

Studying risk factors for neurobehavioral disorders in the state of Qatar

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Introduction: Autism spectrum disorder (ASD) is a group of complex brain disorder affecting social interaction and communication as well as limited and repetitive patterns of behavior, or activities. Most children with autism may have poor eye contact, show repeating a word or abnormal sensory movement in head, face and limbs, slow response to verbal communication, delay speech and difficulty to shows there feeling such as sadness, anger and distress. In addition, children may have difficulty to build a relationship with their peers. The high percentage of ASD in Qatar is similar to another country such as the USA. Several genetic changes have

been found to be implicated in autism pathogenesis as these genetic alterations influence brain development and communication. Autism has been also observed in several syndromes such as fragile X syndrome, tuberous sclerosis, Tourette syndrome, Rett syndrome. On the other hand, there are several environmental factors that may lead to autism such as progressive parental age during conception and pregnancy, maternal prenatal medication use, bleeding during pregnancy, maternal gestational diabetes, cesarean sections, assisted reproductive technologies, maternal antibodies, placenta abnormalities, smoking, alcohol consumption, endocrine disruptors and exposure to x-ray and air pollution.

Problem: Due to the high prevalence of autism spectrum disorder (ASD) in Qatar the proposed study will focus on the

clinical outcomes of maternal, paternal and infant with the disorder.

Aim: The aim of the proposal is to identify the common risk factors of neurobehavioral disorders in Qatar.

Research Question: Is autism spectrum disorder (ASD) in Qatar mainly due to genetic or environmental factors?

Materials and Method: The data will be extracted from the health records for each participant. The participants will be coded (Numerical) accordingly and their clinical data and will be used and stored to protect the confidentiality of the sample (Name, Age, Nationality and Gender). All data will be coded and no subject identifiers will be shared outside the research team at HMC. Data collection sheets will be stored as soft copies within password locked computers at the HMC PIs office.

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