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# Dual Informants Reporting: Do we Observe Behavioral Problems in Primary School Children?

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## ABSTRACT

**Introduction:** World Health Organization states that 20% of young children have emotional and behavioral problems.
**Aims & Objectives: 1)** Identify the pattern of behavior problems among primary school students in Lahore upon dual informant report. **2)** Measure the association of demographic variables and behavior problems in primary school students in Lahore.
**Place and duration of study:** Study was conducted in Lahore and completed in one-year time.
**Material & Methods:** A cross-sectional study was done in eighteen public/ private primary schools of Lahore city; selected randomly from the sample frame of the schools of the selected towns. The sample size was 396, equally divided in both sectors (198 in each); three schools of each sector and town (66); and lastly 22 students from one school in a sector. Simple random sampling technique was applied to select the study subject from the sample frame. An appropriate inclusion and exclusion criterion was applied. Data collection was done on standardized Strength and Difficulties Questionnaire, using Parent and Teacher Proforma. Data was analyzed using SPSS version 23. P-Value < 0.05 was taken as significant.
**Results:** After exclusion, data of 369 students were analyzed for both sector school students. The frequencies for four borderline/ abnormal behavior problems-emotional; conduct; hyperactivity; and peer problems were assessed. The parent's reported frequencies were: 44.98%; 52.15%; 37.32%; and 44.02% respectively. Comparative figures reported by the teachers were: 28%; 34.69%; 28.19%; and 40.11% respectively. A statistically significant association was found between behavior problem sub-domains and socio-demographic factors in students. A weak positive Pearson correlation of 0.323was found between parent and teacher observed total behavior problem scores.
**Conclusion:** According to the assessment of both informants there is a significant rise in the behavior issues in its various sub-domains in students from both sectors as compared to the last statistics of 2010.

**Keywords:** primary school, class-5 children, behavior problem, class/ subject teachers, Strengths & Difficulties Questionnaire (SDQ), MeSH terms (primary school, public sector, private sector, parents, behavior problem).

## INTRODUCTION

High economic costs are incurred for young and adolescent people who experience mental, emotional, and behavioral problems; not only for themselves but their families, the society where they live, educational institutions where they are studying, and their future workplace; all get affected by the problem in different ways[1]. Research states that 14-20% of young adolescents experience some form of a mental, emotional, and behavioral problem at a given point in time[2]. In the majority of cases, the signs of potential behavior problems are apparent at a very early age. Young people with emotional and behavioral problems pose grave public health concerns for several reasons: 1) they cause sufferings to individuals and families 2) their ability to reach normal goals for educational and social achievements gets limited 3) they increase the risk of further psychopathology in later life and reduce optimum positive functioning in later life 4) they incur extra care cost upon the society at every level on account of the disruption they cause and the risk that affected young people will perform less as adults; thus it warrants more focus on prevention of such problems[3]. Behavior problems in young children can be sub-categorized into various forms including emotional, conduct, hyperactivity, and peer problems. Emotional and conduct problems are more internalizing whereas, the other two are more externalizing problem behaviors[3]. A higher percentage of internalizing problems is reported by parents in Eastern cultures than in the West[3]. Children may become anxious or depressed because of the factor that there is a threat of parents achieving control over their children's behavior. Whereas opposite to this in developed countries externalizing problems exist more; where parents perceive that there is a greater need for mental health care for children with disruptive behavior than for those with depression or anxiety[4]. Another study was conducted in

Singapore upon children of 6-12 years of age, and behavior problems were noted through the Child Behavior Check List Parent Form and Teacher Reporting Form. This study claimed 12.2% of internalizing problems (emotional and conduct) upon parent reporting as compared to 2.5% observed by teachers. Externalizing problems in children as noted by parents was 4.9%. on the other hand, this study claimed to have a higher parent-teacher agreement for externalizing problems in children as compared to internalizing problems[5].A recent study carried out in our local set up upon students in the age group 5-11 year using Parent reporting form, stated 27.9% in females and 40.1% males were labeled with abnormal behavior problems, when measured through Strengths and Difficulties Questionnaire[6].

As per the researcher's personal observation and furthermore as a parent, there is very little awareness regarding the significance of behavior problems in young children and very scant knowledge about the long-term implications of such problems. Most of the time significance of such problems and their long-term effects on children are totally overlooked or ignored by the parents mostly, at times by teachers and health care professionals too. Various influencing factors are also playing a role in this like for parents and society it is a stigma if a child is labeled with some behavior problem and is taking some intervention for it; teachers in schools are not trained enough to identify such problems in students quickly; overburdened teachers; lack of referral system from schools; and gross lack of expert Child Psychiatrist/ Psychologists in our set up; and gross lack of communication between parent, teacher, health care professional[7]. Hence, the lack of not being on the same page with the parents, teachers, and HCPs; identification of behavior problems at an early age, and implementation of corrective measures get much delayed. Marked literature gap in this regard in local setting and very little research addressed this issue, not with dual informants and comparative in both sector schools. The last study in this area with two informants was done in 2010 by Hussein. Hence, with the assumption that in present social set up there is all the chance of finding an enhanced behavior problem situation among the young children; since the last study in 2010. With this scenario in mind a comparative study was planned to identify the various forms of behavior problems afflicting the young students of primary schools, through the reporting of teachers and parents. This study intends to add a valuable knowledge set and will act as foundation research for this problem.

**Objectives:**

1) Identify pattern of behavior issues in its sub-domains, among primary school students in Lahore upon dual informant report.
2) Measure the association of demographic variables and sub-domains of behavior problems in primary school students in Lahore.
3) Measure the relation between the observations of the two informants.

## MATERIAL AND METHODS

After receiving Ethical Clearance certificate issued by Institute of Public Health Lahore in December,2015 vide No.249ME/IPH a cross sectional study was executed in both sector primary schools of Lahore in 2018-19. Three towns were randomly selected from the sample frame that had a total of nine towns in the Lahore city and one Cantonment area. The complete list of public and private primary schools for the three selected towns was obtained from the Education Office of Lahore. Based on the socio-economic status middle category schools (starting from Rupees 20 in Government schools up-to Rupees 5000 monthly in both sector schools) were included in my sample frame. Three schools each were chosen from the two sectors of selected towns by a simple random technique (lottery draw); which came to a total of eighteen schools for the study. The sample size calculation was done upon Open Epi soft-ware version 3 using the parameters: Grade 5 students' total population of 111892, behavior problem prevalence of 34%[8], conventional 5% margin of error, CI of 95%, and Design effect of 1. The sample size was 345, and after the addition of a 20% non-response rate, 396 was finalized. It was divided into two sectors schools (198 each); three schools of each sector and town (66 students); and lastly 22 students from one school in a sector. Students were selected randomly from the sample frame developed from the attendance register of the class. The study population comprised of Grade 5 students and the class/ subject teacher for the class.

**Inclusion was based on:**

1) Teacher's willingness.
2) Class/ subject teacher who had taught the class for at least six months.
3) Subject teacher who was taking at least two subjects for the class.
4) Willingness of the mother/ father of the chosen student.

**Exclusion criteria:**

1) Teachers who had previously participated in a same study in the previous six months-one-year times.
2) Positive family history of behavior problems among the siblings of the selected student.
3) Student himself was diagnosed for behavior problems.
4) Parents who had previously participated in research of similar nature in the previous year.

**Variables included:**

1) Parents' factors (parental age, parental education level, parental job, and mother status, chronic sickness in parents, single-parent family, family type, and family history of behavior issues).
2) Factors for the student (age, sex, birth order number, number of siblings, school type, confirmed behavior problems); teacher's factors (age, gender, education level, professional experience, period of contact with Class 5 students); behavior problem variables (emotional, conduct, hyperactivity, and peer problems).

**Data collection tools used:**

1) Socio-demographic form for parents having the detail of demographic variables for parents and students.
2) Socio-demographic Proforma for teachers.
3) Strengths & Difficulties Questionnaire (SDQ)

Its Parent rating form and Teacher rating form. It is a standardized instrument used to effectively screen out mental health and behavior problems in the population up to 16 years of age. It measures 35 attributes distributed in five subscales; all when summed up give a total score of 0-40 for behavior problems.

The subscales are emotional problems; conduct problems; hyperactivity problems; and peer problems. Categorization of total scores was done in three categories for both parent and teacher observations borderline, abnormal, and normal[9]. The validity and reliability of this instrument was tested in our setup in the Urdu language as well[10]. Parents of the selected students were invited through a well-drafted letter, for a specifically called parent-teacher meeting for this purpose. Data was collected upon the parent Proforma from parents of each student separately and in isolation. Some of the parents filled in the questionnaire themselves. The data was collected from teachers a day after completion by the parents. It took two days to complete data collection from one school. Data analysis was planned as descriptive statistics and frequency trends for all variables were calculated; Chi-square test of significance was applied to identify associations between behavior problems sub-domains and socio-demographic variables for both informants' observations; Pearson correlation was noted between total behavior problem scores as per observations of the dual informants. All data was strictly confidential and only in the access of the researcher.

## RESULTS

After exclusion and as per teachers' report, data for 369 students was entered and analyzed on SPSS 20. Teachers reported on all 209 male and 160 female students of Class 5, that were selected in the sample. In the total sample, 190 students were from public schools and 179 from private schools. The age range was 9-15 years, Mean 11.17 ± 1.04. A total of 42 teachers reported on all 369 students. Majority students (37.32%) were first born, and 29% children had three siblings.

On the other hand, only 209 parents (for 369) turned out for reporting on their children respectively. Demographics of parents showed: father mean age 42.97±6.13 and mother mean age 36.23±5.06, and same in the private sector with a minimal difference. Teacher demographics showed: age range 21-48 years, mean age 29.6± 4.81. (Table-1)

| Variable | N (%) |
|---|---|
| **Teacher status:** | |
| Class teacher | (40)95% |
| Subject teacher | (2)5% |
| **Education level:** | |
| Intermediate | (1)2.4% |
| Graduate | (8)19% |
| Postgraduate | (33)78.6% |
| **Work experience:** | |
| =< 1 year | (5)11.9% |
| 2-5 year | (12)28.6% |
| 6-9 year | (18)42.9% |
| =>10 year | (7)16.6% |
| **Contact duration with Grade 5 students:** | |
| 6 months | (2)4.8% |
| 6-12 months | (20)47.6% |
| 1-5 year | (20)47.6% |

**Table-1:** Socio demographic characteristics of the teachers (n= 42)

| Variable | N (%) |
|---|---|
| **Father education level:** | |
| Illiterate | (50)23.9% |
| Primary-intermediate | (96)46% |
| Graduate/ Postgraduate | (63)29.84% |
| **Mother education level:** | |
| Illiterate | (44)21% |
| Primary-intermediate | (119)57% |
| Graduate/ postgraduate | (46)22.21% |
| **Father job status:** | |
| Regular salaried | (94)45% |
| **Mother job status:** | |
| Working | (29)14% |
| Non-working | (165)79% |
| Self employed | (14)7% |
| **Father's income:** | |
| <25000/ month | (75)36% |
| 25000-50000/ month | (73)35% |
| >50000/ month | (61)29% |
| **Mother's income:** | |
| <25000/ month | (22)14% |
| 25000-50000/ month | (15)7% |
| >=50000/ month | - |

**Table-2:** Socio demographic characteristics of the parents (n=209).

| Variable | Public schools N (%) | Private schools N (%) | Total N (%) |
|---|---|---|---|
| **Emotional Problems:** | | | |
| Borderline/ Abnormal | 58 (45%) | 36 (45%) | 94 (44.97%) |
| Normal | 71 (55%) | 44 (55%) | 115 (56.02%) |
| **Conduct Problems:** | | | |
| Borderline/ Abnormal | 72 (55.81%) | 37 (46.25%) | 109 (52.15%) |
| Normal | 57 (44.19%) | 43 (53.75% | 100 (47.85%) |
| **Hyperactivity Problems:** | | | |
| Borderline/ Abnormal | 57 (44.19%) | 21 (26.25%) | 78 (37.32%) |
| Normal | 72 (55.81%) | 59 (73.75%) | 131 (62.68%) |
| **Peer Problem:** | | | |
| Borderline/ Abnormal | 54 (41.87%) | 38 (47.5%) | 92 (44.02%) |
| Normal | 75 (58.13%) | 42 (52.5%) | 117 (55.98) |
| **Total Behavior Problems:** | | | |
| Borderline/ Abnormal | 60 (53.49%) | 32 (60%) | 92 (44%) |
| Normal | 69 (46.51%) | 48 (40%) | 117 (56%) |

**Table-3:** Analysis of Parents' Response for total and sub-domains of Behavior Problems (n=209)

| Variable | Conduct Problem Score N (%) | | $\chi^2$ | p-value | OR | 95% CI | |
|---|---|---|---|---|---|---|---|
| | Border Line /Ab-normal | Normal | | | | Lower | Upper |
| **Gender:** | | | | | | | |
| **Male** | 69 (59%) | 48 (41%) | 4.956 | 0.026* | 1.869 | 1.075 | 3.248 |
| **Female** | 40 (43.5%) | 52 (56.5%) | | | | | |
| | **Hyperactivity Problem Score N (%)** | | | | | | |
| **Male** | 52 (44.4%) | 65 (55.6%) | 5.766 | 0.016** | 2.031 | 1.135 | 3.635 |
| **Female** | 26 (28.3%) | 66 (71.7%) | | | | | |
| | **Hyperactivity Problem Score N (%)** | | | | | | |
| **School Type:** | | | | | | | |
| Public | 57 (44.2%) | 72 (55.8%) | 6.791 | 0.009** | 2.224 | 1.212 | 4.082 |
| Private | 21 (26.2%) | 59 (73.8%) | | | | | |
| **Father Education:** | | | | | | | |
| Up-to matric | 49 (44.5%) | 61 (55.5%) | 5.182 | 0.023* | 1.939 | 1.093 | 3.440 |
| Above matric | 29 (29.3%) | 70 (70.7%) | | | | | |
| **Father Job:** | | | | | | | |
| Jobless/irregular | 27 (52.9%) | 24 (47.1%) | 7.037 | 0.008* | 2.360 | 1.241 | 4.490 |
| Regular | 51 (32.3%) | 107 (67.7%) | | | | | |
| | **Peer problem score N (%)** | | | | | | |
| **Mother Age:** | | | | | | | |
| >50 yr | 3 (1.43%) | 0 (0.0%) | 3.880 | 0.049* | 2.318 | 1.980 | 2.714 |
| Up to 50 yr | 88 (42.1%) | 116 (55.5%) | | | | | |

**Table-4:** Associations of behavior problem sub-scales with socio demographic factors upon parent reporting (n=209)

| Variable | Public schools N(%) | Private schools N(%) | Total N(%) |
|---|---|---|---|
| **Emotional problems:** | | | |
| Borderline/ Abnormal | 56(29.48%) | 47(26.25%) | 103(28%) |
| Normal | 134(70.52%) | 132(73.75%) | 266(72%) |
| **Conduct problems:** | | | |
| Borderline/ Abnormal | 83(43.69%) | 45(25.14%) | 128(34.69%) |
| Normal | 107(56.31%) | 134(74.86%) | 241(65.31%) |
| **Hyperactivity problems:** | | | |
| Borderline/ Abnormal | 66(34.74%) | 38(21.23%) | 104(28.19%) |
| Normal | 124(65.26%) | 141(78.77%) | 265(71.81%) |
| **Peer problem:** | | | |
| Borderline/ Abnormal | 79(41.58%) | 69(38.55%) | 148(40.11%) |
| Normal | 111(58.42%) | 110(61.45%) | 221(59.89%) |
| **Total behavior problem:** | | | |
| Borderline/ Abnormal | 122(64.21%) | 73(40.79%) | 195(52.85%) |
| Normal | 68(35.79%) | 106(59.21%) | 174(47.15%) |

**Table-5:** Analysis of Teachers' Response for sub-scales and total Behavior Problems (n=369)

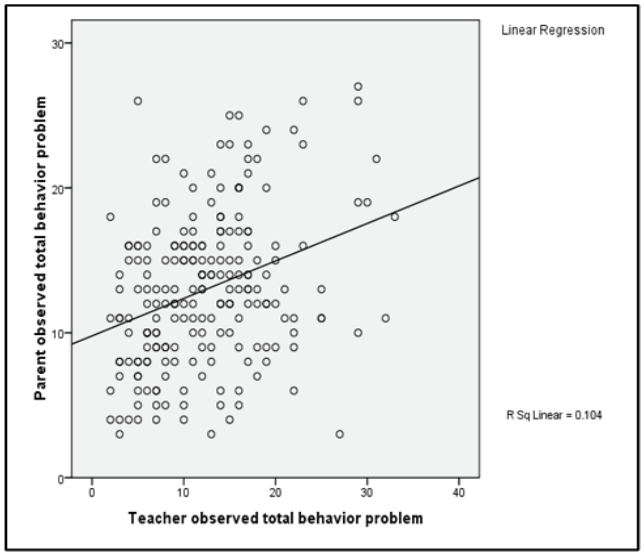


**Fig. 1:** Scatter plot showing the correlation between parent and teacher observed total behavior problem.

| Variable | Conduct problem score N (%) | | $\chi^2$ | p-value | OR | 95% CI | |
|---|---|---|---|---|---|---|---|
| | Borderline /Abnormal | Normal | | | | Lower | Upper |
| **Gender** | | | | | | | |
| Male | 52(44.4%) | 65(55.6%) | 10.590 | 0.001** | 2.70 | 1.472 | 4.46 |
| Female | 21(22.8%) | 71(77.2%) | | | | | |
| **School type** | | | | | | | |
| Public | 60(46.5%) | 69(53.5%) | 19.895 | <.01** | 4.48 | 2.254 | 8.91 |
| Private | 13(16.2%) | 67(83.8%) | | | | | |
| **No. of siblings** | | | | | | | |
| >3 | 31(44.3%) | 39(55.7%) | 4.055 | 0.044* | 1.83 | 1.013 | 3.32 |
| Up to 3 | 42(30.2%) | 97(69.8%) | | | | | |
| **Father Income** | | | | | | | |
| <25000 | 33(47.1%) | 37(52.9%) | 6.909 | 0.009** | 2.20 | 1.216 | 4.00 |
| ≥25000 | 40(28.8%) | 99(71.2%) | | | | | |
| | **Hyperactivity problem score N (%)** | | | | | | |
| **Gender** | | | | | | | |
| Male | 40(34.2%) | 77(5.8%) | 13.798 | <.001*** | 3.82 | 1.831 | 7.99 |
| Female | 11(12%) | 81(88%) | | | | | |
| **School type** | | | | | | | |
| Public | 41(31.8%) | 88(68.2%) | 9.953 | .002** | 3.26 | 1.562 | 6.96 |
| Private | 10(12.5%) | 70(87.5%) | | | | | |
| **Mother education** | | | | | | | |
| Up to matric | 40(31.7%) | 86(68.3%) | 9.276 | .002** | 3.04 | 1.457 | 6.36 |
| Above matric | 11(13.3%) | 72(86.7%) | | | | | |
| **Father job** | | | | | | | |
| Irregular | 18(35.3%) | 33(64.7%) | 4.339 | 0.037* | 2.06 | 1.036 | 4.12 |
| Regular | 33(20.9%) | 125 (79.1%) | | | | | |
| **Mother job** | | | | | | | |
| Irregular | 49 (27.2%) | 131 (72.8%) | 5.593 | 0.018* | 5.05 | 1.157 | 22.1 |
| Regular | 2(6.9%) | 27(93.1%) | | | | | |
| | **Peer problem score N (%)** | | | | | | |
| **Gender** | | | | | | | |
| Male | 60(51.3%) 18 | 57(48.7%) 74 | 22.148 | <.01** | 4.32 | 2.305 | 8.12 |
| Female | (19.16%) | (80.4%) | | | | | |

**Table 6:** Associations of behavior problem sub-domains with socio demographic factors upon teacher reporting (n=209)

| Pearson correlation (r) | Coefficient of determination ($r^2$) |
|---|---|
| Parent observed total behavior problem .323 | .104 |
| The teacher observed a total behavior problem of .323 | .104 |

**Table 7:** Correlation Values for the Two Outcomes

## DISCUSSION

The significance and importance of early detection of behavioral problems in young children are now being recognized all over the world. Despite this fact, very little systematic research has been done in developing countries in the past[11]. A similar situation prevails in Pakistan with very little work done to identify childhood behavior problems. Though, studies among adults in Pakistan show that common mental disorders have a higher prevalence in Pakistan than in other developing countries[12].

The trend of socio-demographic characteristics of parents (Table-2) in this study is supported by the findings of past research that shows a similar pattern for father education, whereas for mother education present study result is a little higher than the past study. On the other hand, parental income findings in my study are much less than the past comparative study[6]. The study in comparison by Syed et al. was conducted in Karachi, Pakistan having the same socio-demographic as the present study and almost the same variables had been studied in it. Similarities in the sociodemographic factors is understandable as almost similar socio economic and demographic dynamics are there in all parts of the country.

Parents' reporting: In my study only 209 parents turned out for data collection out of a total of 369 student sample size (Table-3), that comes to 56% of the study sample; and this is higher than the 50% and 46% of parents reporting in the past studies respectively[6, 8, 13]. These three past studies had also used the same instrument (SDQ) and the same parameters as the present study. Though, with the difference that Syed et al. in 2007 and 2009 have used single informant and applied convenient sampling to select the schools and the study participants. Using dual informants and applying probability sampling is the strength of the present study. Furthermore, Hussein S.A in 2010 had measured the behavior problems in class 1-5 students and had also used convenient sampling for school selection as well as for study participants. When compared on the base of

schools, in the present research to assess the extent of behavior problems in the past decade found a remarkable increase in the problem among children: 53% vs 40% in public and 60% vs 26.2% in private schools[6]. Present study prevalence of borderline/ abnormal behavior problem when compared with another past study is found to be higher for private school students 60.0% vs 26.2% but lower for the public school students[13]. It's an important result of the current study that behavior issues in this age group are on the increasing side in the past decade. There can be many probable reasons for this increase like personal, environmental, socio demographic factors and others; detailed study of which was not in the scope of this study but these influencing factors need to be explored in another study. In the present study, individual subunit variables of behavior problem found a higher prevalence of abnormal behavior for all the subunits with the majority of children found to have: abnormal emotion, conduct, hyperactivity, peer problems, and in prosocial problems in students (Table 1). This finding is much higher than a past study that found lesser prevalence rates for the subunit variables of behavior problems[6]. This again is an important finding of the present study showing significant raise in the existing situation of the problem in primary school children during the time gap between the last data and this study results, which can be due to the many changes in social structure, environment, and socio economic dynamics. When compared with a past study conducted in Russia upon Russian and British children, the present study prevalence of abnormal emotional and conduct problems is found to be higher; and the prevalence of hyperactivity problems is found to be less than the prevalence in Russian children 7-14 year of age. Whereas another study conducted in the UK also showed lesser prevalence for these three subunit variables in British children; than the present study[14].This higher pattern of behavior problems in different categories can probably be on account of many influencing factors that are present in our society as a developing country, are vastly different from the developed countries. School-wise comparison of subunit categories in the present study showed higher trends of abnormality for the conduct, hyperactivity, and prosocial problems in public school students; peer problem rating is less in public school students, and emotion problem rating is equal in both. These trends are higher than the past study done by Syed et al that found lesser ratings for all these individual variables for both sector schools[6]. Present school-wise trends are also higher for: emotional problems 45% Vs 31.4% in public and 45% vs 41.2% in private; for hyperactivity problems 44.1% vs 15.9% in public and 26.2% vs 20.7% in private; and for conduct problems 55.8% vs 29.5% in publics schools[13]. There is a difference that Hussein had not measured the peer problems in her study which is one very important individual subunit of the total behavior problems; and which in the present study has shown higher borderline/ abnormal scores in both sector schools. Since all four components of total behavior problems have not been measured by Hussein, the results can be debatable. Hussein had also not measured the prosocial behavior problems, which is not part of the total behavior problems; but is significant to measure as it shows students' relation to his peers and others around him/ her, and it gets affected in class as well as at home when a student has problem in the other subunit components. It can be safely stated here that very few studies have been done in this area in our set up and the present study increasing trend of a behavior problem in its various sub-domains should be a point of concern for the stakeholders that needs attention by the health care professionals and at the level of state. Hence this is strength of the present study is that all components of total behavioral problems have been measured, along with the extended prosocial problems in the children. These findings added to the existing knowledge in this regard. Furthermore, significant associations have been found between socio demographic factors and subunit components of total behavior problems (emotional, conduct, hyperactivity, and peer problems); upon test of significance application (Table 4). This finding is also the strength of the current study, and this aspect needs further exploration in future studies.

Teachers' reporting: the second informant in this study was the class teacher of Grade 5 who had given a response for the whole 369 student sample (Table 5). This study found higher prevalence for all four subunit individual variables of behavior problems as well as prosocial problems, upon teacher observation. The finding shows a marked increase in the extent of the problem than a past study conducted in Karachi Pakistan that found much less prevalence for all these variables upon teacher observation[8]. Present study teacher observed findings are also higher than the prevalence found in the study conducted among 7-14-year-old Russian and British children[14]. School-wise comparison of the individual subunit variables found higher trends of abnormality for

emotion, conduct, hyperactivity in public schools as compared to the previous study[13]. This past study by Hussein had not measured one important subunit of total behavior problems i.e peer problems; which also shows higher prevalence of abnormal behavior in both sector schools in present study. Hussein had also not measured the prosocial behavior problems in the study participant which as mentioned above is important to be measured as it gets disturbed on account of the abnormal behavior problems in the child and can aggravate the behavior problem in the child if his/ her prosocial relations in his sphere are not working well. The present study result is consistent with a past research that stated higher prevalence for all variables among public school children[15]. In the Pakistani social setting public and Government, schools are generally overcrowded, are resource-intensive both human and financial, and lesser pay structure for teachers. These factors might contribute towards a lack of good grooming and discipline maintenance that can later be expressed in the form of behavior problems among children[16]. Furthermore, significant associations have been found between socio demographic factors and subunit components of total behavior problems (emotional, conduct, hyperactivity, and peer problems); upon test of significance application (Table 6). These findings were the strengths of the current study.

Another significant angle of looking at the results of the present study was in the form of a gradient i.e the highest rating for conduct problems by parents followed by emotional, peer, hyperactivity, and prosocial problem; in gradual decreasing order. This finding is consistent with the past finding of a study that showed the highest rating for conduct problems, hyperactivity problems at fourth and prosocial problems rated least[8]. The present study's highest rate of abnormal conduct problems is much higher than the finding of the recent national survey conducted in the USA, among 13-18-year-old adolescents that found the prevalence of 9.6% for conduct problems[17]. Whereas, teachers in our study rated highest for peer problems, followed by conduct problems, and least for prosocial problems. This finding is in contrast to the past study finding where teachers rated conduct problems highest[8]. These findings of our study signify that parents at home tend to see more emotional problems in children while teachers identify more of classroom-related problems and this is consistent with many past studies done in developing countries. It should be kept in mind that literature says that children tend to behave differently in different settings. Past research has also stated that dual informants (parents and teachers) have reported behavior problems in the same child with a different rating. The difference in ratings can be because parents usually have a protective attitude towards their child and mainly, they intend to keep their child safe from the inconsiderate remarks of others in case he/ she is labeled with some behavior problem[18].

It can be safely stated here that socio-demographic factors like gender, school type, parental education and age, parental job situation have contributory roles towards the higher levels of behavior problems in the sub-domains as well as total behavior problems.

**Strengths of the study:**

To my best knowledge this is the first study of this kind in the local setup that has been conducted with the purpose of comparison between the public and private school children; with a representative sample selected through probability sampling; using dual informant reporting and all individual components of total behavior problems are measured along with the extended prosocial problems in children too. It can cautiously be stated that the trends seen here are likely to follow similar pattern across the target population. The findings add onto the existing knowledge and higher statistics show the gravity of the problem that has increased as compared to the last study done in this area in 2010.

**Limitations of the study:**

A major limitation of the study was the large non-response (44%) from the parents as an informant. This can add bias into the study, although the researcher tried diligently to control with the help of the school administrations. But, on account of the security reasons this was denied to the researcher as the schools did not give the access to parents' contacts; and reliance had to be on the facilitation of the school administration for this purpose. Despite this whole extensive effort parents were not willing to take out time for data collection. Subjective bias on part of the parent while reporting upon the child cannot be completely ruled out; even though this was clarified at the start of the data collection.

**Way forward:**

Future representative and large sample studies are required to assess the prevalence of the problem at the National level. The results can then be used to plan and implement further necessary corrective measures for the children.

## CONCLUSION

The teachers and parents are both very authentic informants when it comes to the assessment of behavior problems in young children. According to their assessment, there is a significant rise in the existing level of the behavior issues in its various sub-domains in both sector schools than the last statistics of 2010. This warrants an in-depth look into this problem and the relevant influencing factors by all the stake holders i.e parents, teachers, and the government.

## REFERENCES


**1.** Connell, M.E., Boat, T., Kenneth, E., 2009. Preventing mental, emotional, and behavioral disorders among young people: progress and possibilities. NRC and IOM of the National Academies, Washington DC: The National Academic Press.

**2.** Kessler, R.C., Berglund, P., Demler, O., Jin, R., Merikangas, K.R., Walter, E.E., 2005. Lifetime prevalence and age of onset distributions of DSM-IV disorders in the national comorbidity survey replication. Arch of Gen Psych; 62(6): 593-602

**3.** Smith, F., Cuijpers, P., Oostenbrink, J., Bateloan, N., de Graaf, R., Beekman, A., 2006. Costs of nine common mental disorders: implication for curative and preventive psychiatry. J of Mental Health Pol & Econ; 9: 193-200

**4.** Wu,P., Hoven, C.W., Bird, H.R., Moore, R.E., Cohen, P., Algeria, M., et al. 1999. Depressive and disruptive disorders and mental health service utilization in children and adolescents. J Am Acad Child Adol Psych; 38: 1081-1092

**5.** Woo, B.S.C., Ng, T.P., Fung, D.S.S., Chan, Y.H., Lee, Y.P., Koh, J.B.K., et al. 2007. Emotional and behavioral problems in Singaporean children based on parent, teacher, and child reports. Singapore Med J; 48(12): 1100

**6.** Syed, E., Hussain, S.A., Mehmood, S., 2007.Screening for emotional and behavioral problems among 5-11-year-old school children in Karachi, Pakistan. Soc Psychiatry Psychiatr Epidemiol; 42: 421-427

**7.** Khan, F., Naqvi, H.A., 2013. child psychiatry in Pakistan: A growing torment. J Coll Physician Surg Pak; 23(6): 381-382

**8.** Syed, E., Hussein, S.A., Haidry, S.Z., 2009. Prevalence of emotional and behavioral problems among primary school children in Karachi, Pakistan – multi-informant study. Indian J of Paeds; 76: 623-627

**9.** Goodman, R., 1999. Psychometric properties of Strength and Difficulty Questionnaire. J Am Acad Child Adolesc Psychiatry; 40: 1334-1137

**10.** Samad, L., Hollis, C., Prince, M., Goodman, R. 2005. Child and adolescent psychopathology in a developing country: testing the validity of the Strength and Difficulty Questionnaire (Urdu version). Int J Meth Psych Res; 14: 158-166

**11.** Nikapota, A. 1991. Child psychiatry in developing countries. Br J Psych; 158: 743-751

**12.** Mumford, D.B., Minhas, F., Akhtar, I.,Akhter, S., Mubbashar, M.H., 2000. Stress and psychiatric disorders in urban Rawalpindi. Brit J Psychiatry; 177: 557-562

**13.** Hussein, S.A., 2010. Dual informant ratings of emotional and behavioral problems among primary school children. Pakistan J of Psychological Res; 25(2): 165-177

**14.** Goodman, R., Slobodskaya, H., Knyazer, G., 2005. Russian child mental health: a cross-sectional study of prevalence and risk factors. Eur Child Adolesc Psychiatry; 14: 28-33

**15.** Fleitlich, B., Goodman, R., 2004. Prevalence of child and adolescent psychiatric disorders in southeast Brazil. J Am Acad Child Adolesc Psychiatry; 43: 727-734

**16.** Rahman, T., 2005. Denizens of alien worlds: A study of education, inequality, and polarization in Pakistan. Oxford University Press: 210

**17.** Merikangas, K.R., He, J.P., Burstein, M., Swanson, S.A., Avenavoli, S., Cui, L., Benjet, C., et al. 2010. Lifetime prevalence of mental disorders in U.S adolescents: results from the National Comorbidity Survey Replication – adolescent supplement (NCS-A) Am. Acad. Child Adolesc. Psychiatry; 49: 980-989.

**18.** Kumpulainen,K., Ransen, E., 2002. Symptoms and deviant behavior among eight-year-olds as predictors of referral for psychiatric evaluation by age 12. Psychiatry Serv; 53(2): 201-6.



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