The Relation of Socio-economic Factors with Autism among Children: A Study in an Urban Area of Bangladesh

Md. Golam Hasnain[1, 2], Monjura Akter[3]

[1]*MPH student, American International University, Bangladesh*
[2]*Research Investigator, International Center for Diarrheal Disease Research, Bangladesh*
[3]*Medical Officer, Upazilla Health Complex, Nandail, Bangladesh*

Conflict of Interest: None declared

This article has been peer reviewed.

Article Submitted on: 18th February 2013

Article Accepted on: 12th October 2013

Funding Sources: None declared

Correspondence to: Md. Golam Hasnain

Address: International Centre for Diarrheal Disease Research, Bangladesh

Email: hasnain.abir@gmail.com

Cite this article: Hasnain MG, Akter M. The relation of socio-economic factors with autism among children: a study in an urban area of Bangladesh. J Pioneer Med Sci. 2014; 4(1):11-13

ABSTRACT

BACKGROUND: Bangladesh is a developing nation and despite economic constraints, Bangladesh has a vision for all round growth and intends to enter the group of developing nations by the year 2020. To achieve these ambitious targets, all sections of society, not only disabled people, but also people with the autism spectrum disorder (ASD) have to be included in the process of developing the nation. This research is a descriptive cross sectional study and aims to find the socio-economic profile of persons with ASD and to correlate the condition of autism with the socio-economic profile.

METHODS: This descriptive cross sectional study was conducted in two autism schools in Dhaka City, Bangladesh from January to June, 2012. All the subjects of the study are the parents of autistic children who were educated and living in Dhaka.

RESULTS: The highest numbers of autistic children were aged 7-9 years (32%) and 4-6 years (28%); 78% were male and 22% were female children. With respect to birth order, 58% were first born and 33% were second born. Parents' education and occupation were associated with this disorder but family income was not. Autistic children were more likely to have illiterate parents (32%) followed by parents with primary level education (21%). The majority of the patients (87%) were from nuclear families and 66% were from urban areas. On the other hand, only 38% of the children went to school regularly.

CONCLUSION: This study highlighted the relationship of autism with birth order, parent's education, economic status and family status. We also found that autistic children were less likely to attend a school

Keywords: Autism; Socio-economic factors; Urban area

INTRODUCTION

Autism is a condition that is unique in many ways. Person coming under the autism spectrum have difficulties in sharing thoughts, feelings, meanings, intentions and other mental experiences of living in the world. Generally, person with autism exhibit a unique set of symptoms in three areas: socialization, communication and behavior [1]. There's an increased emphasis towards rehabilitation of person with the autism spectrum disorder (ASD) [2]. In Bangladesh, some hospital based studies show that the autism related reported cases are increasing which may be due to increased rate of incidence, awareness or both [3]. Socio-economic factors have a major epidemiological value which may be considered as an effective factor in developing, aggravating or preventing a diseased or unusual condition upon the human body [4]. As the reported cases are increasing, that is why the effect of socio-economic factors should be evaluated. However, no such study has been conducted in Bangladesh. Therefore, we conducted this study that was aimed to find out the relationship of socio-economic factors with autism in Bangladesh.

METHODS AND MATERIALS

Study design: This is a descriptive cross sectional study which was conducted in two autism schools in the Dhaka city, Bangladesh.

Study period: January 2012 to June 2012.

Study population: A sample was studied from autism schools which are providing education, screening and treatment in Dhaka city. The parents of the autistic children who met all inclusion criteria were interviewed. The sampling was based on convenience and involved choosing the most easily available subjects from the population. Although it is an easy way of accessing a sample, it may not give a representative selection.

Sample size: A total of 100 parents.

Inclusion and exclusion criteria: Parents of school going autistic children were interviewed and those who have language or speech difficulties were excluded.

Study technique adopted: Before conducting the study interviews, a written informed consent was taken. The interview was performed through a structured questionnaire.

Study variables: We collected demographic and socio-economic information from the parents of the autistic children, which included birth order, monthly income, education, family size and frequency of school going.

Statistical analysis: All data was computed and analyzed using the SPSS software (version 16.01) using descriptive and analytical methods. We used chi-square test to analyze the data and a p-value of ≤ 0.05 was considered significant. For the descriptive portion all p-values were one-tailed and for analytical portion, p-values were two tailed.

RESULTS

Among the 100 children of respondent parents, most were aged 7-9 years (32%), followed by 4-6 years (28%) and 10-14 years (18%). But 15-18 years children represented 12% and children with an age above 18 years and the range of 0-3 years represented only 5%. The majority of the children were males (78%).The birth-order of the child was important as 58% of children were first born and 33% were second born, whereas 7% and 2% were third and fourth born respectively (p value<0.001). Similarly, education level of the parents was also an important predictor of autism as 32% of parents were illiterate, while 21% had some primary education, 16% had a middle school education, and only 11% had a higher level of education (p value: 0.00011).As far as the occupation of the parents was concerned, 79% of the fathers were the earning member of the family whereas 37% mothers were working mothers.

We found that most of the children with ASD were from poor families; 33% were from families with less than $243 monthly incomes; 29% were from families with income between $243 and $365 and 23% were from families with an income range between $377- $608, and 15% were from families with greater than $608 monthly income. However, we did not find that income was significantly different in the group (p value: 0.061).

We found that 87% children were from nuclear families (p value<0.001), 66% children were from urban areas, 28% are from semi-urban areas whereas only 2% and 4% children are from rural and semi-rural areas respectively (p value<0.001).We found that only 38% children were going to school regularly.

DISCUSSION

This cross sectional study found that the highest number of the autistic children were aged 7-9 (32%) and 78% were male. The male: female ratio in this study was 3.4:1, which is consistent with the findings reported in the National Institute of Child Health and Human Development (NICHD) 2001 census [5].

We also found that the order of the child in the family is important as 58% of the autistic children were first-born. Our findings are in contrast to another study which suggests a V-shaped pattern [8]. We also found that the autistic children were more likely to have illiterate parents. Although the relationship between literacy and autism is complex, a study suggested that poor knowledge and attitude of less educated parents may have some role [6]. Similarly, we found that the presence of autism was more common in low-income families.

We also found that autistic children were more likely to come from nuclear families. Only a small percentage of autistic children go to school on a regular basis. Several factors may play a role in decreased schooling of autistic children including lower socioeconomic status of parents and poor parental education level.

Our study has several limitations. First, it was a convenience sampling of urban area schools. This sampling strategy is likely to miss autistic children from rural areas and this may be reflective of the lower number of rural area children in our sample.

It is also likely that educated parents, being rich, may be able to afford better schools, or home tutoring for their autistic children and this may have resulted in our finding that autistic children were less likely to have educated parents. We also did not have children without autism in our sample and therefore, we cannot comment whether the factors we have identified in our study are associated with higher risk of autism or not.

CONCLUSION

In conclusion, we have identified several socioeconomic indicators that are more prevalent in autistic children. Further research is needed to explore whether these factors place children at development of autism and then appropriate intervention studies can designed.

REFERENCES

1. Association, A. P. (1994) Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Washington, DC, American Psychiatric Association.
2. Mandy WP, Skuse DH. Research review: What is the association between the social-communication element of autism and repetitive interests, behaviors and activities? *J Child Psychol Psychiatry* 2008; 49(8):795-808.
3. MM Rahman. Autism Spectrum Disorder. *J Bangladesh Coll Phys Surg* 2010; 28: 143-144.
4. Everson SA, Maty SC, Lynch JW, Kaplan GA. Epidemiologic evidence for the relation between socioeconomic status and depression, obesity, and diabetes. *J Psychosom Res*. 2002; 53 (4): 891-895.
5. Wing L. The Definition and Prevalence of Autism: A Review. *European Child and Adolescent Psychiatry* 1981; 2 (2): 61-74.
6. Judith Pinborough-Zimmerman, Deborah Bilder, Amanda Bakian, Robert Satterfield, Paul S. Carbone, Barry E. Nangle, Harper Randall, William M. McMahon. Socio-demographic risk factors associated with autism spectrum disorders and intellectual disability. *Autism Research* 2011;4(6):438-48