

Prevalence of Emotional and Behavioural Problems Among Primary School Children in Karachi, Pakistan – multi Informant Survey

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ABSTRACT

Objective. While a number of studies in the western countries as well as developing countries have provided estimates of prevalence of emotional and behavioral problems among school children relatively little is known about the prevalence of child psychiatric problems and associated risk factors in Pakistan. A cross sectional survey of 5-11 years old children attending main stream private and community schools in Karachi was conducted in order to determine some baseline prevalence data.

Methods. A cross sectional survey of school children of certain towns within Karachi metropolitan area, aged 5 to 11 years during 1st half of 2006. SDQ was filled out by parents and school teachers for the same children. Demographic data of parents, teachers and children were also collected using a separate performa.

Results. 7 private and 8 community schools agreed to participate. 1488 consent forms were sent to 700 parents of private school and 788 parents of community school children. A total of 675 parents agreed to participate in the study. The response rate was 45.3%. Assessment of children's mental health was conducted using Strength and Difficulties Questionnaire (SDQ). Parents rated 34.4% of children as falling under the "abnormal category on SDQ, slightly higher estimates 35.8% were reported by the teacher. The findings suggest a striking difference between the informants' ratings as well as gender wise difference in prevalence of common child mental health problems.

Conclusion. In the present study prevalence of child mental health problems was higher than reported in studies from other countries. There was also a gender difference in prevalence; boys had higher estimates of behavior/externalizing problems, whereas emotional problems were more common amongst females. There is a need for developing programs to train, sensitize and mobilize teachers and parents regarding child's psychological, emotional and behavioral problems. E-mail: ehsan.syed@aku.edu

Key word : Child mental health; Prevalence; Risk factors

In Pakistan, there is a lack of mental health services for children, partly reflecting a lack of adequate information about the magnitude of the needs that should be met, or even the most basic information about what are the main learning behavioral and emotional problems. There have been two studies carried out in Pakistan to establish the prevalence of emotional and behavioral problems in school children one using the Rutter rating scales¹ and other SDQ.² They found prevalence ranging from of 9.3% to 33%, with antisocial problems and conduct problems being the commonest

in each, respectively. Schools have an important role towards the health of children and a profound influence on their families and the community. Children spend approximately 1500 hours in school per year. It is therefore not surprising that experiences in school, such as bullying and pressure for academic achievement together with overall school ethos can influence the rate of childhood disorder.

The importance of early detection of emotional and behavioral problems is being recognized worldwide. However, until now there has been little systematic research into childhood psychiatric disorders in the developing countries.³ In a study carried out in Bangladesh on a sample of 922 of 5 to 10 years old, Mullick found an estimated prevalence for any International Classification of Diseases (ICD-10)

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diagnosis around 15%.⁴ Another study carried out in India indicated a prevalence rate of 12.5% among children aged 0-16 years.⁵

In the light of the reviewed literature, a survey was conducted on the mental health of Pakistani school children. Some of the results from the survey by the same authors focusing mainly on parental account of child's problems have been reported elsewhere.² The present article takes into account teacher's report and compares it with the parents' version.

MATERIAL AND METHODS

Setting

The study was conducted in Karachi, which is located in south-east of Pakistan, its population at the time of the survey was estimated as 15 million. Karachi is divided into 18 towns, each having its own union council and district 'Nazim' (Mayor). Karachi is the largest city of Pakistan and is the main industrial and business hub.

Sampling Strategy

The educational setup in Pakistan comprises of public or government run schools, community schools and private schools, with the latter offering much better quality of education and facilities. In order to give equal representation, the present study aimed to collect data from all types of school. However, despite our efforts, we were unable to obtain permission from government school authorities for participation in the present research study. Therefore, data was collected from community and private schools. Community schools are run by non-governmental organizations (NGOs) and mostly have a low fee structure and cater for lower socio economic class. A town-wise list of all the community schools in Karachi was obtained from selected 9 towns since the school authorities in these towns were most likely to cooperate with us. From each of these 9 towns, one community school was selected and all but one agreed to participate. In 7 of these towns, we were also able to identify a private school agreeing to participate. Hence a total of 7 private and 8 community schools agreed to participate. From each school 100 children (grade 1-5) were selected, 20 from each class (grade 1-5). If there were less than 20 children in a class, all were selected and if there were more, then only 20 were selected from the class attendance register using alternate odd-even serial number. A total of 1488 children were selected and consent forms and information sheets were sent to their parents. The consent forms were collected by the teachers. A total of 675 parents gave consent to participate in the present study. Active parental consent was required before a

child could be considered for inclusion in the study. Consequently, children of those parents who did not give consent were excluded. Information on non respondents was not collected and therefore not part of the analysis. Children were eligible for the study if, they were over 5 year of age and had not yet reached their 12th birthday. This age range was chosen mainly because this is the age for compulsory schooling in Pakistan according to 'Compulsory Primary Education Ordinance (2001).⁶

PROTOCOL AND INSTRUMENTS

A. Socio-demographic Parent Performa (SDPP)

This 13-item SDPP was developed based on existing literature and expert discussions. It elicited details like, child age, gender, type of schooling, parental education, parental occupation, age of parents, residential area, informant, name of the head of the household, family income, family type, physical illness/disability, languages spoken at home. The socio economic status was determined on the basis of the categories provided by the Federal Bureau of Statistics, Pakistan.⁷

B. Demographic Teacher Performa (DTP)

DTP was designed to provide information by the teacher regarding the child rated on a 4 point rating scale. Including child's performance at school, attendance, teacher qualification, and teaching experience.

Strenght and Difficulties Questionnaire (SDQ)

Is a brief mental health-screening questionnaire that measures 25 attributes, some positive and others negative.⁸ The 25 items are grouped into 5 sub scales of 5 items each, generating scores for conduct, hyperactivity, emotional, peer problems, and prosocial behavior. All scales excluding the last are summed to generate a total difficulties score (0-40). Category bands and total difficulties scores can be classified as normal, border line and abnormal. These bands which are not adjusted for age or gender have been chosen so that approximately 80% of children in the community are considered to be in normal category, 10% in the borderline and 10% in abnormal category.⁹ SDQ can be completed by the parents or the teachers of 4-16-year-olds. The SDQ has been shown to be of acceptable reliability and validity, performing at least as well as the longer-established Rutter Questionnaires and Child Behavior Checklist. Originally published in English,⁹ SDQ has been translated in Urdu and a study to test the validity of the Urdu version has been carried out in Pakistan.¹⁰

Data collection procedure

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The data was collected from January to March 2006 for the private schools and from April to June 2006 for the community schools. Parents were given a short presentation on child mental health disorders explaining the rationale of the study. The purpose of the presentation was to provide awareness as there is a lack of information on child psychiatric problems in the Pakistan, as well as encouraging survey participation, and reducing the number of dropouts. As most parents of private school children could read, they filled the questionnaires themselves, however in the community schools majority of parents were uneducated. For those parents needing assistance the principal researcher (SH) along with other interviewers, helped fill in the questionnaires. A team of 5 interviewers assisted with data collection. All had master's degrees with 2 of them including the principal investigator having master's degree in Psychology. All data was entered into a specially designed database and verified by independent double entry.

Statistical Analysis

Descriptive statistics were computed for the socio-demographic characteristics of children and parents. The frequency distribution for the 'normal', 'borderline' and 'abnormal' categories for both the parent and teacher rating of SDQ subsets was computed. The inter rater agreement between the parents and teachers, total behavioral problem and individual subsets scores on SDQ were analysed using non parametric spearman's rho correlations. Data was analyzed using the software package SPSS version 14.5.

RESULTS

Thirty five questionnaires were excluded, as they didn't meet the criteria. Data analysis was carried out on 640 parent forms and 485 teacher questionnaires. Table 1 reports the descriptive statistics for socio-demographic variables. The mean age of the children in the study sample was 8.4 years with standard deviation (SD) of 1.85 years. About 42% children were going to private while 57% were going to the community schools. Most belonged to the lower socio economic status (78.6%) and almost half of the mothers in our sample were uneducated (49.8%). Parents rated 46.7% as 'normal', 18.9% as 'Borderline' and 34.4% of children as falling under the 'abnormal category on SDQ, whereas teachers rated 36.4% were 'normal', 13.5% 'Borderline' and compared to parents slightly higher 'abnormal' ratings, 35.8%, of children on SDQ. Overall there was a weak but positive correlation between teachers' and parents' report in all subsets and total scores on SDQ (significance =0.05). A gender wise analysis of the individual behavioral subsets of SDQ is given in table 2.

TABLE 1. Type and frequency of behavioral problems. (parents n=640, teacher n=485)

Behavioral scale	Normal	Borderline	Abnormal
Total behavioral problems			
Parent report	299 (46.7)	121 (18.9)	220 (34.4)
Teacher report	177 (36.4)	135 (27.8)	174 (35.8)
Emotional problems			
Parent report	305 (47.7)	96 (15.0)	239 (37.3)
Teacher report	346 (71.2)	51 (10.5)	89 (18.3)
Conduct problems			
Parent report	271 (42.3)	98 (15.3)	271 (42.3)
Teacher report	236 (48.6)	90 (18.5)	159 (32.7)
Hyperactivity			
Parent report	444 (69.4)	76 (11.9)	120 (18.8)
Teacher report	362 (74.5)	61 (12.5)	63 (13.0)
Peer problems			
Parent report	294 (45.9)	104 (16.3)	242 (37.8)
Teacher report	267 (54.9)	115 (23.7)	104 (21.4)
Pro Social Scale			
Parent report	510 (79.9)	53 (8.3)	77 (12.0)
Teacher report	320 (65.8)	59 (12.1)	106 (21.8)

Chi-squares test analysis was carried out to determine association between SDQ scores and gender for both versions. The results showed that there was significant association in total problems rated by parents and the male gender (Chi square =10.82, df=2, p=0.004), as well as for conduct disorders (Chi-square=13.10, df=2, p=0.001) and hyperactivity (Chi-square =20.25, df=2, p=0.000). On the teachers SDQ significant association with male gender was only seen on the hyperactivity (Chi square =11.901, df=2, p=0.003) and pro social subscales (Chi square =5.789, df=2, p=0.05). All other associations were found to be statistically insignificant.

DISCUSSION

The findings suggest a difference between parents and teachers identified problems, however, there were more commonalities. Both parents and teachers rated the majority of children as having conduct problems and more boys than girls were identified in this category by each informant. Consistent with studies done in the western as well as in developing countries, parents rated more females with emotional problems and males with peer related problems. More significant number of

TABLE 2. Gender wise percentage of behavioral problems (parents n=640, teacher n=485)

Behavioral scale	Males			Females		
	Normal	Borderline	Abnormal	Normal	Borderline	Abnormal
Total behavioral problems						
Parent report	43.4	16.5	40.1	50.5	21.6	27.9
Teacher report	34.7	26.7	38.6	38.5	28.6	32.9
Emotional problems						
Parent report	48.4	14.7	36.9	46.8	15.3	37.9
Teacher report	74.1	8.8	17.1	67.9	12.4	19.7
Conduct problems						
Parent report	36.3	15.0	48.7	49.2	15.6	35.2
Teacher report	47.4	16.7	35.9	50.0	20.5	29.1
Hyperactivity						
Parent report	61.7	14.7	23.6	78.1	8.6	13.3
Teacher report	68.5	13.9	17.5	81.2	10.7	8.1
Peer problems						
Parent report	44.8	15.9	39.2	47.2	16.6	36.2
Teacher report	54.2	24.3	21.5	55.6	23.1	21.4
Pro Social Scale						
Parent report	78.2	9.7	12.1	81.4	6.6	12.0
Teacher report	65.0	14.3	24.7	70.9	9.8	18.8

boys were rated as hyperactive. This finding is consistent with literature that also suggests a difference in prevalence of specific disorders depending on the informant. Teachers identified more classroom related problems like conduct and hyperactivity, whereas more parents rated their child as having emotional difficulties. This difference could have resulted from a difference in the perspective of teachers and parents (mothers mostly in this case). Where teachers typically are mostly focused on discipline and academic issues, parents may take a more empathic view of the situation and see the disturbance in behavior as a result of an emotional problem. The present study research, however, was not designed to gather this specific information. Mothers in our culture just as every where else may be reporting less hyperactivity and conduct.¹¹

Teachers are found to have been able to provide valuable predictive information on externalizing behaviors.¹² This may be helpful in identifying subsets of problems such as conduct, hyperactivity and peer problems using SDQ in a school setting but may not be so in case of internalizing problems such as depression. In assessing children for mental health problems, it is more useful to have a multi informant perspective to get a more clear and unbiased picture then only relying on single informant alone.

Limitations of the study

- The sampling unit for the present study was schools, which was most feasible method of recruiting and assessing children in Pakistan therefore the generalizability of findings of this study is limited only to school attending children.
- Most parents in private schools were able to fill out the questionnaires, however parents in community

schools were assisted by the researcher in filling out the forms this could have resulted in reporting bias.

- The low response rate of the study could be due to the stigma, low literacy levels and a lack of research culture hence low motivation for participation among the general population.
- A major drawback of the study is the use of screening tools as a measure to determine prevalence as opposed to a diagnostic interview and therefore resulting in higher prevalence rates.

CONCLUSION

This exploratory study suggests that there was gender difference in prevalence; boys had higher estimates of behavior/externalizing problems, whereas, emotional problems were more common amongst females. There was also a difference in the rating between teachers and parents regarding conduct disorder and hyperactivity subsets. Males may have been more easily picked up for any of the externalizing disorders and thus get help they require, however, girls suffering from internalized problems may have been under diagnosed at schools and get neglected when it comes to intervention. This suggests a multi-informant assessment so that a complete picture could be obtained.

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Contributions: Dr Ehsan Ullah Syed was the co investigator along with the 2nd author and participated in planning, execution and conduct study, data analysis, writing the manuscript and editing further drafts including final draft. Sajid Abdul Hussien was the principal investigator of this part of the study and she played the major role in planning, conducting the study and analyzing the data. She also wrote the first draft of the manuscript. Sana e Zehra Haidry participated in actual survey, data collection and coordinated between the investigators and one of the funding agency *i.e.*, Sindh Education Foundation. She also contributed to writing the 1st draft of the manuscript.

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