

## Autism and its whereabouts in Pakistan

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### ABSTRACT

Autism is a complex neurological developmental disorder which is characterized by varying degree of impaired social interactions, repetitive and stereotyped or compulsive behavioural patterns. In addition, a range of other behaviour problems are common, such as mania, sleeping and eating disturbances, attention issues, temper tantrums and risk of self-injury are present. The health care system of Pakistan is not able to cope with the issue of autism at present as it was evident from a number of studies that the health care professionals who deal with the issue are not equipped with sufficient knowledge to treat the said condition. Adequate health measures need to be taken including formal training of HCPs which will help them treat and counter the issue better.

### Keywords:

Autism; Pakistan

## 1. INTRODUCTION

Autism in its broad spectrum of severity is a syndrome. There is no single known aetiology of autism however, in last decade; portentous progress has been made in encompassing the causes of autism and their multiple impacts on brain development. Genetic factors could largely contribute to autism liability, although it is unclear whether autism is explained more by rare mutations with major effects, or by rare multi-genomic interactions of common genetic variants. Modifications in the neocortical excitatory/ inhibitory balance and synaptic disruption contribute to be the most probable underlying pathogenic mechanism leading to autism. Over expression of SLC25A12 gene is also known to contribute in the pathophysiology of autism by altering inter-neuronal synapses in dorso-lateral and prefrontal cortex and fusiform gyrus at both pre and post natal stages (Arianna et al., 2009). SYNGAP1 is a protein known to cause disabilities in around 1 million of world population and it is directly involved in increasing the risk of autism.

Influenza during pregnancy is known to double while persistent fever during pregnancy triples the autism risk of child. The immune system plays an important role in autism, autistic children have been found by researchers to have inflammation of both the peripheral and central immune systems as indicated by increased levels of pro-inflammatory cytokines and an abnormal activation of microglia. Abnormal immune functions have also been associated with increased behavioural impairments that are the core features of autism such as deficit in social interactions and communication (Medical News Today, 2014).

## 2. DISCUSSION

Autism develops its roots in very early phase of brain development and effect brain's processing by altering the connection between nerve cells and their synapses, however, the exact mechanism is still not well understood. The signs and symptoms of autism varied widely in characteristics and severity and these symptoms tend to appear during infancy or childhood and become fully established by the age of 3 years. The early diagnostic indicators for autism includes: delayed onset of babbling, diminished responsiveness, no gesturing by 12 months, no single word by 16 months, avoiding physical contact and do not like cuddling or being touched, no response to one's own calling name etc.

The hallmark feature of autism is impaired social interaction. Children suffering with autism are often socially clumsy, solitary and offensive in nature. They feel love, hatred, pain, happiness and sadness in the same way as normal people do but they are devoid of ability to express. Lack of empathy, lack of sharing thoughts and feelings and exchanging ideas are the characteristic features seen in people with autism. Their cognitive or sub conscious traits develop fast while language and social skills trail behind and it is directly related to the severity of condition. People with autism often suffer with 'echolalia', a condition of repeating a phrase over and over again. During teen years, the behavioural patterns often change but a condition of being isolated or social clumsiness remains same they hardly get mix with people or rarely make friends, they find difficult to adjust their behaviour in different social situations and they might make less eye contact or avoid eye contact during speaking. They do not understand non verbal cues such as face expressions, body language or tone of voices. Some autistic patients are hyper sensitive to sound or touch and often feel unpleasant by loud noises which in turn contributes to anxiety and frustration (Autism Information, Page 14).

Autism is a complex, neurodegenerative disorder of multiple aetiologies and the disabilities associated with it are life-long and there is no known cure for it and children recover occasionally. A sizeable proportion of autistic individuals lack social support, meaningful relationships, future employment opportunities or self-determination. The core difficulties tend to endure, although the severity of symptoms can tighten with the age and careful and supportive behavioural therapies can bring improvements.

The United States Centre for Disease Control and Prevention identify that 1 in 68 American are on the spectrum of autism and studies also show that the prevalence of autism is 4-5 times more common among boys than girls and the prevalence rates have elevated 10-17% annually in recent years. Research suggests that a woman can tighten her child's risk of autism by taking prenatal vitamins containing folic acid or consume folic acid through dietary intake during the months before and after conception. Behavioural interventions provide the most effective and expeditious source of learning especially the family and educational system can play an important role in this regard while medications may have adverse effect that might be harmful for autistic individuals (Ospiana et al. 2013).

The most commonly prescribed medications to autistic patients are antidepressants, antipsychotics and psychoactive stimulants. No drug is known to alleviate the core symptoms of autism of social impairment and aloofness however these drugs can be effective for treating irritability.

Each individual with autism is unique. A sizeable proportion of people with autism are blessed with portentous savant skills. Above 40% have average to above average intellectual levels and show a rattling performance in visual skills, music, art and maths. Many individuals with autism show superior skills in perception and attention, relative to the general population (Autism Speaks, 2014).

Pakistan lies among the most populous countries of the world with limited health resources. The estimated autistic children in Pakistan are found to be 35,000. Unfortunately, our health care professionals are scarcely aware of the children psychiatry and this lack of awareness contributes to the increasing number of autistic patients day by day.

In present scenario, the urge of formal training and education of health professionals to rectify or counterbalance the misconceptions regarding autism has been elevated. It will be helpful not only in the early diagnosis of the disease but also to prevent the acceleratory spread of autism as well as other mental disorders in the society (Nazish et al. 2011).

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