

ASSESSING NURSES' KNOWLEDGE ABOUT AUTISM SPECTRUM DISORDERS

by

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Abstract

Background

Autism spectrum disorders (ASD) consist of a group of neurodevelopmental disorders with lifelong effects. Autism is rising at an alarming rate for unclear reasons. Increasing ASD rates create major concern for nurses in a variety of clinical surroundings and they need to be adequately prepared to interact with and provide care for these special individuals.

Method

The methodology included the use of a nonexperimental, quantitative research design using two different knowledge assessment tools, the Survey of Knowledge of Autism Spectrum Disorders among Professionals along with the Knowledge about Childhood Autism Among Health Workers (KCAHW), the implementation of an evidence-based educational component and challenging behavior toolkit, concluding with the administration of the same two knowledge assessment tools given at the beginning of the project being given as a posttest to evaluate if an increase in the knowledge of the nurses surrounding ASD occurs as a result of the intervention.

Results

Overall, the results of this project showed an increase in knowledge of the participants following the interventions, in most areas.

Conclusion

The results of this project, though small, demonstrate the gap in knowledge which nurses have surrounding ASD.

ASSESSING NURSES' KNOWLEDGE ABOUT AUTISM SPECTRUM DISORDERS

Autism spectrum disorders (ASD) consist of a group of neurodevelopmental disorders with lifelong effects. Autism is rising at an alarming rate for unclear reasons, be it due to a true increase in the disorders, or more advanced testing and classification methods. In response to the ongoing increase in individuals being diagnosed with ASD, it is extremely important for nurses to be adequately prepared to meet the healthcare needs of this special population. Will, Barnfather, and Lesley (2013) estimated that the potential exists for a primary care physician (PCP) to see “as many as 11 children with an ASD for every 1,000 children in his or her practice” (p 351), which translates to a nurse seeing a minimum of this number, also, due to most PCPs having an office nurse within their practice; this does not include adults with ASD. Nurses in a multitude of nursing practice realms will interact with these individuals (Gardner, Dunphy Suplee, & Jerome-D’Emilia, 2016). Igwe, Bakare, Agomoh, Onyeama, and Okonkwo (2010) pointed out the importance of nurses being members of multidisciplinary teams, along with doctors, dealing with individuals with ASD. This points to the reality that all nurses need to be knowledgeable about ASD, regardless of their practice setting.

The purpose of this DNP project was to assess the knowledge level of nurses in regards to ASD through administering the same assessment tools as a pretest, then again as a post test, and comparing the results after being provided with an evidence-based intervention to evaluate if any changes have occurred in their knowledge level. Nurses who are adequately prepared with knowledge about ASD and how to interact with individuals with ASD will have an increase in their comfort level thus enhancing their ability to interact with and provide care for them. The provision of an evidence-based intervention, including an educational component on ASD and a tool kit addressing how to deal with challenging behaviors, will enhance the nurse’s knowledge

and ability to interact with members of the ASD population as proven through the comparison of identical pre- and posttest responses.

Problem Description

The current gap identified is the low level of knowledge and confidence seen in nurses in regards to autism spectrum disorder (ASD). Nurses need to be armed with the education and tools to be both knowledgeable about and confident in their ability to interact with individuals with ASD. It was noted by Giarelli, Ruttenberg, and Segal (2012) that a limited amount of ASD material is presented within the BSN and MSN curriculum while showing the benefit of providing such material to nurses within their study area. Gardner et al. (2016) found similar results in their study to support the need for the inclusion of ASD information for nurses. Nurses need to have knowledge surrounding ASD due to them, many times, being the ones to initiate referrals to specialists (Garg, Lillystone, Dossetor, Wilkinson, Kefford, Eastwood, & Liaw, 2015). By having nurses who are adequately prepared with the necessary tools and knowledge surrounding ASD, individuals of the ASD population will be more apt to receive the same safe, high quality, competent care as the rest of society, which they are both morally and ethically entitled to.

Nature of the Problem

While ASD is generally diagnosed in early childhood, this is not always the case; despite the time of diagnosis, ASD is a lifelong disorder. Hartley-McAndrew, Doody, and Metz (2014) noted that researchers involved with the study of ASD, posited that nurses, due to the high respect they have from the public, along with the positions in which they serve, are prime candidates to educate, support, and direct those affected by ASD to possible available resources in regards to ASD, while Gardner et al. (2016) pointed out the high propensity for nurses to

interact with this population and their families due to it being a lifelong condition. It was felt by Foley and Troller (2015) through their research, that individuals with ASD are more apt to be diagnosed with and seek treatment for both medical and psychological comorbid conditions more than the rest of society, thus increasing the possibility of nurses in all areas of healthcare settings interacting with this special population. Individuals of the ASD population seek treatment and care at the same venues as the rest of society, both preventative and as treatment, thus pointing out that nurses are not immune from caring for these individuals, regardless of their practice setting (Giarelli & Gardner, 2012). For this reason, it is imperative for nurses to be knowledgeable about and confident in their ability to interact with, provide care for, and anticipate the needs of individuals within the ASD community, along with providing the necessary support to them and their families.

There is a limited amount of education in regards to ASD for nurses, thus leaving the nurse unprepared for interacting with this special population. Giarelli et al. (2012) noted this to be true concerning the curriculum content of both BSN and MSN programs within their study, which makes one wonder if it could be representative of many nursing programs throughout the country. Individuals involved with the study performed by Giarelli et al. (2012) made note of the benefits of having participated in their two day continuing education study regarding ASD. Gardner et al. (2016) pointed out that nurses in all areas are lacking in their knowledge surrounding ASD. This is important to note due to nurses in all areas of nursing having the potential to come in contact with and provide care for individuals of the ASD community.

A lack of knowledge in regards to ASD can contribute to adverse feelings towards providing care for and interacting with individuals of the ASD population. Werner (2011) found through the assessment of 42 female students, from a variety of health care professions,

including nursing, many preconceived feelings concerning working with the ASD population existed, such as stressors in regards to time, difficulty, and demand requirements necessary to interact with these individuals. Cervantez Thompson, Emrich, and Moore (2003) and Katz and Hayout (2002) pointed out that negative feelings towards this population can be correlated with a decrease in the level of care these special individuals receive. It was further found that communication difficulties were identified concerns, as were fears of frustration, along with a stigma in regards to working with ASD individuals. Werner (2011) suggested that the earlier information pertaining to ASD is provided, the more positive the attitudes of healthcare providers will be in the face of the stigmas associated with ASD. It is hoped that through providing information to nurses concerning ASD, an increase in the acceptance of these individuals and their difficulties can occur. In order to assist in this, participating nurses were provided with an evidence-based educational component along with an evidence-based toolkit to enhance their knowledge level, confidence, acceptance, understanding, and comfort level in providing care to and interacting with these special individuals.

Knowledge in regards to ASD has a major impact on nurses in their ability to successfully interact with and provide high quality care for those of the ASD population. Gardner et al. (2016) reported that the majority of participants in their study reported having a very limited knowledge base in regards to ASD, while Will et al. (2013) also found that nurses in their study felt their expertise in dealing with individuals with ASD was low. Based on this study, it can be assumed that nurses would benefit from an educational component along with an evidence-based toolkit concerning ASD, thus supplementing their knowledge base and confidence level regarding ASD.

Significance of the Problem

According to the statistics reported by the Centers for Disease Control and Prevention {CDC} (2014) and James (2014), ASD has increased to one out of every 68 children receiving the diagnosis. The rise in occurrence rates of ASD has been estimated at 30% since 2012 (James, 2014). A steady increase in the number of cases of ASD can be seen since 2000 when it was estimated at one in every 150 children (0.66%), 2008 at one in every eighty eight children (1.14%), 2014 at one in every 68 (1.47%) (Centers for Disease Control and Prevention [CDC], 2016), and to one in 45 children (2.2%) in 2015 (Autism Speaks, 2016b) (Figure 1). These statistics significantly point out the need for nurses to be knowledgeable about ASD.

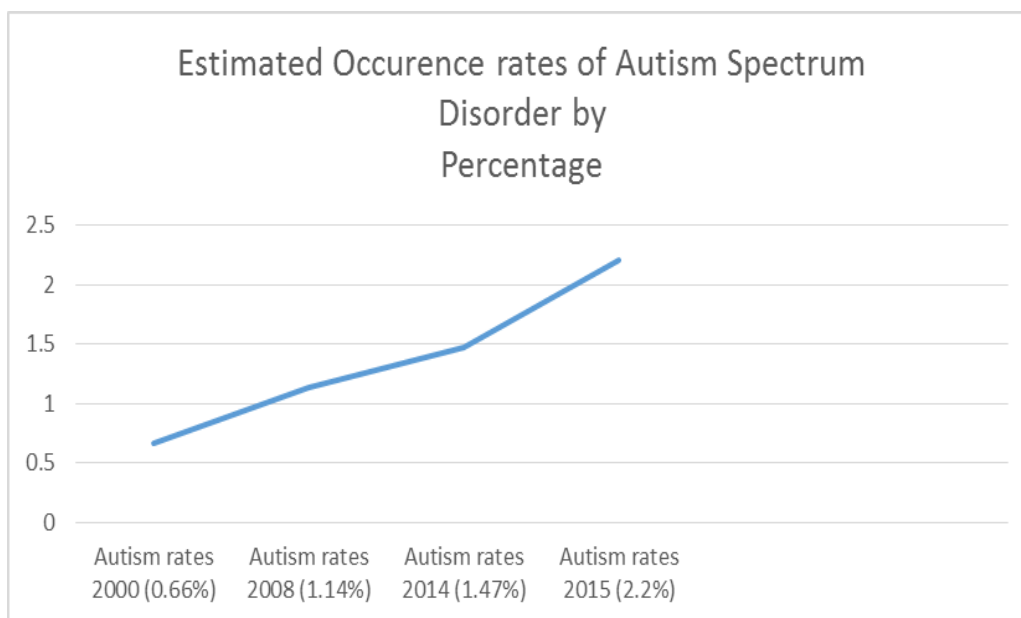


Figure 1: Estimated occurrence rates of Autism Spectrum Disorder. Data are from Autism Speaks (2016b) and Centers for Disease Control and Prevention [CDC], (2016).

ASD, a neurodevelopmental disorder, is diagnosed based on the DSM-V diagnostic criteria which assesses for many of the stereotypical behaviors indicative of ASD. Woods, Mahdavi, and Ryan (2013) pointed out that individuals with ASD exhibit social and communication deficits, along with many repetitive and stereotypical activities. Behaviors such

as rocking, head banging, spinning, and flapping of the hands and arms, along with rigidity through routine and resistance to change are some of the most well-known mannerisms associated with ASD.

Literature Review

An exhaustive literature search surrounding ASD was performed using the search engines of ProQuest Medical Library, Google Scholar, PubMed, PsycINFO, and CINAHL. Search terms utilized within these data bases included autism, autism spectrum disorder, ASD, nurse knowledge of ASD, autism updates, and myths surrounding autism. An attempt was made to include articles written within the past five years, unless the later dated articles contained pertinent data to the subject matter. 140 articles and books containing information pertaining to ASD were retrieved with 80 of them being excluded due to being viewed as not beneficial to this project.

There is a limited amount of literature pertaining to nurses' knowledge of ASD and the presentation of such information on ASD to them. Gardner et al. (2016) reiterated the limited amount of research available in regards to nurses' proficiency in caring for individuals of the ASD community. Due to the minimal amount of information available, it is imperative that there be the addition of further literature documenting this gap in knowledge of nurses in regards to ASD.

One possible cause of the limitation of knowledge nurses are receiving in regards to ASD might be due to the lack of such information being included in their training programs. Giarelli et al. (2012) noted this to be true concerning the curriculum content of both BSN and MSN programs within the Philadelphia area, which makes one wonder if it could be representative of many nursing programs throughout the country. Individuals involved with the study performed

by Giarelli, et al. (2012) made note of the benefits of having participated in their two day continuing education study regarding ASD. Information obtained by Gardner et al. (2016) through their research supports the lack of ASD information being incorporated into nursing programs, in part, because the faculty do not feel confident or comfortable in their ability to present such information. This is important to note due to nurses in all areas of nursing having the potential to come in contact with and provide care for individuals of the ASD community.

A lack of knowledge in regards to ASD can contribute to adverse feelings towards providing care for and interacting with individuals of the ASD population. Werner (2011) found through the assessment of 42 female students, many preconceived feelings concerning working with the ASD population exists, such as stressors in regards to time, difficulty, and demand requirements necessary to interact with these individuals. Cervantez Thompson et al. (2003) and Katz and Hayout (2002) pointed out that negative feelings towards this population can be correlated with a decrease in the level of care these special individuals receive. It was further found that communication difficulties were identified concerns, as were fears of frustration, along with a stigma in regards to working with ASD individuals. Werner (2011) suggested that the earlier education pertaining to ASD is provided, the more positive the attitudes of healthcare providers will be in the face of the stigmas associated with ASD. Unfortunately, Gardner et al. (2016) found that most of the nursing faculty in their research reported an insecurity in educating their students on ASD and tended to avoid assigning them to individual with a known ASD diagnosis in the clinical rotations for the same reasons. It is anticipated that through providing education to nurses concerning ASD, an increase in the acceptance of these individuals and their difficulties can occur. In order to assist in this, participating nurses will be provided with an evidence-based educational component along with an evidence-based toolkit to enhance their

knowledge level, confidence, acceptance, understanding and comfort level in providing care to and interacting with these special individuals.

Knowledge in regards to ASD has a major impact on nurses in their ability to successfully interact with and provide high quality care for those of the ASD population. Will et al. (2013) found that nurses in their study felt their expertise in dealing with individuals with ASD was low. Based on this study, it can be assumed that nurses would benefit from an educational component along with an evidence-based toolkit concerning ASD, thus supplementing their knowledge base and confidence level regarding ASD

Rationale

The rationale for this study is to identify the depth of the gap of knowledge possessed by nurses regarding ASD. Once the depth of this gap is found, the finding can be presented to the stakeholders with the intent of creating avenues to fill this gap in knowledge. Theories utilized within this process included the Adult Learning Theory and the Constructivist Theory.

Adult Learning Theory

The Adult Learning Theory was developed to address the manner in which adults learn and incorporate the obtained information. The basis of the Adult Learning Theory consists of the belief that adults learn based on prior life and educational experiences, desire to learn, and their viewpoint of the need for the education (Billings & Halstead, 2009). DeYoung (2009), while noting Malcolm Knowles as the developer of the Adult Learning Theory, points out that many other individuals have also written their own thoughts in regards to the Adult Learning Theory. As with many theories, assorted individuals have developed their own versions of the Adult Learning Theory, however, they ultimately address the same concepts.

The development of the Adult Learning Theory stems from the need to identify the differences between the manners in which adults learn in comparison to the learning methods of children. Adults learn based on their own desires, needs, and past experiences, as opposed to children whose learning is based on how, what, and when their teacher determines (Billings & Halstead, 2012; Billings & Halstead, 2009; DeYoung, 2009). Adults are deemed to be in charge of their learning processes; whereas, children's learning is guided by another individual, their teacher.

Learning is an ongoing process throughout one's lifetime, thus making the Adult Learning Theory appropriate for use when providing additional training to this population of professionals. The need and desire to gain additional knowledge by adults is what makes the learning successful. Within the field of nursing, there exists the potential to interact with and care for individuals of the ASD community; therefore, the desire and need to gain more familiarity with ASD exists for many nurses, thus validating the use of the Adult Learning Theory. In order for nurses to be prepared to interact with and provide care to these special individuals, allowing them to be afforded the same high quality care as other members of society, the need exists for nurses to receive adequate training regarding the specifics of ASD.

Constructivist Theory

The second framework chosen for this project is the Constructivist Theory. Billings and Halstead (2012) attribute the creation of the Constructivist Theory to Piaget and Vygotsky, while Bastable (2008) includes DeWey with the others for creating the Constructivist Theory. The Constructivist Theory has not been attributed to one single author, but the contribution of many.

The Constructivist Learning Theory emulates a construction project in its evolution. Bastable (2008) noted that constructivists view learning as building on or constructing from currently held knowledge, beliefs, and experiences, coupled with interacting with others, thus forming a new knowledge base. The learner incorporates the newly attained awareness surrounding ASD, to what is the current knowledge base to form an increased understanding of how to interact with individuals within the ASD population.

ANKASD

Based on the rationale of this intervention, it will be referred to as Assessing Nurses' Knowledge about Autism Spectrum Disorder (ANKASD). This intervention consisted of an assessment of what the current knowledge level of nurses participating in the project was both prior to and after the introduction of an evidence-based educational component along with an evidence-based toolkit. The results of the pre-test and the post-tests, which were gathered and analyzed through the use of Survey Monkey, were compared to see if an increase in knowledge surrounding ASD occurred or not at the completion of the project. The results of the ANKASD project will be added to the current research findings to increase the knowledge base on this subject.

Purpose

The purpose of the ANKASD project was to determine the true existence and depth of the gap in knowledge that allegedly exists within nurses in regards to ASD. It is anticipated that through the results of this project, an increase in the inclusion of education pertaining to ASD will be incorporated early, along with nursing education departments within healthcare organizations providing more offerings of education on ASD, the gap in knowledge will lessen and nurses will be better prepared to care for individuals with ASD.

Methods

Context

Recruitment information was sent to approximately 60 nurses in Ohio via a state community college intranet. The participants, who function as registered nurses in a variety of capacities, were chosen due to their access to the project site intranet and ability to receive the project materials. The presentation of the project to the stakeholders included the rationale for the project along with the importance of nurses being knowledgeable about ASD. The process of participating in the project was followed by providing a packet containing the components of the project with the facility, in addition to potential participants being sent materials via electronic communication allowing them to be involved at their convenience. This was an appropriate method of delivery for the project in regards to time and cost containment in keeping with the DNP standards. The project process was designed in such a format to encourage nurses to participate in the project, while eliminating the need for multiple meeting sites along with the associated costs.

Informed consent was obtained from all participants prior to the initiation of the project. The consent form explained the purpose of the project along with components included. It further reassured the participants of their anonymity being maintained throughout the project through coding of all assessment materials by utilizing Survey Monkey to collect responses to the pre and post testing knowledge assessment questionnaires. Individuals were also informed that their choice to participate or not in the project would have no effect on their personal or professional life. Confirmation of the participant's consent to participate in the project was addressed within the content as pointing out that by continuing to the initial intervention step,

consent was given. It was also included in the consent form that the participant could stop his or her participation at any time without penalty.

The chosen research design for this project was a nonexperimental, quantitative research design using a random survey methodology. Norwood (2010) made note that this type of study would be appropriate, as the attempt is to show a change will occur as the result of an intervention. The proposed cause and effect equated to the presentation of the educational component coupled with the accessibility to an evidence-based toolkit pertaining to ASD theoretically increasing the confidence and knowledge level of nurses from a variety of specialties surrounding the topic of ASD.

Prior to the implementation of the intervention, the evidence-based Survey of Knowledge of Autism Spectrum Disorders (ASDs) among Professionals (Hartley-McAndrew et al., 2014) along with the Knowledge about Childhood Autism Among Health Workers (KCAHW) questionnaire (Bakare et al., 2008) were administered via an online service known as Survey Monkey. An evidence-based educational component developed by the Autism Society (2016) along with an evidence-based toolkit developed by Autism Speaks (2016) developed for use by the nurses with the intent to enhance their comfort and confidence level in regards to interacting with and providing care for individuals of the ASD community were introduced. Following the implementation of the intervention, the same evidence-based surveys given prior to the implementation were again administered, through the use of Survey Monkey, and the results compared to evaluate the effectiveness of the intervention. The anticipated results of this survey were to show that nurses were more knowledgeable, thus theorizing it to contribute to an increase in their confidence and comfort in providing care for and interacting with individuals with ASD, following the implementation of the intervention.

The results of the pre- and post-test surveys were analyzed through the use of Survey Monkey. The KCAHW questionnaire is noted to be very consistent in the information gathered when responses are assessed against each other from one application to the next, with a strong association being seen between the various categories evaluated at initial and repeat administration of the survey (Bakare et al., 2008). Hartley-McAndrew et al. (2014) also utilized Survey Monkey to administer their data collection tool, with their survey being based on the format and information from prior tests with updates included as a result of the most recent Diagnostic and Statistical Manual for Mental Disorders (DSM-V) criteria considered to be diagnostic for ASD.

Project Intervention

Recruitment material was submitted to prospective participants via electronic communication followed by the presentation of the project to the stakeholders at the state community college. The intervention consisted of a pretest, the Survey of Knowledge of Autism Spectrum Disorders (ASD) Among Professionals and the KCAHW questionnaire, to collect data on the nurses' current knowledge level surrounding ASD. The next step included the provision of Autism 101, an evidence-based educational program developed by the Autism Society (2016) providing facts and information about ASD and an evidence based toolkit developed by Autism Speaks (2016) titled challenging behavior toolkit, designed for providing information on how to proceed when individuals with autism present with such behaviors and how to be prepared for or even prevent such behaviors from occurring. Following the educational components, the same assessment tools administered as a pretest were then administered again as a post test.

The project was originally opened to participation on May 19, 2016 and was open through June 2, 2016. The initial response number was low and the project deadline for

participation was extended through July 1, 2016. Stakeholders were notified of the change in deadline through electronic communication. Despite the extension, participation in the project remained low and the project was reopened from October 12, 2016 through October 21, 2016 in the event that the low response rate was due to a seasonal element. Again, electronic communication was utilized to inform potential participants of the reopening of the project, with the final number of participants being 12 or 20% of those receiving recruitment information.

Outcomes measured by this project included the knowledge of nurses surrounding ASD contributing to their ability to interact with and provide care for individuals within the ASD community following the presentation of an educational intervention and an evidence-based toolkit. In order to measure these outcomes, previously established tools, the Survey of Knowledge of Autism Spectrum Disorders (ASD) Among Professionals by Hartley-McAndrew et al. (2014) along with the Knowledge about Childhood Autism among Healthcare Workers (KCAHW) questionnaire developed by Bakare et al. (2008) were administered both prior to and at the completion of the intervention and the values compared to ascertain the success of the intervention.

Survey of Knowledge of Autism Spectrum Disorders (ASD) Among Professionals

The Survey of Knowledge of Autism Spectrum Disorders (ASD) Among Professionals was utilized. This tool was developed from the components of various other inquiry tools utilized previously to gather data in other studies (Hartley-McAndrew et al., 2014). It was noted that adjustments were made in the study to address changes which have occurred to the most recent DSM-V diagnostic criteria for autism. The questionnaire begins by assessing the demographics of the participants, with the following segments consisting of the characteristics and criteria required for the diagnosis of ASD followed by evidence-based medicine/practice. The

conclusion of the survey consists of a self-evaluation in regards to the individuals' confidence in their ability to interact with individuals with ASD and their ability to access various resources as needed and relevant.

Knowledge about Childhood Autism among Healthcare Workers (KCAHW)

The KCAHW questionnaire is an evidence-based tool developed by Bakare et al., (2008) with the purpose of doing just as its name implies. The questionnaire is devised of nineteen questions assessing four areas of knowledge surrounding ASD. Area or domain one assesses social deficiency, domain two looks at difficulties in communication and language, domain three assesses obsessive compulsion tendencies, and lastly, domain four evaluates knowledge of ASD specifics and other possible co-occurring disorders. Each question is given three choices with only one being correct and is weighted with a score of one, with the incorrect answers receiving no points. This is considered to be a very reliable assessment tool with positive reliability in the area of test-retest and internal consistency, per the authors (Bakare et al., 2008). This is an appropriate tool to assess the knowledge of nurses in regards to ASD.

Measures

Data was collected through the use of Survey Monkey. Participants were asked to complete both surveys prior to the intervention and then again at the completion of the intervention. The responses to the tests were compared to evaluate if a difference truly exists and if the intervention was successful or not. Through the use of simple logistic regression, the anticipated findings consisted of the knowledge of participants in regards to ASD among nurses is at a low to moderate level with improvement being seen following the implementation of the intervention. This probability hypothesis would be verified if the post intervention test scores are higher in accuracy as compared to the pretest values.

Analysis

Responses were tabulated and results reported out by Survey Monkey. Overall, the results of this project showed an increase in knowledge of the nurses following the interventions, in most areas. Areas of most significant improvement included the necessity of special interaction difficulties for the diagnosis of ASD, having risen from 54.55% to 75% on the posttest, or a 20.45% improvement (Figure 2). This demonstrates the potential for the presentation of difficult, aggressive, and potentially abusive behavior to occur during an interaction between the nurse and an ASD individual if not thoroughly prepared for such a meeting.

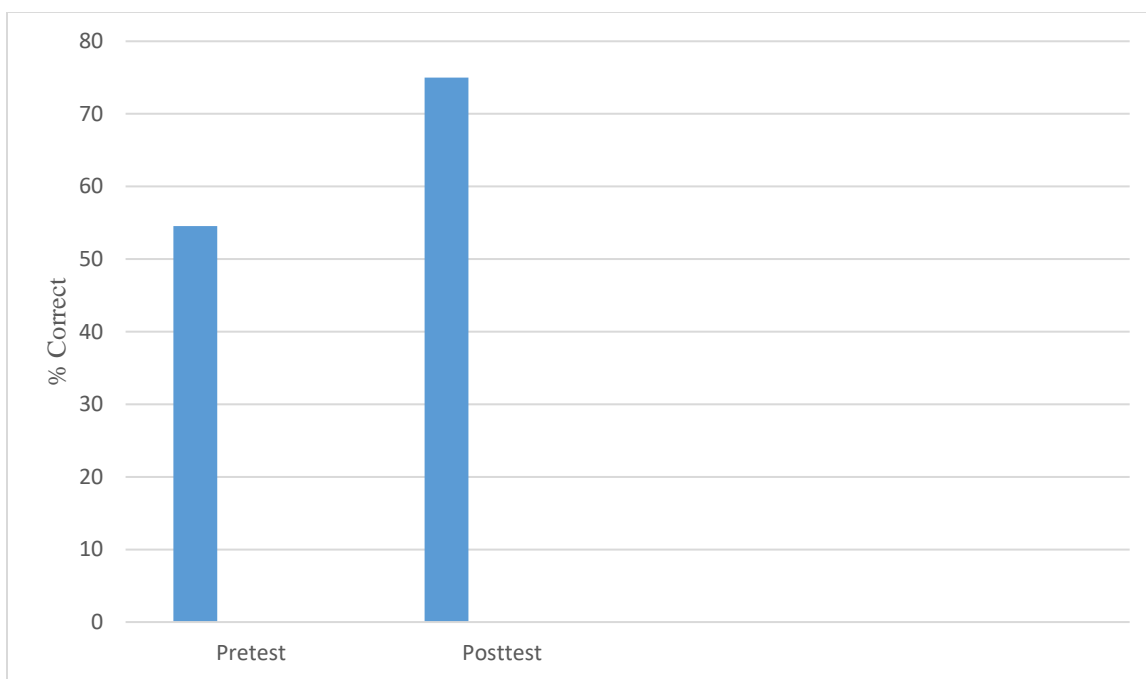


Figure 2. Necessity of special interaction difficulties for the diagnosis of ASD

The characteristic of rigid or stereotypical play increased by 45.45%, from 54.55% to 100%, following the intervention (Figure 3). Individuals with ASD tend to be reluctant to change and are very focused in their play, many times repeating the same activity over and over

several times. These special individuals have difficulty with imaginative play and tend to process things in a literal sense, making such interactions as utilizing stuffed animals, dolls, etc., for educational purposes difficult for them to understand. This points to the importance for nurses to understand the need to monitor their phrasing and demonstration of material provided to and exchanged with these clients.

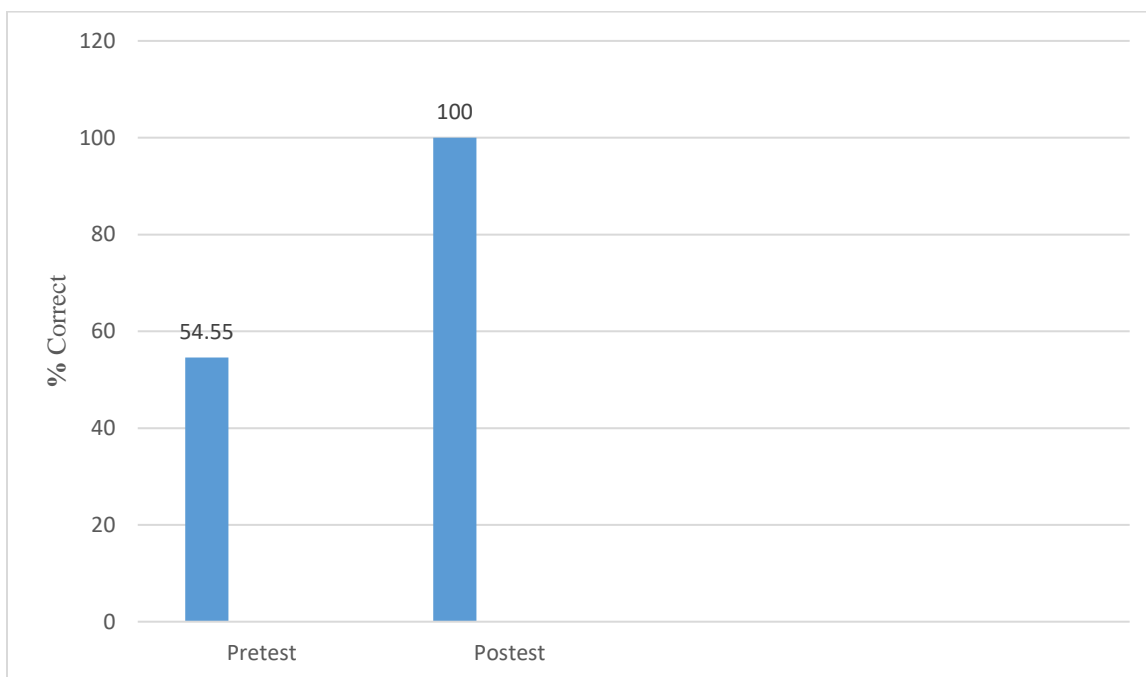


Figure 3. Characteristic of rigid or stereotypical play for ASD diagnosis

Sensory sensitivities as a needed characteristic for diagnosis increased from 81.82% to 100% (Figure 4), an improvement of 18.18% is noted. Many times, if sensory items which contribute to negative behaviors for the individual can be avoided or sensory items which are soothing can be utilized, the potential exists for both the individual and the nurse to experience a more positive, effective, successful interaction.

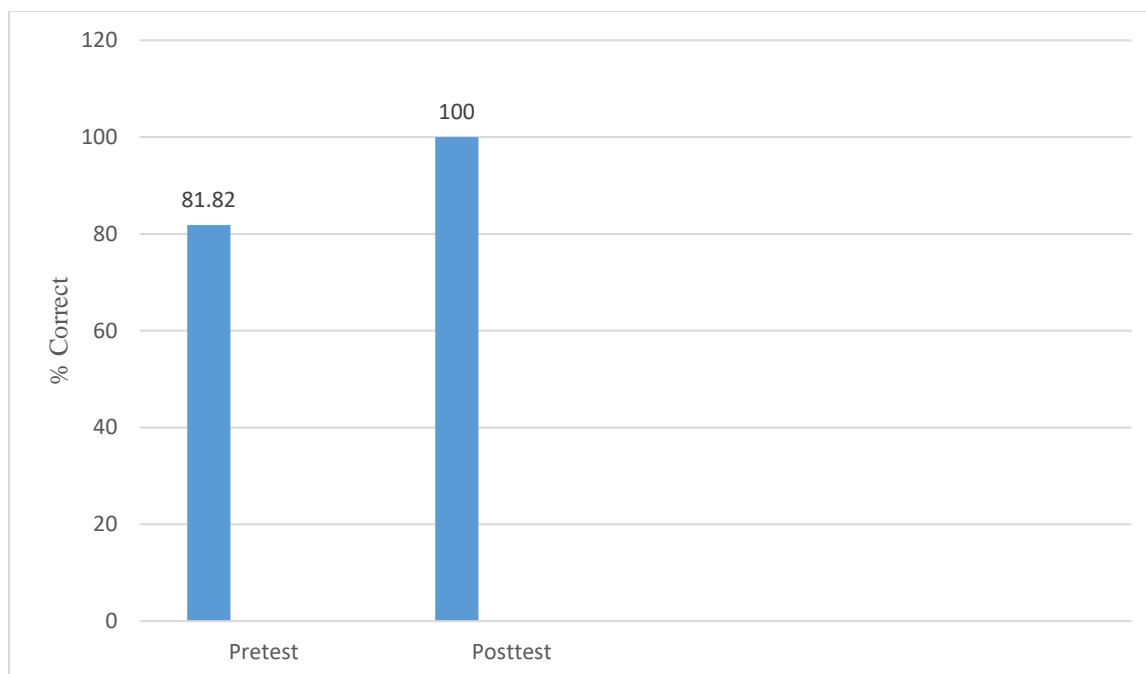


Figure 4. Sensory sensitivities as a needed characteristic for diagnosis of ASD

It was amazing to find that prior to the intervention, few nurses, 45.45% of the participants, were aware of ASD being a developmental disorder, which increased by 37.88% to 83.33% per the posttest (Figure 5). This would suggest that nurses are presented with a very limited, if at all, amount of information pertaining to ASD throughout their education or career. Even more interesting to see was that initially only 70.00% of the respondents knew that ASD has no cure at this time, increasing to 100% post intervention (Figure 6), resulting in an increase in 30.00% . It is imperative that nurses be aware of the lack of a cure for ASD, at this time, in order to avoid providing false hope to this population and their families, while limiting the exchange of inaccurate information.

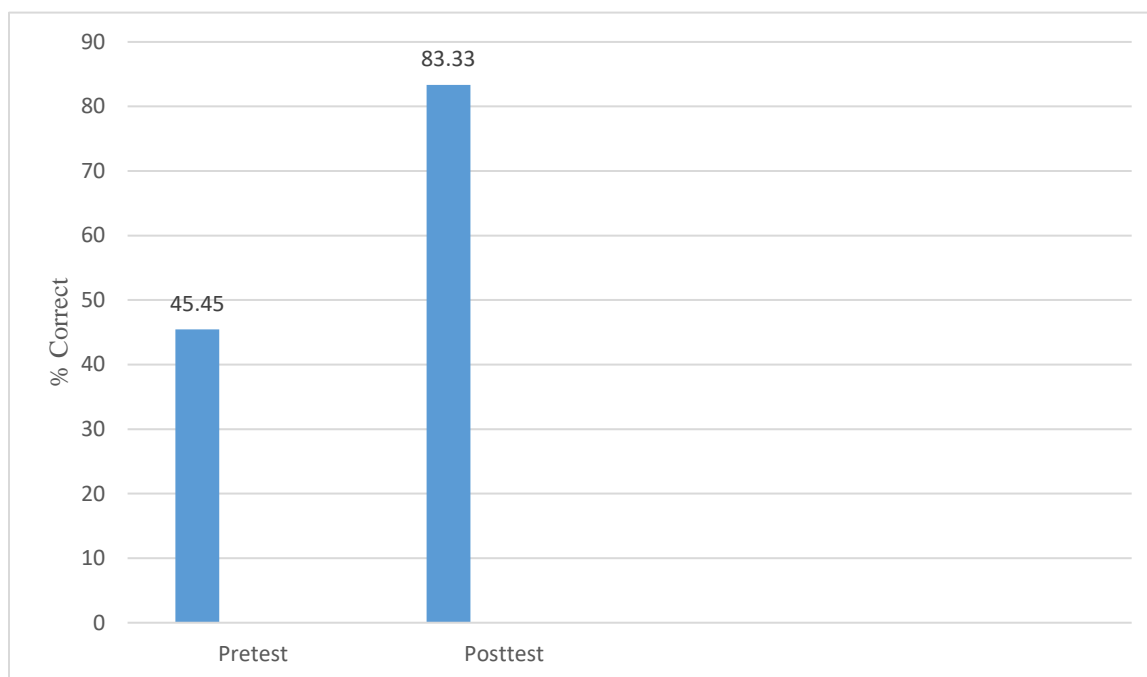


Figure 5. ASD is a developmental disorder

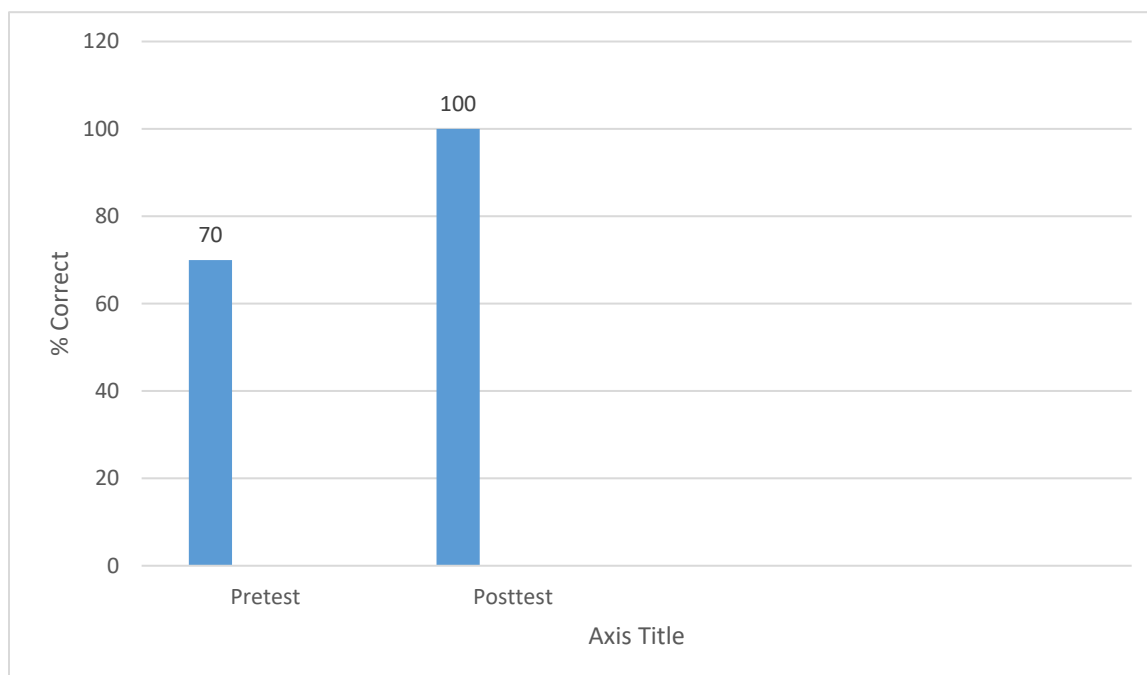


Figure 6. ASD has no cure at this time

Ethical Considerations

There were no ethical concerns identified with the initiation and implementation of this project and informed consent was obtained from all individuals who chose to participate prior to onset of the project. It should be noted that this project, while having no identifiable ethical issues in regards to the participants, it is possible for ethical issues within nursing practice such as cultural specifics be identified. It will be pointed out that providing high quality care to members of the ASD community and their families presents an ethical need for this special population.

Results

This DNP project was originally opened for participation from May 17, 2016 through June 8, 2016. Due to a low participation rate, the study was continued through July 4, 2016. Despite the extension, participation in the project remained low and the project was reopened from October 12, 2016 through October 21, 2016 in the event that the low response rate was due to a seasonal element. Again, electronic communication was utilized to inform potential participants of the reopening of the project, with the final number of participants being 12 or 20% of those receiving recruitment information. Approximately 60 nurses were provided with recruitment material with 20%, or 12 choosing to participate throughout the entire project. At the completion of this project, the findings were presented to the stakeholders along with copies of the findings.

Overall, the results of this project showed an increase in knowledge of the participants following the interventions, in most areas. Areas of most significant improvement included the necessity of special interaction difficulties for the diagnosis of ASD, having risen from 54.55% to 75.00% on the posttest, showing a 20.45% improvement. The potential for difficult,

aggressive, and potentially abusive behavior to occur during an interaction between the nurse and an ASD individual exists, if thorough preparation for such an interaction is not completed.

Discussion

Individuals diagnosed, or yet to be diagnosed, with ASD are both ethically and morally entitled to receive the same quality of healthcare as the rest of society. It was found by Singer (2012) through the participants in her study, the importance of nurses receiving education in regards to all forms of disabilities, including other intellectual and developmental, and in this case, more importantly, ASD. If nurses are unaware of ASD and how to interact with this special population, one wonders how they are capable of providing the same high quality of care to them as is received by the rest of society. Many times fear, secondary to a lack of knowledge surrounding ASD, affects the amount and quality of healthcare time that is spent with these individuals.

It should be noted that the symptoms of ASD may prove to be quite challenging to the nurse, if not prepared for interacting with autistic individuals. Chun and Berrios-Candelaria (2012) point out that primary areas affecting these individuals, social difficulties, communication impairments, along with ritualistic or repetitive behaviors, can be very problematic when the individual is exposed to experiences and situations which are of a variant from that which they are accustomed to. By being aware of these issues, the nurse can proactively prepare for these possible challenges, thereby diminishing or avoiding them completely.

Despite being usually thought of as a childhood illness due to the usual diagnosis time frame of ASD, it is a lifelong disability extending across into adulthood and the geriatric years. Individuals with ASD present for healthcare services, at least, the same amount or more times than the rest of society; therefore, the potential for nurses in all areas to interact with individuals

of the ASD community is quite likely. Perkins and Berkman (2012) made note of the average lifespan of an individual diagnosed with ASD to be only slightly less than the majority of society by three years of the average longevity of 65 years. Based on these findings, individuals within the ASD community have the potential to present themselves within the healthcare system at the same rate as other members of society.

While many individuals view ASD as only being diagnosed during the younger years of life, this is not always the case. It is further noted by Van Niekerk, Groen, Vissers, Van Driel-de Jong, Kan, and Oude Vashaar (2011) that there exists some individuals who have not been diagnosed with ASD until in their elder years. This could be the result of misdiagnosis, other psychological disorders, or simply the lack of presenting for a diagnosis entirely. With this in mind, nurses have the potential to interact with individuals of the ASD community with neither parties being aware of it at the time. In order to improve the nurse's ability to interact with these special individuals, it is imperative that the gap in knowledge about ASD be improved upon thus enhancing the chances of a more effective, high quality, safe provision of care. Through the ANKASD project, it has been shown that a lack of knowledge about ASD does exist with significant improvements being seen following the provision of an evidence-based information presentation and tool kit for dealing with potential challenging behaviors displayed by individuals of the ASD community.

Limitations

Limitations to this project included the participation of fewer individuals than anticipated. A small test pool has the potential to skew the test results thus diminishing the validity of the test overall. The honesty of the participants could potentially effect the testing results if they choose to not abide by the instructions of avoiding the use of educational materials when completing the

data collection tool prior to the intervention. There also was the potential for participants to begin the assessments and not follow it through completely to its fruition, as was the case with three of the participants.

Conclusion

The diagnosis of ASD is on the continual rise, for reasons that are not at this time clear. ASD is a lifelong neurodevelopmental disorder, usually diagnosed in the younger years of life, but this is not always the case. Regardless of when the diagnosis is received, it is important to remember that individuals diagnosed with ASD continue to grow into adulthood and experience many of the same illnesses and disorders as the rest of society thus rendering the nurse the possibility of interacting with this special population sometime throughout his or her career.

Individuals with ASD present with special characteristics which are important for the nurse to be aware of. When the nurse is aware of the specifics surrounding ASD, he or she can be proactive in being prepared to interact with and provide care to these individuals thus providing them with the same high quality, effective, safe care as the rest of society, which they are ethically and morally entitled to. The results of this project, though small, demonstrate the gap in knowledge which nurses have surrounding ASD.

This project will be sustained through submitting it to the STTI Virginia Henderson Global e-Repository of Capella University where it can be accessed and referenced by other researchers in this area. The potential exists for this project to encourage the development of further similar studies in other areas of the health care field, including law enforcement and first responders. It is hoped that this project will begin a dialogue regarding the need for further studies and the inclusion of additional of information surrounding ASD within nursing curriculums.

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APPENDIX A. STATEMENT OF ORIGINAL WORK

Academic Honesty Policy

Capella University's Academic Honesty Policy ([3.01.01](#)) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy ([3.03.06](#)) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy ([3.01.01](#)) and Research Misconduct Policy ([3.03.06](#)), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the *APA Publication Manual*.

Learner name
and date

Signature Redacted

Cynthia A. Queisser MSN, RN

8/7/2016

Mentor name
and school

Dr. Jo Anna Fairley, School of Nursing and Health Sciences