general population. This interpretation discusses children who have already been diagnosed with ASD and show ADHD symptoms and have shown some similarity in levels of autistic test outcomes as adolescents or children with a diagnosis of only ASD.

In the article titled "Addressing parental concerns at the initial diagnosis of an autism spectrum disorder," written by Mario J. Gaspar de Alba and James W. Bodfish, accepted on July 26, 2010, quoted an unknown person as saying, "By the time the diagnosis of an ASD is made, parents have many questions and significant concerns concerning their child and their manifestations. As a range of conditions, each child may present with a unique set of difficulties, including the core symptoms and any possible comorbid issues as mentioned above. For this explanation, it may be difficult for clinicians to adequately address each family's most pressing concerns at the time of diagnosis." This quote discusses how when clinical psychologists, child and adolescent psychiatrists, or other experts diagnose patients with autism spectrum disorder, the patient's parents may have concerns and questions about the diagnosis. Clinicians may also have difficulty determining the correct diagnosis for a patient. Parents may also ask questions about supporting their children with autism.

In this interpretation, the author discusses the Sprenger's article, which states that autistic symptoms could be more severe in social interaction settings, such as a residential school for students, a day school, or a college lecture setting, for individuals with dual ASD-ADHD diagnoses than for those with ASD alone. Regarding the second article, Sprenger confirmed that parents rated their children as socially withdrawn and that these children had not yet been diagnosed with autism spectrum disorder. As a personal example, during adolescence, the author of this paper never felt socially withdrawn. However, according to the writer's psychoeducational reports, their mother rated them as socially withdrawn. The writer of this paper hopes to recognize the difference of its perspective.

The article "ASD and ADHD Comorbidity: What Are We Talking About?" was written by Camille Hours, Christophe Recasens, and Jean-Marc Baleyte on February 28,

2022. Sprenger et al. stated, "Autistic symptoms were more severe, primarily in social interaction (as evaluated by the Social Responsiveness Scale and Autism Diagnostic Interview), in patients with dual ASD-ADHD diagnoses than in those with ASD alone." The understanding of this message is that the report's writers discovered that people with only ASD encounter more intense symptoms in social interaction, as evaluated by psychiatric tests to determine autism, than those with dual ASD-ADHD diagnoses.

According to the American Psychological Association (APA) in 2013, it is not always possible for clinicians to make a formal diagnosis when a patient has both ASD and ADHD, or ADHD and Intellectual Disabilities (ID). The DSM-5 criteria do not prohibit the co-occurring diagnosis of these conditions. However, deficits in attention and hyperactivity can be due to a variety of factors or disorders so it can be difficult to filter out the exact diagnosis. For example, not all children with ID who experience high levels of ADHD symptoms will meet the criteria for ADHD diagnosis due to delays in intellectual development compared to same-age peers without ID. This marks a change from the previous edition, which did not allow for simultaneous diagnoses of the two disorders.

Another piece of evidence from “The Impact of the Comorbidity of ASD and ADHD on Social Impairment” by Christina M. Harkins, Benjamin L. Handen, and Micah O. Mazurek and published on June 28, 2021, reviewed the statements of several scholarly authors, mentioned below:

> Comorbidity is associated with an additive effect on symptom expression compared with either disorder when it occurs alone (Ames & White, 2011; Antshel et al., 2016; Gargaro et al., 2011; Goldstein & Schwebach, 2004). This has been robustly demonstrated in research on tantrums, which showed that Individuals with

> ASD + ADHD display more severe tantrums than those with ASD or ADHD alone (Goldin et al., 2013; Guttmann-Steinmetz et al., 2009; Jang et al., 2013; Mulligan et al., 2009). This additive effect expands into other domains of functioning; Sikora et al. (2012) found that children with ASD + ADHD had significantly more significant delays in adaptive functioning and lower health-related quality of life than individuals with ASD only. Similarly, Rao and Landa (2014) found that young children affected by this comorbidity were more cognitively, socially, and adaptively impaired than those with ASD alone.

In the full direct quote above, the researcher talked about children and adolescents with both disorders can have more tantrums than those with one disorder alone; however, one person with both disorders can have more severity with a delay in functioning and lower quality of life than ADHD and ASD. Rao and Landa (2014) also provided evidence that young children who were affected by the comorbidity were cognitively, socially, and adaptively impaired compared to those with ASD only, which also means that people with ADHD and ASD were cognitively, socially, and functioning normally.

According to an article regarding the diagnosis and treatments of both diseases, "Diagnosis and treatment of children and adolescents with autism and ADHD" by Burt Hatch, Girija Kadlaskar, and Meghan Miller (2022) claimed:

> For example, children with autism often exhibit elevated parent- and teacher-reported ADHD symptoms (Sinzig et al., 2009; Yoshida & Uchiyama, 2004), but it can be difficult to decipher what this means. Do elevated inattention, hyperactivity, or impulsivity levels in autism represent the same thing as they do outside that context? For instance, high activity levels exemplified by aimless wandering and

> difficulty sitting in a chair may represent frank motor activity consistent with ADHD or may be secondary to social or communication challenges consistent with autism. Likewise, inattention in the context of autism may not index the same quality of inattentiveness or distractibility as expected in ADHD, instead reflecting alternate interests in sensory stimuli or a lack of cooperation with teacher requests more consistent with social inattention. Likewise, specific ADHD symptoms, such as inattentiveness in social situations, could result in inaccurate endorsement of autism symptoms without a thorough evaluation. These challenges require careful evaluation and conceptualization of critical symptoms.

In this direct quote from the above-mentioned article, the authors claimed that children with ASD exhibited a much higher level of teacher-reported and parent-reported ADHD symptoms. Most psychiatrists may have to analyze why their patients have these symptoms, and the patient's parents have questions asking their child's psychiatrist to find one or both diagnoses.

There are several pieces of evidence regarding the diagnosis and treatment/intervention for co-occurring ADHD and ASD, one coming from Chiang and Gau in 2016 and Harrison et al., in 2013, respectively, said:

> Co-occurring autism and ADHD are often linked to academic difficulties (Chiang & Gau, 2016), which are typically addressed by accommodations and modifications. Often delivered through what is referred to as Individualized Education Plans (IEP) or Section 504 plans in the United States, these adjustments to educational practices include allowing extended time to complete tests and

> assignments, providing teacher or peer-prepared notes from class, and reducing assignments (Harrison et al., 2013), as well as other supports targeting specific goals identified through the IEP process (e.g., speech-language therapy, occupational therapy, social skills groups, and other school-based behavioral support).

In this interpretation, we need to understand that some children and adolescents have academic interventions in which they experience academic difficulties. They face a combination of accommodations and modifications in the educational setting. For instance, they may receive an Individualized Education Plan or Section 504, depending on their hypothetical case, in which they adjust their IEP, such as extended time for testing and completing assignments, as well as other specific goals to receive support from speech and language pathology, occupational therapy, or other behavioral support, and with the help of their child's psychiatrist or school psychologist.

There are few pieces of evidence regarding medication management with a diagnosis of ASD and ADHD, and several authors from the same article said:

> There is consistent evidence that stimulant and non-stimulant medications can significantly reduce core symptoms in those of elementary school age and older (Catalá-López et al., 2017). Notably, there is evidence that stimulant and non-stimulant medications can significantly reduce inattention and hyperactivity-impulsivity in children and adolescents with co-occurring autism and ADHD (Patra et al., 2019; Rodrigues et al., 2020; Sturman et al., 2017). While the evidence for using stimulant and non-stimulant medications to treat ADHD symptoms in those with autism is promising, several caveats are notable. For stimulant medications, response rates (defined as an ADHD symptom reduction of at least 25% and an

> improved clinical impression) are much lower in children with co-occurring autism (~50%) than in children with ADHD alone (~70–90%) (Handen et al., 2000). Moreover, stimulant, and non-stimulant medications appear more likely to have intolerable side effects (e.g., irritability and social withdrawal) in individuals with autism than in those with ADHD alone (Handen et al., 2015; Patra et al., 2019).

From this direct quote, it needs to understand the difference between non-stimulant and stimulant medications used to treat children and adolescents with ADHD and help reduce the symptoms of inattention and hyperactivity-impulsivity with the co-occurrence of both disorders. There is also evidence that stimulant and nonstimulant medications can significantly reduce core symptoms in elementary students. Simultaneously, researchers have proven that stimulant and non-stimulant medications can reduce symptoms with inattention and hyperactivity-impulsivity with co-occurrence. Other evidence shows that stimulant medications were rated around twenty-five percent with autism co-occurrence than 50 percent for children with ADHD alone (Handen, 2000; Patra et al., 2019).

To conclude, the researcher discussed most pieces of evidence to prove that both ASD and ADHD have co-occurrence, comorbidity, impact, and correlation. The author recognizes that every child or adolescent has the same impact as other children with ADHD and ASD, or one only, which comes first. When we see patterns in a person's behavior, we must act on the person with expertise to evaluate and receive treatment.

Critical Synthesis

In this literature review, the author has discussed the co-occurrence, comorbidity, correlation, diagnosis, and treatments in children and adolescents with ADHD and ASD.

Firstly, the author wants to discuss the symptoms of both disorders:

Symptoms of ADHD and ASD	
Attention-Deficit Hyperactivity Disorder	**Autism Spectrum Disorder**
Inattentiveness ● Having a short attention span and being easily distracted ● Making careless mistakes – for example, in schoolwork ● Appearing forgetful or losing things ● being unable to stick to tasks that are tedious or time-consuming. ● Appearing to be unable to listen to or carry out instructions. ● Constantly changing activity or task ● Having difficulty organizing tasks **Hyperactivity and impulsiveness** ● Being unable to sit still, especially in calm or quiet surroundings. ● Constantly fidgeting ● Being unable to concentrate on tasks. ● Excessive physical movement ● Excessive talking ● Being unable to wait their turn. ● Acting without thinking ● Interrupting conversations ● Little or no sense of danger	**Signs in children** ● Not responding to their name ● Avoiding eye contact ● Not smiling when the person smiles at them. ● Getting very upset if they do not like a particular taste, smell, or sound. ● Repetitive movements, such as Flapping their hands, flicking their fingers, or rocking their body. ● Not talking as much as other children ● Not doing as much pretend, play ● Repeating the same phrases **Signs in Adults** ● finding it hard to understand what others are thinking or feeling. ● getting very anxious about social situations ● finding it hard to make friends or preferring to be on your own. ● seeming blunt, rude, or not interested in others without meaning to ● finding it hard to say how the child feels. ● taking things very literally – for example, the child may not understand sarcasm or phrases like "break a leg."

	• having the same routine every day and getting very anxious if it changes

The co-occurrence of ADHD and ASD in children and adolescents is a growing concern among researchers and clinicians. This critical synthesis examines several sources to better understand the symptoms, relationships, diagnosis, and treatment of both disorders.

The author began by comparing the symptoms of ADHD and ASD using a table. Inattentiveness, hyperactivity, impulsiveness, and social communication difficulties are common symptoms of both disorders, but manifest differently. Children with ADHD are easily distracted and have a short attention span, whereas those with ASD may have difficulty understanding sarcasm or phrases, repeating the same phrases, and avoiding eye contact. These overlapping symptoms pose a challenge for differentiating between ADHD and ASD.

The author discussed the relationship between ADHD and ASD. Santosh and Mijovic (2004) found that children with ADHD who have social communication problems are more likely to display patterns of repetitive behaviors, developmental issues, and speech-language difficulties, like those seen in children with autism. Kotte et al. (2021) found that children and adolescents with ADHD show much higher autism symptoms than previously thought. The author raises a critical question regarding whether children with ADHD will have fewer symptoms of ASD or vice versa.

The author noted that the severity of symptoms may vary depending on the individual's perspective. Sprenger (2011) found that autistic symptoms were more severe in

a social interaction setting, as evaluated by a psychiatrist. However, the same children rated themselves as not socially withdrawn. The author raises concerns about the children's reasoning ability and language comprehension, which may affect their self-rating.

The author reviewed the survey, once again. The author recognizes that the survey is quite unclear and unfocused to the participants. The editor of this paper also analyzed the survey, so the author can understand the language of the questions being answered. Also, there are some odd results on some questions that the participants may not understand.

The author emphasizes the importance of parents watching their child for warning signs and symptoms, as well as repetitive patterns and behaviors, and seeking evaluation from a psychiatrist. The author acknowledges that distractions during evaluation may make it challenging for a psychiatrist to diagnose the patient. The author also noted the availability of tools to diagnose disorders in children and adolescents, such as the DSM-5 criteria, which provide a structured approach to diagnosis, and the Autism Diagnostic Observation Schedule (ADOS) and the Autism Diagnostic Interview–Revised (ADI-R), which provide detailed assessments of autism symptoms.

The author raises critical questions about the relationship between ADHD and ASD, which are essential for a better understanding of the two disorders. Children with ADHD may also exhibit ASD symptoms and vice versa, making it challenging to diagnose the correct disorder. The severity of symptoms may also differ from an individual's perspective, highlighting the importance of considering multiple viewpoints. The author notes the importance of seeking an evaluation with a psychiatrist but acknowledges the challenges of diagnosis. The author encourages parents to be vigilant of warning signs and repetitive

behaviors and to seek professional help when necessary. The availability of diagnostic tools, such as the DSM-5 criteria, ADOS, and ADI-R, can aid in the diagnosis process.

In conclusion, this critical synthesis provides a thorough analysis of the symptoms, relationships, diagnosis, and treatment of ADHD and ASD in children and adolescents. The author used a table to compare the symptoms of both disorders, making it easier to analyze evidence from different sources. The author raises critical questions about the relationship between the two disorders, validity of self-rating, and challenges of diagnosis. The author emphasizes the importance of the methodology in this literature and notes the availability of diagnostic tools to aid in the diagnosis process. The following section will discuss the methodology.

CHAPTER 2: METHODOLOGY

Introduction

The correlation between ADHD and ASD has been the subject of extensive research, with many studies reporting a high co-occurrence of these two disorders. This has led to the hypothesis that individuals diagnosed with one disorder are more likely to be diagnosed with another. Moreover, individuals with comorbid ADHD and ASD are likely to experience greater impairments in social and behavioral functioning than those with only one disorder.

Survey Method

The researcher conducted the survey using Qualtrics. The researcher conducted the survey based on deaf and hard-of-hearing college students in a First-Year: Writing Seminar taught by Dr. Cindy Officer, Ph.D. The following ten questions that are being asked, are in the survey questions section below. The researcher has several hypotheses regarding the correlation, co-occurrences, impact, diagnosis, and treatment of both disorders in children and adolescents.

Survey Population

Our survey population is based on deaf and hard-of-hearing college students in our writing community course, known as the First-Year: Writing Seminar. In a classroom, there are different types of diversity within the community.

Hypotheses:

1. Deaf and hard-of-hearing college students diagnosed with both ADHD and ASD will report higher levels of academic difficulties than those diagnosed with either disorder alone.
2. Students who are diagnosed with both ADHD and ASD report higher levels of anxiety, social isolation, and difficulty with communication compared to those with a single diagnosis or no diagnosis.
3. Students who were referred to a psychiatrist or psychologist for diagnosis were more likely to receive a dual diagnosis of ADHD and ASD than those who were not referred.

Survey Sample

The researcher, within an inquiry-based first year writing course, had limited access to the ideal population for which the survey was designed. As a result, the sample was not representative of the population the researcher would have liked to sample. However, his sample did not have the same results because the sampling is not representative of people who have dual diagnosis of ADHD-ASD. The researcher surveyed about twenty-eight students who participated in the survey.

The survey, https://rit.az1.qualtrics.com/jfe/form/SV_0js94MKfc7Z3ChU, for this paper was generated using Qualtrics software, Copyright © 2022 Qualtrics. Qualtrics and all other Qualtrics product or service names are registered trademarks or trademarks of Qualtrics, Provo, UT, USA. https://www.qualtrics.com.

Survey Questions

This list contains sample questions from the Attention-Deficit Hyperactivity Disorder and Autism Spectrum Disorder questionnaires, respectively, and are listed below:

- Attention-Deficit Hyperactivity Disorder
    - How often do you have trouble wrapping up the final details of a project once the challenging parts have been completed?
    - How often do you make careless mistakes when working on a boring or difficult project?
    - How often do you feel restless or fidgety?
    - Does the child/pupil "on the go" or often act as if "driven by a motor?"
    - How often does a person avoid, dislike, or be reluctant to engage in tasks that require sustained mental effort?
- Autism Spectrum Disorder
    - I frequently get so strongly absorbed in one thing that I lose sight of others.
    - I find myself drawn more strongly to people than to things.
    - I find it easy to "read between the lines" when someone is talking to me.
    - I do not usually notice small changes in a situation or a person's appearance.
    - It does not upset me if my daily routine is disturbed.

CHAPTER 3: RESULTS

Survey results are explained herein.

Figure 1

Participants' Race and Ethnicity

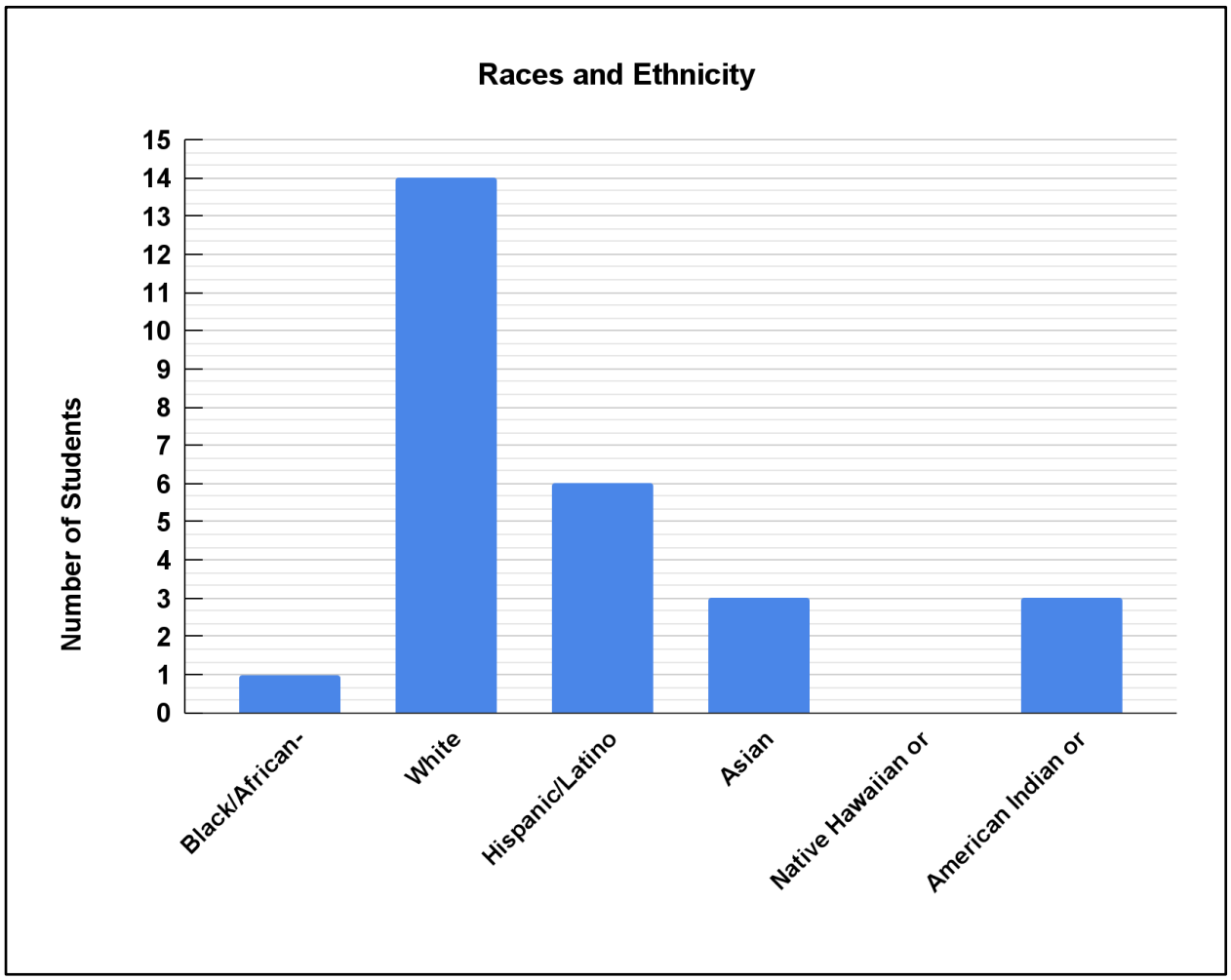


Figure 2

Participants' College Group

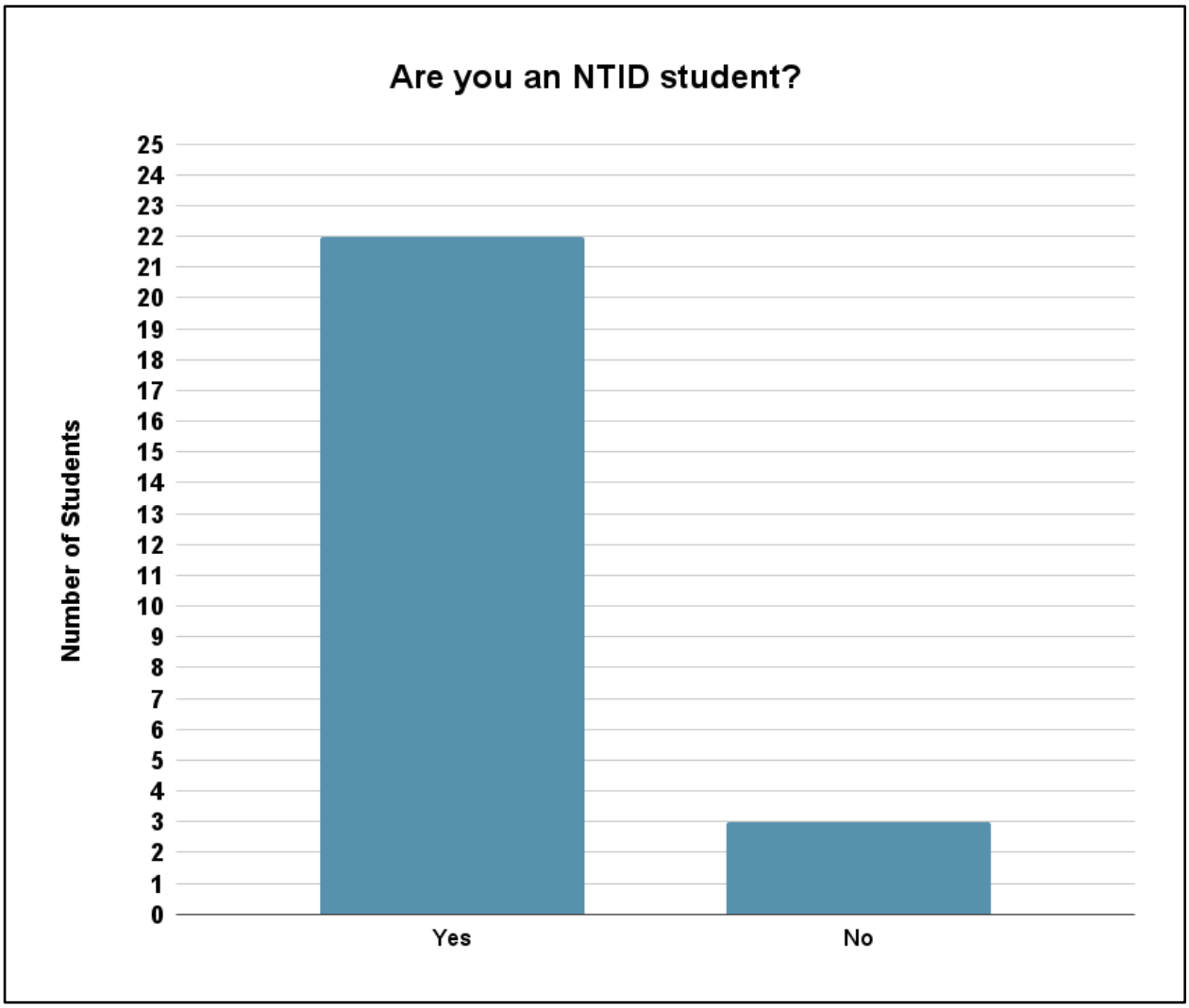


Figure 3

Participants' Hearing Status

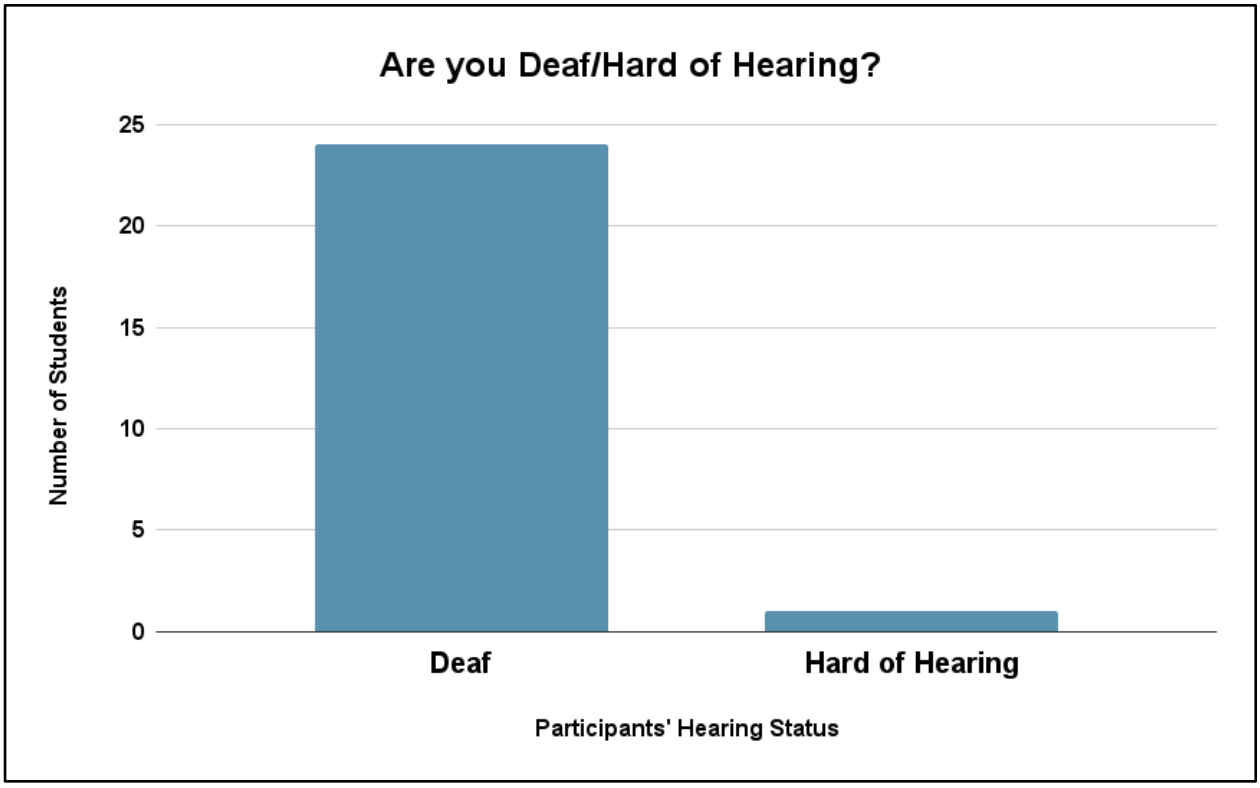


Figure 4

Participants' Primary Mode of Communication

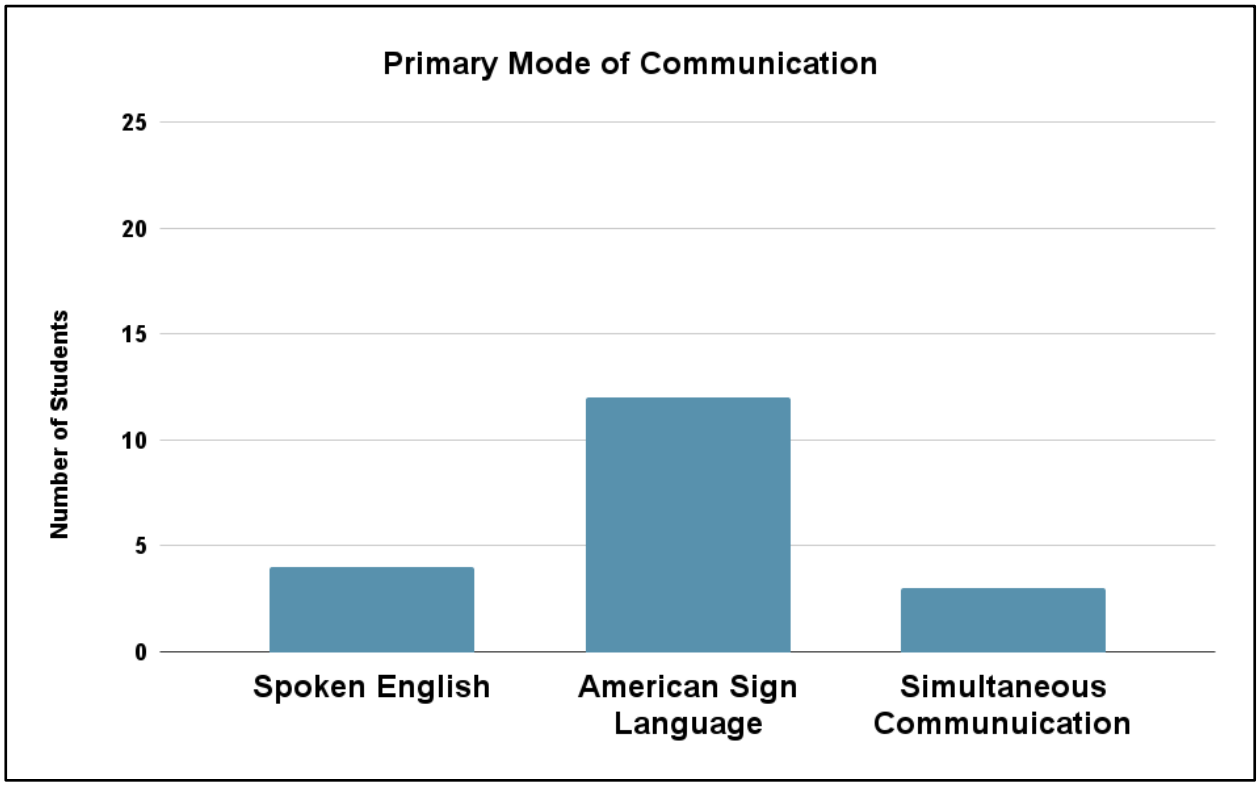


Figure 5

Autism Spectrum Disorder Questionnaire

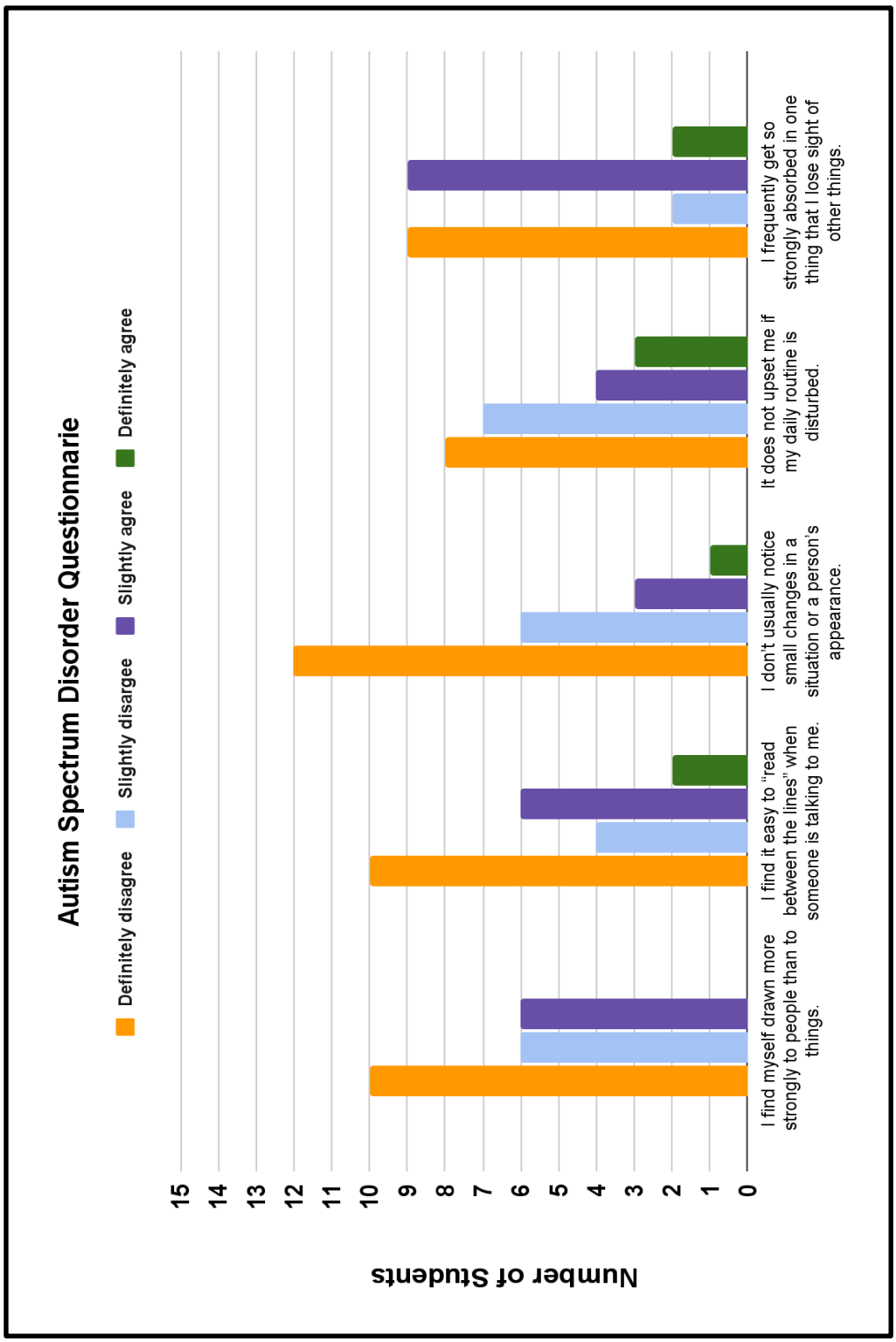
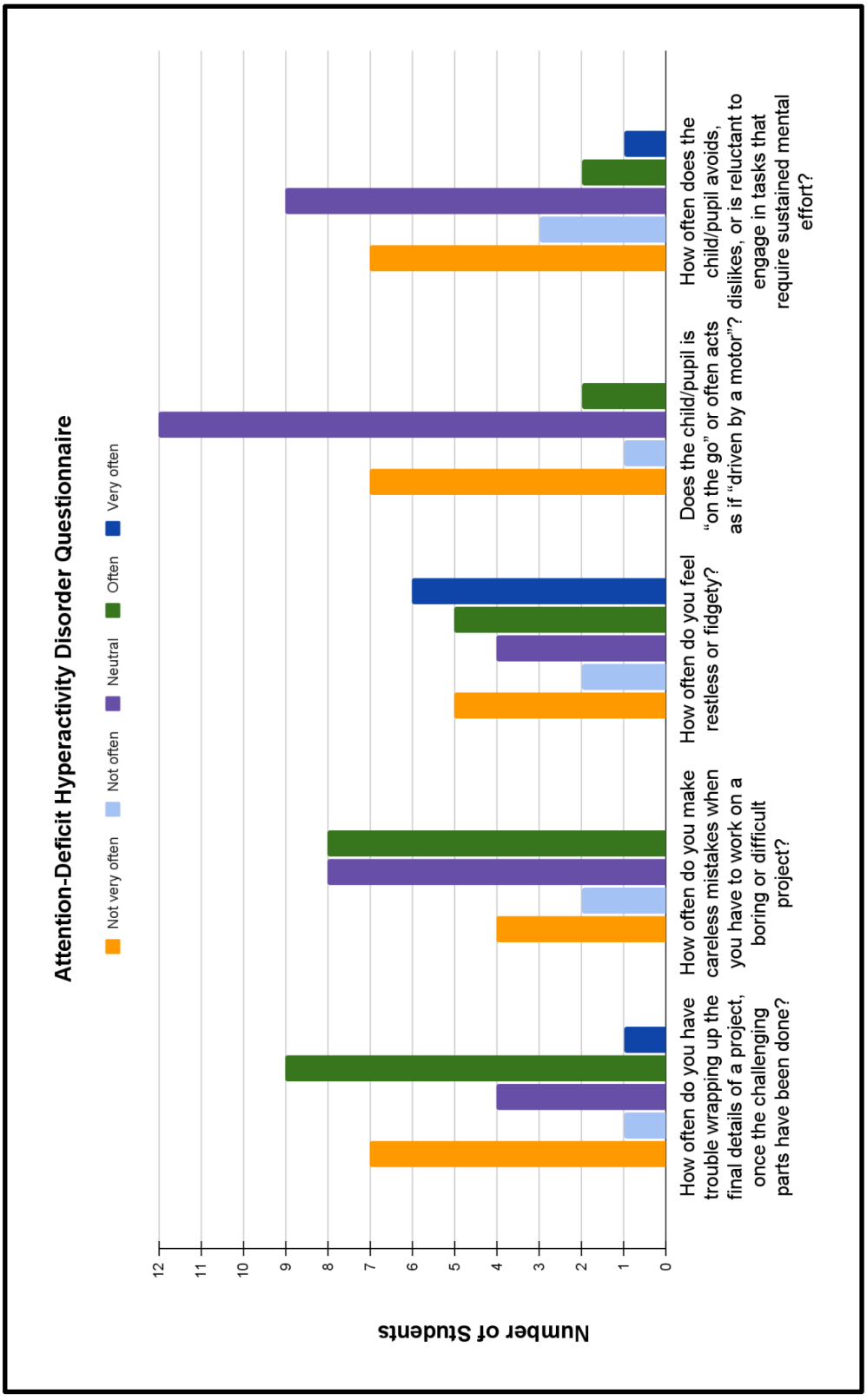


Figure 6

Attention-Deficit Hyperactivity Disorder Questionnaire



CHAPTER 4: ANALYSIS AND DISCUSSION

Introduction

The literature review presented herein focuses on the co-occurrence, comorbidity, correlation, diagnosis, and treatment of attention-deficit hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) in children and adolescents. This review explores various sources to gain insight into these topics and provides valuable insights into the unique challenges associated with these disorders.

This review highlights the high rates of co-occurrence and comorbidity of ADHD and ASD in children and adolescents. Studies have reported that approximately 30-80% of individuals with ASD also exhibit ADHD symptoms. The co-occurrence of these two disorders is associated with increased severity of symptoms, functional impairments, and poor treatment outcomes. The high rate of comorbidity between ADHD and ASD underscores the need for improved diagnostic and treatment strategies to address the unique challenges associated with these disorders.

This review further investigated the correlation between ADHD and ASD, including shared symptoms and traits such as inattention and hyperactivity. Impairments in attention, executive function, and social communication are characteristic of both disorders. However, the nature and severity of these impairments vary among individuals with ADHD and ASD. This review notes that the shared symptoms and traits of ADHD and ASD can make it challenging to differentiate between them, highlighting the need for specialized assessments.

Challenges

The literature review also discussed the challenges in diagnosing ADHD and ASD in children and adolescents. The review notes that the overlap of symptoms and variability in the presentation of these disorders can make it difficult to distinguish between them. This review highlights the importance of specialized assessments, including a comprehensive evaluation of an individual's developmental history, symptoms, and behavior, to ensure an accurate diagnosis.

In addition to the challenges in diagnosis, this review also examines various treatments for ADHD and ASD, including behavioral and pharmacological interventions. This review emphasizes the need for a personalized treatment approach that considers the individual's unique strengths and challenges. This review notes that behavioral interventions, such as parent training, social skills training, and cognitive-behavioral therapy, can effectively improve symptoms and functional outcomes in children and adolescents with ADHD and ASD. The review also noted that pharmacological interventions, such as stimulant medication, can be effective in reducing the symptoms of ADHD in children and adolescents. However, the review also highlights the need for caution when prescribing medication to individuals with ASD, as these medications may adversely affect social communication and behavior.

Clear and Focused Language

The literature review also highlighted the importance of clear and focused language in surveys and assessments to ensure accurate and meaningful data collection. The review notes that participants may need help in understanding the language and meaning of the survey questions, which can lead to incorrect responses. This review emphasizes the need for researchers to use straightforward, focused questions in surveys and assessments to ensure accurate data collection.

This review provides valuable insights into the co-occurrence, comorbidity, correlation, diagnosis, and treatment of ADHD and ASD in children and adolescents. These findings suggest the need for further research to develop improved diagnostic and treatment strategies that can effectively address the unique challenges of these disorders. The high rate of comorbidity of ADHD and ASD underscores the need for specialized assessments and personalized treatment approaches that consider an individual's unique strengths and challenges. This review also highlights the importance of clear and focused language in surveys and assessments to ensure accurate and meaningful data collection.

Conclusion

In conclusion, co-occurrence, comorbidity, correlation, diagnosis, and treatment of ADHD and ASD in children and adolescents present unique challenges that require specialized assessments and personalized treatment approaches. The high rate of comorbidity between ADHD and ASD underscores the need for improved diagnostic and treatment strategies. Behavioral and pharmacological interventions such as stimulant

medication can effectively improve symptoms and functional outcomes in children and adolescents with ADHD and ASD.

Reflections

In this reflection, the author believes that parents must recognize that their child(ren) is struggling with one or both disorders. They should consult with psychologist or appropriate personnel for support and strategies to love their children with autism and ADHD, and if they have questions and concerns regarding their child.

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APPENDIX A: ANNOTATIONS

Annotation 1

In the article titled, "Diagnosis and treatment children and adolescents with autism and ADHD", discussed the methodology/strategies of diagnosis and treatments to children and adolescents. The American Psychological Association made a quote in 2013, "Autism is characterized by pervasive challenges with social communication and the presence of restricted and/or repetitive behaviors and interests, which ADHD is characterized by developmentally inappropriate symptoms of inattention and/or hyperactivity-impulsivity." This quote is meant to understand that people (adults, children, and adolescents) can experience impulsivity, hyperactivity, and inattentive problems. Examples are not thinking rationally, blurting out inappropriate comments/statements, not thinking about other people' feelings, etc.

Annotation 2

In the same article, Santosh and Mijovic from 2004 said that children with ADHD who have social communication problems are as well more likely to show patterns of repetitive behaviors, developmental issues, and speech language difficulties like the children who have autism. This quote is trying to say that children are more likely to have similar behaviors like children with autism. (Hartman et al, 2016) said that the co-occurrence of autism and ADHD also shows to change based on age. Evidence based on past research suggests that monitoring for co-occurrence should be a consistent process over time.

Annotation 3

Another quoted, "Other studies have demonstrated that those with ADHD exhibit higher autism symptom severity than typically developing peers (Kotte et al., 2013; Reiersen et al., 2007) and experience more difficulties with interpersonal social communication as well as restricted, repetitive, and stereotyped behaviors (Hollingdale et al., 2020; Jang et al., 2013)." In this scenario, we are presenting that there are people with ADHD who have a higher probability of developing symptoms of autism spectrum disorder than those people I assume... with existing autism spectrum disorder, who may show a little or no symptoms. We don't know until we find out.

Annotation 4

In an article from people with Sprenger, quoted, “In a study by Lutejin and colleagues (2000), children with a diagnosis of ASD+ showed similar levels of autistic psychopathology (as rated by the CSBQ) compared to children with no comorbid ADHD diagnosis (in the following: ASD--). Parents rated children with ASD--as more socially withdrawn. A population-based study found that children with ASD+ had more than five times greater odds of showing bullying behavior than the general population (Montes & Halterman, 2007).” This interpretation discusses children who are already diagnosed with ASD symptoms and/or a bit of symptoms of ADHD has proven to demonstrate some similarity of levels of autistic test results, I presume, compared to adolescents/children with no ASD diagnosis, just having ADHD.

Annotation 5

In the second article, titled, "Addressing parental concerns at the initial diagnosis of an autism spectrum disorder", written by Mario J. Gaspar de Alba and James W. Bodfish, accepted on July 26, 2010. An unknown person quoted, "By the time the diagnosis of an ASD is made, parents have many questions and important concerns about their child and his or her symptoms. As a spectrum of disorders, each child may present with a unique set of difficulties including the core symptoms and any number of possible comorbid problems mentioned above. For this reason, it may be difficult for clinicians to adequately address each family most pressing concerns at the time of diagnosis." Its interpretation discusses the means of when clinical psychologists and/or child and adolescent psychiatrists, or anyone who has their own expertise to diagnose patients with autism spectrum disorder, the patient's parents may have concerns and/or questions regarding to the diagnosis, as well some clinicians may have a hard time to figure out what the proper diagnosis for the patient themselves is. Perhaps they may ask questions about supporting your child with autism as well.

Annotation 6

The article "ASD and ADHD Comorbidity: What are we talking about?" were written by Camille Hours, Christophe Recasens, and Jean-Marc Baleyte and published on February 28, 2022. Sprenger et al. said, "Autistic symptoms were more severe autistic symptoms were primarily in the area of social interaction (as evaluated by the social responsiveness scale and autism diagnostic interview), in patients with dual ASD-ADHD diagnoses than in those

with ASD alone. Its interpretation means that the people wrote their literature saying that those with only ASD experience more severe, specifically in social interaction, who are already evaluated with psychiatric tests to determine whether they are autistic than those with dual ASD-ADHD.

Annotation 7

Another piece of evidence that proves that it is not possible for clinicians to formally diagnose patients, according to the American Psychological Association in the year of 2013, they claimed the following quote:

> DSM-5 criteria do not preclude clinicians from making a co-occurring diagnosis of ASD/ADHD or ADHD/ID (APA, 2013). However, for an ADHD diagnosis to be made in conjunction with ASD or ID, deficits in inattention and hyperactivity/impulsivity should be more severe than expected, given the child's mental age. Thus, in theory, not all children with ID who experience elevated levels of ADHD symptoms will meet the criteria for an ADHD diagnosis due to delays in intellectual development compared to same-age peers without ID.

The following quote above, its interpretation discusses from one edition to another. Authors in the fourth edition said that mental health professionals could not use two diagnoses simultaneously. However, they said the criteria to make an ADHD diagnosis with a correlation of ASD is the patient must have a severe range of inattention, hyperactivity, and impulsivity than the child's mental age to diagnose the patient formally.

Annotation 8

Another piece of evidence from "The Impact of the Comorbidity of ASD and ADHD on Social Impairment" by Christina M. Harkins, Benjamin L. Handen, and Micah O. Mazurek and published on June 28, 2021, claimed several scholarly authors below:

> The comorbidity is associated with an additive effect on symptom expression compared to either disorder when it occurs alone (Ames & White, 2011; Antshel et al., 2016; Gargaro et al., 2011; Goldstein & Schwebach, 2004). This has been robustly demonstrated in research on tantrums which shows that Individuals with ASD + ADHD display more severe tantrums than those with ASD or ADHD alone (Goldin et al., 2013; Guttmann-Steinmetz et al., 2009; Jang et al., 2013; Mulligan et al., 2009). This additive effect expands into other domains of functioning, as Sikora et al. (2012) found that children with ASD + ADHD had significantly more significant delays in adaptive functioning and lower health-related quality of life than individuals with ASD only. Similarly, Rao and Landa (2014) found that young children affected by this comorbidity were more cognitively, socially, and adaptively impaired than individuals with ASD alone.

In the full direct quote above, we talked about children and adolescents with both disorders can have tantrums than one disorder alone, which a child or an adolescent who has been diagnosed with ASD, however one person with only both disorders can have more severity with the delay in functioning and low in quality of life than ADHD and ASD both

only. Rao and Landa 2014, also gave proof that children of young age who were affected by the comorbidity were cognitively, socially, and adaptively impaired than people with ASD only, which also mean people with ADHD and ASD were cognitively, socially, and functioning normally. Two disorders are good, while one illness is terrible.

Annotation 9

According to an article regarding the diagnosis and treatments of both diseases, "Diagnosis and treatment of children and adolescents with autism and ADHD" by Burt Hatch, Girija Kadlaskar, and Meghan Miller, published on September 11, 2022, claimed:

> For example, autistic children often exhibit elevated parent- and teacher-reported ADHD symptoms (Sinzig et al., 2009; Yoshida & Uchiyama, 2004), but it can be difficult to decipher what this means. Do elevated levels of inattention, hyperactivity, or impulsivity in autism represent the same thing as they do outside that context? For instance, high activity levels exemplified by aimless wandering and difficulty sitting in a chair may represent frank motor activity consistent with ADHD or be secondary to social or communication challenges consistent with autism. Likewise, inattention in the context of autism may not index the same quality of inattentiveness or distractibility as expected in ADHD, instead reflecting alternate interests in sensory stimuli or lack of cooperation with teacher requests more consistent with social inattention. Likewise, specific ADHD symptoms—such as inattentiveness in social situations—could result in inaccurate endorsement of autism symptoms

> without thorough evaluation. These challenges make careful evaluation and conceptualization of symptoms critical.

In this direct quote from the above-mentioned article, the authors claimed that children with ASD exhibited a much higher level of teacher-reported and parent-reported ADHD symptoms. Most psychiatrists may have to analyze why their patients have those symptoms, and the patient's parents have questions to ask their child's psychiatrist for answers to finding one or both diagnoses.

Annotation 10

Several pieces of evidence regarding the diagnosis and treatment/intervention for the co-occurring ADHD and ASD, one coming from Chiang and Gau in 2016, and Harrison et al., in 2013, respectively, said:

> Co-occurring autism and ADHD are often linked to academic difficulties (Chiang & Gau, 2016), typically addressed by a combination of accommodations and modifications. Often delivered through what is referred to as Individualized Education Plans (IEP) or Section 504 plans in the United States, these adjustments to educational practices include allowing extended time to complete tests and assignments, providing teacher or peer-prepared notes from class, and reducing lengths of assignments (Harrison et al., 2013), as well as other supports targeting specific goals identified through the IEP

> process (e.g., speech-language therapy, occupational therapy, social skills groups, other school-based behavioral supports).

In this interpretation, we need to understand that some children and adolescents have academic interventions in which they have academic difficulties. They face the combination of accommodations and modifications in an educational setting. For instance, they may receive an Individualized Education Plan or Section 504, depending on their hypothetical case, in which they get adjustments to their IEP, such as extended time for testing and completing assignments, as well as other specific goals to receive support from speech and language pathology, or occupational therapy, or other behavioral supports, and with the help of their child's psychiatrist or school psychologist.

Annotation 11

Few pieces of evidence regarding medication management with being diagnosed with ASD and ADHD; several authors from the same article said:

> There is consistent evidence that stimulant and non-stimulant medications can significantly reduce core symptoms for those of elementary school age and older (Catalá-López et al., 2017). Notably, there is evidence that stimulant and non-stimulant medications can significantly reduce inattention and hyperactivity-impulsivity in children and adolescents with co-occurring autism and ADHD (Patra et al., 2019; Rodrigues et al., 2020; Sturman et al., 2017). While the evidence for using stimulant and non-stimulant medications

> to treat ADHD symptoms in those with autism is promising, several caveats are notable. For stimulant medications, response rates (defined as ADHD symptom reduction of at least 25% and an improved clinical impression) are much lower in children with co-occurring autism (~50%) compared to children with ADHD alone (~70–90%) (Handen et al., 2000). Moreover, stimulant, and non-stimulant medications appear more likely to have intolerable side effects (e.g., irritability and social withdrawal) for individuals with autism compared to those with ADHD alone (Handen et al., 2015; Patra et al., 2019).

From this direct quote, we need to understand the difference between non-stimulant and stimulant medications that are used to treat children and adolescents with ADHD and help with reducing its symptoms of inattention and hyperactivity-impulsivity with the co-occurrence of both disorders. There is also evidence that stimulant and non-stimulant medications can significantly reduce core symptoms in elementary students. Simultaneously, the researchers have proof that stimulant and non-stimulant medications can reduce symptoms with inattention and hyperactivity-impulsivity with co-occurrence. Other evidence shows that stimulant medications rated around twenty-five percent with autism co-occurrence than fifty percent for children with ADHD alone.

APPENDIX B: PEER REVIEWS

Literature Review: Annotations

1. To Naomy Arevalo, regarding their Literature Review Annotations

    A. In the article' " Inside Jonestown: How Jim Jones Trapped Followers and Forced 'Suicides' ", written by Lesley Kennedy. The article was published on November 13, 2018, but was recently updated on February 20, 2020. Jim Jones is the cult leader who convinced 900 or more of his followers that they needed to die. Jim forced his people to drink cyanide-laced punch. In 1977, Jones, the self-proclaimed "messiah" of his evangelical flock, led his followers to a remote jungle in Guyana to live in Jonestown where he lied that they could grow food, no mosquitoes or snakes and temperatures hovered around 72 degrees every single day. (Kennedy, 2020) Jim Jones used armed guards and threats to force suicides kill adult and children was one the worst mass killing in American history.

    In the article " Cult Members Who Are They?". This article discusses what types of people or what motivated people to join cults. The article mentions that people who tend to join the cult are stupid, brainwashed, insane, and weak-minded; types who need to be told what to do; or people who are too lazy to mentally think for themselves. People with higher education are more likely to join cults than those with lower education. People who have more money or a higher financial status will most likely join cults.

The title of the news article is "What makes a cult a cult?" written by Holly Meyer. The paper was published on September 15, 2016. This article explains how cults started up. Charismatic leaders are expert manipulators, charming and know how to read people. Transcendent belief systems. Most religions and political groups have transcendent belief systems, meaning that they must express how to get a better place. You must do something to be in the group. System of control: They control you, your life, your choices, and your style. Whatever they tell you to do, you do it. To give them a purpose and meaning. Systems of influence, meaning old members who have a lot of experience, will train and pressure new members on how to behave and be like them. (Meyer, 2016).

After reading and researching the three articles, it was interesting to see how cults started up and who most likely joined the cult. The article mentions that people who have higher education are more likely to join the cult than people who are stupid, weak-minded, brainwashed, too lazy to mentally think for themselves, etc. That statement changed my thoughts because I thought that people who tend to join the cult are weak-minded, stupid, and lazy and never thought that people with higher education would join the cult. This Makes sense because people with a higher education can control anything and manipulate weak people.

The title of the article is called, “How Do Normal, Successful, and Smart People End Up Joining a Cult?” Written by Barbara Gurgel, published on

May 11, 2021. This article mentions that if you are a happy, well-adjusted person, with a loving family and a degree, then you are the kind of person that can be recruited into a cult. People think cults are like images of people standing in a ring of candles, a whole family dead in their beds, wearing matching tracksuits. According to Dr. Janja Lalich, a sociologist and a renowned cult expert, a cult is more likely to look like an overly enthusiastic self-help group, the type that will take over your schedule, or a multi-level marketing company that makes you drive all your friends away. (Gurgel, 2021) On the report by psychologist Steve Eichel, no one joins cults on purpose, but everyone is vulnerable to being manipulated into joining. Cults know exactly what they are doing. Cults need members who are passionate about self-improvement, the betterment of mankind, and living a more fulfilling life. (Gurgel, 2021)

In my opinion, I agree with this article because most cult leaders are smart, experts, and have higher education than their followers. It was interesting to note that no matter how happy you are, have a loving family, or have a good career or life, they will still join the cult either way.

In the article, "How Cults Change Your Brain" cultic behaviors and rituals that can have devastating effects on the brain and people's lives are discussed. Often, taking advantage of vulnerable people in search of comfort and identity, they damage critical thinking processes and freeze emotional processing to gain and maintain control over their members. (Lennon, 2019)

Promoting an “us” against “them” mentality in this way means that should cult members disagree with any of the actions or mantras of their group, they are unlikely to voice them for fear of alienation. Over time, suppressing these emotions leads to the stubborn irrationality that many therapists experience among cult members as well as their trauma. (Lennon, 2019) According to the author, cults tend to discourage and severely punish those who question their leader or practices, they tend to prevent both vertical and horizontal integration from happening.

The title of the article is, “What is a Cult? Four Types of Cults and Common Characteristics Written by Master Class, published on November 10, 2022. Written by MasterClass it was published on Nov 10, 2022. There are four types of cults. doomsday cults, political cults, religious cults, and sex cults. Doomsday cults are a group that come together to prepare for the allegedly imminent end of the world. Political cults in a group on both the left and the right can morph into cults. Religious cults comprise a group of spiritual beliefs. Sex cult cults for all types of sexual abuse. (MasterClass, 2022)

This article provides a lot of information about different kinds of cults and explains what the group does. It was interesting that the cult not only had one type of cult but also four types of cults. I did not know if they had political cults or doomsday cults. I thought that it had only one type of cult.

The title of the article is called, “How Do Normal, Successful, and Smart People End Up Joining a Cult?” Written by Barbara Gurgel and published by May 11, 2021. This article mentions if you are a happy, well-adjusted person, with a loving family and a degree then you are the kind of person that can be recruited into a cult. People think cults are like images of people standing in a ring of candles, a whole family dead in their beds wearing matching tracksuits. (Can you show source for this?) According to Dr. Janja Lalich, a sociologist and a renowned cult expert, mentions that a cult is more likely to look like an overly enthusiastic self-help group, the type that will take over your schedule, or multi-level marketing company that makes you drive all your friends away. (Gurgel, 2021) On the report on psychologist Steve Eichel no one joins cults on purpose, but everyone is vulnerable to being manipulated into joining. Cults know exactly what they are doing. (Can you expand on this? Explain what you mean by this). Cults need members who are passionate about self-improvement, about the betterment of mankind, about living a more fulfilling life. (Gurgel, 2021) (Include a link to this reference).

In my opinion I agree with this article because most cult leaders are smart, expert, and have higher education than their followers. (Explain this more. Why do you agree to it? What are your justifications?) And it was interesting when the article mentioned that no matter how happy you are, have a loving family, or good career or life they will still join the cult either way.

Feedback for Article 1:

Overall, good job on writing your sources. I can see that you are missing to expand your interpretation on each highlighted phrase. For example, you said that when a person is happy and a well-adjusted person that can recruited to a cult, my concern is that always true, like tru-biz true? Where is the hard/solid proof for this?

In the article, "How Cults Change Your Brain" (Where is the author's name, date of publication, and the publisher's name?) discuss cultic behaviors and rituals that can have devastating effects on the brain and people's lives. Often taking advantage of vulnerable people in search of comfort and identity, they damage critical thinking processes and freeze emotional processing to both gain and maintain control over their members. (Lennon, 2019) Promoting an "us" against "them" mentality in this way means that should cult members disagree (Yeah but for what reasons? Why do you think people need to disagree?) with any of the actions or mantras of their group, they are unlikely to voice them for fear of alienation. Over time, suppressing these emotions leads to the stubborn irrationality many therapists experience among cult members, as well as their trauma. (Lennon, 2019) According to the author, cults tend to discourage and severely punish those who question their leader or practices, they tend to prevent both vertical and horizontal integration from happening. (Can you interpret what does it means to you?)

The title of the article is called, "What is a Cult? 4 Types of Cults and Common Characteristics". Written by MasterClass it was published on Nov 10, 2022. There are 4 types of cults. doomsday cults, political cults, religious cults, and sex cults. Doomsday cults are a group that come together to prepare for the allegedly imminent end of the world. Political cults a group on both left and right can morph into cults. Religious cult is a spiritual beliefs group. Sex cults a cult that do all type of sexual abuse. (MasterClass, 2022)

This article has a lot of information about different kinds of cults and explains what the group does. It was interesting that cult not only has one type of cults, but it also has four types of cults. I didn't know they have political cults or doomsday cults. I thought it only have one type of group of cults.

Feedback for Article 3:

Can you find some stories about type of cults? I thought it will be probably a good idea to add some examples of some types. I look forward to reading it through.

Also do you happen to have references for your research.

Critical Synthesis

2. To Naomy Arevalo, regarding to their critical synthesis.
    A. A cult is an organized group whose purpose is to dominate cult members through psychological manipulation and pressure strategies. (Morin, 2022) Cults usually tend to have powerful leaders who influence people's minds to

form a group and keep them away from society. A cult is a cult, and that is what a frat is. A place where they strip their personality and rebuild it in their image. (Maher, unknown year). Basically, this quote means that a cult leader will manipulate their personality and image to rebuild it in their image. Some people who join cults become lifelong. Others are lucky enough to break free and share how they feel brainwashed by a leader. There are four types of cults: doomsday, political, religious, and sex. Doomsday cults are a group that come together to prepare for the allegedly imminent end of the world. Political cults in a group on both the left and the right can morph into cults. Religious cult is a spiritual beliefs group. Sex cults are cult for all types of sexual abuse (MasterClass, 2022).

How do cults start up? In the report of "What makes a cult a cult?" written by Holly Meyer and was published on September 15, 2016. Charismatic leaders are expert manipulators, charming, and know how to read people. Transcendent belief systems most religions and political groups have transcendent belief systems meaning they must express how to get some better place. Like you must do something to be in the group. System of control, they control you, your life, your choice, and your style. Whatever they tell you to do, you do it. To give them purpose and meaning. Systems of influence meaning old members who have a lot of experience will train and peer pressure the new member how to behave and be like them. (Meyer, 2016).

People think that it is very common for those who join cults to be stupid, brainwashed, insane, and weak-minded; types who need to be told what to do; or people who are too lazy to mentally think for themselves. People with higher education are more likely to join cults than those with lower education (Dawson, 2023). People who have more money or a higher financial status will most likely join cults. Individuals with higher education are more likely to create cults because they are powerful, good with their words, and influence people who have less education. Weak people look up to a powerful person thinking they have all the power or think they will heal them and have all the answers.

How do normal, successful, and smart people join the cults? If you are a happy, well-adjusted person, with a loving family and a degree then you are the kind of person that can be recruited into a cult. (Gurgel, 2021). People think cults are like images of people standing in a ring of candles, a whole family dead in their beds wearing matching tracksuits. According to Dr. Janja Lalich, a sociologist and a renowned cult expert, mentions that a cult is more likely to look like an overly enthusiastic self-help group, the type that will take over your schedule, or multi-level marketing company that makes you drive all your friends away. Steve Eichel, a psychologist, mentions that no one joins cults on purpose, but everyone is vulnerable to being manipulated into joining. Cults know exactly what they are doing. Cults need members who are passionate about self-improvement, about the betterment of mankind, about living a more fulfilling life. (Gurgel, 2021).

According to an article, “How Cults Change Your Brain” written by Annie Lennon, was published on September 24, 2019. Mentions that cultic behaviors and rituals can have devastating effects on the brain and people’s lives. Often taking advantage of vulnerable people in search of comfort and identity, they damage critical thinking processes and freeze emotional processing to both gain and maintain control over their members. Promoting an “us” against “them” mentality in this way means that should cult members disagree with any of the actions or mantras of their group, they are unlikely to voice them for fear of alienation. Over time, suppressing these emotions leads to the stubborn irrationality many therapists experience among cult members, as well as their trauma. (Lennon, 2019) According to the author, cults tend to discourage and severely punish those who question their leader or practices, they tend to prevent both vertical and horizontal integration from happening.

One of the famous cult leaders of the Peoples Temple religious group, Jim Jones, started to be influenced by Father Divine (the Preacher) and the Peace Mission (a religious movement), and later became obsessed with the exercise of power (Unknown name, 2023). Jones convinced 900 or more of his followers that they had to die. He forced his people to drink cyanide-laced punches. Jone manipulated his follower that the cyanide-laced punch was Kool-Aid; it was a chemical that can physically harm you. In 1977, Jones, the self-proclaimed "messiah" of his evangelical flock, led his followers to a remote jungle in Guyana to live in Jonestown where he lied that they could grow food, no mosquitoes or snakes and temperatures hovered around 72

degrees every single day. (Kennedy, 2020) Jim Jones used armed guards and threats to force suicides kill adult and children was one the worst mass killing in American history.

B. Feedback for Critical Synthesis:

Naomy, Good job on the first paragraph, I see that you are interpreting your first source. However, I don't see you begin your sentence, "According to the article…" or "In the article", then you started stating the quote, with the author's name, year, and publisher's name and date of publication. That's the general feedback. Now, I'd like for you for to write a reflection (1 paragraph) for this first paragraph. It will help you think critically more about your topic.

How do cults start up? In the report of "What makes a cult a cult?" written by Holly Meyer and published on Sept 15, 2016. Charismatic leaders are expert manipulators, charming, and know how to read people. Transcendent belief systems most religions and political groups have transcendent belief systems meaning they must express how to get some better place. Like you must do something to be in the group. System of control, they control you, your life, your choice, and your style. Whatever they tell you to do, you do it. To give them purpose and meaning. Systems of influence meaning old members who have a lot of experience will train and peer pressure the new member how to behave and be like them. (Meyer, 2016)

Feedback for Source 2:

Naomy, try not to start a paragraph with a question :), I'd like to see you expand a little on religious beliefs based on cults. This will give the readers to have an understanding religious belief and the overall research. Don't forget the reflection as well.

People think that it is very common that those who join cults are stupid, brainwashed, insane, weak-minded, types who need to be told what to do, or people who are too lazy to mentally think for themselves. People with higher education are more likely to join the cults than those with less education (Dawson, 2023). And people who have more money or have higher financial status will most likely join cults. Individuals who have higher education are more likely to create cults because they are powerful, are good with their word, and influence people who have less education. Weak people look up to a powerful person thinking they have all the power, or think they will heal them, and have all the answers.

Feedback:

Good source, do you have Dawson's articles, any articles, that proves people with higher education are more likely to join group of cults than those with lower education?

How do normal, successful, and smart people end up joining cults? If you are a happy, well-adjusted person, with a loving family and a degree then you are the kind of person that can be recruited into a cult. (Gurgel, 2021) People think cults are like images of people standing in a ring of candles, a whole family dead in their beds wearing matching tracksuits. According to Dr. Janja Lalich, a sociologist and a renowned cult expert, mentions that a cult is more likely to look like an overly enthusiastic self-help group, the type that will take over your schedule, or multi-level marketing company that makes you drive all your friends away. Steve Eichel, a psychologist, mentions that no one joins cults on purpose, but everyone is vulnerable to being manipulated into joining. Cults know exactly what they are doing. Cults need members who are passionate about self-improvement, about the betterment of mankind, about living a more fulfilling life. (Gurgel, 2021)

Feedback:

Excellent source. I don't think this paragraph needs feedback. But one thing to keep in mind is (Last Name, Year) needs to be put in before period at the end of each sentence.

According to an article, "How Cults Change Your Brain" written by Annie Lennon was published on Sep 24, 2019. Mentions that cultic behaviors and rituals can have devastating effects on the brain and people's lives. Often taking advantage of vulnerable people in search of comfort and identity, they

damage critical thinking processes and freeze emotional processing to both gain and maintain control over their members. Promoting an “us” against “them” mentality in this way means that should cult members disagree with any of the actions or mantras of their group, they are unlikely to voice them for fear of alienation. Over time, suppressing these emotions leads to the stubborn irrationality many therapists experience among cult members, as well as their trauma. (Lennon, 2019) According to the author, cults tend to discourage and severely punish those who question their leader or practices, they tend to prevent both vertical and horizontal integration from happening.

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Feedback:

Overall, good job with all your synthesis. I'd also like for you write a conclusion, making a transition to methodology and theoretical framework. Other suggestion is that I want to see analysis two or three sources and show the relationship between each other.

Survey Questions

3. To Ashraf Shahata, regarding their chosen Research Methodology (Method)
    A. Survey Questions are listed below:
        i. Overall, how would you rate your mental health?
            1. Excellent
            2. Very Good
            3. Good
            4. Fair
            5. Poor
        ii. During the past two weeks, how often have you felt sad or depressed?
            1. Extremely often
            2. Very often
            3. Somewhat often
            4. Not so often
            5. Not at all often

iii. During the past two weeks, how often has your mental health interfered with your personal relationships?

    1. Extremely often
    2. Very often
    3. Somewhat often
    4. Not so often
    5. Not at all often

iv. During the past two weeks, how often has your mental health interfered with your ability to get work done or accomplish tasks?

    1. Extremely often
    2. Very often
    3. Somewhat often
    4. Not so often
    5. Not at all often

v. What is your gender?

    1. Male
    2. Female

vi. Please select your age:

    1. Under 18
    2. 18-24
    3. 25-34
    4. 35-44
    5. Above 45 or up

vii. Have you had difficulties in managing daily household activities?

1. Yes
2. No
3. Not sure

viii. Have you been having trouble falling or staying asleep, or sleeping too much?

1. Yes
2. No
3. Not sure

ix. Have you been stressed lately?

1. Yes
2. No
3. Not sure

x. How often do you feel hopeless?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

xi. How often do you feel you've lost interest in most (or all) of the things and activities that you used to find enjoyable or interesting?

1. Never
2. Rarely

3. Sometimes
4. Often
5. Always

xii. How often do you feel you've lost control of your life and future?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

xiii. How often do you feel overwhelmed?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

xiv. How have you been poor appetite or overeating?

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day

xv. Feeling bad about yourself or that you are a failure or have let yourself or your family down.

1. Not at all

2. Several days
3. More than half the days
4. Nearly every day

xvi. Thoughts that you would be better off dead, or of hurting yourself.

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day

xvii. If you checked off any problems, how difficult have these problems made it for you at work, home, or with other people?

1. Not difficult at all
2. Somewhat difficult
3. Very difficult
4. Extremely difficult

xviii. Think about your mental health test. What are the main things contributing to your mental health problems right now?

xix. Little interest or pleasure in doing things?

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day

xx. Do you feel comfortable answering this survey?

- Yes
- No

B. Feedback

i. Good Job Ashraf! It is clear and to the point. Some of the questions are ALL CAPS, make the questions to be sentence-case and the choices to each question as well.

Results

4. To Naomy Arevalo, regarding their Methods (the process of doing their survey)

A.

i. What trends do you notice in your responses to the survey?

- For the report on cults the result of the graph notice 16% male took the survey than women 12%. The graph shows various ages between 18-28. The graph also shows there is a diversity of people who take this survey which is nice to see different kinds of views and respond.

ii. What results were expected?

- Question #7: Who most likely joins the cult of higher education or less education? Less education is the highest percentage than higher education. Which is expected because it is very common for people to stereotype cult. People who think less education will join the cult because they believe that they can't decide for themselves, are too lazy to mentally think for themselves, or

weak–minded. Higher education is more likely to join the cult than less educated people.

iii. What were surprising?

- For question #6 Do you think cult can be a good thing or bad thing? The results were tied between bad things and both 8% Most people said cult can be a bad thing or both. And 2% is a good thing. Which is surprising because many individuals think cult is a bad thing and would have higher percentages than both percentages. Usually people think cult is bad, harmful, and dangerous, but cult can both depend on what kind of organization and how their leader influenced them and their belief. This survey was interesting to see people answer and their view on why they pick bad things, good things, or both.

B. Understood your topic, it is interesting that the researcher asked the participants, "Do you think cult can be a good thing or bad thing?" Some of the participants may be inclined to agree to either or both good and bad thing. However, I would like consistency in your results.

Analysis and Discussion

5. To Brianna Kelley, regarding their Analysis and Discussion

A. The two main questions of collecting data to find more answers and comparing them to the literature review require having more than one school counselor and what is their suggestion for making school protection better for

students and teachers. Let us first talk about the need to have more than one school counselor. There is not much information to explain the research found on the Internet about suggestions that need more than one school counseling; however, schools usually have one counselor for over 250 students. This is necessary for a counselor to help with mental health issues. Schools give students a free counselor if needed, but more is needed; other people who can talk for an unlimited time are teachers. Students stay with teachers for school hours, and teachers can open to be there for them, but the problem is that they do not have counselor licenses for it. Teachers are required to refer counselors to talk deeply about their mental health. The main reason why only one counselor is available for every school is because the school budget is low, and they cannot provide more counselors. This is the main problem because students who have mental health and it could affect them to become shooters at other schools or their school. Therefore, they need more school counselors to help them provide their most considerable support and to avoid being crazy out of control. To collect the data, students from two classes of the University Writing Program, Rochester Institute of Technology, were recruited. The three options for this question are yes, maybe, and no. No one answer said, no. Nine students answered that they are maybe. Twenty students answered yes'. To discuss with new people who want to share this research paper, the high recommendation is to continue to obtain a counselor license if interested in being a counselor and help people all over the world to avoid becoming a shooter. It is sad to see

that the school budget is low and cannot pay for more than one counselor, but it is a good idea to show the school board to prove how many students need more time and see weekly to improve their mental health. This could change their minds about having more than one counselor at school. The second and last main topics are their suggestions for improving school protection for students and teachers. There is much information to find to explain on the Internet about their suggestions. Many schools have essential things to make them safer and better. For example, security systems such as guards standing outside by the doors, police monitoring the buildings, checking school ID badges, and security cameras. That is a good thing, but there must be missing, and we need more and better than that. They collected the data, and students typed their suggestions for improving school protection from the two classes of the University Writing Program, Rochester Institute of Technology. Twenty-six students were willing to type the suggestion, but one said: “I don’t know.” That is okay. It is not required for everyone to answer my question, but thankfully twenty-six students have an excellent idea! Give examples from students' suggestions to improve school protection for students and teachers; metal detectors, armed teachers, and more and better security guards check security often and reinforce classroom windows, including those with an outside view. These are great and better ideas. To discuss with new people who want to share this research paper, it would be a good idea to give out the school board of students and bring many more ideas to improve school protection for students and set up suggestions for all schools in America. To

summarize, both main topics to discuss with new people who want to share the main research topics, knowing show that schools have low budgets to not afford more school counselors and basic staff to protect the school better, but to use take advantage of students' suggestions to protect all schools in America from showing the school board that we need it and also include collecting students who have mental health. Therefore, they can reconsider hiring more school counselors. The main two questions of collecting data to find more answers and compared to the literature review, asking requires having more than one school counselor and what is their suggestion for making school protection better for students and teachers. Let's talk about require having more than one school counselor first. It is not much information to explain the research found on the internet about suggestions that need more than one school counseling however found; schools usually have one counselor for over 250 students. That is necessary for one counselor to help with their mental health issue. Schools give students a free counselor if needed, but more is needed; other people who can talk for unlimited time are teachers. Students stay with a teacher for school hours, and teachers can open to be there for them, but the problem is that they don't have counselor licenses for it. Teachers are required to refer to counselors to talk deeply about their mental health. The main reason why only one counselor for every school is because the school budget is low, and they could not provide more counselors. That is the main problem because students who have mental health and it could affect them to become shooters at other schools or their

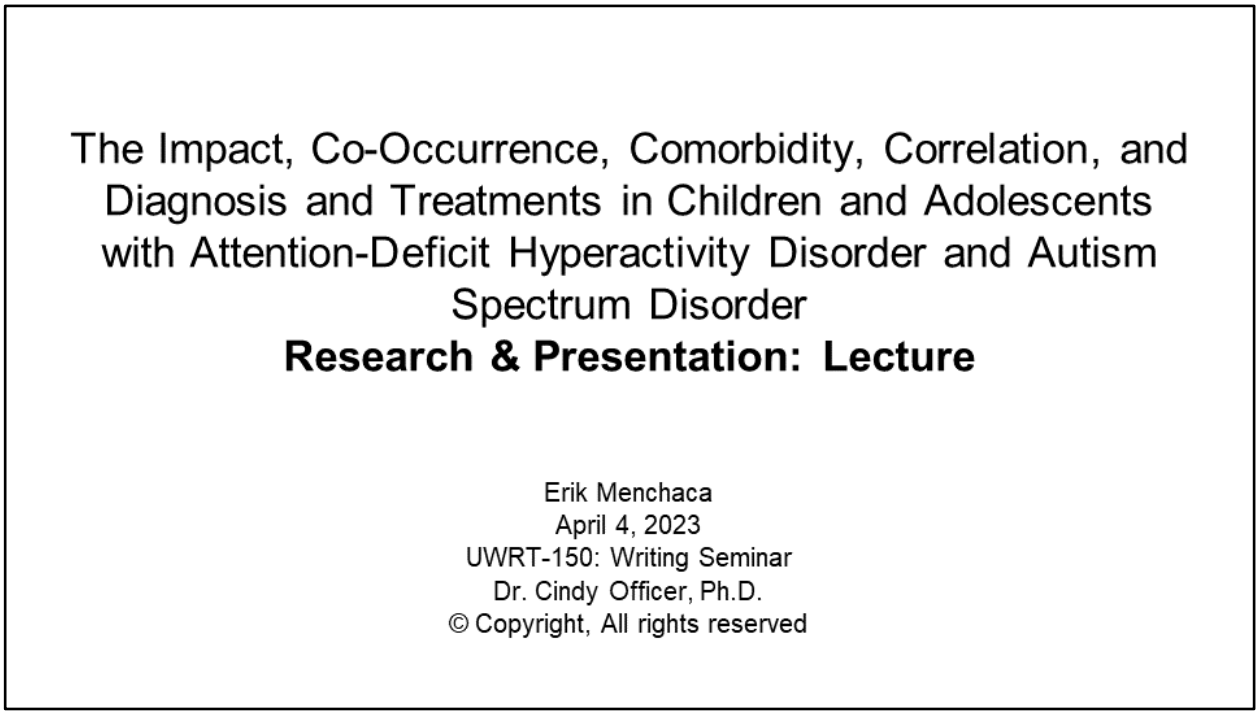
school. That is why they need more school counselors to help them to give their most considerable support and avoided to be crazy out of control. To collect the data, ask students from the two classes from the University Writing Program, Rochester Institute of Technology. Three options for this question are yes, maybe, and no. There is no one answer part said no. Nine students answered maybe. And twenty students answered yes. To discuss with new people who want to share this research paper, the high recommendation is to continue to get a counselor license if interested in being a counselor and help people all over the world to avoid becoming a shooter. It is sad to see school budget is low and can't be able to pay for more than one counselor, but it is a good idea to show the school board to prove how many students need more time and see weekly to get better from their mental health. That could change their mind about having more than one counselor for school. The second and last main topic is their suggestion for improving school protection for students and teachers. There is much information to find to explain on the internet about their suggestion. There are many schools has essential things to make school safe and better. For example, security systems such as guards standing outside by the doors, police monitoring the buildings, checking school ID badges, security cameras, and more. That is a good thing, but there must be missing, and we need more and way better than that. They collect the data, and students type their suggestions for improving school protection from the two classes from the University Writing Program, Rochester Institute of Technology. Twenty-six students were willing to type the suggestion, but one

said: “I don’t know.” That is okay. It Is not required for everyone to answer my question, but thankfully twenty-six students have an excellent idea! Give examples from students' suggestions to improve school protection for students and teachers; metal detectors, armed teachers, and more and better security guards check security often and reinforce the classroom windows, including those with an outside view. Those are great and better ideas. To discuss with new people who want to share this research paper, it would be a good idea to give out the school board of students and bring many more ideas to make school protection better for students and set up those suggestions for all schools in America. To wrap up, both main topics to discuss with new people who want to share the main research topics, knowing show that schools have low budgets to can't afford more school counselors and basic stuff to protect the school better but to use take advantage of students’ suggestions to protect all schools in America from showing school board that we need it and also include collect students who have mental health. So, they can reconsider hiring more school counselors too.

B. Very good! I can see you are explaining everything about your research. As I can see that you are explaining the process of the project, I am happy to hear that students are answering suggestions of ways to protect schools from mass shooting. However, I got under the impression if you did or did not compare your primary research against secondary research. Let's discuss more in class.

APPENDIX C: LECTURE SLIDES

Slide 1: Title



Slide 2: Acknowledgements

Acknowledgements

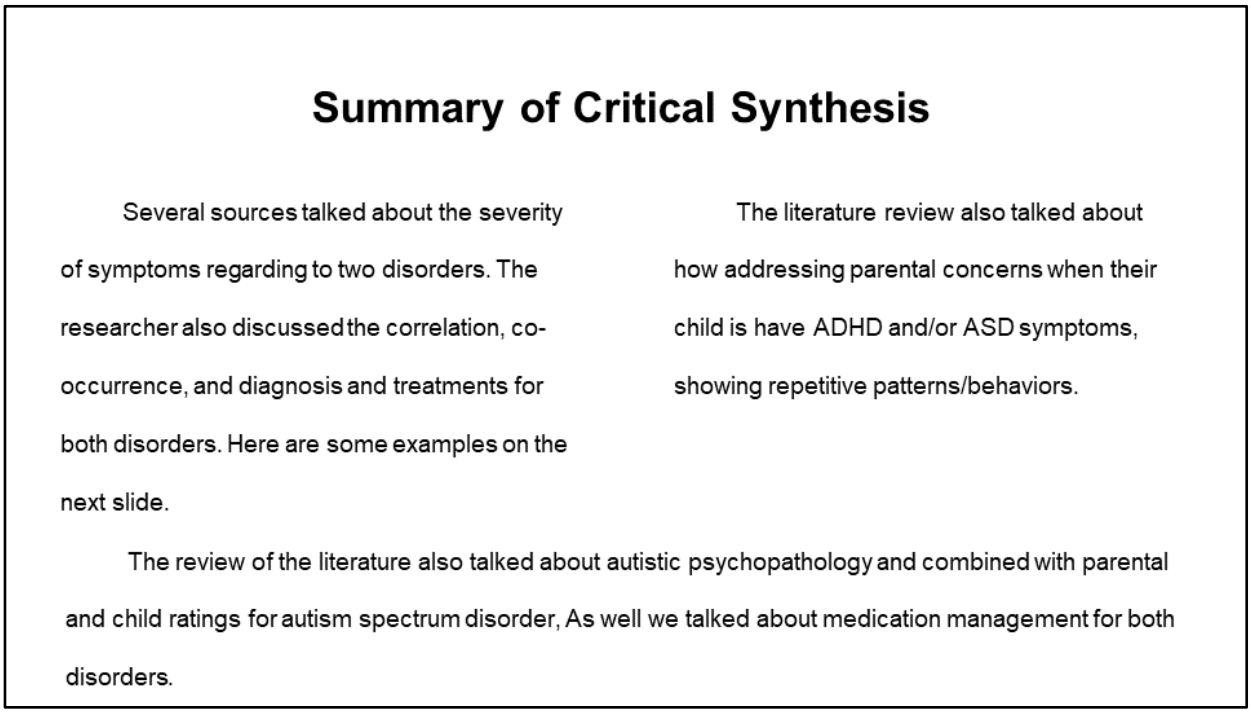
It is with utmost sincerity that I express my profound gratitude to Dr. Cindy Officer, a paragon of excellence, for her unwavering guidance, continuous support, and boundless encouragement throughout my research journey. Her sage counsel, from ideation to implementation, has been an invaluable resource, propelling me towards academic success. Dr. Officer's constructive feedback has been a beacon of hope, shining light on areas of improvement, while her insightful advice has been an oasis of knowledge in a desert of uncertainty. Without her exceptional guidance and unflinching support, I would not have been able to complete my APA paper on time. Indeed, I am blessed to have had her as my mentor and colleague, and I shall forever cherish her contributions to my academic and personal growth.

Moreover, I extend my heartfelt appreciation to my peers, who have demonstrated an unwavering commitment to excellence by going above and beyond in providing constructive criticism of my literature. Their willingness to participate in my survey, which facilitated the collection and analysis of scientific and quantitative data, has been instrumental in arriving at meaningful conclusions. The depth of their insights and thoughts has been an invaluable resource, and I am indebted to them for their time and effort, which has propelled my work towards excellence.

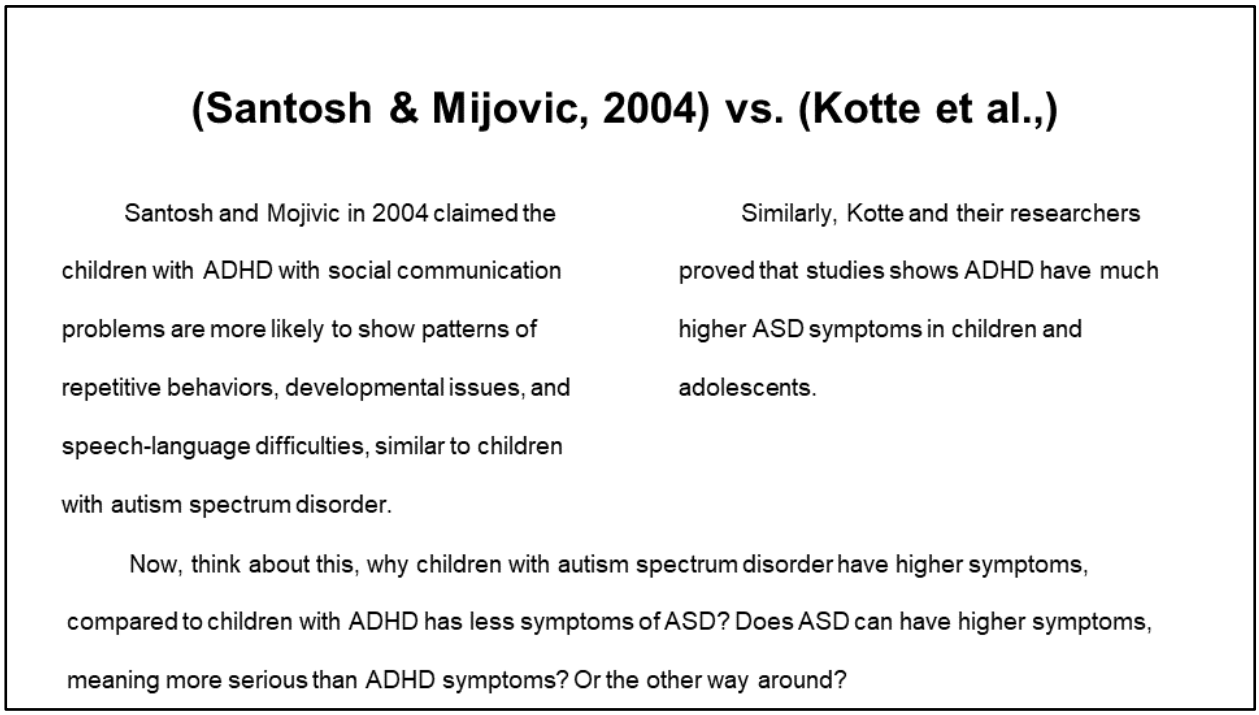
I also wish to express my gratitude to my speech-language pathologist, Bonnie Bastian, for her consistent encouragement and unwavering support over the past two years. Her phenomenal feedback on my pragmatics through writing has been a catalyst for improvement, and our weekly meetings have been instrumental in identifying and addressing areas of weakness. I am truly grateful for her guidance and support, which have been pivotal in shaping my academic and personal growth.

Finally, I am immensely thankful to my mother, a paragon of unconditional love, for her constant support and encouragement throughout my educational journey at RIT. Her unwavering guidance, love, and support have been instrumental in helping me to achieve my goals and pursue my passions. Her contributions have been immeasurable, and I shall forever cherish her role in shaping the person that I am today.

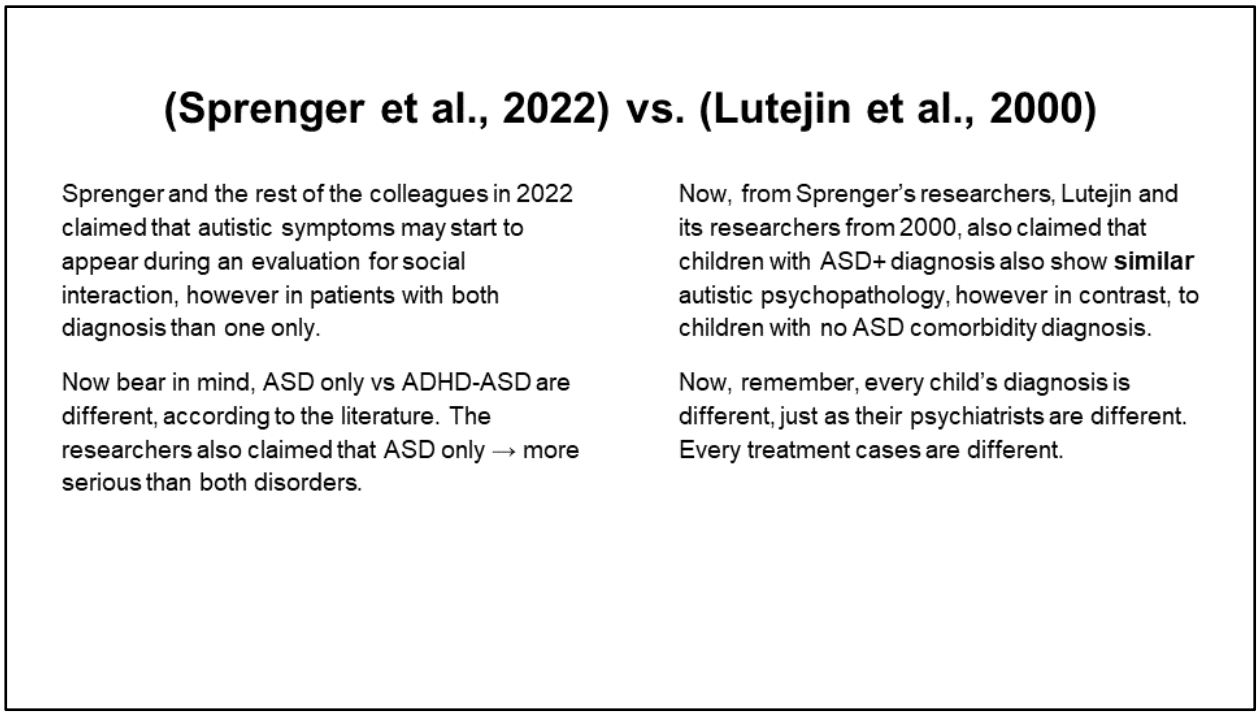
Slide 3: Summary of Critical Synthesis



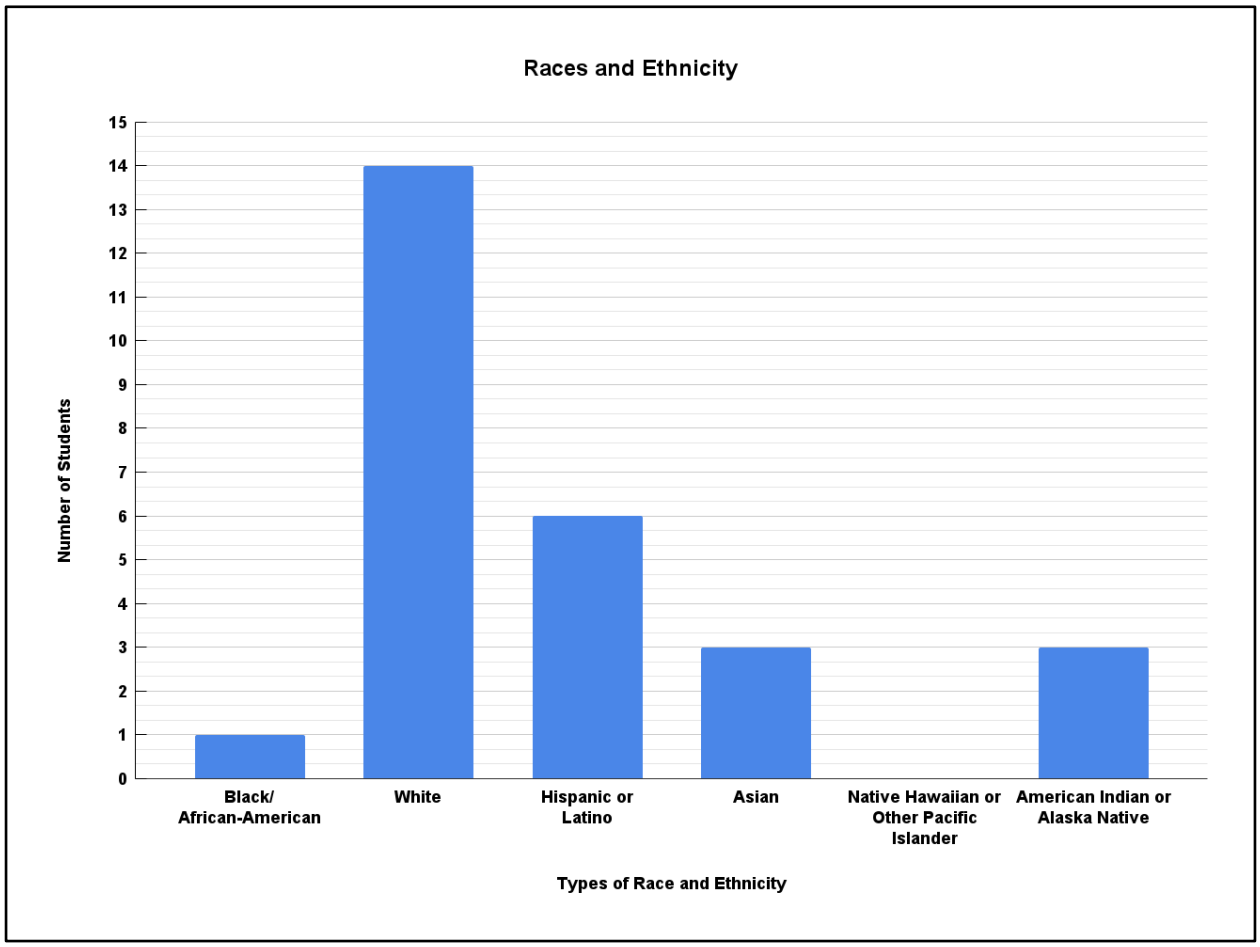
Slide 4: (Santosh & Mijovic, 2004) vs. (Kotte et al.,)



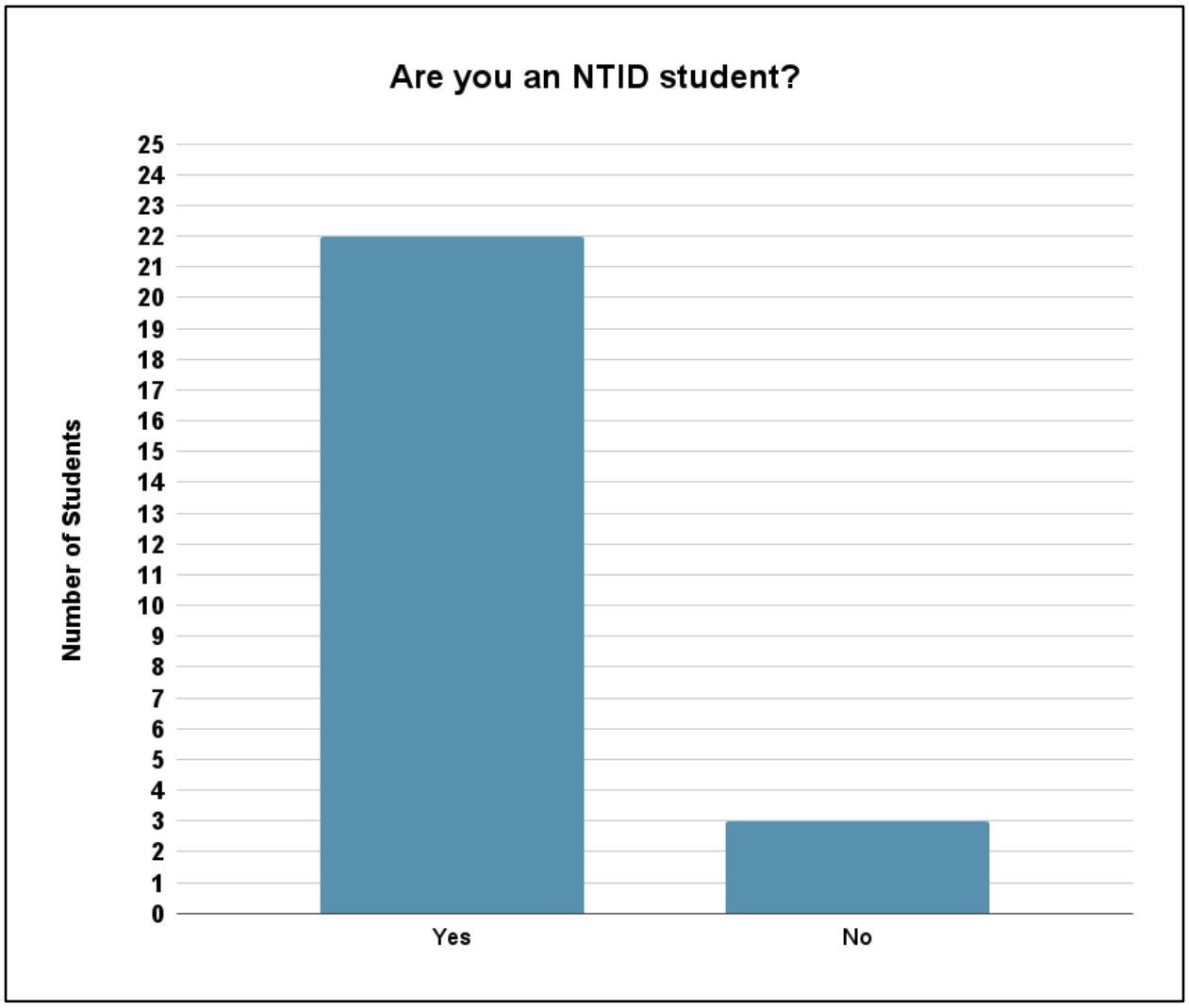
Slide 5: (Sprenger et al., 2022) vs. (Lutejin et al., 2000)



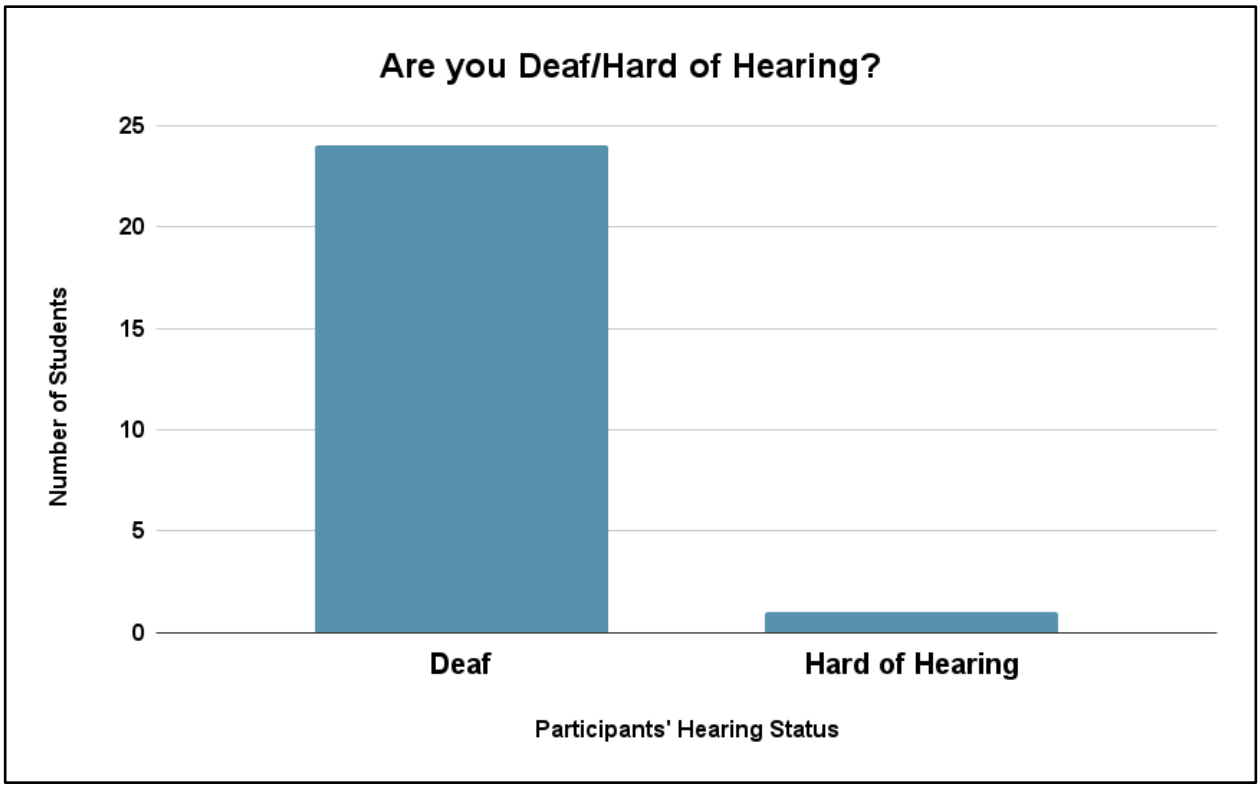
Slide 6: Race and their Ethnicity



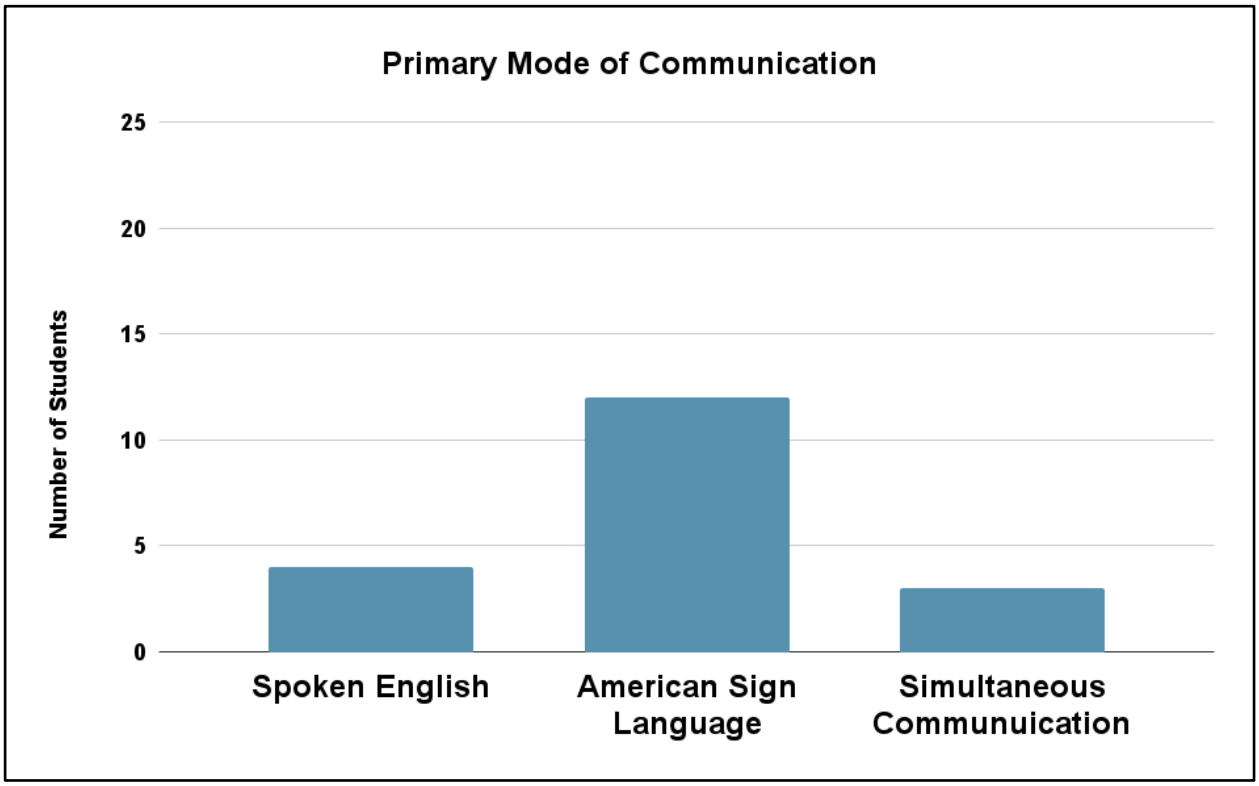
Slide 7: Student Status



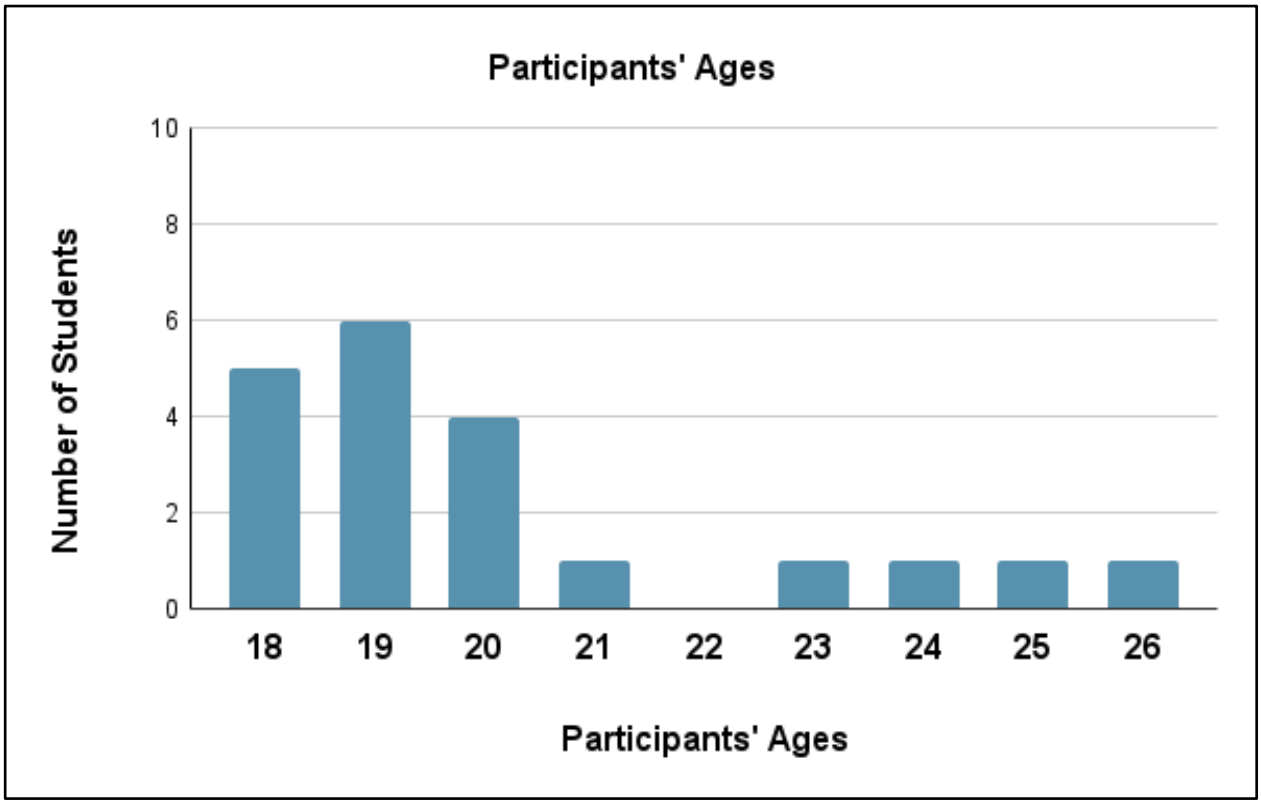
Slide 8: Participants' Hearing Status


Are you Deaf/Hard of Hearing?
25
20
15
10
5
0
Number of Students
Deaf
Hard of Hearing
Participants' Hearing Status

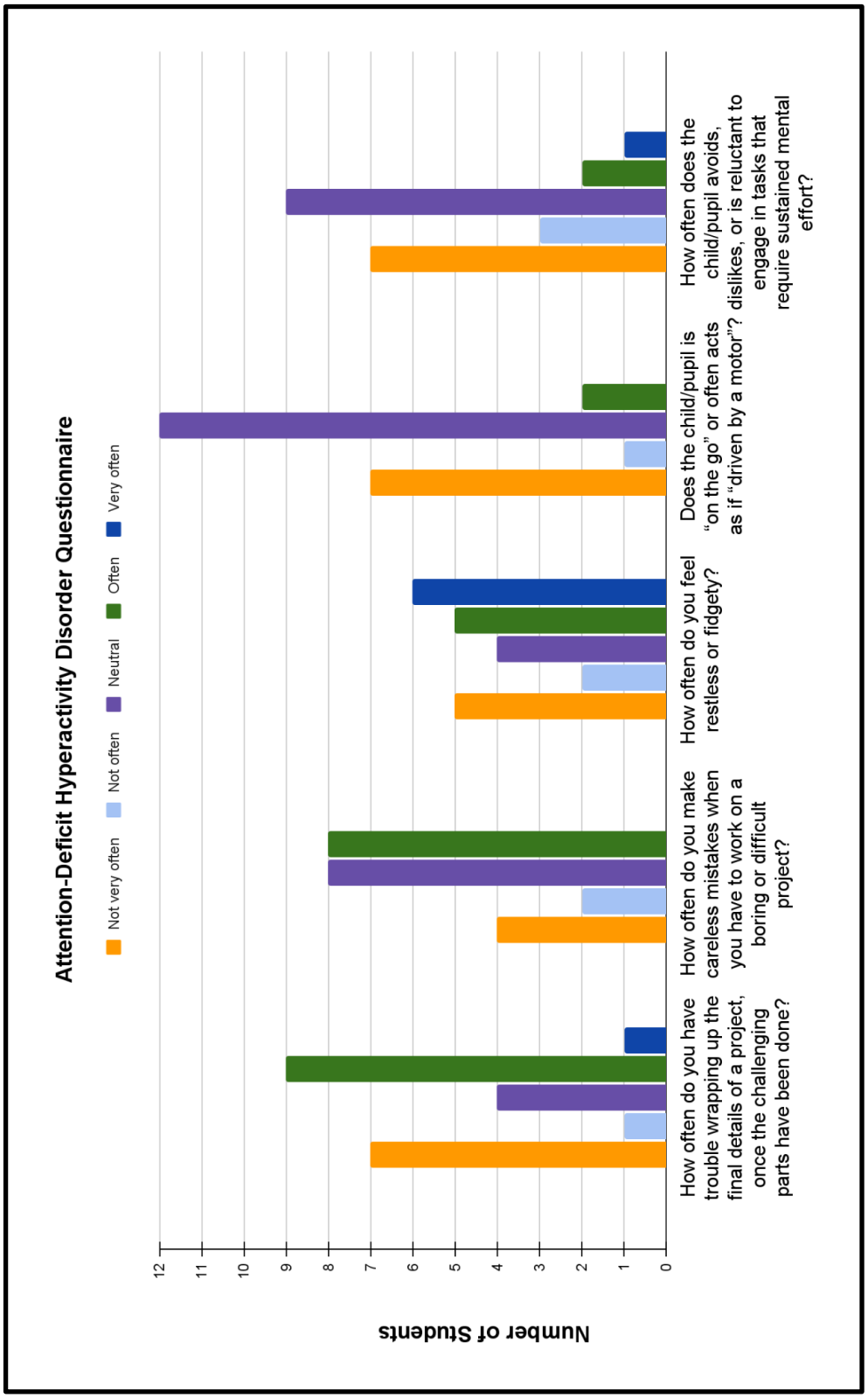
Slide 9: Participants' Primary Mode of Communication



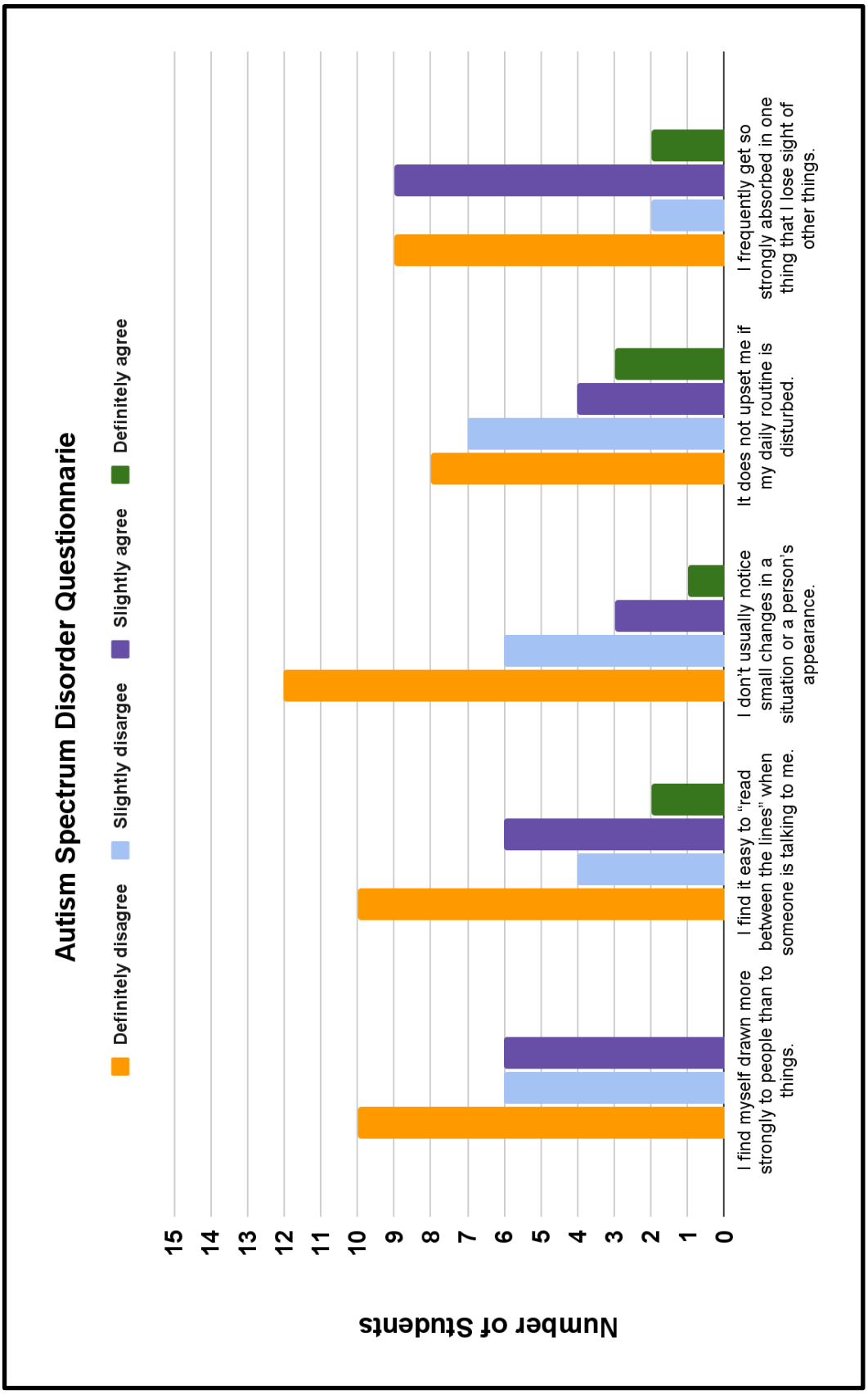
Slide 10: Ages of Participants



Slide 11: ADHD Questionnaire



Slide 12: ASD Questionnaire



APPENDIX D: THRESHOLD CONCEPTS

Final Reflection

One: Writing is a knowledge-making activity.

In our writing community, I agreed that writing is a knowledge-making activity because our community values our topics, and we express well-informed opinions based on research. However, when it comes me, I phenomenally fall in love and gets inspired with his research on children and adolescents with attention-deficit hyperactivity disorder and autism, exploring their correlations and comorbidities. The more the I dive in, the better my learning. Additionally, I discussed his topic with my classmates and an instructor within the writing community.

Two: Writing is a social, rhetorical activity (a "conversation").

Within our discourse community, we actively engage with the social and rhetorical aspects of writing. We share our work with fellow writing colleagues and the course instructor, fostering a vibrant exchange of ideas. Through our discussion board posts, we engaged in meaningful conversations, providing feedback to one another to enhance the quality of our writing, particularly in relation to the researcher's topic. By engaging in dialogue and applying relevant examples, we can further our understanding and refine our own writing skills.

Three: Writing addresses social situations through recognizable forms called genres.

In our community, we use an IMRaD model to write research papers about our chosen topics and their related literature. I gathered information from sources and combined them to gain a deeper understanding of the topic. My classmates and I also used a research database like ProQuest to find relevant data. Afterwards, I compared this data with the information in the literature to see if there are any differences.

Four: Language and literacy cannot be separated from identity.

In our writing community, we come from diverse identities and countries, and we particularly have different languages. For every writing assignment, we employ American English for reading and writing in English. However, when discussing the reader's topic and engaging in conversation, we utilize American Sign Language. This interactive approach allows us to learn new things and actively participate in the discussion.

Five: Dynamic revision is central to developing writing.

Within our discourse community, we engage in repetitive revisions of our papers. We acquire knowledge on the writer's topic by actively writing in our own words. We share our essential feedback among scholars to receive fresh insights. Subsequently, we utilize this feedback to incorporate real-world examples relevant to the writer's topic. Additionally, we can seek feedback from the course instructor, which can be applied to future writing assignments.