

## **Child Psychiatric Characteristics and Course of Elective Mutism: An Analysis of 40 Cases from Bahrain**

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**Objective:** Forty children with elective mutism (EM) were clinically assessed to ascertain their characteristics.

**Methods:** The sample consisted of referred cases to the child unit, psychiatric hospital, Bahrain in the period between 1992 to 1999 and fulfilled ICD diagnostic criteria for EM. Data was collected by detailed clinical assessment and interview of parents with the Conner's Parents Rating Scale. (C.P.R.S).

**Results:** EM typically manifested at preschool age, was more common in boys, seen in all social classes and early developmental risk factors were common. Three quarters of children with EM had pre-morbid speech and language abnormalities and one third had behavioral problems in terms of oppositional and aggressive behavior. Shyness and excessive anxiety were the most common personality features. Co-morbid diagnoses with enuresis and encopresis were frequent. School and unfamiliar people created the social context in which children with EM most frequently did not speak. EM was persistent in nearly 29% of cases.

**Conclusion:** The clinical features and course of EM were similar to those reported recently by others in different cultures.

***Bahrain Med Bull 2002;24(3):98-100.***

Elective mutism (EM) is characterized by a marked emotionally determined selectivity in speaking, in that the child demonstrates his or her language competence in some situations but fails to speak in other situations<sup>1</sup>. In DSM IV, the name of the disorder was changed from "elective mutism" to selective mutism<sup>2</sup>.

The available knowledge of EM comes mainly from anecdotal, retrospective case reports of small case series<sup>3</sup>. Steinhausen and Juzi, in a recent analysis of 100 cases

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from clinical and non-clinical population, reported more incidence in girls, mainly of preschool onset, associated with behavior problems, and pre morbid speech and language disorders were common<sup>4</sup>. Children with EM have been reported to demonstrate oppositional disorders, negative personality traits, high incidence of enuresis, encopresis, depression and separation anxiety<sup>3,5-8</sup>. Block and Unde<sup>9</sup> examined 30 children with EM recruited from non-clinical population and concluded that the disorder may be a symptom of social anxiety rather than a distinct diagnostic entity.

This study was designed to ascertain the characteristics of children with EM and to address the following questions: 1) In what situation and with whom are children with EM reluctant to speak? 2) What is the prevalence of psychiatric co- morbidity? 3) Is psychological trauma before the onset common? 4) What is the course of the disorder?

Subjects were consecutive attendees with EM at the Child Psychiatric Unit, Psychiatric Hospital, Bahrain. In the Unit, all cases with EM were interviewed together with their parents. The children received individual counseling and were encouraged to attend the Unit's social skills training sessions. Counseling the family and the school teachers was an essential part of the management package. However, the involvement of families differed from one case to the other.

## **METHODS**

This is a descriptive, cross-sectional study that examined the personal characteristics, associated co-morbidity and course of children with elective mutism.

The study sample consisted of all children who attended the child and adolescent services of Psychiatric Hospital, Bahrain, in the period between January 1992 and December 1999 and received ICD 10 diagnosis of elective mutism (n=49)<sup>1</sup>. Children who received in addition to selective mutism a diagnoses of mental retardation (n=6) pervasive developmental disorder and schizophrenia (n=1) were excluded. Two families refused to participate in the study and so the final number was reduced to 40 (%) cases. Data were collected by studying the children's files and interviewing parents using an item sheet designed for the study. The interview was conducted by two psychiatric residents, who were familiar with the patients and parents, either in 30–45 minutes face –to- face in most instances (27 cases) or by telephone in 13 cases. Each completed questionnaire was discussed with the consultant child psychiatrist for clarification. Inter-rater reliability was not assessed because the questionnaire mainly required clarification of items of information from parents that had already been obtained during detailed history taking at the time the child was brought to hospital for treatment, as well as changes in the child's condition. In addition, both interviewers were natives with similar long-term clinical experience in the Unit, and familiarity with the parents. The item sheet was written in Arabic and recorded information on the child's socio-demographic characteristics, prenatal, natal, post natal history, early childhood development, language development, significant stressful life events at onset, personality features, presence of co-morbid symptoms such as anxiety, hyperactivity, enuresis, encopresis, sleep disorder, eating disorder, tics and obsessions. The parents were contacted by telephone to assess the progress of

mutism in 34 (85%) cases. Parents were asked questions regarding whether there were changes in the status of mutism and socialization. The social class was constructed following a modified form of Hollingshead and Rahe five-point scale based on father's level of education and employment<sup>10</sup>. The personal features and co-morbidity were obtained from Conner's parents rating scale (CPRS) for oral clinical child interview<sup>11</sup>. The CPRS is routinely administered to new referrals to the clinic including cases with EM symptoms.

## RESULTS

### Sample Description

Forty children were included in the study, 23 males and 17 females of which 92% were Bahraini nationals. The majority (85%), were students and from lower social classes (classes 4 and 5). The onset of EM, was before school entry in 72.5%. Many of the children experienced EM in more than one circumstance. It occurred in the presence of strangers in 77.5%, other children (45%), family members other than parents (30%), fathers (7.5%), siblings (5%) and mothers (2.5%). There was a history of delay in motor development in 2 cases and 15% of parents reported a delay in toilet training. Parents reported articulation disorders (42.5%), expressive language disorder (7.5%), stuttering (17.5%) and receptive language disorder (7.5%), prior to the onset of EM. Table 1 Shows the prenatal, peri-natal and postnatal complications during pregnancy which were mostly in the form of anaemia and hypertension. Almost half of the babies had difficulties during or soon after labour. Eight babies (20%) had jaundice, and six (15%) had Caesarean section delivery or low birth weight. Two cases (5%) had a history of a loss of significant person at onset.

Table 1. **Prenatal, Natal And Post-Natal Complications**

Complication during pregnancy	No.	%
Hemorrhage	1	2.5
Infection	2	5
Accident	0	0
Alcohol – Drug Use	0	0
Others (Depression, Hypertension, Anemia, Seizure, Heart problems)	11	27.5
Complication during labour and neonatal period		
Preterm Delivery	3	7.5
Birth Asphyxia	2	5
Jaundice	8	20
Others (Decreased B.W., Asthma, Caesarean Section)	6	15

## Co-morbidity and Personality Features

Thirty two (80%) children showed features of excessive shyness and 45% anxiety symptoms. Twenty five (62.5%) had enuresis and 7.5% encopresis at the time of examination. Thirteen children (32.5%) had symptoms of conduct problems like oppositional and aggressive behavior and three (7.5%) hyperactivity. Few children presented with depression (2.5%), tic disorder (2.5%), sleep disorder (5%) and eating disorder (2.5%). The parents' response on Conner's rating scale was similar to findings from the clinical interview. Twenty four parents (60%) reported anxiety symptoms, 16 (40%) learning problem, 13 (32.5%) conduct problems, six (15%) hyperactivity and impulsivity and six (15%) psychosomatic symptoms such as abdominal pain, headache and nausea which are not referable to organic diseases.

## Course of EM

Table 2 shows the parents' response to outcome questions. The mutism improved in more than half of the cases while nearly three quarters improved in socialization in the same period. The mutism did not change in 10 cases (29%).

Table 2. Course of elective mutism cases

	Mutism		Socialization	
	No	%	No	%
Improved	19	56	25	73
Dereriorated	1	3	1	3
No Change	10	29	6	18
Fluctuating	4	12	2	6
Total	34*	100	34	100

\*34 patient (85% could be recalled)

## DISCUSSION

In contrast to most similar studies<sup>4,7-9</sup>, EM was more common among boys in our series. An explanation for gender differences is probably connected with the referral pattern. For example, in Bahrain culture, it is possible that boys might be referred earlier if they did not speak in schools, while girls with similar symptoms may be labeled as shy. The distribution of socioeconomic status showed that EM is a disorder that is seen in all social classes. The high prevalence of low social classes (4 and 5) among the sample probably reflects the greater chance for them to attend public health services. Our findings from early development history further support the vulnerability model for the causation of EM. A large number of children with EM had complications during pregnancy, delivery and post-partal period. However, the data on early childhood development should be interpreted with caution since it was retrospective in nature and not specific to EM disorder.

There was a high rate of pre-morbid speech and language disorders which may have played a role in the development of EM in three quarters of the sample. Stuttering and articulation speech disorder expose the child to social embarrassment and criticism in unfamiliar environments, such as schools. These children might react negatively by withdrawing and avoiding speech. Similar findings, though of lower rate, were reported in other studies<sup>3,7</sup>.

Behavioral problems during infancy and preschool age were also high. In contrast to Stienhausen and Juzi<sup>4</sup>, the problems were mostly of externalizing types such as aggressive behavior and hyperactivity. Internalizing problems such as separation anxiety and relationship problems were less common. In our series, sleep disorder, eating disorders, tics and obsessions were rather rare. EM typically started at preschool age, thus supporting the finding reported by other studies<sup>4,9</sup>.

The outcome of the disorder was similar to that reported by Krohn<sup>12</sup> and more favorable than some others<sup>4</sup>. The majority of cases improved in terms of socialization and more than half in mutism. The good response to the management package probably reflects the superiority of structural intervention, behavior expectation and close liaison with family and school over other types of interventions. We could not evaluate the effectiveness of each treatment method as different children received different degrees of involvement according to the family situation.

There was no evidence of causal relationship between traumatic experience and the development of EM.

The current study suffers from several limitations. The lack of a control group limits our understanding of the difference between the EM group and the general population. Speech and language disorders were not assessed by a speech therapist. The inter-rater reliability between investigators was not assessed. Finally the study was carried out on a clinical referred sample and not in the community which might have resulted in recruitment bias; for example, chronic cases of male gender from lower social classes were over represented.

## CONCLUSION

**In this study, the characteristics of children with EM were similar to those reported from different cultures with the exception of gender representation and types of behavioral problems. Boys and externalizing type of behavior were more prevalent among the series.**

**The follow up of these children showed high recovery and improvement rates. Due to inconsistency of management of these cases, it was not possible to validate the effectiveness of each intervention methods for example individual counseling versus group social skill training or family intervention.**

**A follow up study of community based sample which has cases of different chronicity, over a long period might answer questions related to associated factors and the disorder course more accurately.**

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