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Future Possibilities for Adults with Autism Spectrum Disorder

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Abstract

Autism Spectrum Disorder's nature of presenting socially awkward behaviors creates barriers for those with ASD in the job interview process. This problem raises questions on how the interview process can be redefined to be more inclusive. Dillenburger et al. conducted a study on interventions provided for individuals with ASD. The study concluded that most jobs do not provide an appropriate job interview process for those with ASD. Solomon et al. and Maras et al. both conducted studies that highlighted the social behaviors presented by individuals with ASD that prevented them from being hired during the job interview process. Both of these studies concluded that these behaviors expressed hindered this population from obtaining employment. Both of these studies point to the fact that the job interview process must change. Wehman et al. focused their study on individuals with ASD maintaining employment after obtaining a job. The results from this study conclude that it is not an inability to perform job related tasks that is preventing this population's employment. These studies were evaluated by the methodology of a review of literature. From this paper it was determined that the interview process is not inclusive for those with ASD. The interview process must be reconstructed to provide the appropriate inclusivity for those with ASD.

Keywords: Autism Spectrum Disorder, interview process, socially awkward behaviors, adults with ASD, and employment.

Future Possibilities for Adults with Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) can be a socially debilitating diagnosis. This can prevent this underutilized population of individuals from obtaining a job. Due to the nature of this diagnosis, the average job interview process is near impossible to overcome. This leaves a staggering 5.6 million adults with Autism Spectrum Disorder unemployed as of 2021 (Palumbo, 2021, para. 2). The focus of this paper will be to answer; how will those diagnosed with Autism Spectrum Disorder be incorporated into the workforce in the future? In a job interview process, first impressions are the obstacles these individuals struggle to conquer. From their sensory issues with fluorescent lights and whirling ceiling fans to socially awkward behaviors like avoiding making eye contact, ASD individuals are set up for rejection before the job interview begins. These individual's overwhelming social anxiety also contributes to their socially awkward mannerisms. The average employer is not aware of the challenges faced by adults with ASD. This provides an opportunity to bring more awareness to the diagnosis and population. Increased awareness from employers about ASD would help this staggering unemployment rate decrease. If the daunting job interview process was reconstructed to be more applicable to this population, then a reconstructed job interview process would look much different than a traditional job interview. Instead of a panel of people asking the individual their strengths and weaknesses, the interviewee would be given tasks on a computer. They would then be evaluated on how they completed the tasks. This could eliminate social anxiety and unnecessary pressure experienced by the individual, thus giving adults with ASD a fair chance when applying for jobs. Once hired, these individual's work ethic and determination to prove that they are a valuable asset in the workforce would be exponential. Diagnosed individuals with ASD see the world in a different light. They possess abilities that the general population does not and can provide an

approach to a problem unlike other employees. This once unemployable population is beginning to break through into the workforce. They have an untapped potential for new ideas, creativity, and an unapologetic drive to be recognized for what they have to offer. Another aspect of this diagnosis worth mentioning is providing these individuals with an appropriate work environment. The environment, depending on the individual, might have low lighting, a quieter setting away from the rest of the employees, softer color tones, etc. In an ideal setting the environment would be governed toward the sensory needs of the individual. This paper will look deeper into the topics mentioned above. Along with providing a history of this diagnosis over the years, the common signs and symptoms associated with it, future projections of the population increase we have witnessed, and treatment options to guarantee the best overall life outcome for these individuals.

When I first started working with children 10 years ago, I knew little to nothing about Autism Spectrum Disorder. After a few months of being a one-on-one substitute with different students, I was given my first opportunity to work permanently with a student. My first day working with the student threw me a curve ball. I had no idea what I was in for. Within the first 30 minutes of the day, my student had a full-blown breakdown that lasted for more than 30 minutes. They were screaming, crying, and left the classroom without permission. They were threatening to run into the street, completely agitated. All the while I had no idea what set them off. It turned out my student was jealous of one of their classmates and due to my student's ASD, they were unable to control their emotions. I became very familiar with this behavioral response that stemmed from an inability to control their emotions. This is just one of few symptoms related to ASD. Fast forward three years after this incident. My dedication and hard work had paid off. My student no longer required support in the classroom. This was a major

accomplishment for me. This was my first student who I helped transition into the next chapter of their life. This was an amazing experience working with and seeing my student's growth. This three-year time period sparked something inside me that I had been searching for. I had found my passion for working with special needs children. Due to this exposure, I found mental health care very interesting. This is also what brought me to CSUMB to pursue my degree in psychology.

Even with continual growth in awareness in the last 20 years with regards to Autism Spectrum Disorder, major societal deficits remain. In 2021, adults diagnosed with ASD are a large unemployed population of individuals. With over 5 million unemployed adults with ASD (Palumbo, 2021, para. 2), this high number raises some questions. What is causing such a high rate of unemployment within this population? Is it that these individuals possess an inability to be effective in the workplace? No. Highly recognized and successful individuals such as Elon Musk, Temple Grandin, and Bill Gates are all recognized to be on the spectrum in regards to Autism. If these individuals mentioned were able to attain world class recognition, what is preventing such a large number of adults with ASD from having a job? Work ethic is not an issue. Individuals diagnosed with ASD are known for having socially awkward behaviors. Behaviors such as an inability to make eye contact, to read social cues and facial expressions appropriately, and a lack of understanding when asked open ended questions are evident (Maras, 2021, para. 9). These deficits are important aspects necessary for obtaining a job during the interview process. Even with public awareness of this diagnosis being higher than in years past, the unemployment rate of these individuals remains high. The answer lies directly in how the job interview process can be revised in a way that addresses adults with ASD and their social awkwardness. By changing this process adequately to meet their needs, more adults with ASD

would be incorporated into the workforce. With the names like Musk, Grandin, and Gates there is no question that these individuals may prove themselves within the workforce. Individuals diagnosed with ASD could shatter doubts or biases possessed by society that they are an unemployable population. With the incorporation of a restructured interview process to meet their needs, their success in being able to secure employment would reduce the unemployment rate of adults with ASD.

Literature Review

Framing ASD

In 2013, the latest version of the DSM was released. The fifth edition of the DSM included some changes about ASD. One major area of change was the name of the diagnosis and subdiagnoses. Before the release of the latest addition of the DSM, ASD would have been diagnosed as, “Autistic Disorder, Asperger Syndrome, or Pervasive Developmental Disorder” (Hyman, 2013, para. 4). Now all of these subdiagnoses fall under the umbrella of ASD. “In (the) DSM-IV, symptoms were divided into three areas (social reciprocity, communicative intent, restricted and repetitive behaviors)” (Hyman, 2013, para. 6). “The new diagnostic criteria have been rearranged into two areas: 1) social communication/interaction, and 2) restricted and repetitive behaviors. The diagnosis will be based on symptoms, currently or by history, in these two areas” (Hyman, 2013, para. 7). This was done to simplify the labeling of the diagnosis of ASD and all of the related subcategory diagnoses. It was agreed that Autism Disorder and Asperger Syndrome fall into the same category. The single diagnosis of ASD was much simpler.

The Mayo Clinic highlights the risks associated with ASD. The 5 areas of concern include; “The child’s sex, family history, other associated disorders, extremely preterm babies, and the parent’s age” (Mayo Clinic Staff, 2018, para. 18). Research shows that boys are 4 times

more at risk to be diagnosed with ASD than girls. Regarding family history, if the family already has one child diagnosed with ASD, there is an increased risk factor for having another child with the same disorder. Other family members may exhibit signs of the disorder (social awkwardness or poor communication skills) but are not diagnosed with the disorder themselves. In reference to other disorders, when children are born with specific medical conditions they are at a higher risk for developing ASD. This is due to the “fragile X syndrome” (Mayo, 2018, para. 22). When babies are born prematurely, they have a greater risk for developing ASD. The parent’s age has always been thought to be a contributing risk factor for ASD. Unfortunately, this has yet to be scientifically proven. The age of the parents does not always determine an ASD diagnosis.

According to the DSM-5, “Autism Spectrum Disorder is frequently associated with intellectual impairment and structural language disorder” (American Psychiatric Association, 2013, pgs. 58-59). There are many comorbid diagnoses associated with ASD. These diagnoses include; “developmental coordination disorder, anxiety disorder, depressive disorders, epilepsy, sleep problems, constipation, and avoidant-restrictive food intake disorder” (American Psychiatric Association, 2013, pgs. 58-59). The DSM-5 also states that, “about 70% of individuals with Autism Spectrum Disorder may have one comorbid mental disorder, and that 40% may have two or more comorbid mental disorders” (American Psychiatric Association, 2013, pgs. 58-59). In the case of the student that I worked with, they fell into the category of two or more comorbid disorders. My student also exhibited avoidant-restrictive food intake disorder. This resulted in severe constipation because they hated eating fruits and vegetables. Due to intrusive thoughts they also had a difficult time sleeping. This then also contributed to higher levels of anxiety and depression.

Definition of Autism Spectrum Disorder

The DSM-5 defines Autism Spectrum Disorder as, “Persistent deficits in social communication and social interaction across multiple contexts” (American Psychiatric Association, 2013, pg. 50). Some of these deficits include; repetitive motor movements (flapping), non communicative behaviors, social deficits (inability to make friends, difficulty reading social cues, social-emotional inability to understand others feelings), strict adherence to specific routines or schedules (lacking the ability to be flexible and go with the flow), intense fixations on personal interests, and sensory based dislikes (how the way something sounds, feels, smells, looks, acts etc.). The fascinating part about ASD is how differently it affects the diagnosed individual. There is a vast difference in how ASD presents. The levels of severity range widely. Diagnosed individuals can be extremely socially awkward and highly intelligent or vice versa. For many years, ASD severity was looked at as a spectrum and that the diagnosed individual would fall somewhere on that line. This is problematic due to the nature of ASD. No diagnosis of ASD looks exactly the same (American Psychiatric Association, 2013, pgs. 50-59).

Prevalence

According to Statista in 2021, “in the United States, around 3.63 percent of boys aged 3 to 17 years old had Autism Spectrum Disorder compared to 1.25 percent of girls” (Elflein, 2021, para. 1). This may not sound like a major gap in percentages but working in this field it is quite noticeable. I have worked with many students over my 10-year span in the field. During this time period, I have worked with a handful of female students diagnosed with ASD. With regards to the male students, there have been exponentially more males that I worked with. Scientists and psychologists do not have a clear understanding of why this is. One theory suggests that girls are overlooked more than boys. The girls slide under the radar for many years until later when they

might be diagnosed. Do girls have milder behaviors than boys or are doctors diagnosing children hyper focused on looking for signs in boys? It is hard to say. Males diagnosed with ASD far surpass the female population with the disorder.

Age of Onset

The National Health Institute highlights important signs and symptoms when looking at the age of onset with ASD. There are some obvious signs to look for up until age 2. For example, the student I worked with would initially make eye contact with their parents. Before their second birthday, they no longer would make eye contact with their parents. Their parents also noticed a new fixation on ceiling fans. They would stare at ceiling fans rotating for hours on end if their parents would let them. They would get agitated when the parents turned them off. The same type of agitated reaction would occur when they were in the car driving with their parents and they had to stop for a red light. They would immediately begin crying and screaming and then stop when the car started moving again. My student exhibited the loss of eye contact, fixation on an object, and sensory issues all before age 2, which diagnosed them with ASD. The earliest indicators of ASD include; “no babbling or pointing by age 2, no single words by age 16 months or two word phrases by age 2, no response to their name, loss of language and social skills previously acquired, poor eye contact, excessive lining up of toys and objects, and no smiling or social responsiveness” (NIH, para. 13). If these signs and symptoms are overlooked in their first two years of life, later indicators may include; “impaired ability to make friends with peers, impaired ability to initiate or a sustain a conversation with others, absence or impairment of imaginative and social play, repetitive or unusual use of language, abnormally intense or focused interest, preoccupation with certain objects or subjects, and inflexible adherence to specific routines and rituals” (NIH, para. 14).

Comorbidity

Satterstrom (2019) looked at similarities between Autism Spectrum Disorder and Attention Deficit/Hyperactivity Disorder, to see if there was any relationship between the disorders. Satterstrom found that, “ASD and ADHD have a similar burden or rare protein-truncating variants in evolutionary constrained genes, both significantly higher than the controls” (Satterstrom, 2019, para. 1). The study looked at a specific gene that was correlated with a “microtubule-protein 1A (MAP1A)” (Satterstrom, 2019, para. 1) that they believed to be linked to causing “childhood psychiatric disorders” (Satterstrom, 2019, para. 1). The study found that the protein-truncating variant was linked between the two disorders. Other notable disorders related to ASD include; “Rett syndrome, selective mutism, language disorders and social (pragmatic) communication disorder, intellectual disability (intellectual development disorder) without Autism Spectrum Disorder, stereotypic movement disorder, ADHD, and schizophrenia” (American Psychiatric Association, 2013, pgs. 57-58). These disorders mentioned share bits and pieces of the diagnosis relating to ASD. Some of these diagnoses lack key components of ASD, thus resulting in a different disorder, unlike schizophrenia, which has more severe symptoms than ASD. Another diagnosis not mentioned by the DSM-5 that I believe relates to ASD is Obsessive Compulsive Disorder (OCD). People diagnosed with OCD have a strict adherence to following a routine. Individuals diagnosed with ASD follow a similar pattern, not necessarily the repetitive part but they need predictability of a defined schedule (American Psychiatric Association, 2013, pg. 50). When their schedule/routine is interrupted, this can cause them a great deal of dismay. Similarly seen with OCD.

Future Trends

What might future trends in ASD look like? In 2020, “The Centers for Disease Control and Prevention (CDC)’s Autism and Developmental Disabilities Monitoring Network estimates that one in 54 children in the United States have been identified with ASD” (Cervantes, 2020, para. 2). This article states there has been an exponential rise in child diagnoses in the past 10 years. The CDC states they are not sure what has caused the rise in children diagnosed with ASD. This has prompted the reauthorization of the Autism CARES act. Even with these recorded higher numbers, appropriate funding for research is lacking. As 1 out of 54 children are diagnosed with ASD, this leaves a potentially larger population of future adults that could require more necessary services. More funding is important to help ensure this population's success in the future. With this drastic change over a 10 year span, more research and funding is necessary so that we can help to understand and treat individuals with ASD.

Medications

There are several medications associated with the treatment for ASD. Unfortunately, none of these drugs cure all the symptoms of ASD. These medications are used for helping control certain behaviors and specific feelings. These medications include; SSRIs, tricyclics, psychoactive or antipsychotic medications, stimulants, anti-anxiety, and anticonvulsants. Not all of these are appropriate for every case. The medications prescribed are unique to every case. “A notable treatment approach for people with ASD is called applied behavior analysis (ABA). Use of ABA has become widely accepted among healthcare professionals and used in many schools and treatment clinics. ABA encourages positive behaviors and discourages negative behaviors to improve a variety of skills” (CDC, 2019, para. 7). This form of treatment may be the most beneficial to the child and the parents. This therapy empowers the child with the necessary skills

to one day be self sufficient. This will also empower the parents to help their child to the best of their ability, thus resulting in the best possible outcome for both child and parents. Early diagnosis and intervention are a crucial part of the overall success of the child.

Public Awareness

A major aspect of ASD that is preventing this group of individuals from obtaining a job is the general public's awareness of the diagnosis. Due to the nature of this diagnosis, those diagnosed with ASD do not always present themselves in the best light. A diagnosis like this can give people the wrong idea about this population. They are seen as being socially awkward and unable to perform the necessary skills to have a job. When in reality this is untrue. These misconceptions cause individuals with ASD to have a difficult time finding a job. The public is aware of ASD. So then what is causing there to be such a high rate of unemployed ASD diagnosed individuals? Is there a stigma against these individuals? Or is it entirely attributed to their social awkwardness during job interviews?

Lack of Interventions

Dillenburger (2013) surveyed a large sample of the general population. The study collected data from over 1,200 participants. From this study, they were able to gather that, “80% of the sample were aware of ASD and over 60% of these respondents knew someone with ASD in their own family, circle of friends or work colleagues” (Dillenburger, 2013, para. 1). The study goes on to say that not only is the public aware of this diagnosis but they even have a strong understanding of it. The study found that participants had, “knowledge of the strengths and challenges faced by individuals with ASD was relatively accurate” (Dillenburger, 2013, para. 1). On the contrary, the individuals surveyed lacked a clear understanding of the, “interventions and service provider responsibilities” (Dillenburger, 2013, para. 1). Company interventions and

service provider responsibilities include providing job interview processes geared towards individuals with ASD. Public awareness of this diagnosis has increased exponentially over the last 10 years. This does not mean the hiring process has become anymore achievable or inclusive for this population. There is a disconnect preventing the general population from realizing the hiring process needs to be reevaluated with this population in mind. With nearly 6 million adults with ASD unemployed (Palumbo, 2021, para. 2), the hiring process must change. If it does not change, we can guarantee that this number will continue to rise. This diagnosis is becoming more prevalent. In the future it will become even greater (Cervantes, 2020, para. 2). There lies a clear simple solution to getting individuals with ASD into the workforce. Remove the social aspect of the interview process and replace it with tasks related to what the company is hiring for.

Social Behaviors Preventing Employment

Solomon (2020) conducted a study in 2020 that looked at the relationship between adults with ASD and employment. The study recognized that even though adults with ASD struggle with, “social communication and adaptive behavior deficits” (Solomon, 2020, para. 1) they are; “extremely efficient, trustworthy, reliable, and cost-effective employees” (Solomon, 2020, para. 1). There exists a major gap between adults with ASD and their ability to secure employment. Businesses are worried these individuals will require more resources than the average employee, slow down production rates, and cost the company. These statements are biased and not based on the fact that these are hard working self sufficient individuals when they are provided with the right tools for the task. Businesses need to put these biases aside and return to the main barrier preventing their employment, which are job interviews. This study highlights the numerous social deficits experienced by adults with ASD. Deficits include; “focused conversation; listening without interrupting, good grooming, hygiene and dressing; handshakes; understanding

and reciprocating facial expressions; and eye contact” (Solomon, 2020, para. 9). All of these traits mentioned make the job interview process difficult to navigate. An important takeaway from the deficits mentioned is these are social problems. They are not an inability to be a valuable employee once hired. This study states that adults with ASD greatest challenge in acquiring a job, “is promoting themselves in an interview” (Solomon, 2020, para. 8).

Appropriately promoting oneself in an interview is key to obtaining employment. Solomon et al. states that 1 in 5 applicants with ASD express socially awkward behaviors during the interview, hindering their chances of being hired. The research gathered by Solomon et al. further solidifies the challenges faced by adults with ASD when trying to obtain a job.

Maras (2021) conducted a study this year that highlights the problems and challenges faced by individuals with ASD in the job interview process. For this study, they selected 50 adults to participate, 25 individuals with an ASD diagnosis and 25 individuals without the diagnosis. The participants went through two general job interviews 6 months apart. The first interview was used as a “baseline”. Both groups scored better on the second interview but the individuals with ASD were still found to be at a disadvantage. The results collected showed, “employment experts rated autistic interviewees less favorably than nonautistic interviewees” (Maras, 2021, para. 1). Furthermore, evidence suggests that the general unstructured way that an interview follows is difficult for individuals with ASD. This population prefers structure, predictability, and routine. Due to the nature of high anxiety, especially in social situations, being prepared for what to expect helps these individuals function less socially awkward. This social awkwardness presents itself in a few different ways. Individuals with ASD have a hard time deciphering social cues, interpreting facial expressions, and difficulties understanding how their own behavior is being evaluated by others. This means they believe the way they are interacting

in the interview process is completely normal to them. Which in their defense is true.

Unfortunately for the employer this behavior is seen as socially awkward. The study states, for example, that a simple question like, “what can you tell me about yourself” (Maras, 2021, para. 7), is far too broad of a question to be asking. An individual with ASD could interpret a question like this in a multitude of ways. Not knowing exactly the intentions behind the question, the interviewee might respond in a way that is completely irrelevant to the interview. This problem is referred to as the “double empathy problem” (Maras, 2021, para. 9). This occurs when both parties don’t understand what the other person means. This type of problem creates convolution in the interview process and is a major barrier that is difficult for this population to navigate. Evidence dictates that if individuals with ASD in the interview process make a good first impression they may be hired. “Employers often report that their autistic employees make a valuable contribution to the workplace with their positive attitudes, skill, and abilities” (Maras, 2021, para. 3). Not only is the interview process difficult to navigate but once in the workplace, their skills are underutilized. “Despite possessing valuable skills, 85% of autistic people are not in full work and 46% of the autistic adults who are employed are overeducated or exceed the skill level needed for the roles they are in” (Maras, 2021, para. 3). These findings directly support two crucial aspects of this paper. First, the general interview process is not applicable to everyone. Like this study found, interviews need to be more structured and less open ended to help facilitate an equal chance of being hired for those diagnosed with ASD and those who are not diagnosed with ASD. Second, this is an underutilized population that has skills to offer in the workforce. These may not be the traditional skills employers have historically looked for, but this provides opportunities. These are new opportunities to look at problems in a new light, bring ideas to the table that the general population overlooks, and create a collaboration of different

minds to overcome unseen challenges. The story of Temple Grandin and how she revolutionized the meat industry comes to mind when contemplating the new possibilities that could arise from individuals with ASD in the workforce.

Above Average Creativity

Temple Grandin contributes a lot when addressing this disparity with regards to individuals with ASD in the workplace. Her accomplishments revolutionized the meat industry. Temple Grandin, a world wide recognized professor, forever changed the treatment of livestock in the meat industry. She was awarded top, “100 Most Influential People in the World” (Kintzinger, 2016, para. 2), by Time Magazine in 2010. Grandin was diagnosed with ASD when she was four years old. Her ASD gave her the ability to look at the world in the same light as the livestock she would help later on in life. Grandin crawled on all fours through a meat processing plant just like a cow would have done. She saw and noticed things that never would have occurred to the average employee. Through her designs she created a safer and more peaceful facility for the animals as well as the workers. From start to finish she improved the process which resulted in a higher quality end product. Her vision began spreading across North America and even further to factories around the world. This is a remarkable example of just one individual diagnosed with ASD and her impact on an entire industry. Imagine what would be achievable with the 5.6 million unemployed adults with ASD being a part of the workforce. The possibilities are endless. This is a clear and concise reason why the interview process must be more accommodating to those who struggle with it. With a revamped interview process governed towards those diagnosed with ASD, society would be able to tap into an entirely new creative perspective.

Ability to Maintain Employment

To further strengthen the argument that adults with ASD would be valuable assets in the workforce, Wehman et al. conducted a study to look at their ability to gain and maintain employment. With the necessary support and guidance, 63 out of 64 individuals in the study were able to secure employment and maintain employment as well. Over the 5 year span of the study, the individuals also expressed a decrease in a need for further support. These individuals gained employment through competitive integrated employment (CIE). According to Wehman et al. 77% of the individuals in this study had never been employed before. This speaks to the resilience and determination expressed by adults with ASD to be a part of the workforce. Wehman et al. highlights the process that was executed in this study to make this job search for employment so successful. The potential employee, also known as the adult with ASD, worked alongside an employment specialist to create a list of needs from the desired employer that matched the skills possessed by the potential employee. This process was made possible by the Workforce Innovation and Opportunities Act (WIOA). The WIOA used techniques such as supported employment (SE) and customized employment (CE) to make their clients successful in securing employment. Wehman et al. goes on to say that the earlier the individual is when they start gaining work experience, the better they will be in the future. Adults with ASD given the right support, tools, and opportunities have proven that they are valuable assets within the workforce. They may require a little more assistance obtaining a job and getting familiar with what is being asked of them in their placement than someone not diagnosed with ASD. With guidance and coaching they can perform the necessary requirements to maintain employment.

Method

Data Collection

To begin my research for this project, I began by looking at the CSUMB Library Database. I already knew I would be focusing on the Autism Spectrum Disorder and the job interview process. I began searching the library database by looking up general information about ASD to give some background about the diagnosis. I looked at the age of onset, prevalence, comorbidity rates, medications, treatments, changes in the diagnosis over the years, description of symptoms, and behaviors associated with the diagnosis. The DSM-5 was also helpful in detailing the history of this diagnosis. ASD is a well documented diagnosis which provided me with useful information. After establishing the history and background of ASD, I moved on to looking at the interview process and adults with ASD. For this portion of the research, I searched terms such as; “ASD and job interviews, adults with ASD and employment, adults with ASD and social awkwardness, and ASD and public awareness”. I also searched the internet for prominent people related to this project. This search contained doctors, writers, and individuals with the diagnosis that had major impacts on the world. Once I gathered sufficient information, I began drafting my paper. One area of this project that will be difficult to replicate is my own personal knowledge and experience with this diagnosis. I have worked with children with ASD for over 10 years. These experiences gave me insight to the diagnosis that one can not get from reading previous studies or research. The idea for this paper was sparked by a recent 60 Minutes story delivered by Anderson Cooper. Cooper highlights the struggles faced by individuals with ASD and how workplaces are changing to help incorporate this population.

Methodology: Review of Literature

To select the data I used to write this literature review, I had specific criteria that I focused on to conduct my research. I started with a general history and overview of this diagnosis to provide background to unfamiliar readers. This part pertained to the DSM-5 along with scholarly journals and accounts. Next, I began looking for data involving adults with ASD and their employment. I disregarded studies, surveys, observations etc. conducted outside of the United States. I choose to do this because I am solely focusing on the ASD unemployment rate in the United States and what is being done here. I also excluded studies that occurred before 2010. I wanted to be sure to only include recent relevant information pertaining to ASD. ASD is defined and looked at much differently than years in the past. To help find my selection of data I asked 3 pertinent questions to see if the information provided by the article was applicable to my paper. I started with, “Does this article highlight the difficulties of the job interview process for adults with ASD”? Next, I asked, “Does the article conclude that adults with ASD present socially awkward behaviors”? Lastly, “Did the article find that adults with ASD and their social awkwardness prevent them from being hired”?

Discussion

Social Significance

The focus of this paper is to look at individuals with ASD in a different light in the workforce. The goal of this paper is to answer the question; With advancements in awareness with ASD, how will those diagnosed with Autism Spectrum Disorder be incorporated into the workforce in the future? This problem is socially significant because currently there are 5.6 million adults with ASD that are unemployed. These people may be overlooked because of their social awkwardness, inability to read social cues, and their overly emotional responses. These are

individuals who want to work and have something entirely different to bring to their job. They don't want to be seen as unemployable. They want to live just like anyone who is not diagnosed with ASD. With the knowledge and research we have now, we know that ASD diagnoses have continued to rise over the years. With the rate of diagnoses continuing to rise, there will be more unemployed adults with ASD. I am passionate about this problem. I have spent over 10 years of my life dedicated to working with special needs children. A large chunk of this time was devoted to working with children diagnosed with ASD. This was an amazing experience for me that I hold near and dear to my heart. I worked with a student with ASD for 5 years in their school setting as well at home. I can proudly say I made a major impact on this child's life. They were able to transition to not needing a one-on-one aide because of my hardwork and dedication. I was able to learn the range of what this diagnosis can look like. The most amazing part was seeing how the student's brain worked. Their ability to compartmentalize information was something I had never seen before. I wish to take what I have learned from working with my students and my schooling to help bring more individuals with ASD into the workplace. I believe individuals with ASD have far more to offer than what the general population gives them credit for. Given the right tools and opportunities this group of people may astound their employers.

Fields of Inquiry

The fields of inquiry that address my research question are; studies and trends relating to individuals diagnosed with ASD, the history of the diagnosis ASD, the interview process and how it does not facilitate a fair success rate of employment for them as well as employers, and what is being done to incorporate this population into the workforce.

Influential Organizations, Scholars, and Articles

The organization, Autism Society, is a community based program focused on inclusivity. Autism Society's goal is "acceptance", not changing individuals with ASD to fit into a system. This is a national organization working alongside federal lawmakers to change "Autism Awareness Month" to "Autism Acceptance Month". They believe that "words matter", which is exactly why they aim to rename the month. This organization's goals include; "improved support and opportunities in education, employment, accessible housing, affordable health care, and comprehensive long-term services and supports" (Autism Society, paragraph 2). This organization was founded in 1965. Over the years they have provided support to over 620,000 individuals annually. This is a prominent organization that believes in the proper acceptance of individuals with ASD in their community. The ASD community should not have to fit into a world that was not built for them. They should be accepted and included in society for who they are.

Another prominent organization worth noting is Autistic Self Advocacy Network (ASAN). One powerful aspect this organization strongly focuses on is, "Identity-First Language" (ASAN). This idea refers to how society addresses individuals with ASD. The idea behind this is that people are not defined by their diagnosis, just like you would refer to someone diagnosed with cancer as, "people with cancer" rather than "cancerous people" (Brown, paragraph 9). This terminology is more politically correct and does not label the individual. Ideas like these are important in gaining acceptance for individuals with ASD in the community.

An influential scholar by the name of Paul Wehman, conducted a study called "Employment for Adults with Autism Spectrum Disorder", in 2016. This was a recent study conducted that directly related to the overall theme of this paper. This study selected individuals

with ASD to help facilitate their employment along with supports in the workplace to measure their ability to maintain employment. Employment specialists worked with the adults with ASD and their employers to evaluate skills that related to their job and the best placement for them in the company. The study had a 98% success rate for the individuals with ASD maintaining their employment. The study also found these individuals needed less and less support as time went on. This study depicts the success of having adults with ASD in the workplace.

Another influential scholar worth noting is Calvin Solomon. He published a study in 2020 called, “Autism and Employment: Implications for Employers and Adults with ASD”. Solomon focused on disadvantages possessed by adults with ASD when applying for a job. The findings from this study are relevant to this paper and contains valuable information for how the interview process can be changed. Solomon also acknowledges the strengths possessed by these individuals and how they are valuable assets to have in the workplace.

Katie Maras is the final influential scholar worth discussing. Maras published her study in 2021 titled, “Ameliorating the Disadvantages for Autistic Job Seekers”. This article compared and contrasted 25 adults with ASD and without ASD. Maras recruited employment experts to evaluate the individuals on how well they presented themselves during the interview process. Maras highlighted the flaws of the job interview process and how it could be restructured to be more inclusive. This article is recent as well as relevant to this paper. The insight provided by Maras should be noted for future direction on how job interviews can be more accepting to those with ASD.

Medical News Today published a recent article on April 16th, 2021 focusing on current research associated with ASD. The author, Kimberly Drake, delivers a well written article focused on; “Exploring contributing factors, current research on genes, investigating

neurological factors, autism and the gut microbiome, and new directions of diagnostics and testing” (Drake, 2021). This is leading edge information regarding the future of ASD.

Although we have moved on from the term Asperbergers, the book; *Very Late Diagnosis of Asperger Syndrome: Autism Spectrum Disorder* still contains valuable information in regards to this diagnosis. This book was written by Philip Wylie in 2014. Seven years later, this book still highlights important aspects of diagnosing adults with ASD.

Temple Grandin is an important individual when discussing the power of getting more individuals diagnosed with ASD into the workforce. She is an individual diagnosed with ASD that proved to be a valuable asset in the workforce. Due to her ability to see things in a different perspective, she revolutionized the meat industry. She was able to exponentially decrease the amount of cortisol released by the animals before they are killed. Therefore producing a better tasting product. She also helped to create a more humane code of conduct for major meat producing companies. This type of creativity may not be achievable by the average person. It took an above average person to think outside the box to change an industry for the better. Not every adult with ASD is going to revolutionize an industry. Given the right tools for success along with an equal chance at being hired, those diagnosed with ASD hold the potential to have an impact in their job. This idea can be applied to this paper. The workplace needs help looking at existing problems from a fresh perspective, possibly fresh perspectives that can be shown to the world by individuals with ASD. This does not mean this will be the same for every adult with ASD entering the workforce, nor will it be expected of them to influence an entire industry. To be able to show a young child with ASD what is achievable in the workforce, Grandin’s story might be the one to tell. Her story might be the motivation they need.

Analyzing the Articles

The first eight articles reviewed and included did not answer the questions regarding the overall theme of this paper. These articles were used to illustrate the diagnosis and give the reader the proper information to understand the diagnosis. These articles included; information from the DSM-5 (APA), Elfleih et al. 2021, The NIH, Satterstrom et al. 2019, Hyman et al. 2013, The Mayo Clinic (2018), Cervantes et al. 2020, and The CDC (2020). The article presented by Dillenburger et al. does not answer the questions pertaining to how I selected my articles. This article was included as a baseline of understanding by the general public and ASD. The article discussed the strengths and weaknesses associated with ASD as understood by the public. I thought this was a good starting point by depicting the challenges faced by adults with ASD and the job interview process. This article was included to show the public's disconnect between their understanding of ASD and how the interview process is an obstacle. Mara's et al. study answered all of the questions that I asked to evaluate the substance of the article. This article included data on the difficulties of the interview process, explained the socially awkward behaviors exhibited, and how these behaviors are preventing adults with ASD from being hired. I included an article written on Temple Grandin by Kitzinger of Forbes Magazine. This article answered the question regarding adults with ASD and their social awkwardness. Kitzinger highlights the struggles faced by Temple Grandin due to her behavioral mannerisms. Though Grandin is not seen in the best light by the ASD community, there is no denying her story of success when faced by adversity, which countless adults with ASD experience. I thought it was important to include her story in my paper because she had an impactful influence on an entire industry. Solomon's et al. article was included in this paper because it answered two of the questions that were used to evaluate the related information. The article presents the difficulties

for adults with ASD and navigating the interview process. The article elaborates how socially awkward behaviors are preventing adults with ASD from securing employment. The article promotes positive aspects of employing adults with ASD in the workplace. Solomon et al states that they are, “extremely efficient, trustworthy, reliable, and cost effective employees”. The last article I included in this paper was conducted by Wehman et al. This article does not answer any of the necessary questions but holds value nonetheless. This article was included because it explains when adults with ASD are provided with the necessary tools to gain employment, they are able to maintain employment and perform the necessary skills asked of them. The study surveyed 64 individuals with ASD over a 5 year time span and 63 out of 64 remained employed the entire time.

Conclusion

The findings from this paper clearly present existing issues regarding the interview process and adults with ASD. The interview process is a major barrier preventing this group of individuals from obtaining employment. The interview process must be reconstructed to be more inclusive for this population. Adults with ASD present socially awkward behaviors during the process that deter employers from hiring them.

Employers need to work with the ASD community to find a common ground to support them in the hiring process. Job interviews can be easily changed by presenting interview questions to the individuals beforehand. By doing this, these individuals can be more prepared and know what to expect during the interview process. This may lessen social anxiety for the adults with ASD applying for the job. Another alternative described in the paper is employment agencies working with potential employers on how both parties can benefit by hiring adults with

ASD. This may create a more inclusive workplace and help lower the high unemployment rate that exists among adults with ASD.

Limitations

There existed limitations throughout the process of conducting my research. An area of improvement that would have strengthened this paper would have been first hand account interviews. It would have been valuable to include interviews by adults with ASD and their experiences with the job interview process. This would deliver insight to specific areas of job interviews and how they could be altered to be more inclusive. Including interviews from employers who conducted the hiring process with these individuals with ASD, would have been beneficial as well. Having both sides of the job interview process in detail from the two parties would give the ability to compare and contrast, thus giving more understanding on both sides.

Another area that I was limited on was time. This paper is a graduation capstone project. We were allotted 4 months to research the necessary information and draft a presentable finished product. Ideally, to conduct a more thorough study one would need a longer time period. I believe I have scratched the surface of this issue. With more time I would have been able to dig deeper to draw out more valuable information.

Lastly, this paper was done consisting of one individual doing the work. In other studies there are multiple researchers conducting the study. That way there would be different ideas and perspectives incorporated into the paper. This would provide diversity within the paper and result in a wider lens to deliver an answer to this issue. Having more people take part in the study helps with the limitation on time. More work can get done in a shorter amount of time with more researchers.

Delimitations

I set several delimitations for this study. The first one I set was for where the studies were conducted. I choose not to include any studies outside of the United States. I did this because I wanted to focus on the unemployment rate of adults with ASD in the United States. Other countries might have different outlooks on this issue and I did not want to present any disagreements between countries. Another aspect I focused on was only including research after 2010. I wanted my paper based on recent findings. I choose to focus on adults with ASD rather than adolescents. I did this because the unemployment rate I found was based on adults. I focused on changing the process of the interview instead of changing the individual to fit a cookie cutter expectation. I want to promote acceptance, change of the system, and inclusivity of those diagnosed with ASD.

Recommendations for Further Studies

From the findings of this paper, we can conclude that the interview process must change to help incorporate adults with ASD into the workplace. There is ample opportunity for more research on the matter. One area worth looking into is finding the best way to interview adults with ASD. It is clear that the current process is not the appropriate approach. Conducting a study to pinpoint a few different approaches would be beneficial. One approach would be for employers to create skill and performance based tasks for applicants to complete. This could eliminate the social anxiety aspect and prevent socially awkward interactions from occurring during the interview process. It would be important to include adults with ASD in this process to find and fulfill their needs on how this process can change for the better.

Another recommendation for further research would be to look into areas where workplaces lack support for these individuals. If those not diagnosed with ASD feel supported in

the workplace, then those diagnosed with ASD should feel the same way. Individuals with ASD can exhibit sensory issues that could potentially affect their performance on the job. Sensory issues can include a noisy environment, too bright, off putting bright colors, and even textures of surfaces. Not all individuals with ASD exhibit these sensory overloads, but it is worth noting. By looking into this, not only adults with ASD benefit, but potentially other employees would benefit. This research could facilitate a more peaceful and enjoyable workplace, causing better work productivity from the entire staff.

The last area I will suggest for further research is how workplaces can be more inclusive and accepting of adults with ASD in general. Incorporating those with ASD goes beyond just the interview process. They need to feel comfortable and safe in their work environment. In general, awareness of ASD is high. But that does not mean there isn't room for improvement.

Researching how these individuals can be further accepted and included in a work environment is important. Providing educational seminars on ASD within the workplace is worth further research. Companies are required to provide sexual harassment training and general codes of conduct. Providing trainings on understanding and acceptance of those with ASD is worth noting.

The implications of all of these recommendations hold benefits not only for individuals with ASD, but all individuals. Many would benefit from these ideas. We each have individual traits that make us unique. Not only individuals with ASD express social anxiety and awkwardness. Our entire society could potentially benefit from these recommendations. This would bring more awareness, understanding, and acceptance between employees and employers. Through future studies we could help facilitate growth throughout our society and workplace for everyone.

References

- About autism acceptance month*. Autism Society of America. (n.d.). Retrieved November 19, 2021, from <https://www.autismacceptance.org/about-1>.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). <https://doi.org/10.1176/appi.books.9780890425596>
- Brown, L. (n.d.). *Identity-first language | autistic self advocacy network*. Retrieved November 19, 2021, from <https://autisticadvocacy.org/about-asan/identity-first-language/>.
- Centers for Disease Control and Prevention. (2019, September 23). *Treatment and Intervention Services for Autism Spectrum Disorder*. Centers for Disease Control and Prevention. <https://www.cdc.gov/ncbddd/autism/treatment.html>.
- Centers for Disease Control and Prevention. (2020, September 25). *Data & Statistics on Autism Spectrum Disorder*. Centers for Disease Control and Prevention. <https://www.cdc.gov/ncbddd/autism/data.html>.
- Cervantes, P.E., Matheis, M., Estabillo, J. *et al.* Trends Over a Decade in NIH Funding for Autism Spectrum Disorder Services Research. *J Autism Dev Disord* (2020). <https://doi.org/10.1007/s10803-020-04746-3>
- Dillenburger, K., Jordan, J. A., McKerr, L., Devine, P., & Keenan, M. (2013). Awareness and knowledge of autism and autism interventions: A general population survey. *Research in autism spectrum disorders*, 7(12), 1558-1567.

- Dudley, K.M., Klinger, M.R., Meyer, A. *et al.* Understanding Service Usage and Needs for Adults with ASD: The Importance of Living Situation. *J Autism Dev Disord* 49, 556–568 (2019). <https://doi-org.csUMB.idm.oclc.org/10.1007/s10803-018-3729-0>
- Elflein, J. (2021, June 14). *Autism rates among children by country*. Statista. <https://www.statista.com/statistics/676354/autism-rate-among-children-select-countries-worldwide/>.
- Hendricks, D. (2010). Employment and adults with autism spectrum disorders: Challenges and strategies for success. *Journal of Vocational Rehabilitation*, 32, 125-134.
- Hyman, S. L. (2013, June 4). *New DSM-5 includes changes to autism criteria*. American Academy of Pediatrics. <https://www.aappublications.org/content/early/2013/06/04/aapnews.20130604-1>.
- Kintzinger, S. (2016, March 10). *Cargill Brandvoice: How temple grandin changed the Food Industry Forever*. Forbes. Retrieved October 14, 2021, from <https://www.forbes.com/sites/cargill/2016/01/25/temple-grandin/?sh=6448e0c73458>.
- Maras, K., Norris, J. E., Nicholson, J., Heasman, B., Remington, A., & Crane, L. (2021). Ameliorating the disadvantage for autistic job seekers: An initial evaluation of adapted employment interview questions. *Autism*, 25(4), 1060–1075. <https://doi.org/10.1177/1362361320981319>

Mayo Foundation for Medical Education and Research. (2018, January 6). *Autism spectrum disorder*. Mayo Clinic. Retrieved November 21, 2021, from <https://www.mayoclinic.org/diseases-conditions/autism-spectrum-disorder/symptoms-causes/syc-20352928>.

Palumbo, J. (2021, April 27). *Why autism speaks is encouraging companies to hire those on the autistic spectrum*. Forbes. Retrieved September 12, 2021, from <https://www.forbes.com/sites/jenniferpalumbo/2021/04/27/why-autism-speaks-is-encouraging-companies-to-hire-those-on-the-autistic-spectrum/?sh=41c27d6252a2>.

Satterstrom, F. K., Walters, R. K., Singh, T., Wigdor, E. M., Lescai, F., Demontis, D., Kosmicki, J. A., Grove, J., Stevens, C., Bybjerg-Grauholm, J., Bækvad-Hansen, M., Palmer, D. S., Maller, J. B., iPSYCH-Broad Consortium, Nordentoft, M., Mors, O., Robinson, E. B., Hougaard, D. M., Werge, T. M., Bo Mortensen, P., ... Daly, M. J. (2019). Autism spectrum disorder and attention deficit hyperactivity disorder have a similar burden of rare protein-truncating variants. *Nature neuroscience*, 22(12), 1961–1965. <https://doi.org/10.1038/s41593-019-0527-8>

Simonoff E;Kent R;Stringer D;Lord C;Briskman J;Lukito S;Pickles A;Charman T;Baird G; (n.d.). *Trajectories in symptoms of autism and cognitive ability in autism from childhood to adult life: Findings from a longitudinal epidemiological cohort*. Journal of the American Academy of Child and Adolescent Psychiatry. Retrieved October 3, 2021, from <https://pubmed.ncbi.nlm.nih.gov/31863881/>.

Solomon, C. Autism and Employment: Implications for Employers and Adults with ASD. *J Autism Dev Disord* 50, 4209–4217 (2020). <https://doi.org/10.1007/s10803-020-04537-w>

U.S. Department of Health and Human Services. (n.d.). *Autism Spectrum Disorder Fact Sheet*.

National Institute of Neurological Disorders and Stroke.

<https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Autism-Spectrum-Disorder-Fact-Sheet>.

U.S. Department of Health and Human Services. (n.d.). *Medication Treatment for Autism*. Eunice

Kennedy Shriver National Institute of Child Health and Human Development.

<https://www.nichd.nih.gov/health/topics/autism/conditioninfo/treatments/medication-treatment>.

Wehman, P., Brooke, V., Brooke, A. M., Ham, W., Schall, C., McDonough, J., ... & Avellone, L.

(2016). Employment for adults with autism spectrum disorders: A retrospective review of a customized employment approach. *Research in Developmental Disabilities*, *100*(53-54), 61-72.