SELF-REPORTED STRENGTHS AND DIFFICULTIES IN SCHOOLCHILDREN OF INDIAN ORIGIN IN UAE

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ABSTRACT

Objective: There have been several studies assessing mental health problems in children living in UAE but none focusing exclusively on children of expatriates living there. In this study we have tried to find out if the mental health problems of expatriate children in UAE are similar to local children and children from other countries.

Design: Cross-sectional questionnaire survey

Place & duration of study: A private school in UAE for children of Indian origin. Data collected in one day.

Subjects & Methods: 1291 children attending grades 7-11 completed the 25-items Strength and Difficulties Questionnaire along with the Impact Supplement. Data was analysed using SSPS 14.0 for Windows. Group differences were tested using Pearson's Chi-square test for categorical variables and independent samples *t* test for continuous variables.

Results: We received 1049 correctly filled out forms. The mean of SDQ self-report total difficulties score was 10.5 (SD 5.16) for all subjects, slightly higher for girls (10.6, SD 5.18) than boys (10.4, SD 5.14). More girls were classified as having an 'abnormal' score (4.7% vs 4.1%, p = 0.04) on emotional problems subscale while more boys were classified as having an 'abnormal' score on conduct problems (5.5% vs 3.6%), hyperactivity problems (4.5% vs 2.9%) and peer problems subscales. Overall 6.3% of children scored above the 90th percentile, suggesting they were at significant risk of developing psychiatric morbidity, while a further 9.2% fell in the Borderline category.

Conclusions: A total of 15.5% of expatriate school going children in UAE were at least moderately at risk of developing a psychiatric illness. While this is not hugely different from children in other populations it does underline a need for child and adolescent mental health services for this particular sub-population.

Key words: Mental Disorders Diagnosed in Childhood, SDQ, UAE

INTRODUCTION

The United Arab Emirates (UAE) is a fast-growing developing country of the Arabian Gulf. According to recent UNICEF statistics, 19.0% of the population in UAE falls between ages 5 – 18 years[1]. As in other parts of the world, mental health services for children in the Gulf countries have become the focus of increasing attention. This has generated research in form of population surveys[2-4], school surveys[5,6] and clinical studies. They have shown significant psychiatric morbidity in young children, averaging between 10-20%. A community survey of 329 school-going children in Al-Ain showed 22.2% having at least 1 psychiatric diagnosis according to DSM-IV[2]. Results are no different from western figures[7-12]. A Norwegian study of school children showed at least 9% of children to have symptoms that created distress in their lives[11].

UAE also has the most relaxed entry regulations in the region. 39% of the population is expatriates, of which 22% are south-asian[13]. Migration, a process of social change, can be inevitably stressful. Their children, though second-generation immigrants, are affected by this change. Multiple factors mediate stress during and after migration. Poverty can jeopardize children's mental health and productivity[14], and immigrant families may be comparatively poorer than their local counterparts. Hence stress may result from material depriva-

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tion[15], ineffective parenting and intra-familial hostility[16]. Mental well-being of mothers and fathers adversely affect mental health of their children[17].

Local studies of childhood problems have mostly excluded the expatriate children population. Our study aims to bridge the gap with a survey of school-going children of Indian origin living in UAE. The results may highlight the importance of mental illness in this growing population subgroup and make grounds for further epidemiological studies to promote mental health in the expatriate children of UAE.

SUBJECTS AND METHODS

Subjects

The study was conducted at a private school for children of Indian origin only. All pupils attending the school grades between 7 and 11 were given the self reporting version of the questionnaire after obtaining permission from the school administration for conducting the survey.

Materials

The Strengths and Difficulties questionnaire (SDQ)[21] is an emotional and behavioral screening questionnaire which has good clinical predictive ability. SDQ scores above the 90th percentile predict a substantially raised possibility of having a psychiatric disorder[18,19], a combination with impact score suggests as a good indication of caseness[20].

It has 25 items divided into five scales: Emotional symptoms scale, Conduct problems scale, Hyperactivity scale, Peer problems scale and Prosocial scale. Subscores are generated for each subscale (range 0–10). All scale scores except the prosocial score are added up to a total difficulties score (range 0–40). Besides generating scores, there are specified score ranges, different for different scales, which categorize the scores into Normal, Borderline and Abnormal categories.

The "Impact Supplement" asks the respondent whether he thinks he has a problem (perceived difficulties) and if so, inquires further about chronicity of these problems, overall distress, social impairment related to family, friends, learning situation and leisure activities and lastly about burden to the environment. The items concerning overall distress (1 item) and social impairment (4 items) generate an impact score, ranging between 0 and 10. A total impact score of 2 or more is Abnormal, 1 is Borderline and 0 is Normal.

Statistical Analyses

All data was analyzed using SPSS version 14.0 for Windows. The significance level (P – value) was kept at 0.05. Most analyses were performed separately for ages and genders. Group differences were tested using Pearson's Chi-square test for categorical variables and independent *t* test for continuous variables.

In these analyses symptom scores were dichotomised at the 90th percentile, perceived difficulties dichotomised in no/ small difficulties versus severe/definite difficulties, impact scores in normal/ borderline (0–1) versus caseness ($\geq$2) and burden in no/little versus quite a lot/a great deal.

RESULTS

A total of 1291 students were attending the target grades and all participated by filling out the forms at the end of their regular school classes. Of the 1291 forms received, 204 had to be discarded due to incomplete information. The final sample size was 1049 subjects. Gender distribution was almost equal – with slight overrepresentation of boys (594 boys: 56.6% *vs*. 455 girls: 43.4%). The age range of the population was between 10 – 20 years, most of them lying in the range of 12 – 16 years.

Total difficulties scores

The mean of SDQ self-report total difficulties score was 10.5 (SD 5.16) for all subjects, slightly higher for girls (10.6, SD 5.18) than boys (10.4, SD 5.14). However, the difference was not statistically significant (2-tailed p=0.525).

Table 1 gives mean scores among boys and girls on each subscale of the SDQ. The mean scores for subscales of emotional problems and peer problems were significantly different between the two genders with girls having a significantly higher score on the emotional problems subscale (B = 2.83, G = 3.25, P=0.003) and boys having a significantly higher score on the peer problems subscale (B = 2.03, G = 1.73, P = 0.004).

Prevalence of symptoms within each subscale – comparison of genders

Table 2 presents the percentage of sample falling in "abnormal", "borderline" and "normal" categories for each subscale. The SDQ scoring system permits caseness to be determined by this method and uses different score ranges for each category across the subscales. For example "Emotions Subscale": $\geq$7 is abnormal, 6 is borderline and $\leq$ 5 is normal.

More girls were classified as having an 'abnormal' score (4.7% vs 4.1%) on emotional problems subscale, and the different was statistically significant (p = 0.04). More boys were classified as having an 'abnormal' score on conduct problems subscale (5.5% vs 3.6%), hyperactivity problems subscale (4.5% vs 2.9%) and peer problems subscale (1.9% vs 1.2%). However, the difference failed to reach statistical significance in any of these subscales.

Association of subscale scores and total difficulties scores with age – comparison of genders

Pearson's correlation coefficient was calculated for age against total difficulties in boys and girls separately. It was found that total difficulties increased with

Table 1

Mean scale scores of the SDQ self report, among boys and girls.

SCALES	VARIABLES				T-TEST VALUE	TWO-TAILED SIGNIFICANCE
	Boys		Girls			
	Mean score	SD	Mean score	SD		
Emotions	2.83	2.18	3.25	2.28	- 3.021	**0.003**
Conduct	2.25	1.61	2.22	1.49	0.285	0.766
Hyperactivity	3.32	2.07	3.43	2.00	- 0.833	0.405
Peer Problems	2.03	1.60	1.73	1.63	2.916	**0.004**
Pro-social	7.88	1.61	7.87	1.52	- 6.627	**0.000**

Table 2

Symptoms response categories on all SDQ scales among boys and girls

SDQ - SCALES	SYMPTOM RESPONSES (%)						CHI – SQUARE (p-value)[1]
	ABNORMAL		BORDERLINE		NORMAL		
	B*	G*	B*	G*	B*	G*	
Emotional symptoms	4.1	4.7	3.5	3.1	49.0	35.6	**0.045**
Conduct problems	5.5	3.6	7.4	4.4	43.7	35.4	0.203
Hyperactivity	4.5	2.9	3.6	3.2	48.5	37.3	0.593
Peer problems	1.9	1.2	7.9	4.6	46.8	37.6	0.212
Pro-social	1.6	0.3	3.9	2.0	51.1	41.1	**0.009**

* : Percentage of total sample (B = Boys, G = Girls)

1 – Pearson's Chi-square value; significant <0.05

age among the boys (r=0.096, p =0.019) but among girls this association was a very weak one (r=0.049, p =0.298).

Looking at each subscale across genders, among girls the hyperactivity scores increased significantly with age (r=0.110, p=0.019), but the scores on the emotional, conduct, peer problems and prosocial behavior did not.

Among boys, conduct problems (r=0.133, p=0.001) and hyperactivity scores (r=0.219, p=0.000) increased significantly with age. Interestingly, it was found that prosocial behavior scores decreased with age among boys (r=-0.148, p=0.000).

Proportion of boys/girls having risk of psychiatric morbidity

From the total sample, 6% of children scored above the 90th percentile, suggesting they were at significant risk of developing psychiatric morbidity. 9% were borderline and 85% were normal.

Perceived difficulties

Of all respondents, 85.3% reported little or no difficulties, 10.4% "a lot" of difficulties while 4.3% "great" difficulties. Girls reported more frequently that they had great perceived difficulties (2.5% vs. 1.8%, p=0.105).

Regarding impact of these difficulties (Table 3), the biggest impact was perceived in classroom learning (14.1%). More boys reported negative impact on home life (6.5% boys vs 4.4% girls), classroom learning (8.8% boys vs 5.3% girls) and leisure activities (4.8% boys vs 3.5% girls.) However, these differences were not statistically significant.

12% of those who perceived at least "a lot" of difficulties felt that their problems were a great burden to others while 50% of them did not perceive any burden on others. Of all those who perceived at least "little" difficulties, the majority suffered for less than a month (40.1%), one fourth (25.7%) for more than a year.

Table 3

Impact of perceived difficulties on various domains of life, by gender

PERCEIVED DIFFICULTIES (including borderline + abnormal cases)	Boys (%)	Girls (%)	P - value
Home life	6.5	4.4	0.324
Friendships	5.2	5.1	0.387
Classroom Learning	9.1	5.3	0.253
Leisure activities	4.8	3.5	0.966

DISCUSSION

Migration is the process of social change whereby an individual moves from one cultural setting to another for the purposes of settling down either permanently or for a prolonged period[23]. It can be for political reasons, economic betterment and educational standards to name a few. A number of studies have shown greater incidence of mental illness among immigrants[24-26]. Bhugra et al[25] found that Asian women aged 18–24 were 2.5 times more likely to attempt suicide. The authors of both studies attributed these findings to increased culture conflict. Eisenbruch[26] suggests that cultural bereavement, as experienced by refugees, is interlinked with symptoms and experiences of post-traumatic stress disorder (PTSD). The mediating factors hypothesized are poverty, cultural adjustments, social limitations etc. UAE is a developing country seeing rapid growth of the expatriate population, hence mental health of expatriate families in UAE directly impacts health of the country.

The present study used a self-report version Strengths and Difficulties Questionnaire with an impact supplement. Nearly identical versions exist for parents and teachers. Previous studies have used Rutter Parent Questionnaire[2] and Kiddie Schedule for Affective Disorders (K-SADS) [3] and Child Behavior Checklist (CBCL) [27]. Klasen et al[27] found that scores from parent and self-rated SDQ and CBCL were highly correlated and equally able to distinguish between a community and a clinic sample.

The mean total difficulties score and cut off points in our study are comparable to international studies[10-12, 21]. Overall, girls reported more emotional difficulties, while boys reported more peer problems. This finding was similar to those of UAE nationals as well as in Western settings.

6.3% of our sample scored above the 90th percentile, meaning significant risk of psychiatric morbidity while 9.2% fell in the borderline category that still equates to moderate risk. A total of 15.5% were at least moderately at risk of psychiatric illness, hence needing attention of mental health services. This is similar to that reported for local UAE children in community surveys[2,3]. A study on male Saudi school children reported 8.3% to have emotional and behavioral problems[28]. A school study in UAE found a weighted prevalence rate of 10.4% of psychiatric morbidity among citizens of the country[29].

15% of the total sample reported “a lot” or “great” difficulties. More boys reported an impact of perceived difficulties than girls. This is a finding opposing that of the Norwegian[10] population where girls reported greater impact. As no study in UAE schools has used SDQ self-report, comparison is limited.

Our study results are based on the self reported version of the SDQ and as such cannot be used as a definitive diagnostic measure of psychological disorders among the target population. Such an analysis would require comprehensive assessment of data obtained from cross informants, using the parent and teacher reported versions, or further clinical assessment by professionals. However given the large size of our sample and the validated psychometric properties of the self reported version of the SDQ alone one may treat this as an effective screening measure for psychological disorders among Indian children and adolescents in the UAE.

CONCLUSION

A total of about 15% of children had atleast a moderate risk of developing a psychiatric illness which was similar to the rates of psychiatric morbidity in indigenous children and children in other arts of the world. This highlights the need for developing child and adolescent mental health services for this sub-population.

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