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Evidence-Base Practice: Screening for Depression and Suicidality in High Functioning Autistic Spectrum Disorder Adolescents

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EVIDENCE-BASE PRACTICE: SCREENING FOR DEPRESSION AND SUICIDALITY
IN HIGH FUNCTIONING AUTISTIC SPECTRUM DISORDER ADOLESCENTS

by

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Bachelor of Science in Nursing, Montana State University-Northern, 2009

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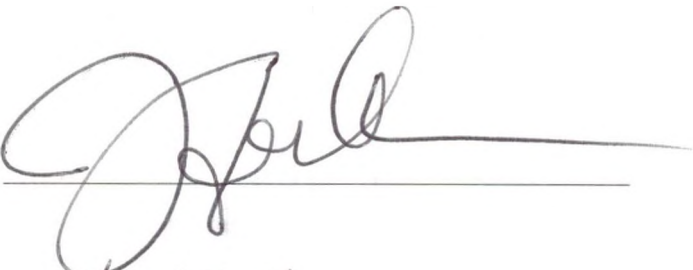
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Department Nursing

Degree Master of Science

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Abstract

Research regarding assessing for suicide and depression in high-functioning autistic spectrum disorders (HFASDs) is very limited. An extensive literature review focusing on HFASDs was conducted, which resulted in adolescents with HFASDs are likely to experience depression and suicidality compared to those who are neurotypical or those not diagnosed with an autistic spectrum disorder (ASD) because of limited social and communication skills. These deficits put these individuals at risk for depression, therefore, suicidality. PubMed, SCOPUS, PsychiatryOnline, and Cumulative Index to Nursing and Allied Health Literature (CINAHL) were used to research information for this independent study. Implications for psychiatric nurse practitioners and other clinicians are to screen HFASDs adolescents more often for depression and suicidality because of the complication of having limited communication and social skills as well as, difficulty developing meaningful relationships.

Keywords: High-functioning Autism; depression; suicidality, theory-of-mind

Introduction

Over the last decade, two epidemics have drawn the attention of the public, politicians, medical officials, and scientists around the world. Autism and suicide have grown at an alarming rate “causing parents to be faced with a wide range of concerns” (Mansell & Morris, 2004, p. 389). According to the organization, Autism Speaks (2010), “Autism is one of today’s most urgent public health challenges” (p. 7). The Centers for Disease Control and Prevention’s (CDC) Autism and Developmental Disabilities Monitoring Network (ADDM) has recorded over the last three decades of autism having a steady increase. In the 1980’s, the prevalence was 0.1-0.4 per 1,000 children to 2.0-7.0 per 1,000 children in the 1990’s (CDC, 2007a). In 2006, the prevalent was 9.0 per 1,000 children (CDC, 2009a, para. 3). According to ADDM in 2006, data showed between 1 in 80 children has an Autism Spectrum Disorder (ASD) or 1% of the population (CDC, 2006, p. 8). The CDC also reports over the last three decades suicide had been the third leading cause of death for youth ages 10-24 (CDC, 2007c).

For those who have autism, even those with high functioning autism spectrum disorders (HFASDs) communication is difficult. Communication impairment is one of the criteria for diagnosing autism (American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, 2000). The challenge of not being able to express or communicate fears or frustrations to others makes it difficult for autistic adolescents to reach out for help. These individuals internalize their emotions to the point of putting themselves at risk for experiencing depression and feelings of loneliness (Vickerstaff, Heriot, Wong, Lopes, & Dossetor, 2006; Hurtig et al., 2009; Lopata et al., 2010). Depression, hopelessness, and loneliness are contributing factors to developing suicidal ideation (Quinnett, 1992). Even for adolescents without communication deficits, face the risk of having depression and suicidal ideation because

they have an increase challenge to conveying their feelings of hopelessness. Therefore, adolescents with HFASDs are more at risk of developing depression and suicidal ideation. These risk factors trigger the need for assessing signs of depression such as hopelessness, loneliness, and helplessness in these high-risk individuals more frequently than adolescents who do not have an ASD.

Just hearing about autistic suicidal adolescents ignites many emotions; especially for those who care for an autistic child. Besides, having concerns with suicidality and autism in the general population, the adolescent years become even more challenging for them if they suffer from autism. A psychiatric comorbidity of suicidal adolescents with autism raises concerns for medical doctors, advanced practicing nurses, nurses, and counselors to assess for contributing factors related to suicide using evidence-based screening tools. These tools are used to depict risk factors related to suicidality in the adolescent population. The concern regarding autistic adolescent population contemplating suicide leads to the clinical question for further review, “What evidence-base practices are established to assess for depression and suicidality in the adolescent high-functioning autistic population?”

Purpose

Before the question can be answered, one must assess the dynamics that are involved with autism and suicidality. According to TeenScreen, a program developed by the Columbia University (2010) stated, “Approximately 90% of children and adolescents who commit suicide have a mental disorder” (p. 1). Unfortunately, at this time, no systematic epidemiological studies have been performed to determine the specific outcomes of autistic adolescents with depression and suicidal ideation, and specifically, high-functioning autistic adolescents.

By understanding communication and social impairment of those with HFASDs, one can see how these individuals have an increased risk of developing suicidality or suicidal risk factors. Through independent study, by reviewing literature, that discusses communication and social impairments in adolescents with HFASDs and depression risks in these individuals, leads to assessing specifically those with HFASDs for suicidality by using evidence-based screening tools. The results from the independent study will encourage psychiatric nurse practitioners and other clinicians who treat adolescents with HFASDs to screen these individuals more often than the general adolescent population for risk factors of depression and suicidality; therefore, decreasing the risk of them completing the act of suicide.

Information from this independent study was shared during a meeting with licenses clinical social workers, a family practice psychiatric mental health nurse practitioner, and case managers at the Center for Mental Health in Havre, Montana. Feedback received focused towards understanding the complexity of the autism spectrum and their different levels of impairment of their social and communication skills. A recommendation from fellow clinicians was to incorporate evidence-base communication techniques to help build a rapport, in which, assessment for depression and suicidality could be conducted in a more timely fashion.

Significance

In the general population of children ages 10-12 years, depression is present however; depression is more prevalent in the high-functioning autism population according to a study by Kim et al. (2000). According to the U.S. Preventive Services Task Force (USPSTF), 2009, “Major Depression Disorders, (MDD) estimated prevalence among adolescents aged 13-18 years is 5.6%. Lifetime prevalence among adolescents may be as high as 20%” (para. 12). There is little information about the psychiatric comorbidity of suicidology for individuals with HFASDs

or for those with depression and HFASDs. Information that is available regarding depression, suicidal ideation, and autism are available separately and information on the epidemiological impact of each entity was combined to express the need to screen this high-risk population for depression.

Through review, the information illustrated depression and autism as risk factors for adolescents with suicide ideation. By focusing on depression of those with HFASDs, one can see the need to assess for suicide in this high-risk population. The most current data from the CDC (2007b) stated, “Among young adults ages 15-24 years old, there are approximately 100-200 attempts for every completed suicide”. The CDC (2007b) also stated, “In 2007, 14.5% of student in grades 9 through 12 seriously considered suicide in the previous 12 months (18.7% of females and 10.3% of males”).

The outcomes or results from this study will enhance the available literature by supporting the use of evidence-based practices of assessing for warning signs of suicide that is presently available. Information from this study will provide evidence specifically addressing the psychiatric comorbidity of adolescent with HFASDs and their increase risk of experiencing depression and suicidality. This study will also reflect the use of screening tools with those with high-functioning autism, which are evidence-base for the adolescent population.

Information gained from this independent study will encourage other psychiatric nurse practitioners and clinicians to become more aware of the psychiatric comorbidity of depression and suicidality in adolescents with HFASDs. The results will influence an intervention of identifying at risk individuals under their care and guidance and possibly, lead to a standard of care regarding this high-risk population. Standards of care are guidelines that describe

responsibilities for which nurses and other clinicians are accountable for providing care to their patients (Varcarolis, 2006).

Specifically, nursing science will become informed of the idea that even though individuals with limited social, affect, and verbal interactions, they are just at risk of suicide as those with no impairments. These adolescents are not immune from the side effects of depression and require comprehensive treatment as well as, advocacy of the need to be assessed for depression and signs of suicidal ideation.

Information from this study was shared with licensed clinical social workers, advance family psychiatric nurse practitioner, and case managers at the Center for Mental Health in Havre, Montana. Results from this study will also be shared with colleagues of this author at Northern Montana Hospital in Havre, Montana.

Theoretical Framework

Due to the lack of information and research on suicidal adolescents with HFASDs, information to help associate HFASDs with suicidal ideation and depression, literature from the fields of developmental, learning disabilities, depression, and HFASDs were utilized. The literature focused on HFASDs and their communication and social impairments, these individual are more apt to experience depression and loneliness and are less likely to develop friendships (Whitehouse, Durkin, Jaquet, & Ziatas, 2009).

Adolescents with HFASDs have limited “ability to take part in reciprocal communication and understand unwritten rules of communication and conduct” (Whitehouse et al., 2009, p. 310). Because of these limitations, these individuals have a harder time building a rapport with someone and feeling comfortable in confiding in them. These individuals are often viewed as “loners”. Close relationships help adolescents build self-esteem and develop coping skills to

help prevent depression (Berger, 2008). Vickerstaff et al. (2006) stated, “It is reasonable to expect that self-awareness of one’s social deficits may play a crucial role in the psychological adjustment of children with HFASDs” (p. 1649). Without having the capability to develop and maintain close relationships, adolescents with HFASDs have a difficult time expressing their emotions or concerns to others as adolescents without an HFASD. Those adolescents with HFASDs are vulnerable because that have the cognitive ability to understand self and social awareness, but are not able to adapt as quickly as others who do not have HFASD (Lopata et al., 2010).

Individuals with autism often lack the “ability to attribute mental states such as beliefs, feelings, and desires to other people” (Kleinman, Marciano, & Ault, 2001, p. 29). This ability is called theory-of-mind. For those who do not have the capability to utilize the theory of mind, “They do not understand what influences other’s behaviors or their beliefs, feelings, desires, and experiences” (Kleinman et al., 2001, p. 29). Besides having problems in communication and social skills, the “theory-of-mind deficit is a core characteristic of people with autism” (Kleinman et al., 2001, p. 30). The inability of having the theory-of-mind in those with an ASD, poor eye contact has been contributed and these individuals are viewed as “avoidant” (Kleinman et al., 2001). Lack of theory-of-mind contributes to these individuals from initiating interaction with their peers. This alone becomes a barrier for them to reach out to others in a time of need.

Adolescents with a HFASD may express communication deficits however, “communication and interaction do not have to involve the use of language and speech” (The National Autistic Society [NAS], 2010b, para. 4). NAS recommended other forms of communication need to be utilized to connect with these adolescents such as gestures, pictures,

and knowing the difference between pre-intentional communication and intentional communication.

Pre-intentional communication is when an individual says or does things without intending to affect those around them (NAS, 2010b, para 9). These individuals are seen talking to themselves or humming in an attempt to either calm or express themselves. This is also noted as “stemming”. Intentional communication is “when an individual says or does things with the purpose to sending a message to another person” (NAS, 2010b, para 10). Recognizing the different types of communication expressed by individuals with an ASD, even HFASDs, they are trying to communicate and further intervention by others is required to decipher the purpose of the attempt to communicate.

Definitions

ASDs are also known as Pervasive Developmental Disorders, (PDD) according to American Psychiatric Association’s (2000) Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). The DSM-IV-TR states, “PDD are characterized by severe and pervasive impairment in several areas of development: reciprocal social interaction skills, communication skills, or the presence of stereotyped behavior, interests, and activities” (p. 85). The disorders that are often associated with PDD are (a) Autistic Disorder, (b) Asperger’s Disorder or Syndrome, (c) Rett’s Disorder, (d) Childhood Disintegrative Disorder, and (e) Pervasive Developmental Disorder Not Otherwise Specified. High-functioning autism lies on the far end of the spectrum near “normal” or neurotypical (those without a mental disorder). These individuals usually have an average or above average intelligence and usually do not have a language delay. With each of these disorders, there are different levels of severity and impairment in which, makes ASDs difficult to diagnose.

Process

Before utilizing credible research sites, information on the topic of suicide and autism were assessed to see if there is any correlation on the issue that was ratably available. The information from lay internet sites proves to be a collaboration of news stories of high school shootings by people with autism and blogs from people with autism talking about their history of depression and suicide. The lay sites support there is a link between individuals with autism and suffering from depression, anxiety, and suicide. The lay sites that were utilized were Bing® and Google®. Keywords or phrases used to search were *autism*, *suicide*, *Asperger's syndrome*, and *high-functioning autistic spectrum disorders (HFASDs)*. At first, little information was available on autism and suicide when these two words were used simultaneously to identify information. More information became readably available when HFASD was applied to the search terms.

The lay sites were beneficial by supporting the concern that is among our society. The best evidence to support there is a reason for worry is to hear worlds from those with autism. Reviewing autism blogs and YouTube® videos provided reassurance that there is a concern of two epidemics coming together.

Resource sites such as PubMed, SCOPUS, PsychiatryOnline, and Cumulative Index to Nursing and Allied Health Literature (CINAHL) were used to search information for this independent study. The Cochrane site provided little to no information on autism and suicide that would be beneficial on using evidence-based practice to assess for these comorbid conditions in HFASDs adolescents. However, while searching for evidence-based approved assessments to screen for depression and suicide in adolescents, the TeenScreen Primary Care kit developed by the Columbia University provided the best tool to use for screening adolescents with HFASDs. The kit assess for general mental health conditions, depression, suicidality, and

substance use. The screens provide a comprehensive assessment for adolescents in a timely fashion.

Review of the Literature

There are recent studies that dissect the causes of depression with those with high-functioning autism and the influence of depression on suicidal behavior. Seven studies address the symptomatology of depression with ASD adolescents (Ghaziuddin et al., 1992, 1995; Hurtig et al., 2009; Lopata et al., 2010; Vickerstaff et al., 2006; White & Roberson-Nay, 2009; & Whitehouse et al., 2009;). Social impairment is a key symptom of diagnosing someone with HFASDs and increases depression.

Vickerstaff et al., 2006 conducted a pilot study of (N = 22) children with HFASDs, ages 7-13 concluded those with HFASDs have increase self-awareness. The retrospective study subjects intelligence quotient (IQ) scores ranged from 82-141. The limited sample size of this study, along with the limited results, played a factor in determining the overall weight of the study. Eighteen parents and seventeen teachers along with the children were given a battery of tests in the form of questionnaires. Only eleven teachers and four parents completed all of the tests, limiting the information and possibly skewing the results. Bias is noted in the procedure process. Teachers were chosen by nomination of the adolescent. Since only 50% of the teachers returned the questionnaires, limits the value of the Behavior Assessment Scale for Children (BASC) and the Social Skills Rating System (SSRS) results.

Both of these tests assessed for observational objective assessments of the HFASDs adolescents in their most natural settings. Therefore, the results of the study are directly influenced by the compliancy of the returned questionnaires. This study did however bring empirical information on those with HFASDs and how they view their social impairments;

“Children with higher intellectual function see themselves more accurately, are more aware of the social deficiencies” (Vickerstaff et al., 2006, p. 1649). Those with HFASDs had lower levels of self-perceived social competence, and low self-perceived social competence predicted higher levels of depression. Vickerstaff et al. (2006) used a regression model to compare two independent variables, depression, and self-perceived social competence. The results expressed self-perceived social competence was found to be a significant correlation of depression symptomatology.

Both White et al. (2009) and Whitehouse et al. (2009) are retrospective quantitative studies addressing how the issue of loneliness is correlated with social deficits and depression of those with ASD. Both sample sizes were small, Whitehouse et al. (2009) (N = 35) adolescents with ASD and White et al. (2009) (N = 20). The mean age of 12 was comparable between the studies. Whitehouse et al. (2009) study showed equal representation of both sexes. However, White et al. (2009) study had 90% male representation, lack of depiction of the female population. In regards to predictor of depression, Whitehouse et al. (2009) confirmed through the Sobel test the feelings of loneliness are a significant mediator in the level of depression symptoms ($p = 0.05$). White et al. (2009) discovered that high levels of anxiety is correlated with greater feelings of social loneliness ($F = 6.60, p < 0.05$).

In 1992, a study was conducted with 68 children and adolescents with autism, six (9%) suffered from an associated psychiatric disorder, and three of these six subjects (50%) were clinically depressed (Ghaziuddin, Alessi, & Greden, 1992, p. 496). Ghaziuddin et al. (1995) study addressed chronic difficulties and life events that would be of significance in the occurrence of people with autism. Ghaziuddin et al. (1995) findings also suggested, “In the general population, significant life events, particularly negative ones may contribute to the

occurrence of depression in children with PDD” (Ghaziuddin et al., 1995, p. 495). Ghaziuddin et al. (1995) hypothesized that adolescents with depression sustained recent unpleasant life events. The sample size is limited $N = 11$ (nine male IQ: 60.7, M age: 9.8 years; four autistic disorder; seven PDD-NOS). The subjects consisted of six of them having major depression, 50% of the six subjects also had psychotic features. The remaining five had a depressive disorder not otherwise specified. To understand the full dynamics of these subjects, five in the depressed group and three in the nondepressed group were mental retarded (full-scale IQ < 70) (Ghaziuddin et al., 1995, p. 498). This longitudinal retrospective study was conducted over 36 months and the investigators were blinded to the hypothesis. The hypothesis was children with autism and depression experience significant life events prior to the onset of depression. The IQ range for the depressed group was higher compared to the nondepressed group. Depressed group’s IQ range 55.3 to 97.9 and the nondepressed group’s IQ ranged from 44.1 to 77.3 (Ghaziuddin et al., 1995). The male to female ratio was 9:2. The nine patients with higher IQs and depression (82%) expressed a history of having sustained unpleasant life events compared to the other five (45%) in the nondepressed group (Ghaziuddin et al., 1995, p. 498).

Children with HFASDs also experience high levels of anxiety along with depression compared to those who are neurotypical or those without autism (Hurtig et al., 2009; Lopata et al., 2010; & Whitehouse et al., 2009). Hurtig et al. (2009) and Lopata et al. (2010) both used a control group that was demographically compared to the subject group. Lopata et al. (2010) a retrospective quantitative study discovered those children with HFASDs per self-report experience anxiety and depression symptoms more than neurotypical children (anxiety 49.733: SD 11.80; depression 50.33: SD 9.12) HFASD $N = 40$, neurotypical subjects $N = 40$ (anxiety 49.23: SD 7.65; depression 47.33: SD 5.78) (Lopata et al., 2010).

Hurtig et al. (2009) was a retrospective quantitative study with a larger control group of ($N = 217$ compared to the sample group ($N = 46$). A strong positive relationship between adolescents with HFASD by the use of the Youth Self-Reporting questionnaire (YSR) and the Teacher Report Form (TRF) illustrated withdrawal behaviors was the strongest correlation of ($p = 0.66$) and anxious/depressed, social, thought, attention and externalizing problems expressed slightly weaker correlations (Hurtig et al., 2009, p. 592). This study reported, “Adolescents with HFASD have statistically significantly more internalizing, social and attention problems than control adolescents” (Hurtig et al., 2009, p. 593). When taking into the count of the various psychiatric and depressive symptomatologies of those with HFASDs, one has to address the concern of suicide in this population.

To compare presented results of suicide with those with HFASDs and those with an ASD, one must have insight of how suicide affects neurotypical adolescents. A longitudinal prospective study was conducted over a period of seven years assessing recent psychiatric and suicidal history. Ages 9-16 years with a sample size of $N = 1420$ with an approximately equal amount of representation for sexes, 49% female, and 51% male were studied regarding proximal risks for suicidality (Foley, Goldston, Costello, & Angold, 2006). The results of study concluded that the severity of the symptom-related impairment was associated with suicidality. However, depression and generalized anxiety disorder (GAD) increased the severity of the psychopathology (Foley et al., 2006).

Research shows in a most recent, cross-sectional exploratory study by Oren Shtayermman (2008), 50% of the subjects with a form of an ASD had clinically significant suicidal ideation, 20% met criteria for a diagnosis of major depression disorder, and 30% met the criteria for GAD. The mean age of the subjects was 19.7, $SD 3.0$. Shtayermman took the same

study and looked how peer victimization in adolescents with Asperger's syndrome correlated with depression and anxiety symptomatology along with suicidal ideation. Out of the 10 subjects, 38% of them experienced victimization (Shtayermman, 2007).

Another analysis by McBride & Siegel (1997) discovered in suicidal notes of 27 adolescents who committed suicide, 89% has severe learning disabilities (McBride & Siegel, 1997). McBride and Siegel did not evaluate if the subjects with learning disabilities had an ASD. However, those with an ASD suffer from some form of learning disability and often excel in other subjects. Further research needs to be done to include ASDs with learning disabilities suffering from suicidal ideation. However, one must not dismiss the evidence that was presented by McBride and Siegel (1997).

On another note of peer victimization, bullying is quite common for those with ASDs. The NAS (2010a) stated, "Children with autism can be at more risk of being bullied. One study of 400 children with Asperger's syndrome found that the children were at least four times more likely to be bullied than their peers" (p. 2). Therefore, adolescents dealing with complex issues are limited by their disorder to communicate their frustrations, forcing them to internalize their pain. The mortality of these individuals is best understood by reviewing the following study.

A longitudinal study on the mortality rate of those with ASDs was conducted over 24 years by following 341 children with PDD, 12 patients had died, or 3.5% by the time the study was completed. Two out of the 12 individuals died of suicide. The individuals that died from suicide were deemed autistic-like were 18 and 20 years of age at the time of their death (Isager, Mouridsen, & Rich, 1999). Ghaziuddin (2005) stated, "Suicide attempts are not uncommon in persons with Asperger's syndrome and Autism" (p. 1559). Since there is a significant deficit for large-scale studies on depression, suicide, and autism, clinical based studies express depression

is the perhaps the most common psychiatric diagnosis (Ghaziuddin, Ghaziuddin, & Greden, 2002).

Beside risk factors related to developing depression, which contributes to suicidal ideation, risk factors that impair communication need to be addressed. A study by Yamasaki et al. (2010) conducted on 10 individuals with HFASD determined a “significant grey matter volume reduction of both the pars opercularis and triangularis (areas that control speech and comprehension)” compared to the control group (Yamasaki et al., 2010, p. 1141). The results showed a significant association with the increase severity of social communication in the ASD group. The findings contribute the role of the pathophysiology of ASD.

In another study by Waiter et al. (2004), the total grey matter volume was increased in those with ASD specifically, in the right fusiform gyrus, the right temporo-occipital region, and the left frontal pole extending to the medial frontal cortex. These areas are recognized for their role in social cognition, particularly face recognition, (right fusiform gyrus), mental state attribution: theory-of-the mind (anterior cingulate and superior temporal sulcus) and perception of eye gaze (superior temporal gyrus) (Waiter et al., 2004).

Results

The literature points to the conclusions that adolescents with HFASD or even ASD are likely to experience bullying, signs of depression, and suicidal ideation because of the physiological abnormalities of the brain makes them susceptible to having communication and social impairments. Impairments that prevent them from developing significant relationships or a support network in which, they can confide in if they are feeling depressed and suicidal.

Keep in mind, many children with autism may have different levels of communication difficulties. The National Institute on Deafness and Other Communication Disorders (NIDCD),

2010 stated, “A child’s ability to communicate will vary, depending upon his or her intellectual and social development. Experts estimate that as many as 25% of all children with autism may never develop verbal language skills” (para. 5). Utilizing supportive staff to help communication with the adolescent would be reasonable, as long as rapport remained intact. By focusing on adolescents with HFASDs, the TeenScreen program will help assess for suicide, depression, and substance use in this high-risk group.

According to the USPSTF (2009), there is adequate evidence that screening tests can accurately identify MDD in adolescents in ages 12 and older. USPSTF expressed two instruments demonstrated good sensitivity and specificity in primary care setting in adolescents: sensitivity ranges of 73% for the (Public Health Questionnaire-Adolescent) PHQ-A to 91% for the (Beck Depression Inventory-Primary Care) BDI-PC and a specificity range 91% for the BDI-PC to 94% for the PHQ-A (para. 12). Those who are directly involved with HFASDs adolescents can learn how to utilize these screening tools if there is concern regarding the safety of the child.

Clinicians can receive the TeenScreen program free for their institution or practice. The TeenScreen starter kit contains instructions for implementing the screening questionnaires, instructions on interpreting screening results, and information about referrals, and how to obtain reimbursement ((TeenScreen National Center for Mental Health Checkups at Columbia University, 2003). The kit includes three questionnaires, which address general mental health status, depression, and substance use.

The screening kit was deemed evidence-based through the National Registry of Evidence-Based Programs and Practice (NREPP) as of November 2007. It has been supported by the Best Practices Registry for Suicide Prevention (SAMHSA’s National Registry of

Evidence-based Programs and Practices [NREPP], 2010). The screening tool can be implemented at clinician level and in the academic arena once collaboration had been established. The screening takes less than five minutes to complete and can be implemented during a well-child exam or during a brief one-on-one during school. The screen itself covers ages 11-18 years old.

Discussion

Information about identifying the signs of autism and how early intervention is the key for these children to have a good quality of life. Providers, clinicians, teachers, and nurses have been informed about the wide range of ASDs and the statistical number for those affected by autism. Professional education at graduate levels does not even discuss the concerns of these growing epidemics. Hence, medical students, nurse practitioner students, teachers, and counseling students are not being encouraged to assess for suicide or depression in this high-risk population.

There is a large stigma associated with those with autism. The stigma is associated with the mental illness concept and secondly, people are confused by the wide spectrum of autism. Autism is still associated with severe mental retardation. However, today we know milder forms of autism have a less degree of mental retardation or none at all (Ghaziuddin, 2005). Most of the autistic population shows problems in abstraction and with executive thinking. They commonly have problems with reading people's emotions and feelings from not having the theory-of-mind. This deficit makes these individuals susceptible to victimization and isolation therefore, contributes to depression and suicidal ideation.

Interpretation

As we know, individuals with autism have physiological changes to the brain that prevent them from having adequate communication and social skills that allow them to easily develop relationships that are meaningful. Because of the adolescent years and difficulty during this transition period, adolescents even with HFASDs struggle to adapt to their world surrounding. They strive to find acceptance as other adolescents. They face challenges of depression and bullying as those who are neurotypical. However, their deficits hold them captive from effectively communicating their problems with those who can be a support to them.

With understanding adolescents with HFASD are prone to internalizing their feelings more than those who are not faced with autism, they deserve to have their voice be heard. This is where doctors, nurse practitioners, and counselors can step in and be their voice of hope for them by assessing for signs of depression and suicidality. Taking the time to learn how to communicate with these adolescents and build a rapport creates an avenue of trust and security for these individuals to turn too in a time of need. Because of this rapport, these individuals are offered hope and other options besides wanting to end their life.

Clinicians will offer treatment to help relieve the symptomology of depression and suicidality. This process starts with using an evidence-based tool that is directed at detecting signs of depression and suicidality in the adolescent population.

Outcome

The main learning points from the reviewed studies are depression, anxiety, loneliness, and peer victimization is all too common with individuals with HFASDs. These symptoms are precursors for suicidal ideation and not just with this with ASDs but also for those who are neurotypical. Those with HFASDs are able to participate in having their mental health status

assessed and provide useful information to help determine the individuals risk for suicide. Evidence-base tools are available to use to assess for depression and suicidality. However, no specific assessment tools for with adolescents with HFASDs are available. Until such tools are available, one must rely on evidence-based assessment that target depression and suicidality in neurotypical adolescents. Strategic use of communication skills with adolescents with HFASDs is important to being able to utilize the tools that are available to assess these high-risk individuals.

Implications for Nursing

Information about autism has been broadcasted across about every television in the United States. Information about identifying the signs of autism and how early intervention is the key for these children to have a good quality of life. Providers, clinicians, teachers, and nurses have been informed about the wide range of ASDs and the statistical number for those affected by autism. Professional education at graduate level does not discuss the concerns of these growing epidemics. Hence, medical students, nurse practitioner students, teachers, and counseling students are not being encouraged to assess for suicide or depression in this high-risk population. Due to the lack of education on the part of the students, these future practitioners and mentors will be seeing this high-risk population face more challenges than their neurotypical peers.

Autism is still associated with severe mental retardation. However, today we know milder forms of autism have a less degree of mental retardation or none at all (Ghaziuddin, 2005). Most of the autistic population shows problems in abstraction and with executive thinking. They commonly have problems with reading people's emotions and feelings. The

inability to read people's emotions and feelings makes these individuals susceptible to victimization and isolation.

Practice. A nurse's education is based off nursing theory and practice. They are encouraged to treat a person with holistic care and taught to care for the person not the disease. Throughout the last century, nurses and the medical field in general are being encouraged to promote prevention through education. Be proactive instead of reactive. Nurses are specifically being pushed to use interventions that are evidence-based in their practice. Establishing a standard of care for adolescents with HFASD sets the stage for this high-risk population to be addressed as individuals. High-risk individuals, who require proper assessment related to their deficits and specific needs.

Research. Through continued work of identifying new studies on autism, depression, and anxiety, one will be able to take the information and use it to further research the dynamics of depression and suicide on the autistic population. Information from this independent study can be used to adopt new practices for educating the public, students, and medical professionals regarding concerns of autism. The education gained from this study will promote insight on how to help these individuals lead a high quality of life and remain an asset to their community.

Education. Education is the key to breaking the stigma as with any mental illness. As new information is released, these individuals with ASDs and their caregivers can learn how to cope and take action on decreasing the feelings of hopelessness. Clinicians can become aware of proper interventions with individuals with HFASDs by learning how to build a rapport based on their communication and social deficits. This rapport will end up being the key to getting to hear and address the concerns of their patient before they take their own life. The lack of seeking education on the etiology of this broad spectrum leaves room for non-evidence-based practices to

permeate the care of those with autism. In which, will cause a delay for standards of care to be set for adolescents with HFASDs.

To help prepare clinicians, teachers, and other supportive staff for assessing for suicide, recommendations of in-service education on depression and autism along with participation in the Question Persuade and Refer Gatekeeper (QPR) program by Dr. Paul Quinette (1999). The program teaches the basic of identify risk and signs of suicidality and ways to prevent the act of suicide.

Policy. Health Policy focuses on the rights of those with a mental illness. As with many illnesses, these individuals did not ask to have autism. However, they do ask is to receive the same care as any individual with a physical illness. The more we know about the pathophysiology of autism, we can start to promote policies that support the assessment and identification of risk factors associated with autism. Focusing on the scope of nurses, at any level of education, assessing for suicide is within their capabilities. Utilizing programs such as, QPR encourages institutions to support suicide awareness education.

Further recommendations for nursing practice research would be to support investigation on the epidemiology of individuals with autism. Especially, how sensory issues of these individuals makes nursing care more of a challenge due to all the external stimuli that is associated with the medical field.

Conclusion

Adolescents with a HFASDs experience a wide range of complex issues that affect them socially, emotionally, and academically putting them even more at risk for depression therefore, suicide. Assessing for key factors through one-on-one interaction and indirect observation through the assistance of teachers, peers, and the child's clinician allows the adolescent to be

closely monitored for suicidal ideation and depression. The key factors that should be addressed have been used in depression and suicidal screens. The key factors are hopelessness, anxiety, loneliness, and victimization through bullying. Keep in mind, many children with autism may have different levels of communication difficulties. Due to the limited prevalence of depression with autism, “Clinic-based studies suggest depression is the probably the most common psychiatric disorder seen in a person with autism” (Ghaziuddin et al., 2002, p. 304). Combine the behavioral changes during the adolescent years, the need to assess for depression and suicide are ever more important to preventing a precious life from being lost. Taking into context the high level of suicide in the adolescent population and the statistic percentage who have committed suicide suffered from a mental illness, warrants further investigation and implementation of risk reduction practices.

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