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Co-Occurring Conditions Seen in Individuals with Autism



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ABSTRACT

Background: Autism spectrum disorder (ASD), affects both specific and general areas of the brain. The region that ASD affects in the brain correlates to which symptoms a patient may endure. ASD impacts patient's cognition, emotion, and behavior. These include diseases and/or disorders such as anxiety, depression, attention deficit hyperactivity disorder (ADHD), and problems with sleep. **Method:** The methods used for obtaining scholarly and current journal articles were gathered by the use of CINAHL and Medline Plus. The research question was: What are the comorbidities that are seen in patients who have autism? **Results:** The comorbidities include anxiety, depression, ADHD, and sleep problems. These comorbidities affect problem-solving, thinking and learning. The symptoms are seen more noticeably in childhood, around 18-24 months. Individuals with autism tend to have a flat affect.

INTRODUCTION

Patients living with autism face many challenges during their life. One of the most common challenges is overcoming the co-occurring diseases or disorders that are associated with autism. As time progressed and more research is done, evidence indicated that autism affects the brain and body. Autism is a disorder that can be diagnosed early in life. As the child ages, the signs and symptoms of autism become more noticeable. These signs and symptoms are more prominently show during childhood years. Signs and symptoms include regression and no progression in learned skills, no imaginative play. Individuals with ASD prefer to be isolated and tend to avoid eye contact [1].

As illustrated in Figure 1, ASD impacts patient's cognition, emotion, and behavior [2]. The purpose of this review was to determine the comorbidities that are seen in patients who have ASD. The question that is driving the research was, what are the comorbidities that are seen in patients who have autism? Also, discussed are the factors that may play a role in the patient's activities of daily living. ASD patients are more susceptible to underlying diseases and disorders as a result of autism's effects on the brain and body [3].

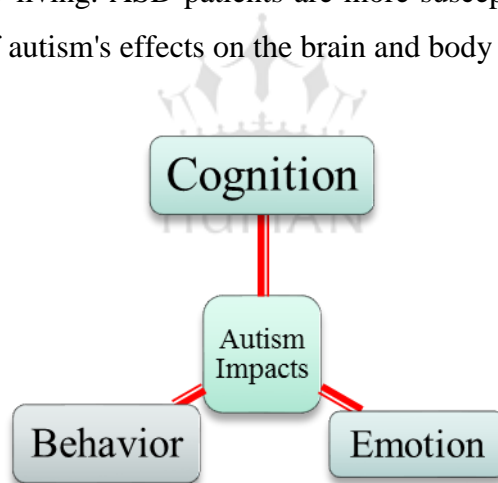


Figure No. 1: ASD impacts patients' cognition, emotion, and behavior

Background

In the United States, there are more than 74 million children [4]. In the year 2000, one in 150 children, were diagnosed with ASD. When looking at the most recent data, from 2016, research has shown that now, one in 54 children are being diagnosed with ASD. Within that 16-year time frame, the number of cases has almost tripled. These results indicate that there are more than 1 million children in the United States diagnosed with ASD. The risk for ASD is not associated with ethnicity, race or socioeconomic status. Boys are four times more likely

to be diagnosed with ASD than girls [4]. Individuals diagnosed with ASD tend to have many comorbidities, these include diseases or disorders such as anxiety, depression, ADHD, and problems with sleep (see Figure 2). These changes can develop over time, can diminish with time, and be lifelong.

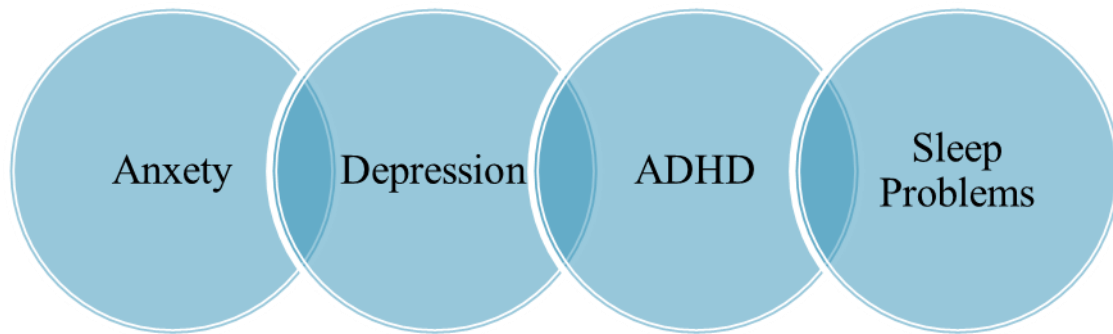


Figure No. 2: Comorbidities associated with ASD

Throughout the study of ASD, research has shown increasing rates of diagnosis. This is because of the improvement in diagnostic procedures as signs and symptoms of ASD have become more prominently studied. Organizations are putting substantial time and manpower into studying the risk factors that lead to ASD. Organizations are also looking at the comorbidities and symptoms that are accompanied by ASD. Studies by organizations such as the CDC [5] are changing how the process of diagnosis is conducted in individuals with ASD.

Individuals living with autism have a variety of characteristics. The characteristics vary from individual to individual. Autism can affect one's problem-solving, learning, and thinking processes. As seen in Figure 3, the severity of autism can range from severely impaired to gifted [1]. When looking at all individuals with autism, an estimated 50% have some type of intellectual disability. During childhood, the symptoms are more noticeable. Some children develop normally, but once they are 18 to 24 months old, they can lose skills that they once had or they stop gaining new skills. For example, a child who was previously talking can no longer talk. By 18 months old, children typically play "pretend," however, a child with autism does not. An example of this is a normal child will "pretend" by having a tea party with their stuffed animals. However, a child with autism will not participate in such activities. A diagnosis of autism is typically made by age 5 [1].

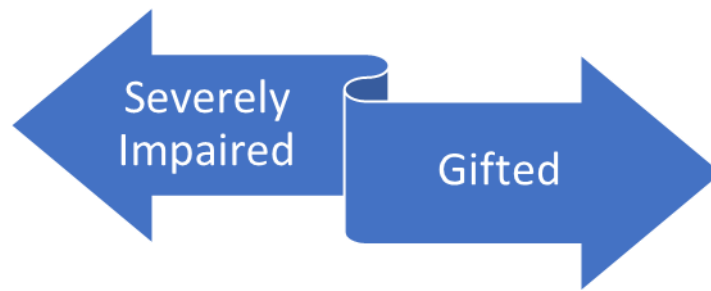


Figure No. 3: Severity of autism can range from severely impaired to gifted

Some observed behaviors of ASD include being very organized, prefer to be alone, and try to avoid eye contact. The times that they do make eye contact, they experience extreme discomfort [1]. Individuals with autism may also exhibit inappropriate or flat facial expressions. Another characteristic behavior of autism is called self-stimulation, which is making repetitive movements such as, nail-biting, head-banging, rocking side-to-side, and flapping their hands and arms. Individuals with autism are over adherent to daily routines and rituals [1]. When there is a change in routine, even a minor one such as dinner being a half-hour late, they do not respond well. This change can result in severe anxiety, a feeling of no control or having a meltdown. Other behaviors include sleep problems and ADHD with a short attention span [6].

Communication deficits experienced in individuals with autism vary from individual to individual. Some individuals do not speak at all whereas others have no deficit. They may exhibit a language delay. They have trouble relating to others and understanding feelings. This results in them having a lack of interest in others and lack of responsiveness [1]. This impaired communication contributes to having trouble creating and maintaining relationships with others. Individuals with autism may have trouble expressing their needs using words or motions. Lastly, individuals with autism experience echolalia, which is the repeating of phrases or words [1]. An example of echolalia would be; when a mom asks her son to “please grab the remote,” her son will say “grab the remote” repeatedly, or they will repeat any common words that are heard daily.

Maloret and Scott [7] analyzed the prevalence of anxiety in individuals with autism who are in acute mental health units. Schiltz et al. [8] reviewed the stability and life functioning of individuals with autism who have self-reported anxiety. Also, they looked at the change in clinical manifestations of anxiety over time. Multiple sources researched different aspects of autism and ADHD. One source focused on understanding the behaviors of individuals with autism and the comorbid disorder of ADHD [9]. Nattel et al. [10] analyzed the convergent clinical manifestations associated with autism and ADHD. Avni et al. [6] analyzed the frequency of ADHD and anxiety in individuals with autism. They compared clinical manifestations of individuals with autism and ADHD to individuals who only had autism. Problems with sleep was a symptom that was commonly seen in individuals with ASD. One of the studies focused on viewing the relationship between the clinical manifestations of autism, psychiatric comorbidities, and sleep problems. They also assessed if any neurobiological alterations occurred in individuals with autism [11]. Another source that studied sleep problems is a cohort study to determine whether sleep problems can exacerbate the characteristics of autism. They also determined that autism contributed to problems with sleep [12]. Lastly, Shuli et al. [13] analyzed whether individuals with autism exhibit any obvious signs that a sleep problem may occur.

METHOD

To gather the peer-reviewed studies that was used in the literature review, multiple databases were used. The university's library was the main source. CINAHL and Medline Plus were also used. The literature review focused on individuals with autism and the comorbidities associated with it; those comorbidities included anxiety, depression, ADHD, and sleep problems. The year the sources were published ranged from 2017 to 2019.

LITERATURE REVIEW

The purpose of this literature review was to examine which articles related to one another, are different, and what the research is saying. Individuals living with ASD tend to suffer from comorbidities. Some of these comorbidities examined included anxiety, depression, ADHD, and sleep problems.

Anxiety

One symptom that frequently came up with the review of these articles was anxiety in individuals with ASD. Maloret and Scott [7] suggested that anxiety is a common feeling experienced by those living with ASD. Out of the sample of participants used, the study examined comorbid mental health conditions related to individuals with ASD. The most common comorbid diagnosis for these individuals was anxiety. Of the sample population in the study, 35.5% of the sample experienced anxiety. This is thought to be related to the unmet need for equality, as well as healthcare staff not knowing how to properly care for individuals with ASD.

Depression

McDougle [14] indicated that mood disorders especially depression was common in individuals diagnosed with disabilities such as autism. However, there is a challenge when trying to make a diagnosis of depression. The individuals with autism who do not talk, have no way of communicating their feelings. Some clinical manifestations of depression are the same as the signs of autism. For example, an individual who has a flat affect, sleep disturbances, and social withdrawal, can pose a challenge in distinguishing whether these problems are caused by depression or are they a sign of autism.

McDougle [14] indicated that there were some red flags specific to depression. These included changes in appetite, sleep, anhedonia, and decreased motivation. Individuals with ASD are 28 times more likely to attempt suicide than those without ASD. It is vital to address depression. Untreated depression can lead to suicidal ideations and homicidal ideations. These ideations can result in creating a plan and following through with the plan.

A meta-analysis [15] further reviewed the relationship between depression and autism. The analysis determined that the rate of depression in males with autism was 17% compared to the rate of depression in females which was 56%. The study results indicated that individuals with a diagnosis of autism and social impairments have higher rates of depression. Individuals with ASD and with depression have a higher risk of suicidal ideations and suicidal attempts.

Attention Deficit Hyperactivity Disorder

Ayni et al. [6] examined the relationship between autism and comorbid diseases such as ADHD and anxiety. They discovered that 44% of those living with ASD displayed signs of clinically elevated anxiety. A trend was noticed that anxiety intensity tended to increase with the severity of autism.

Another study focused on individuals with high functioning ASD (HFASD), individuals with ADHD, and individuals of typical development. The research supports the theory that individuals with HFASD have higher levels of anxiety and less control over their symptoms than typically developed individuals [8].

Ayni et al. [6] stated, 62.7% of individuals in a study regarding the comorbid conditions of ADHD and anxiety in those living with ASD were found to have clinically elevated signs of ADHD. ADHD clinical signs tended to elevate with the severity of autism, therefore providing evidence that ADHD and ASD are positively correlated.

Sokolova et al. [9] examined 1400 participants and the relationship between ASD and ADHD. The researchers measured many factors that relate to ADHD and ASD. These include hyperactivity symptoms, impulsivity symptoms, inattention symptoms, reduced contact and social interests. They also measured difficulties understanding social information, fear of changes or resistance to changes, and stereotyped repetitive behavior. Individual scores for the Child Social Behavior Questionnaire, intelligence, verbal IQ, and performance IQ indicated a positive correlation between ADHD and ASD [9].

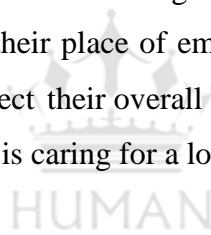
Sleep Problems

Past studies have highlighted a positive correlation to ASD and sleep problems, although the exact cause is unclear. It is suggested that sleep problems can be caused by other problems, such as stress and anxiety [11]. A literature review discovered that approximately 41% out of a sample of 5,123 children who were part of the Autism Treatment Network and were living with ASD, experienced sleep problems. This research also suggests the possibility of parents having sleep problems as well related to the care of their child [16].

One study suggested that sleeping problems are often a major symptom of ASD and are therefore positively correlated. It was found that sleep problems in individuals living with ASD tend to increase as age increases. This shows a correlation between the changes in symptoms of comorbid diseases as ASD progress [12].

SUMMARY OF LITERATURE REVIEW

The literature regarding individuals living with ASD and their comorbidities tend to have trends in common (see Figure 4). Considering that individuals living with ASD often have comorbid conditions of anxiety, depression, ADHD and sleep problems, it is important to consider other implications these comorbidities of ASD can have on the individual's life. The comorbid conditions may negatively impact the behavior and mood of the individual living with ASD. Ensure that the caregiver is talking with individuals who have ASD about how they are feeling, any changes in behaviors or tendencies and about any suicidal thoughts or ideations. These negative feelings and behaviors can then impact the caregiver. The caregiver may then reflect these negative emotions and feelings onto the individual living with ASD or to other family members, friends, at their place of employment. The negative emotions and feelings of the caregiver can also affect their overall health. Caregiver burden and burnout can also occur when a family member is caring for a loved one for prolonged periods [17].



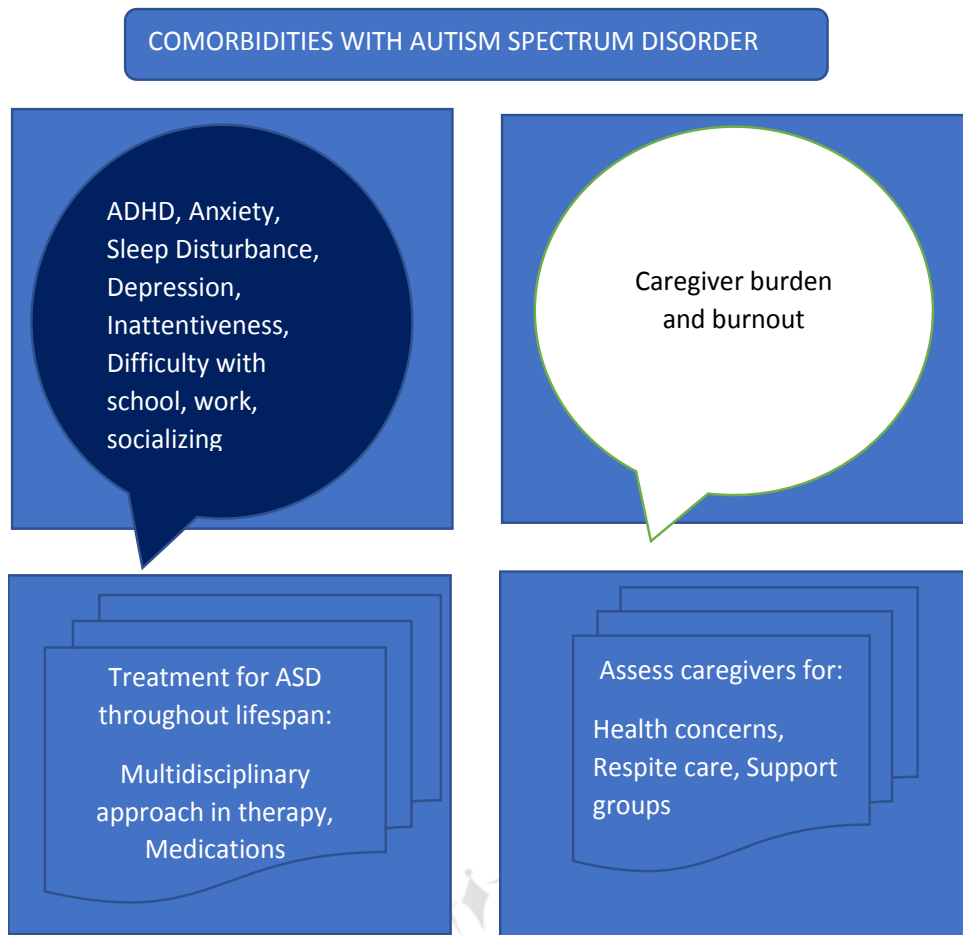


Figure No. 4: Emerging themes for comorbidities and interventions with ASD

DISCUSSION

Individuals living with ASD often have comorbidities such as ADHD, anxiety, and sleep problems. This can lead to complications for the individual living with autism. Therefore, participating in everyday activities such as school, work, and socializing can be extremely difficult. An anxious individual, not sleeping, and has a difficult time staying motivated, oriented, and on task can negatively affect themselves and others around them. Along with keeping individuals with ASD motivated, make sure to ask them about their thoughts and feelings such as “how are you feeling” as well as addressing any suicidal thoughts or ideations. It is important to remember these conditions do not only affect the individual living with autism, but also the caregiver, friends, and family. Because of this, the treatment team must involve the individual living with ASD, their caregiver, primary healthcare provider, and healthcare specialists. The caregiver may need to be treated for conditions as well, such as mental health. This is due to the caregiver being a primary part of the treatment plan for the individual living with ASD.

CONCLUSION

To treat ASD and the many comorbidities that often come with the disorder, it takes a multidisciplinary approach to care for these complex individuals. This team includes but is not limited to, the primary healthcare provider, therapist, and any specialists required to treat the needs of the individual living with ASD. Due to individuals with ASD being highly affected by the mentioned comorbidities, it is recommended that they seek help right away, and identify issues and risk factors promptly.

Individuals living with ASD must continue to receive consistent treatment throughout their lifespan. ASD will not go away, but the additional comorbidities it causes can regress and be managed. A combination of therapy, medication, and commitment can result in a better outcome for these individuals. It is also recommended that the caregiver be assessed for healthcare concerns as well, particularly mental health. Information on respite care, support groups, and other services for the caregiver should also be explored. More research must be completed to develop tools and techniques to help aid in diagnosing disorders such as anxiety and depression in patients with ASD.

In conclusion, ASD often comes with comorbid conditions. These conditions can negatively affect the life of the individual living with ASD and the caregiver. With early identification and a multidisciplinary approach to healthcare, an individual living with ASD can be supported. It must be remembered that it is important to treat not only the individual living with ASD but the caregiver as well. By looking at the whole picture and working with other healthcare team members, the individual with ASD, and the caregiver can be treated.

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