

Good causes of autism report example

[Family](#), [Children](#)



Definition

Neurodevelopmental disorders are defined as impairments of the development and growth of the central nervous system or the brain (Reynolds and Goldstein, 1999 p. 3). Neurodevelopmental disorders affect the brain's function that deals with memory, the learning ability and emotions, and they become more intense as the individual grows (Reynolds and Goldstein, 1999 p. 4-8). Autism is considered a neurodevelopmental disorder distinguished by a range of impairments, including problems with communication (verbal and non-verbal) and any social interaction as well as behavioral problems (American Psychiatric Association, 2000). Individuals with autism find it difficult to process information, mainly due to changes in the brain's connection between its nerve cells and synapses (Levy, Mandell and Schultz, 2009). People with autism demonstrate repetitive behaviors, or deviations from stereotyped behaviors and symptoms are usually obvious within the first three years in a child's life (American Psychiatric Association, 2000). In the autism spectrum, there are three recognized disorders in total; the other two include PDD-NOS, meaning Pervasive Developmental Disorder Not Otherwise Specified, and Asperger Syndrome (Johnson and Myers, 2007).

Statistics

Childhood-onset neuropsychiatric disorders are more frequent now than the past (Anckarsäter et. al., 2010). Research has shown that these disorders, which include autism spectrum disorders, affect about five percent of all children while relatives of affected children may also demonstrate " milder phenotypal expressions or " shadow syndromes" (Anckarsäter et. al, 2010).

As shown in Table 1, in the US alone, based on facts from the Centers for Disease Control and Prevention, one in 150 children were diagnosed with autism spectrum disorders in 2000.

Prevalence in 2012 showed that from 1,000 children 20 were diagnosed with autism when in 2008 only 11 in 1,000 children were diagnosed with autism, and about 7 per 1,000 in 2000 (Blumberg et al, 2013). Comparing those facts with data from the 1980s, it becomes obvious that autism has a dramatic increase (Blumberg et al, 2013).

Markers and Factors that Increase the Risk of Autism

According to studies, if among identical twins, one has an Autistic Spectrum Disorder, then the other child will be affected approximately 36-95% of the time (Rosenberg, et al, 2009). In case of non-identical twins, the other child is affected about 0-31% of the time (Rosenberg, et al, 2009). Furthermore, parents that already have a child with a disorder from the autistic spectrum run a risk of having another child with that disorder ranging from 2 percent to eighteen percent (Ozonoff et al, 2011). It also appears that disorders of the autistic spectrum occur at far greater rates in people that have particular genetic conditions or a condition related to a disorder in chromosomes (Cohen, 2005). Indicatively, among children with autism, it is estimated that 10 percent already has Down syndrome, Tuberous sclerosis or another similar disorder (Cohen, 2005). Finally, studies have shown that more than half the cases of children with autism show no actual sign of intellectual disability whatsoever (Cohen, 2005).

A study conducted in 2008 has also unveiled another parameter that also increases the risk of having a child with an autistic spectrum disorder. This

factor involves the paternal and maternal age that appear to be important in determining the child's health (Durkin et al, 2008). Based on data from 10 study sites within the United States – all participants of the Centers for Disease Control and Prevention's Autism and Developmental Disabilities Monitoring Network- have monitored more than 250, 000 births that occurred in 1994 (Durkin et. al, 2008). About 1, 200 cases of children had been identified as having a disorder of the autistic spectrum; those cases belonged to births where parents were older than 40 years (Durkin et al., 2008). Moreover, mothers that gave birth to a firstborn offspring at a later age –over 40- increased the chances to deliver a child with autism by three times, compared to those that had already given birth to their firstborn child before their mid-30s (Durkin et al., 2008). The same applies to fathers that were over 40 years of age when their firstborn child was born (Durkin et. al., 2008).

Another study focused on identifying whether birth weight had any effect on developing autistic spectrum disorders was also enlightening. When comparing the birth weight and gestational age prevalence rates and distributions of children that had a low birth weight to those that were not born prematurely and had normal weight, risk of autism were high (Schendel and Bhasin, 2008). In detail, there seems to be a fourfold that significantly raises the risk of having a child with an autistic spectrum disorder. That fourfold included low birth weight, meaning weight below 2, 500 g; premature births that are referred to as births before the 33rd gestational week; children that already had another developmental disability, e. g. mental retardation; and finally gender-related factors –more girls than boys

(Schendel and Bhasin, 2008). “ For example, a significant fourfold increased risk was observed in low birth weight girls for autism accompanied by mental retardation, whereas there was no significantly increased risk observed in low birth weight boys for autism alone.” (Schendel and Bhasin, 2008).

Autistic spectrum disorders also co-occur with other medical, neurologic, psychiatric or developmental conditions. A study among more than 2, 500 autistic children up to their eight years of age, collected data that evidenced the coexistence of multiple conditions like the aforementioned (Levy et. al., 2010). More analytically, 10 percent of children with autism had also been diagnosed with a psychiatric disorder, 16 percent had a neurologic disorder, 83 percent had non-autistic spectrum disorders, and 4 percent had at least one genetic disorder (Levy et. al., 2010).

Diagnosis

Signs become recognizable to parents in the first two years of their child’s life, and signs usually do not remit. However, diagnosis may delay due to doubts about the validity of signs (Kleinman et. al., 2008). A study among 77 children evaluated children between 16 and 35 months of age, and then re-evaluated them when they were 42 and 82 months of age (Kleinman et. al., 2008). The goal of the study was to determine whether they are autistic or not. Results have demonstrated a diagnostic stability when it a child is evaluated at about 2 years after its birth (Kleinman et. al., 2008).

Signs usually confuse parents for up to six months after the child’s birth; however, they become overt right after that time frame and by the age of two or three they become established (Rogers, 2009). Signs follow the child up to its adulthood, only in many cases they become more muted (Rapin and

Tuchman, 2008).

Autistic children are usually distinguished by a threefold of symptoms that include impairment in communication and social interaction as well as behavioral abnormalities, such as repetitive behavior or lack of variety of interests (Rogers, 2009). Moreover, some children might also have eating habits that deviate from typical eating, but that is not a significant symptom to diagnose autism (Filipek et. al., 1999).

There are cases when diagnosis does not take place during childhood, and the individual continues living a troubled life without getting any help at all to better their condition. A project that was carried out at The Göteborg Child Neuropsychiatric Clinic aimed at assessing autism (Anckarsäter et. al., 2010). Between 2001 and 2003, 240 adults with possible autism spectrum disorders, most of which were referred by general practitioners, adult-psychiatry specialists, or even came themselves, were asked to complete the Temperament and Character Inventory so to be assessed for autism (Anckarsäter et. al., 2010). From them, only a minority was diagnosed from an early age. After the evaluation was completed, it turned out that 113 individuals had autism spectrum disorders, atypical autism or Asperger Syndrome (Anckarsäter et. al., 2010).

The impact of Autism Spectrum Disorder on a Child's life

Children with a disorder from the autism spectrum lack attention, find it difficult to communicate, make decisions, have control of their posture and voice, and show deficits in IQ (Anckarsäter et. al., 2010). The findings of the Göteborg Adult Project demonstrate a dramatic difference in self-rated personality traits, when compared to those of the general population.

Indicatively, most subject showed an increased tendency to avoid harm and sought for novelty far more intensively than other people without an autism spectrum disorder, and had low reward dependence as shown in Table 2 (Anckarsäter et. al., 2010).

Moreover, autistic individuals scored low in tests related to cooperativeness and self-directedness, were more susceptible to fatigue and more vulnerable to disease and illnesses, and had increased anticipatory concerns (Anckarsäter et. al., 2010). Autistics are usually over-attached with a close person of theirs and are over-sentimental while some also show personality disorders, too as shown in Table 3 (Anckarsäter et. al., 2010).

Treatment

As of now, there are no known medications that can effectively treat autism spectrum disorders or their symptoms (cdc. gov). However, there are medications that help individuals with autism spectrum disorders to manage depression, their lack of concentration or seizures, so they can function better (cdc. gov).

Of course, the earlier a child is treated for autism the better. Early intervention services are proven to be very helpful in a child's development and help children between birth and 3 years of age to learn skills that are significant to their development (cdc. gov). For that reason, it is important that a child gets early care.

In order to treat a child with autism spectrum disorders parents have a number of choices, apart from medication, including:

- Complementary and alternative medicine to relieve symptoms,
- Dietary approaches to exclude food allergies and lack of nutrients that are believed to may cause symptoms of autism spectrum disorders, and
- Communication/behavior approaches, like Applied Behavior Analysis that encourages positive behaviors so a wide array of skills can be developed (cdc. gov). Also, occupational therapy and speech therapy teach the child to live as independently as possible, with improved communication skills respectively (cdc. gov).

A new proposed experimental design to help in autism spectrum disorders

The need for early interventions for autism disorders is evident; not only can autism be detected early in life, but effective treatment can significantly reduce symptoms and improve prognosis later in life.

In addition, empathy has been linked to autism disorders, in that lack of empathy in infants and adults may indicate the existence of disordered communication patterns and capabilities (see, for instance, Charman et al., 1997, Baron-Cohen and Wheelwright, 2004).

Since empathy can be detected early in life (Eisenberg & Miller, 1987), I would propose conducting an exploratory prospective study on a birth cohort, following the children from birth to the age of five. In this study, I would suggest evaluating the child's empathic capabilities (according to their age), along with developmental measures such as achieving developmental

milestones and from the age of three their perceived intelligence. In addition, I would add age-appropriate autism screening procedures to each of the testing phases (I would suggest one phase at the age of 9 months, then the age of two, then the age of three and a half and finally the age of five). At the end of the data collection stage, the study would then cross-reference the data and try to find correlations between empathic markers, the child's development and signs of autism. Though a causal relationship is always difficult to find, I think that this research would help discover early markers of autism therefore allowing for early intervention.

In conclusion, a study aimed at discovering early detection methods and markers for autism will allow for early intervention. In some cases, early intervention can significantly decrease symptoms and will allow to construct the child's learning environment in accordance with their capabilities, incorporating therapies such as Developmental Individual-difference Relationship-based model (DIR) (Wieder & Greenspan, 2003).

Conclusion

Autism spectrum disorders are neurodevelopmental disorders that affect the individual's life to a great deal. Comparing facts and statistics it becomes obvious that the number of autistic children increase in time, which is a worrying trend. Research has shown that in identical twins, if one has autism chances increase that the other child will also demonstrate some signs of autism spectrum disorder. The same applies to parents that have already a child with autism and give birth to a second one; it is highly likely it will also have autism as it is believed that chromosome-disorders lie behind the core reasons of autism spectrum disorders.

Studies have shown that many cases of children with autism spectrum disorders do not receive early intervention services which reflects to their overall development. With proper treatment it is possible that individuals with autism spectrum disorders can live a more independent life, enhance their communication skills as well as other skills that are affected by autism. Although there is no treatment with scientific evidence of its effectiveness, it is proven that medications can help ease the symptoms of autism, so individuals can live a better life, without too much attachment, sensitivity and repetitive behaviors, among so many others that make daily life difficult to bear.

Empathy has been proven to link with autism spectrum disorders. For that reason it is suggested that an exploratory prospective study is conducted on a birth cohort and following infants up to their fifth year. This study should be focused on evaluating the empathic skills of the child and how and when each child reaches developmental milestones as per their age. Finally, screening procedures could be added at three important phases of a child's life.

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