ORIGINAL ARTICLE

COMPARATIVE BEHAVIOUR PROBLEMS AMONG PRIMARY SCHOOL CHILDREN OF GRADE-5 IN PUBLIC & PRIVATE SCHOOLS OF LAHORE: TEACHER & PARENT REPORTING

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Background: The World Health Organization (WHO) estimated that about 10-20% of children worldwide have mental or behavioural problems. Objectives of the study were 1) To determine the prevalence of behavioural problems among primary school children of grade-5 in public and private schools of Lahore upon teachers and parents' reporting 2) To identify association of socio-demographic factors to Total behavioural problems in the study subjects. **Methods:** Descriptive cross-sectional study, conducted in 18 public and private primary schools in Lahore, during 2018-19; with a sample of 396, and simple random sampling technique applied. Inclusion criteria: 1) willingness of the teacher 2) class teacher/ subject teacher 3) teacher has spent >6 months with the class 4) willingness of the parents for their child selection. Exclusion criteria: 1) teachers who had taken part in similar research in the past year 2) child with positive family history of the behavioural problem in siblings 3) child himself/ herself diagnosed for such problem. Data were collected on a standardized Strength and Difficulty Questionnaire. **Results:** Data of 369 students collected through dual informants' survey and analysed. Upon parent reporting the prevalence of total abnormal behavioural problems was 44%; and with teacher reporting 52.85%. Highly significant association was found between gender and type of school (p-value <.001) and teacher outcome. The overall percent agreement for dual informants was 60%. Multiple regression analysis identifies male gender and public-school type to be the predictors of abnormal behaviour problems in primary school children. **Conclusion:** There is a marked increase in the extent and magnitude of total behaviour problems among male students and in public schools; identified as two significant predictors of the problem.

Keywords: Primary school; Grade-5 students; Class/ subject teachers; Parents; Strength and Difficulty Questionnaire

Citation: Shahzad S. Comparative behaviour problems among primary school children of grade-5 in public & private schools of Lahore: Teacher & parent reporting. J Ayub Med Coll Abbottabad 2021;33(4):629–34.

INTRODUCTION

Behavioural problems among children are defined as: symptomatic expression of emotional or interpersonal maladjustment especially in children as by nail-biting, enuresis, negativism, or by overt hostile or antisocial acts; especially a child.[1] Health care professionals (HCPs), parents, and teachers should understand the importance of identifying behaviour problems at a young age and should be able to apply corrective measures. Potential lifetime promising benefits of preventing behavioural problems are on the highest when young people are focused upon. Interventions can be effective in the prevention and delaying of such disorders as most of such behavioural problems have roots deep down in childhood and youth. In any given year 14–20% of young people are diagnosed and labelled with such disorders.[2] For prevention purposes, health professionals proposed that indicated interventions should be adopted, for which it is important to have a current baseline prevalence of emotional and behavioural problems among the population of interest.[2] A study carried out in Bangladesh with a sample of 922 children aged 5–10-year-old found an estimated prevalence of around 15%.[3] In another study conducted in Italy upon 5–9-year-old primary school children, teachers reported a prevalence of 8.7% of total behavioural problems among children; whereas parents reported a 14.7% prevalence of total behavioural problems.[4]

In Pakistan, an increasing trend of prevalence of behavioural problems has been noted in the young adult population. To identify such trends in young children of primary school age, very few studies have been done up till now and that too not with a representative sample. In a pioneer study done in Lahore, Pakistan, the prevalence of behavioural problems among school children was found to be 9.3%.[5] Few other studies in recent past, were carried out on primary school children 5–11 year of age with teacher rating Performa found a prevalence of 35.8%,[6] and 51.60%;[7] but the authors of these studies did not take parents' reporting regarding behavioural problems in their children. Child mental health

services are plagued by constraints of resources, same as adult mental health services in Pakistan. Multiple factors govern child mental health care: the nature of the practice, referral conventions, relationship with paediatricians, general physicians, and specialists are some of the factors.

The problem in our set up is that behavioural problems in young children are prone to be overlooked or ignored on account of various factors like it is taken as taboo if a child is labelled with such a problem and needs expert advice or help; teachers in schools are overburdened and are not trained enough in this regard; communication between teacher, HCP and parents is grossly lacking; and most importantly parents are minimally aware of its significance and have less information upon this issue. HCPs, parents, and teachers should understand the importance of identifying behavioural problems in childhood, be on the same page regarding a child labelled with such problem; and able to communicate with each other. In this way, they would be able to plan and implement prevention/ intervention at that very early age, and will have far better chances of improvement and nipping the problem in budding. There is a huge literature gap in this particular area in our set up and studies with both teacher and parent reporting/ observation regarding behavioural issues in children are next to none.[8] Hence, this current comparative will add valuable knowledge to existing data in our set up and will be a baseline study in this area. Objectives: 1) To determine the prevalence of comparative behavioural problems among primary school children of grade-5 in public and private schools of Lahore upon teachers and parents' reporting 2) To identify association of socio-demographic factors to Total behavioural problems in the study subjects.

Research Questions for this study: 1) What is the prevalence of total behaviour problems among primary school children upon parents' and teachers' reporting in primary school children of the middle category (socio-economic status) public and private sector schools of Lahore? 2) What is the relation between total behavioural problems and socio-demographic variables?

MATERIAL AND METHODS

It was a cross-sectional study conducted in public and private schools in Lahore during 2018–2019, and simple random sampling technique was used. Three towns of Lahore were selected randomly for this study; and the total number of public and private schools were listed (as obtained from EDO Education Office Lahore) for the selected three towns. Middle socio-economic category schools (upon fee structure of 20–5000 Rupees/ month) were marked in the list. Three public and three private schools were selected for one town by simple draw method from the sample frame; thus, a total of 18 schools were selected for three towns. The sample size was calculated upon Open Epi software using parameters: the total population of 111892 of grade-5 students, the prevalence of 34%,[6] margin of error at 5%, and Confidence Interval of 95%. The calculated sample size was 345; and attending to a 20% non-response rate sample of 396 was finalized. This sample size was equally divided into two sectors, i.e., 198 students from one sector; hence, 66 students from three schools of each town. Lastly, 22 students were selected randomly from the sample frame; from each school in a sector. The same procedure was applied for the other sector too to recruit 198 students for the study.

Parents and teachers of the selected students were the two survey observers. The study population was primary school children of grade-5 and class or subjects' teacher for grade-5. Inclusion criteria were: 1) willingness of the teacher 2) class teacher or subject teacher (who teaches at least two subjects to the class) 3) teacher had spent a minimum of six months with the students 4) willingness of the parents of selected students. Exclusion criteria were: 1) teachers who had taken part in research of similar kind in the past one year 2) child with positive history of diagnosed behavioural problems in siblings 3) child himself/ herself diagnosed for such problem 4) parents who had taken part in similar research in past one year. Study variables included were: 1) socio-demographic variables of parents (age, education, job status, mother status, long illness, single-parent family, family type, positive family history of behavioural problems); 2) socio-demographic variables of the child (age, gender, birth order number, number of siblings, type of schooling, diagnosed behavioural problem); 3) socio-demographic variables of the teacher (age, gender, educational status, work experience, contact period with grade-4); total behaviour problems scores. Data collection instruments were: 1) socio-demographic parent Performa: a 17 item Performa was developed that included all the socio-demographic variables (for parent and child) that were considered important through literature review and expert discussion 2) demographic teacher Performa: included socio-demographic variables of teacher 3) Standardized SDQ – Parent Rating Performa 4) SDQ – Teacher Rating Performa. SDQ is a brief mental health screening questionnaire that measures 25 attributes grouped under five subscales.

To generate a total score (0–40) of behavioural problems for a child all subscales are summed up. Total difficulty score and category bands are classified into normal, borderline, and abnormal; separately for both teacher and parent reporting *Prorforma*.[9] SDQ can be completed by parents and teachers of children up to 16 years of age. It has been translated into Urdu and its validity and reliability were tested in Pakistan.[10] Data collection was done for the selected children and the parents of each child were interviewed or they filled in the questionnaire in isolation; in a specially planned parent-teacher meeting in each school. Data from the teachers was collected a day later than parents and one school was completed in two days. All ethical considerations for the study were observed and data as confidential in all manner. The data analysis plan was: descriptive statistics and frequency trends calculated; total behaviour problem scores calculated and categorized for both observers; associations noted by Chi-square test of significance; Overall Percent agreement calculated for both observers; and Multiple Regression Model applied. Ethical approval was duly obtained from the relevant institution and all ethical considerations were observed in the form of anonymity of the respondents and institutions, confidentiality of the data, and data was accessible only to the principal investigator, i.e., myself.

RESULTS

After exclusion data for 369 students as reported by the respective teachers was entered and analysed on SPSS 20. My sample had 209 male and 160 female students of Grade-5, and teachers reported upon all 369 students. Age range was 9–15 years, Mean 11.17±1.049. Whereas only a total of 209 (out of 369) parents turned up for reporting upon their selected child. A total of 42 teachers were taken for their report upon the students. Their socio demographics showed: 95% were class teachers and 5% subject teachers; 2.4% had Intermediate, 19% Graduate, 78.6% had Post Graduate degree; 11.9% had <1 year, 28.6% had 2–5 year, 42.9% had 6–9 year, 16.6% had ≥10 year of work experience duration; 4.8% teachers had 6 months' duration of contact with grade 5 students, 47.6% had 6–12 months, and 47.6% had 1–5 year of contact duration with the students.

Table-1: Socio demographic characteristics of students (n=369)

Variable	Public school	Private school
Gender		
Male	126 (66.31%)	83 (46.37%)
Female	64 (33.69%)	96 (53.63%)
Age group	M-77 (61.6%)	M-49 (59.04%)
9–11.5 years	F-36 (55.39%)	F-63 (65.62%)
	M-31 (24.8%	M-29 (34.94%)
11.6–13.5 years	F-21 (32.30%)	F-31 (32.29%)
	M-17 (13.6%)	M-5 (6.02%)
13.6–15 years	F-8 (12.31%)	F-2 (2.09%)

Table-2: Parents' report upon total behaviour problems (n=209 (out of 369)

Variable	Public schools	Private schools	Total
Total behavioural problems			
Borderline/ Abnormal	60 (53.49%)	32 (60%)	92 (44%)
Normal	69 (46.51%)	48 (40%)	117 (56%)
Total	129 (100%)	80 (100%)	209 (100%)

No significant association of parent observed total scores were found with any socio-demographic factor with Chi-square test application.

Table-3: Teachers' report upon total behaviour problems (n=369)

Variable	Public schools	Private schools	Total
Total behavioural problems			
Borderline/ Abnormal	122 (64.21%)	73 (40.79%)	195 (52.85%)
Normal	68 (35.79%)	106 (59.21%)	174 (47.15)
Total	190 (100%)	179 (100%)	369 (100%)

Table-4: Association of teacher observed total behaviour problems with demographic factors (n=369)

Variable	Teacher observed behaviour problems		*p*-value
	Borderline/ Abnormal	Normal	
School type			
Public	122 (62.56%)	68 (39%)	<.001***
Private	73 (37.43%)	106 (61%)	
Gender			
Male	136 (69.74%)	73 (42%)	<.001***
Female	59 (30.25%)	101 (58%)	

Chi-square test was applied and *p*-value <.05 was taken significant. No significant association of total scores was found with any other factor upon teacher reporting.

Table-5: Overall Percent Agreement of both observers regarding behaviour problems in children (n=209)

	Observer 1 (parent)	
	Behaviour problems	
	Positive	**Negative**
Positive	58	49
Negative	35	67
Total	93	116

Overall percent agreement = a+d/ a+b+c+d x 100 = 60%

Table-6: Multiple regression model using teacher observed behaviour problem total score as outcome

Variable	UnAdj.OR	95% CI		AOR	95% CI		*p*-value
		Lower	Upper		Lower	Upper	
School type	2.605	1.711	3.967	3.164	1.538	6.506	.002***
Gender	3.189	2.077	4.898	3.021	1.614	5.656	.001***

DISCUSSION

My study upon parent observation found the prevalence of abnormal total behaviour problems higher than past few researches.[5,6,8,11]; whereas it's slightly less than a recently found the prevalence of 48.50%[7]. The comparative local studies and regional studies show similar pattern and many of the socio-demographic characteristics of the study subjects are similar to our setting. In the present study, school wise comparison of parent observed abnormal total behaviour problem was found to be higher in private schools than in public schools; which is opposite to other studies stating higher trends in government schools than in private schools;[7] and high prevalence of abnormal total behaviour problem in community schools as opposed to in private school children[8]. A probable reason for this finding in the present research can be explained based on a smaller number of parent's observations that turned out for data collection and interview, and this picture might have been different if all three hundred and sixty-nine parents had given the information. Whereas school-wise comparison in my study (parent observation) to measure the extent and magnitude of behaviour problem over the past ten years shows a greater rise in the problem among students: in public and in private schools.[8] This is a significant finding of present research that behaviour problems among this age group have been on the rise over the years; which needs to be looked into and should be dealt with, with proper needful intervention measures.

A very significant finding in my study is the teacher observed prevalence of abnormal total behaviour problem which is higher than few other studies; where teachers have reported lesser prevalence of the problem.[6,7,12] School wise comparison showed an increase in the prevalence of abnormal total behaviour problem among students of public schools and reduction in the prevalence among students of private schools; when compared to a past study.[7] These findings are the strength of my study and signifies the extent of the problem in public schools; that can have a greater impact upon the classroom learning environment and it can place a greater burden upon teachers when they are not fully trained to identify such behaviour problems and dealing with them effectively. Another assumption for this finding could be: level of education, awareness regarding behavioural problems, inability to identify a behaviour problem in a child, and lower socio-economic status of parents in public schools could be the contributing factors towards this result.

Dual informants were used for reporting upon the selected students and I found that teacher observed prevalence for abnormal total behaviour problem is higher than parent observed prevalence. One probable reason for this finding might be the lesser turnout of parents for data collection. This finding is consistent with other studies conducted in the past that have also stated the same trends.[6,7] Various other studies in the past have shown that dual informants (parents and teachers) tend to report behaviour problems to a different extent in the same children. The difference between ratings of both informants may be due to the protective effects of parent's wish and intention to keep their child safe from any hurt that is caused to them by other's rude or inconsiderate behaviour.[13,14] This finding in my study is strengthened by another past research that stated, child behaviour may be specified in specific situations; hence certain problems may emerge in certain specific settings and not everywhere. Thus, different ratters get the opportunity to observe different behaviour patterns in different situations.[15] This result in my study can also be explained on the ground that children behave differently in different settings. Hence their behaviour at home with parents especially with their mother is different from how they behave in school, among peers and teachers. Another probable reason for this phenomenon could be hidden in the social setup of developing countries and Pakistan specifically. Parents believe that a child labelled with a behaviour problem is a stigma for the family as well as for that particular child also, and

needing professional help for this very reason is taboo for both. So, with some caution, it can be stated: the observation made by a parent regarding their child (mostly mothers in this case and few fathers) does not give the whole true picture regarding the child; rather their observation might mask the problem. On the contrary past research in developed countries has shown that parents and teachers both are good informants regarding behaviour problems at home and school.[16]

A strong and positive finding of the present study is the higher trend of parent observed abnormal behaviour among male students than in female students in public schools; whereas in private schools' higher abnormal behaviour among girls than in boys. This finding is strongly supported by another research that also found a higher proportion of abnormal behaviour in boys than in girls.[8,7] Though the present study could not find a statistically significant association between these two variables which is in contrast to the findings of many of the past researches that found a significant association between gender and total behaviour problems.[8,6,17]

The higher trend of parent observed abnormal behaviour problem in this study, more so in public school students than in private school students; is strongly supported by past studies that found similar trends of abnormal behaviour in disadvantaged schools than in private schools.[7,8,17] Though the present study could not find a statistically significant association between school type and parent observed total abnormal behaviour problem which is in contrast to many of the past research findings that state: school type and parent observed abnormal total behaviour problems.[8,17] I also found a highly significant association of gender with teacher observed total behaviour problem in the total sample (p-value = <.001), with a higher proportion among male students than in female; and highly significant association of school type with teacher observed behaviour problem for the total sample (p-value = 0.000), with a higher proportion of abnormal behaviour among public school students than in private school students. These findings are a strength of my study and are consistent with past research findings that also state higher behaviour problems among boys than in girls and higher in community schools than in private schools;[7] significant association among gender and teacher observed total behaviour problem, and borderline significant association between school type and total behaviour problem.[17] This result is also supported by another study conducted in Nigeria with similar school types, which found behaviour problems were frequent and common in government schools and boys were found to be more disturbed with antisocial behaviour more common among boys.[18]

Overall percentage agreement of dual informants regarding the total behaviour problem, is a very important positive finding; interpreted as 60% of the time both observers agree upon the decision of labelling students with an abnormal behaviour problem or normal. So cautiously it can be stated that children agreed upon for having behaviour problems might need further professional diagnostic help and if required then early intervention should be given. Finding overall percentage agreement between dual informants also validates their SDQ scoring for behaviour problems and strengthens the present result.

Multiple Regression Model analysis was applied to remove the effect of conventional and other confounders and identify the true association and to make prediction. The teacher observed total behaviour problem scores were taken as the outcome in the model and after adjusting; I found a highly significant association between gender and teacher outcome showing Adjusted Odds Ratio AOR= 3.021, CI 1.614–5.656, p-value = 0.001; school type and teacher outcome AOR= 3.164, CI 1.538–6.506, p-value = 0.002. None of the other factors (birth order number, single-parent family, age, number of sibs, parental literacy, and father income <25000) found to have a significant association with the outcome after adjustment. So, for the present research study, it can be safely stated that gender and school type have a true association with an abnormal behaviour problem; and hence I can cautiously state that male gender and public-school type are the predictors of abnormal behaviour problems in the primary school children.

CONCLUSION

It can be safely stated that parents and teachers are authentic and significant observers to report on behaviour problems in children. According to the results, I can conclude that there is a marked increase in the extent and magnitude of total behaviour problems among male students and public schools. Overall Percent agreement between the two informants warrants that behaviour problems assessment should be adopted by schools on regular basis; as this would affect students' learning as well as personality growth. Result of the prediction model warrants to have a deeper look into the situation.

Strengths & Limitations:

Strengths of my study are: to the best of my knowledge, it's the first study to assess comparative behaviour problems in young children in public/ private schools with a representative sample; using dual informants reporting; determining overall

agreement between the two informants; and making the prediction. So, with caution, I can state that trends seen in this study will be more or less the same across the targeted population.

The major limitation of this study was the large non-response of the parents; even after reminders. Since the true association has been developed and cautious prediction has been made, further investigation of the factors behind this prediction is needed.

Way forward:

Future representative studies should be planned with dual observers and prediction purposes; so as results should be taken up for action to improve the mental health of the child and improve upon his growth in every way.

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Submitted: February 12, 2021	*Revised: August 11, 2021*	*Accepted: August 15, 2021*

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