

Autism

Introduction

The reason I chose the topic of autism was mainly because my mother has been a special education teacher for over twenty five years now and has dealt with not only autistic, but physically disabled and emotionally disturbed children. The few times I've been in her room to shadow the class, I always learned something new about the disease but was also left with a new question that went unanswered about it. In my lifetime, I have seen many autistic children and adults who have an incredible capacity for knowledge but lack the ability to deal with social situations and people, in general, so I thought if I learned more about the disease I would have not only a better knowledge, but a better understanding of how to communicate and socialize with these individuals.

Section 1: Background and Problem Statement

Autism is a general term used to describe a group of complex developmental brain disorders known as Pervasive Developmental Disorders (PDD). It is a developmental disability that typically appears during the first three years of life and affects a person's ability to communicate and interact with others. Autism is defined by a certain set of behaviors and is a "spectrum disorder" that affects individuals differently and to varying degrees (Autism Speaks par. 1).

- **Web site #1 Name: Autism Society**
- **Web address: <http://www.autism-society.org/site/PageServer>**
- **Background Information:**

Healthy People 2010 does not address autism because it is a developmental and social disease but there are several different organizations found throughout the country that are dedicated to the research of this disease and reach out to those who have it and to their family members. The Autism Society is a Web site that specializes in reaching out to those affected with autism. Anyone can join to learn more about the disease and learn how to live with it. The Autism Society's strength is in its wide spread community of chapters and its network of national partners and collaborators. These groups are vital in their efforts of increasing public awareness about the day-to-day issues faced by people with autism, advocating for appropriate services for individuals across the lifespan, and providing the latest information regarding treatment, education, research and advocacy (Autism Society par. 4).

- **Web site #2 Name: Autism Speaks**
- **Web address: <http://www.autismspeaks.org/>**
- **Background Information:**

Another well known organization is the Web site Autism Speaks. Their goal is to change the future for all who struggle with autism spectrum disorders. They are dedicated to funding global biomedical research into the causes, prevention, treatments, and cure for autism; to raising public awareness about autism and its effects on individuals, families, and society; and to bringing hope to all who deal with the hardships of this disorder. They are committed to raising the funds necessary to support these goals. Autism Speaks aims to bring the autism community together as one strong voice

to urge the government and private sector to listen to their concerns and take action to address this urgent global health crisis. It is their firm belief that, working together, they will find the missing pieces of the puzzle (par. 3-6).

- **Web site #3 Name: National Autism Association**
- **Web address: <http://www.nationalautismassociation.org/>**
- **Background Information:**

The mission of the National Autism Association is to educate and empower families affected by autism and other neurological disorders, while advocating on behalf of those who cannot fight for their own rights. They educate society that autism is not a lifelong incurable genetic disorder but one that is biomedically definable and treatable. They also raise public and professional awareness of environmental toxins as causative factors in neurological damage that often results in an autism or related diagnosis. They encourage those in the autism community to never give up in their search to help their loved ones reach their full potential, funding efforts toward this end through appropriate research for finding a cure for the neurological damage from which so many affected by autism suffer (National Autism Association par. 4).

Section 2: Research

- **Web site #1 Name: Pub Med**
- **Web address: <http://www.ncbi.nlm.nih.gov/pubmed/>**
- **Summary of the research:**

The PubMed Web site had several different results for the research done on autism in the past. The Center for Nanoscale Science and Engineering (CNSE) located at the State University of New York did a study on the etiology of autism. It said that worldwide, the rate of autism has been steadily rising. There are several environmental

factors in conjunction with genetic susceptibilities that are contributing to this rise. Vitamin D is important for neuronal growth and neurodevelopment, and defects in metabolism or deficiency have been implicated in autistic individuals. Other factors that have been considered include: maternally derived antibodies, maternal infection, heavy metal exposure, folic acid supplementation, epigenetics, measles, mumps, rubella vaccination, and even electromagnetic radiation. In each case, the consequences, whether direct or indirect, negatively affect the nervous system, neurodevelopment, and environmental responsive genes. The etiology of autism is a topic of controversial debate, while researchers strive to achieve a common objective (pubmed par. 1).

- **Web site #2 Name: Intute Search Engine, The National Autistic Society**
- **Web address: <http://www.autism.org.uk/autismdata>**
- **Summary of the research:**

The National Autistic Society prides themselves in providing an ideal research tool for anyone researching autism. It lists over 18,500 published research papers, books, articles, videos and other materials. One of their research topics is “living with autism.” This section provides numerous links to several topics such as early years, understanding behavior, communicating and interacting, at home, education and many more. All of these links provide a detailed description of some of the things a parent can expect when learning about this disorder and give a step by step guide to help them in their journey. (par. 2-8).

- **Web site #3 Name: Scirus Search Engine, Centers for Disease Control and Prevention**
- **Web address: <http://www.cdc.gov/Features/AutismResearch/>**
- **Summary of the research:**

SEED stands for the Study to Explore Early Development. It is a 5-year, multi-site collaborative study that will help identify what might put children at risk for autism spectrum disorders (ASDs) and other developmental disabilities. It is being conducted by six study sites and a data coordinating center called the Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE) Network. They say it is too soon to speculate on the results of the study. They hope the study will give all of us a better idea of which of the risk factors that we will be looking at seem to be the most important in causing autism. The causes may be related to genes, the environment, or a relationship between the two (par. 1-3).

Section 3: Statistics

- **Web site #1 Name: National Center for Health Statistics**
- **Web address: <http://www.cdc.gov/nchs/>**
- **Summary of the statistics:**

The National Center for Health Statistics provides numerous charts and quizzes that we can take to test our knowledge about different health-related topics. Some of the statistics the CDC gives is that it is estimated that 1 in 150 children in the United States have an ASD (Autism Spectrum Disorder). ASDs occur in all racial, ethnic, and socioeconomic groups, yet are four to seven times more likely to occur in boys than in girls. Recent studies have estimated that the lifetime cost to care for an individual with

an ASD is \$3.2 million and that number is on the rise as more and more cases are being discovered (par. 1-5).

- **Web site #2 Name: National Center for Health Statistics**
- **Web address: <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5601a1.htm>**
- **Summary of the statistics:**

Population-based studies conducted worldwide before 1985 indicated that prevalence of autism and related conditions was 0.4--0.5 per 1,000 children below the age of eighteen years. The most recent studies using current Diagnostic and Statistical manuals have identified ASD rates ranging from 2.0 to 12.0 per 1,000 children with "best-estimate" rates of 2.0--6.0 per 1,000 children. Recent findings reflect the expansion of the definition of autism to encompass a spectrum of disorders that might include co-occurring mental retardation (MR) or cognitive impairment, and the findings have challenged previously accepted ideas concerning the population characteristics of persons with ASDs. For example, certain studies have identified male-to-female ratios twice the four-to-one male-to-female ratio often identified in older studies and much lower rates of co-occurring MR (approximately 25%--50% rather than the typically cited 70%) (par. 7-8).

- **Web site #3: National Center for Health Statistics**
- **Web address: <http://www.cdc.gov/Features/DetectAutism/>**
- **Summary of the statistics:**

Screening tests for autism are vital when a child is still in early development. Early intervention may be vital in preventing a cascade of problems that may affect later functioning. All children should be screened for autism spectrum disorders at the 18, 24 and 30 month "well-child" visits. Additional screening may be needed if a child is at high

risk for an autism spectrum disorder (has a sibling or parent with an autism spectrum disorder) or if symptoms warrant (par. 3).

Section 4: Consumer Information

- **Web site #1 Name: Medline Plus**
- **Web address: <http://www.nichd.nih.gov/health/topics/asd.cfm>**
- **Summary of the information:**

Autism causes kids to act in unusual ways. They might flap their hands, say certain words over and over, have temper tantrums, or play only with one particular toy. Most kids with autism don't like changes in routines. They like to stay on a schedule that is always the same. They also may react to what's going on around them in unusual ways. Normal sounds may really bother someone with autism, so much so that the person covers his or her ears. Being touched, even in a gentle way, may feel uncomfortable.

- **Web site #2 Name: Medline Plus**
- **Web address: http://kidshealth.org/kid/health_problems/brain/autism.html#**
- **Summary of the information:**

The main signs and symptoms of autism involve problems in the following areas: communication, both verbal and non-verbal, social, such as sharing emotions, understanding how others think and feel and holding a conversation, and routines or repetitive behaviors such as repeating words or actions, obsessively following routines or schedules, and playing in repetitive ways (par. 1).

- **Web site #3 Name: Mayo Clinic**
- **Web address: <http://mayoclinic.com/health/autism/DS00348/DSECTION=risk%2Dfactors>**
- **Summary of the information:**

There are several risk factors to look out for when trying to determine if your child is at a high risk for autism. Studies show that boys are three to four times more likely to develop autism than girls are and families who have one child with autism have an increased risk of having another child with the disorder. Children with certain medical conditions have a higher than normal risk of having autism. These conditions include fragile X syndrome, tuberous sclerosis, Tourette syndrome and finally epilepsy.

Section 5: Solutions to the Problem (or Issue)

- **Web site #1 Name: Mayo Clinic**
- **Web address:**
<http://mayoclinic.com/health/autism/DS00348/DSECTION=treatments%2Dand%2Ddrugs>
- **Summary of the information:**

Applied Behavioral Analysis (ABA) are programs that often include support for the child in a school setting with a one-on-one aide to target the systemic transfer of skills to a typical school environment. Skills are broken down into manageable pieces and built upon so that a child learns how to learn in a natural environment. Facilitated play with peers is often part of the intervention. Success is measured by direct observation and data collection and analysis, all critical components of ABA. If the child isn't making satisfactory progress, adjustments are made. Programs often include support for the child in a school setting with a one-on-one aide to target the systemic transfer of skills to a typical school environment. Skills are broken down into manageable pieces and built upon so that a child learns how to learn in a natural environment. Facilitated play with peers is often part of the intervention. Success is measured by direct observation and data collection and analysis - all critical

components of ABA. If the child isn't making satisfactory progress, adjustments are made (par. 3-10).

- **Web site #2 Name: Medline Plus**
- **Web address: <http://www.nichd.nih.gov/health/topics/asd.cfm>**
- **Summary of the information:**

There is no cure for autism, nor is there one single treatment for autism spectrum disorders. But there are ways to help minimize the symptoms of autism and to maximize learning. Some of these options include behavioral therapy and other therapeutic options, educational or school-based options, or in some cases there are certain medications that can be taken to treat some of the symptoms of autism (par. 4).

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