

## “Prevalence of Mental Health Problems and Its associated Factors among School Going Children in Urban Population, Dhaka, Bangladesh”

Dr. NusratJahan<sup>1</sup>, Dr. Md.Shariful islam<sup>2</sup>, Dr. Monika Mazumder<sup>3</sup>,  
Dr. Mst. Naznin Sultana<sup>4</sup>

<sup>1</sup>Assistant professor, Dept. of Paediatric Haematology and Oncology, Rangpur Medical College Hospital, Rangpur, Bangladesh

<sup>2</sup>Assistant professor. Dept. of Paediatrics, Rangpur Medical College Hospital, Rangpur, Bangladesh

<sup>3</sup>Junior consultant Dept. of Paediatrics, Rangpur Medical College Hospital, Rangpur, Bangladesh

<sup>4</sup> Junior Consultant, Dept. of Paediatrics, Rangpur Medical College Hospital, Rangpur, Bangladesh

Corresponding Author: Dr. NusratJahan

---

**Abstract:** Mental health problems in children have emerged as a public health problem in Developing countries. Limited number of studies so far found regarding mental health problems of school going children in Bangladesh. The aim of this study was to estimate the prevalence of mental health problems and its associated factors in school going children at the age of 5-11 years in the capital city of Bangladesh. A cross-sectional study conducted during the period of January 2010 to December 2010 among 196 school going children of schools of Dhaka city aged between 5 -11 years. A total of 235 students along with their parents were selected and 196 have been interviewed. In the study multistage sampling was adopted. Replacement of the non responder student is taken from the same school. The Bengali version of the strengths and difficulties questionnaire was used for the interview of the parents of the selected children. Strength and difficulty score was generated based on standard scoring protocol. The individuals were categorized based on cut off used for individual domains as well as total difficulty score. Cross tabulation was done to assess association of disability level with socioeconomic variables. Through multivariate analysis the risk factor were assessed. The prevalence of such disorder was found to be quite higher among them, more than one in five (20.9%) children was found to have emotional and behavioral disorders as screened using the strength and difficulty questionnaire. In the children another 41.8% were with borderline difficulty score and 37.1% were with of normal range. Among male average total difficulty score was  $16.55 \pm 2.8$ , and among female average total difficulty score was  $17.22 \pm 3.5$ , No sex difference in total difficulty score or individual scale score was found following independent t test ( $P > .05$ ). Domain wise difficulty prevalence suggests emotional problem in 23% children, conduct problem in 20.9% children, hyperactivity in 1.5% children, peer problem in 22.4% children and pro-social behavior in 54.1% children. None of the age, sex, and family income, number of children, father's level of education and mother's education and occupation appeared as a significant predictor of emotional and behavioral disorder in children of Dhaka city. In the conclusion, we can say, Parent's occupational status appeared as a significant predictor of child's mental health problems in Bangladesh. So, working parents should give more attention to mental health problems of their school going children.

**Key words:** Mental Health, Emotion, Behaviour, strengths and difficulties questionnaire (SDQ)

---

Date of Submission: 10-05-2019

Date of acceptance: 27-05-2019

---

### I. Introduction

The magnitude of mental health problems in children has not yet been recognized sufficiently by many governments and decision makers. Epidemiological studies of child and adolescent psychiatric disorders in the developing world have generated prevalence estimates ranging from 1 to 49% (Hackett 1999)<sup>1</sup>. In the developing world, child psychiatric disorders are common but child mental health professionals are scarce. In the developed world, child psychiatric disorders cause serious distress or social impairment to around 10% -20% of children at any one time. (BIRD 1996)<sup>2,3</sup>. Previous studies have indicated that between 17% and 26% of the children and adolescents meet the diagnostic criteria for at least one psychiatric disorders (Muris P, Meesters C, Van den Berg F 2003)<sup>4</sup>. What few studies there have been of child psychiatric disorders in developing countries suggest that the prevalence there may be at least as high ( Nikapota 1991)<sup>5</sup>, which is perhaps unsurprising since so many children in the developing world are exposed to poverty, malnutrition, infectious disease, violence and social disintegration. However, most of these studies lack one or more of the methodological features required

for generating believable prevalence estimates, namely: an adequate sample size, a representative sampling frame, standardized assessment measures that are suitable for generating exact diagnoses, explicit and internationally accepted diagnostic criteria, and assessment not just of symptoms but also of resultant distress and social impairment (Fleitlich-Bilyk 2004)<sup>6</sup>. Bangladesh is a low-income nation with a large population with a population pyramid with wide base, suggesting younger people in the population (BBS 2004) There have been few epidemiological studies of the prevalence of child and adolescent psychiatric disorders in Bangladesh, and indeed there scarcity of validated psychiatric measures in Bengali that could be used for this purpose. The prevalence of childhood disability in Bangladesh is increasing with the improvements in child survival (Zaman 1999)<sup>7</sup>. Now a day's behavior problems form an increasing proportion of the presenting complaints. Studies of mental health disorders in Bangladesh urban settings suggested rates as 20% boys and 10% girls in primary schools as reported by teachers (Rabbani 1999)<sup>8</sup>. Questionnaires for measuring psychopathological symptoms in children and adolescents are important for three reasons. Firstly, despite the fairly high prevalence rates of behavior and emotional problems, it should be noted that only a small percentage of the children and adolescents actually come in contact with mental health services. Thus, questionnaires that can be used for detecting youths who are at high risk for developing behavioral and emotional problems are highly relevant. Secondly, clinicians can employ such measures as part of the clinical assessment in order to obtain an initial idea about the type and severity of the psychiatric problem. Thirdly and finally, standardized questionnaires are also helpful to those clinicians who want to quantify the effects of treatment (Achenbach TM 1998). The Strengths and Difficulties Questionnaire (SDQ) is a promising new instrument for assessing for the psychological adjustment of children and adolescents, first published in 1997 by British psychiatrist Robert Goodman. The SDQ may be administered to parents and teachers of 4-16 year-olds and to 11-16-year-olds themselves. It contains 25 items, selected on the basis of both contemporary diagnostic criteria and factor analysis, divided equally among five scales such that sub scale scores are generated for emotional symptoms, conduct problems, hyperactivity-inattention, peer problems and prosocial behavior. It has a specificity of 95% and a sensitivity of 63% to predict clinical diagnosis accurately. In a large British study supporting the cross – cultural relevance of the SDQ and raising the possibility that SDQ might be useful as a screen for psychiatric disorders in community or paediatric clinics in Bangladesh. Research into the prevalence of emotional and behavioral disorders in young children is relatively new, and its development is challenged by the question as to what really constitutes an emotional or behavioral 'problem'. Still, recent studies estimate that the prevalence of behavioral and emotional problems in preschool children has increased over the past two decades to more than 10%. This number is considerably higher among preschool and toddlers. However, up until now there has been little research into screening of emotional and behavioral disorders of children by using SDQ in our country. Present study was designed to determine the prevalence of behavioral and emotional disorders including their risk factors among urban school going children, which are not yet elaborately available in our country.

## **II. Objectives**

### **General objective:**

To determine the prevalence of mental health problems among school going children of selected schools of Dhaka city

### **Specific objectives:**

To determine the associate factors of mental health problems in school going children.

## **III. Material and Methods**

This was cross-sectional was carried out during the period of January 2010 to December 2010 in the Department of Pediatrics, Sir Salimullah Medical College Mitford Hospital, Dhaka and different schools of Dhaka city. Our study subjects were school going children aged between 5 -11 years of Dhaka city. We applied multistage sampling techniques. At every stage purposive sampling was adopted due to its suitability in this kind of study. 1st stage: Three administrative thana were selected from 14 thanas in Dhaka city. The Shahbag, New market and Motijheel thana. 2<sup>nd</sup> stage: One ward was selected from each thana. Wards were 57, 52 and 31 and the 3<sup>rd</sup> stage: There were six schools in the ward 57, of which two Govt. and four private schools. For collection of socio-demographic variables a semi structured questionnaire was developed based on research objectives. Questionnaire for the study of emotional and behavioural disorders: Strength and Difficulties questionnaire was used. The SDQ consists of 25 items: emotional symptoms (5 items), conduct problems (5 items), hyperactivity/inattention (5 items), peer relationship problems (5 items) and prosocial behaviour (5 items). An extended version of the SDQ includes an impact supplement that asks if the respondent thinks that the young person has a problem and explores the chronicity, distress, social impairment and burden for others (Goodman & Scott, 1999). Current study used only 25 item of SDQ. On average the SDQ takes 5 minutes to complete (Klasen, Woerner, Wolke, Meyer, Overmeyer, Kaschnitz et al., 2000). The questionnaire is completed

by an informant that is by the parents or the teacher or the young person themselves. Present study used the parent completed version of SDQ. Before commencing field work, SDQ and operational definitions of some variables which were tested on 30 (15.3%) cases of the total study population, in order to finalize the procedure and to evaluate the appropriateness of the instruments. Modification was done accordingly after pre-testing. Some of the questions of emotional and behavioral disorder were discarded and reviewed after pre-testing. A research team was set for data collection along with researcher herself with two supporting personnel's of sociology background. School children were taken as sampling frame from registered book provided by the respective schools. Interviewing of the parents of school children were conducted in the respective school premises. Firstly, children who satisfied the inclusion and exclusion criteria were selected. Then, informed consent was taken from the parents of the children. After taking consent, parents were interviewed by the researcher and trained data collectors by using questionnaire for emotional and behavioral disorders. A total of 235 students along with their parents were selected for interview out of them 190 has been interviewed and the remaining students were selected from the same school. Response rate was 83%. Non response was due to parent's absence during the time of interview and objection of the parents to some questions. Collected data were sorted and screened for any discrepancy. The edited data were entered on to the template of SPSS 16 for windows. Informed written consent was taken from the participant after explaining all the facts potential dangers to the subjects in case of primary data collection.

**Inclusion criteria:**

Child age between 5-11 years with their parents.

**Exclusion criteria:**

Child whose parents are unwilling to consent.

#### IV. Results

This was cross-sectional study conducted during the period from January 2010 to December 2010. A total of 235 children Aged between 5-11 years along with their parents were selected, finally 196 were interviewed (response rate 83%). Among the respondents 35.7% were aged between 5 – 7 years, 43.4% were aged between 7 – 9 years and 20.9% were aged between 9 – 11 years. Among the respondent 45.4% were male. Table shows the distribution of the respondent by parent's characteristics. Among the fathers 67.3% were service holders, 23.5% were business man and 9.2% were engaged in other occupation. Among the mothers 65.8% were house wives and rest were working mothers. Regarding level of education of father 15.3% studied up to Primary or below 12.8 % studied up to SSC, 16.3 % studied up to HSC, 33.7 % were Graduate and 21.9% were post graduate. Regarding level of education of mother 23.5 % studied up to Primary or below 16.3 % studied up to SSC, 21.4 % studied up to HSC, 24.5% were Graduate and 13.8% were post graduate. The distribution of the respondents by monthly family income. Among the respondent 26.0% had monthly family income <10000 taka, 36.2% had between 10000 and 30000 taka, 29.6 % had between 30000 – 50000 taka and 8.2 % had income above 50000 taka. Table shows the distribution of the respondents by number of child in family. Among the respondents 27.6% had single child, 23.0% had two children and 49.5% had more than two children. [Table II] shows the distribution of summery statistics of the total difficulty score and five sub scale by sex. Among male average total Difficulty score was  $16.55 \pm 2.8$ , Emotional symptom score was  $4.98 \pm 1.7$ , Conduct Problem score was  $3.18 \pm 1.38$ , Hyperactivity score  $3.82 \pm 1.4$ , Peer Problem score  $4.58 \pm 1.4$  and Pro-social behavior was  $4.0 \pm 1.58$ . Among female average total Difficulty score was  $17.22 \pm 3.5$ , Emotional symptom score was  $5.32 \pm 1.9$ , Conduct Problem score was  $3.55 \pm 1.6$ , Hyperactivity score  $3.47 \pm 1.9$ , Peer Problem score  $4.89 \pm 1.5$  and Pro-social behavior was  $4.30 \pm 1.7$ . [Table III] shows the distribution of summery statistics of the total difficulty score and five sub scale by age. Among subjects aged between 5 – 7 years average total Difficulty score was  $16.67 \pm 3.2$ , Emotional symptom score was  $4.64 \pm 1.7$ , Conduct Problem score was  $3.73 \pm 1.7$ , Hyperactivity score  $3.53 \pm 1.3$ , Peer Problem score  $4.77 \pm 1.5$  and Pro-social behavior was  $3.8 \pm 1.6$ . Among subjects aged between 7 – 9 years average total Difficulty score was  $17.01 \pm 3.2$ , Emotional symptom score was  $5.47 \pm 1.8$ , Conduct Problem score was  $3.04 \pm 1.4$ , Hyperactivity score  $3.66 \pm 1.3$ , Peer Problem score  $4.85 \pm 1.7$  and Pro-social behavior was  $4.28 \pm 1.6$ . Among subjects aged between 9 – 11 years average total Difficulty score was  $17.17 \pm 3.3$ , Emotional symptom score was  $5.41 \pm 1.9$ , Conduct Problem score was  $3.5 \pm 1.4$ , Hyperactivity score  $3.73 \pm 1.4$ , Peer Problem score  $4.51 \pm 0.87$  and Pro-social behavior was  $4.49 \pm 1.6$ . No sex difference in total difficulty score or individual scale score was found following independent t test ( $P > .05$ ). [Table IV] shows the distribution of the respondents by classification of total SDQ score and sub scales. According to total difficulty score 37.3% are normal, 41.8% were borderline and 20.9% were abnormal. In terms of Emotional symptom score 61.2% are normal, 15.8% were borderline and 23.0% were abnormal. In terms of Conduct problem score 64.3% are normal, 14.8% were borderline and 20.9% were abnormal. In terms of Hyperactivity score 94.9% are normal, 3.6% were borderline and 1.5% were abnormal. In terms of Peer problem score 20.4% are normal,

*“Prevalence of Mental Health Problems and Its associated Factors among School Going Children in*

57.1% were borderline and 22.4% were abnormal. In terms of Pro-social behavior score 20.9% are normal, 25% were borderline and 54.1% were abnormal. Table shows the distribution of the study subjects by SDQ score and socio demographic score. No statistically significant association was found between age ( $P>.05$ ), sex ( $P>.05$ ).

**Table I:** Distribution of parent’s characteristics (n=196)

	n	%
Father’s occupation		
Service	132	67.3
Business	46	23.5
Others	18	9.2
Mother’s Occupation		
Housewife	129	65.8
Working Mother	64	32.7
Father’s qualification		
Primary or below	30	15.3
SSC	25	12.8
HSC	32	16.3
Graduate	66	33.7
Post graduate	43	21.9
Mother’s qualification		
Primary or below	46	23.5
SSC	33	16.3
HSC	42	21.4
Graduate	48	24.5
Post graduate	27	13.8
Family Income		
> 50000 BDT	16	8.16
30000-50000 BDT	57	29.08
10000-30000 BDT	75	38.26
<10000 BDT	45	22.96
Number of Children in Family		
One	54	27.55
Two	46	23.46
More than Two	96	48.97

**Table II:** Distribution of SDQ score of the scales by sex (n = 196)

SDQ	Sex				Independentt test	
	Male		Female		t	P value
	Mean	SD	Mean	SD		
Total difficulty Score	16.56	2.792	17.22	3.457	-1.456	.147
Emotional symptom	4.98	1.764	5.32	1.945	-1.271	.205
Conduct Problem	3.18	1.378	3.55	1.644	-1.694	.092
Hyperactivity	3.82	1.450	3.47	1.192	1.870	.063
Peer Problem	4.58	1.460	4.89	1.532	-1.411	.160
Pro-social Behavior	4.00	1.581	4.30	1.717	-1.258	.210

**Table III:** Distribution of SDQ score of the scales by age (n=196)

SDQ score	Age					
	5 – 7 year		7 – 9 year		9 – 11 year	
	Mean	SD	Mean	SD	Mean	SD
Total difficulty Score	16.67	3.234	17.01	3.122	17.17	3.263
Emotional symptom	4.64	1.786	5.47	1.862	5.41	1.871
Conduct Problem	3.73	1.693	3.04	1.410	3.51	1.381
Hyperactivity	3.53	1.259	3.66	1.350	3.73	1.397
Peer Problem	4.77	1.534	4.85	1.708	4.51	.870
Pro-social Behavior	3.83	1.659	4.28	1.645	4.49	1.630

**Table IV:** Classification of children according to total SDQ score and subscales (n=196)

SDQ	Classification of difficulty*		
	Normal	Borderline	Abnormal
Total difficulties	73 (37.3)	82 (41.8)	41 (20.9)
Emotional symptom	120 (61.2)	31 (15.8)	45 (23.0)
Conduct problem	126 (64.3)	29 (14.8)	41 (20.9)
Hyperactivity	186 (94.9)	07 (03.6)	03 (01.5)
Peer problem	40 (20.4)	112 (57.1)	44 (22.4)
Pro social behavior	41 (20.9)	49 (25.0)	106 (54.1)

Figure in parenthesis denotes percentage\*Some children had difficulty in more than one domain

**Table V:** Distribution of the children in different domains in combination

Combined difficulty	n	%
None	98	50.0
Emotional only	23	11.7
Conduct only	19	9.7
Hyperactivity only	01	0.5
Peer problem only	26	13.3
Emotional + Conduct	09	4.6
Emotional + Peer	07	3.6
Conduct + Peer	07	3.6
Emotion + Hyperactivity + Peer	04	2.0
Emotion + conduct + Hyperactivity	02	1.0
Total	196	100.0

**Table VI:** Distribution of the children by SDQ scores across age and sex (n=196)

	SDQ score			Test Statistics
	Normal	Borderline	Abnormal	
Age group				
<b>5-7yr</b>	31(42.5)	24(29.3)	15(36.6)	$\chi^2 = 3.07$ df 4 P= 0.55
<b>7-9yr</b>	28(38.40)	40(48.8)	17(41.5)	
<b>9-11yr</b>	14(19.2)	18(22.00)	9(22.00)	
Sex				
<b>Male</b>	35(47.9)	42(51.2)	12(29.3)	$\chi^2 = 5.62$ df 2 p= 0.60
<b>Female</b>	38(52.1)	40(48.8)	29(70.7)	

Figure in parenthesis denotes percentage

## V. Discussion

The cross-sectional study was conducted among school going children aged between 5-11 years of Dhaka city with an aimed to estimate the prevalence of mental health problems and its associated factors in school going children at the age of 5-11 years in the capital city of Bangladesh with Strength and difficulties questionnaire. The present study observed emotional and behavioral disorders among 20.9% school going children. Another 41.8% were diagnosed as having borderline disorder and 37.3% were normal. A cross sectional survey of 5–11-year-old children attending main stream private and community schools in Karachi on 675 parents found 47% normal, 19% borderline and 34% abnormal babies. Assessment of children’s mental health in their study was conducted using SDQ and based on cut-off provided by Goodman (Syed 2007). Majority of the studies conducted on prevalence of psychiatric morbidity among children from community shows wide range of Figures. The higher prevalence of emotional and behavioral problems in the present study may be due to the fact that they are determined based on screening questionnaire alone. The prevalence of emotional and behavioral problems varies between urban and rural children in different studies. As seen in a similar study by Srinath et al. (2005) reported 4.2% emotional and 12.8% behavioral disorders in rural area. In the same study they observed 11.4% emotional and 17% behavioral disorder in urban area. These dissimilarities either may be due to variations in diagnostic tools or better child mental health facilities. In another study carried out by Mullick et al. (2005) in Bangladesh found 9.6% emotional disorders and 10.6% behavioral disorders in the urban area. The prevalence in the present study was a bit higher than these estimates from previous literature evidences. One of the reasons may be that, present study was restricted to urban school going children only. One study was done among urban primary school children in Dhaka, Bangladesh by Rabbani (1999) and found 13.4% behavioral disorders which are much lower than that in our study. For example Rabbani (1999) used Rutter B2 Scale for detection of prevalence among primary school children. Mullick (2005) in their pioneering study used Bangla translation of a standardized child psychiatric interview, the Development and Well-Being Assessment (DAWBA) which was validated against routine clinical diagnoses on a consecutive series of 100 referrals to a child mental health service. They used stratified sampling for representation of rural, urban and slum strata. In a comprehensive review of studies about the prevalence rates of behavioral and emotional disorders among school going children authors reported 3.6% to 24% with a mean 10.2%. Among the five domains, present study observed emotional problem in 23% children, Conduct problem in 20.9% children, Hyperactivity in 1.5% children, Peer problem 22.4% children and Pro-social behavior 54.1% children. Study by Margot (2005) on urban school children using similar method showed significantly higher rates of behavioral problems. In another study carried out by Elhamid(2008) in Egypt Using both parent and teacher rated version of SDQ where prevalence of emotional and behavioral problem was high reported by parents 20.6%. Abnormal prosocial score 11.8%, Emotional problem 2.0%, Conduct disorder 6.6%, Hyperactivity 0.7%. Based on the review of published literature elsewhere, it was evident that socio demographic factors may affect psychiatric morbidity among children such as gender, school type and parental education as well as socioeconomic status. In the present study the average age of the children was 7.9± 2.6 years ranging from 5 – 9 years and the disability is 20.9%. Khan et al

(2009) had conducted the study among children of 2-9 years and found the prevalence of 14.6%. Mullick and Goodman (2005) studied the prevalence of mental health disorders among 5 to 10 year old children in Bangladesh. They reported some kind of disorder in 15.4% of rural children, 10% of urban children and 19.5% of slum children. Current study is done in urban children and the percentage is higher than the urban prevalence reported other studies. Although result of the current study suggests no sex variation, published article provides rather opposite evidence, particularly higher prevalence among boys was found in most studies, one study found female preponderance (Eapen 2003). Rabbani et al. (1999) showed that male children were more likely to have behavioral disorders than were females with a male to female ratio: 2:1. Abdel-Fattah et al. (2004) showed education as a predictor that opposes our study finding. In the present study mother's occupational status appeared as a significant predictor of child's emotional and behavioral disorder adjusting for all factors in the model ( $P=0.002$ ). Similar result reported by (Abdel-Fattah 2004) that students with working mothers were more liable to develop emotional and /or behavioral disturbance than those with non-working mothers. Before 'thought' and 'language', 'emotion affect' within the context of relationships that forms the basis for all future development of the children. Early onset of emotional and behavioral problems in school going children and adolescents are related to a variety of health, social and academic problems including juvenile crimes and school dropout (Anderson 1987). Early interventions can prevent behavioral and emotional problems and poor school performance which requires early detection, evaluation and identification of risk factors of behavioral and emotional problems in school going children and adolescents. SDQ can be used as a screening tool and after screening high risk children should be referred to child mental health clinic or child developmental Centre for thorough psychiatric assessment. Studies like present one will guide psychiatrists to develop programs of supports and services for children with emotional and behavioral problem.

### **Limitations of the study**

The access to formal education is limited in Bangladesh; therefore the generalizability of findings of this study is limited only to school attending children. On the other hand, sample size was small in the present study, which may not reflect the scenarios of the whole country.

### **VI. Conclusions**

The aim of this study was to estimate the prevalence of mental health problems and its associated factors in school going children at the age of 5-11 years in the capital city of Bangladesh. The problems are equally prevalent in both sexes. More than one in five (20.9%) children was found to have emotional and behavioral disorders, another 41.8% were with borderline difficulty score and 37.1% were with of normal range. Domain wise difficulty prevalence suggests emotional problem in 23% children, Conduct problem in 20.9% children, Hyperactivity in 1.5% children, Peer problem in 22.4% children and Pro-social behavior in 54.1% children. None of the age, sex, family income, number of children, father's level of education and mother's education appeared as a significant predictor of emotional and behavioral disorder in children of Dhaka city. However Mother's occupational status appeared as a significant predictor of child's emotional and behavioral disorder.

### **VII. Recommendations**

Policy makers should be made aware about the important issue of behavioral and emotional problem which is prevalent in one fifth of the school children, so that they can address the issue in strategic planning. Emotional and behavioral problems in children should be regarded as a public health problem and action should be made to counteract the burden of morbidity on health system. Parents should be made aware about the possible factors that precipitate the condition among the children. Psychiatric assessment of the children should be included in the school health program, and should cover all children at least once in a year. Parents should be advised to spend substantial amount of quality time with their children further study is hereby recommended in the issue with greater sample size.

### **References**

- [1]. Hackett R, Hackett L, Bhakta P, Gowers S. 1999, The prevalence and associations of psychiatric disorder in children in Kerala, South India. *J Child Psychol Psychiatry* 40:801–807
- [2]. Bird HR. 1996. Epidemiology of childhood disorders in a cross-cultural context. *J child psychol psychiatry*, 37:35-49
- [3]. Bird HR, Canino G, Rubio-Stipec M, Gould MS, Ribera J, Sesman M, Woodbury M, Huertas-Goldman S, Pagan A, Sanchez-Lacay A, Moscoso M. 1988. Estimates of the prevalence of childhood maladjustment in a community survey in Puerto Rico. *Arch Gen Psychiatry*, 45:1120–1126
- [4]. Muris P, Meester C, Van den Berg F. 2003. The Strength and Difficulties Questionnaire (SDQ): Further evidence for its reliability and validity in a community sample of Dutch Children and adolescents. *European Child and Adolescent Psychiatry*, 12, 1-8.
- [5]. Nikapota AD. 1991. Child psychiatry in developing countries. *Br. J Psychiatry* 158: 743 751
- [6]. Fleitlich-Bilyk B, Goodman R. 2004. The prevalence of child psychiatric disorders in Southeast Brazil. *J Am Acad Child Adolesc Psychiatry*. 43:727–734

- [7]. Zaman SS, Khan NZ, Islam S. 1990. Validity of the ‘Ten Questions’ for screening serious childhood disability: results from urban Bangladesh. *Int J Epidemiol*.19:613-20.
- [8]. Rabbani MG, Hossain MM. 1999. Behavior disorder in urban primary school children in Dhaka Bangladesh, *Public Health*, 113, 233-236
- [9]. Abdel-Fattah MM, Asal ARA, Al-Asmary SM, Al-Helali NS, Al-Jabban TM, Arafa MA. 2004. Emotional and Behavioral Problems Among Male Saudi Schoolchildren and Adolescents Prevalence and Risk Factors. *German J Psychiatry*, 1, 1-9.
- [10]. Srinath S, Girimaji SC, Gururaj G, Seshadri S, Subbakrishna DK, Bhola P, Kumar N. 2005. Epidemiological study of child and adolescent psychiatric disorders in urban and rural areas of Bangalore, India. *Indian J Med Responder*,122,67 –79.
- [11]. Syed EU, Hissein SA, Haidry SZ. 2009. Prevalence of emotional and behavioral problems among primary school children in Karachi, Pakistan-Multi informant survey’, *Indian Journal of Pediatrics*, 76, 623-627
- [12]. Syed EU, Hussein SA, Mahmud S. 2007. ‘Screening for emotional and behavioural problems amongst 5-11-year-old school children in Karachi, Pakistan’, *Social Psychiatry and Psychiatric Epidemiology*, 42(5), 421-427.
- [13]. Mullick M, Goodman R. 2001. Questionnaire screening for mental health problems in Bangladeshi children: A preliminary study. *Social Psychiatry and Psychiatric Epidemiology* 36:94-99
- [14]. Mullick M, Goodman R .2005. The prevalence of psychiatric disorders among 5-10 year olds in rural, urban and slum areas in Bangladesh: an exploratory study. *Social Psychiatry and Psychiatric Epidemiology*, 40, 663-671.
- [15]. Shatkin JP and Belfer ML.2004. The global absence of child and adolescent mental health policy. *Child and Adolescent Mental Health*, 9(3), 104-108.
- [16]. Woo TP, Fung DSS, Chan YH, Lee YP, Koh JBK, Cai Y, 2007. Emotional and behavioural problems in Singaporean children based on parent, teacher and child reports. *Singapore Med J* 48(12), 1100-1106
- [17]. World Health Organization. (1994). The ICD-10 classification of mental and behavioural disorders : Diagnostic criteria for research. Geneva.
- [18]. Youth in Mind. 2005. SDQ: Information for researchers and professionals about the Strength and Difficulties Questionnaire Retrieved, 2008, from <http://www.sdqinfo.com>

Dr. Nusrat Jahan “Prevalence of Mental Health Problems and Its associated Factors among School Going Children in Urban Population, Dhaka, Bangladesh.” *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, vol. 18, no. 5, 2019, pp 61-67.