A BUMPY ROAD TO YOUTH: A CROSS SECTIONAL SURVEY TO ASSESS EMOTIONAL AND BEHAVIORAL ISSUES OF CHILDREN OF PESHAWAR

Mifrah Rauf Sethi[1,2], Farhana Jahangir[2], Erum Irshad[2], Muhammad Irfan[1]

[1] Department of Psychiatry and Behavioural Sciences, Peshawar Medical College, Riphah International University Islamabad
[2] Department of Psychology, University of Peshawar

Address for correspondence:
Mifrah Rauf Sethi
Department of Psychiatry and Behavioural Sciences, Peshawar Medical College, Riphah International University Islamabad

E-mail:
mifrahrauf@gmail.com

Date Received:
23rd January, 2023
Date Revised:
10th April, 2023
Date Accepted:
13th April, 2023

This article may be cited as
Sethi MR, Jahangir F. Irshad E, Irfan M. A bumpy road to youth: A cross sectional survey to assess emotional and behavioral issues of children of Peshawar. J Postgrad Med Inst 2023;37(2): 91-102. http://doi.org/10.54079/jpmi.37.2.3213

ABSTRACT

Objective: To determine the prevalence of Emotional and Behavioral problems in school-aged children of Peshawar Pakistan.

Methodology: A cross-sectional survey was conducted on students with the age range of 10-13 years from different private institutions of Peshawar from January to June 2022. The strength and difficulty questionnaire was used to check the emotional and behavioral problems of children along with demographic information. Analysis was done using SPSS v.26 and the results of a test of significance were considered significant at $p<0.05$ level.

Results: The response rate was 93%, with the mean age (n=2053) of 12.45 + 0.79 years. The Reliability of the scale strength and difficulty Questionnaire (SDQ) through Cronbach Alpha reliability was 0.668. The majority of the students were boys (n=1768,86.1%), middle born (n=1924, 93.7%), and belonged to middle socio-economic status (n=2027, 98.7%) respectively. According to the responses on the strength and difficulty questionnaire (SDQ), the prevalence rate was 27.6% (n=566) as abnormal cases. Regarding gender difference, a significant result found that males have more conduct, hyperactivity, and peer problems (p= 0.000) than females. A statistically significant relationship was found in self-reported SDQ among age, gender, birth order, and educational level (p=0.000) through Linear regression analysis.

Conclusion: It is estimated that almost one-third of the children reported emotional and behavioral problems. Furthermore, males had a higher level of behavioral problems, while females had more emotional problems.

Keywords: Emotional; Behavioral; Children

INTRODUCTION

Childhood is the developmental phase of life in which children are keen to develop effective communication skills and learn adaptive behaviors.[1] A child's behavioral, emotional, physical, and cognitive growth in the initial years of life plays an essential role in the development of a child's life.[2-4] Behavioral problems encompass social behaviors and cultural norms while emotional problems account for an individual's ability to control and express their emotional states.[5] With cognitive and physiological changes, there are few behavioral and emotional problems in children, which are very common and drastically affect their regular performances.[6-8]

Few studies were conducted to evaluate the effects of emotional and behavioral problems on children not only on children's life but also evaluate the effects on their families and societies.[9-11] During the critical phase of childhood, a child may face many emotional and social pressures that can develop physical, behavioral, social, and academic problems[12], also have a negative impact on a child's school performance, self-esteem, and social involvement along with other serious mental health issues.[13-15]

Many risk factors have been linked in some research to the emergence of emotional and behavioural issues in children. Consider factors such as parental occupation and education, marriage and divorce rates, and unemployment.[16-19] Also one of the studies suggested that children's internalizing problems were related to the mother's mental health, whereas externalizing problems were related to the father's mental health.[20]

One of the surveys conducted in Pakistan on "emotional and behavioral problems" among school children reported a 9.3% prevalence of behavioral problems.[21] Similarly, one of the studies conducted in Karachi on school-going children, reported 34% of children having behavioral problems with antisocial and conduct

problems being the commonest.[22] Similarly, another study also conducted in Karachi on working children reported a 9.8% prevalence of behavioral problems.[23] One of the studies in Bangladesh on a huge sample of school-going children of age between 5 to 10 years, found a prevalence of around 12%.[24]

Globally, few studies have been done on the prevalence of emotional and behavioral problems in children,[25-27] whereas not much research work is done on the prevalence of childhood problems in Pakistan. However, despite the alarming situation created by this problem, no such study has been conducted in Pakistan, especially in district Peshawar, to the best of our knowledge, so this study aims to find out the prevalence of emotional and Behavioral problems in school children.

METHODOLOGY

This cross-sectional survey was conducted on children ranging in age from 10 to 13 years of age in private educational institutes in Peshawar, Pakistan. The duration of the study was from January to June 2022. The Census technique was used, and all the eligible students who consented to participate were included. Those with epilepsy and learning disabilities were excluded from the study. The ethical approval (PRIME/IRB/2021-33) was obtained from the Institutional Review Board of Prime Foundation Pakistan, and before the collection of data, formal permission was obtained from the institutional authorities. Written informed assent forms were obtained from the children who had emotional and behavioral issues. The demographic data (including child and family characteristics and emotional and behavioral problems in families) was collected in addition to a scale to measure emotional and behavioral problems in children to identify the number of children having emotional and behavioral problems. "The 'Strengths and Difficulties Questionnaire' (SDQ)" was developed by Goodman in 1997. This scale measures the child's emotional and behavioral problems. The scale comprises 25 items, which measure the five domains: one is pro-social-behavior and another one is a problem-behavior domain, which includes conduct and peer problems, emotional symptoms, and hyperactivity. A 3-point scale of 0 to 2 from certainly true to not true was used. It is a validated instrument effective in identifying behavioral disturbance in children.[28] The Inter-scale correlation using the Pearson correlation coefficient between the strength and difficulty questionnaire with its subtypes showed a significant positive and strong correlation (p=0.000). The data was analyzed using SPSS V25. Analysis of the basic variables was carried out using descriptive statistics for percentages and frequencies. The internal consistency of the SDQ scale was measured through Cronbach's Alpha reliability and alpha equal to or greater than 0.70 was considered satisfactory. The scores of SDQ and its subtypes were compared between different gender by using the t-test. In addition, Simple linear regression was used to find out the effort of SDQ on the age, gender, class, and birth order of the students. Inter-scale Correlation was calculated by applying Pearson Correlation to find out the relationship between SDQ with its subtypes. The results of a test of significance were considered significant at $p<0.05$ level.

RESULTS

A total of 2200 students participated in the study. Out of which 2053 (93%) forms were complete in all aspects. The mean age of the sample was 12.45 ± 0.79 years. The Cronbach Alpha Reliability of the Strength and Difficulty Questionnaire (SDQ) was 0.668. The majority of the students were boys (n=1768,86.1%) middle born (n=1924, 93.7%), and belonged to middle socio-economic status (n=2027, 98.7%). According to the responses on the strength and difficulty questionnaire (SDQ), less than half of the students come under the normal range (n=990, 48.2%) while only a few suffered from abnormal emotional and behavioral problems (n=566, 27.6%). Regarding the subtypes of SDQ, the majority suffered from borderline cases of peer problems (n=762, 37.1%), followed by abnormal cases of conduct problems (n=644, 31.4%), abnormal cases of hyperactivity (n=357, 17.4%) and abnormal cases of emotional problems (n=178, 8.7%) respectively. Details are in Table 2.

A significant difference was observed in terms of gender using a t-test with SDQ and its subtypes that males have more conduct, hyperactivity, and peer problems(p=0.000) than females, except for emotional problems, which showed the non-significant difference was observed between males and female genders (p=0.753). Furthermore, SDQ with its subtypes of hyperactivity and peer problems indicated a large effect size. Details are given in table-3.

The simple linear regression analysis showed a statistically significant relationship in SDQ among age, gender, birth order, and educational level (p=0.000). The R^2 is 0.048,

Table 1: Inter-scale correlation using Pearson correlation coefficient between strength and difficulty questionnaire and its subtypes (n=2053)

S. No	Scales	I (p-value)	II (p-value)	III (p-value)	IV (p-value)	V (p-value)
I	SDQ Total	1				
II	Emotional Problems	.643** (.000)	1			
III	Conduct Problems	.726** (.000)	.326** (.000)	1		
IV	Hyperactivity	.750** (.000)	.252** (.000)	.413** (.000)	1	
V	Peer Problems	.709** (.000)	.213** (.000)	.363** (.000)	.434** (.000)	1

NOTE ** Correlation is significant at 0.01 level.

Table 2: Basic demographic details of the study (n=2053)

Variables		Frequencies (%)
Gender	Male	1768 (86.1%)
	Female	285 (13.9%)
Age	M + SD 12.45+ 0.79	Range 10-13 years
Birth Order	First Born	127 (6.2%)
	Middle Born	1924 (93.7%)
	Last Born	2 (0.2%)
Class	Grade 4th	59 (2.9%)
	Grade 5th	432 (21%)
	Grade 6th	904 (44%)
	Grade 7th	658 (32.1%)
Institutions	School 1	649 (31.6%)
	School 2	892 (43.4%)
	School 3	285 (13.9%)
	School 4	227 (11.1%)
Socio Economic Status	Low	3 (0.2%)
	Middle	2027 (98.7%)
	High	23 (1.1%)
Fathers Occupation	Employed	2046 (99.7%)
	Unemployed	7 (0.3%)
Mothers Occupation	Employed	23 (1.2%)
	Housewives	2030 (98.8%)
Strength & Difficulty Questionnaire (SDQ)	Normal	990 (48.2%)
	Borderline	497 (24.2%)
	Abnormal	566 (27.6%)
Emotional Problems	Normal	1705 (83%)
	Borderline	170 (8.3%)
	Abnormal	178 (8.7%)
Conduct Problems	Normal	1006 (49%)
	Borderline	403 (19.6%)
	Abnormal	644 (31.4%)
Hyperactivity	Normal	1346 (65.6%)
	Borderline	350 (17%)
	Abnormal	357 (17.4%)
Peer Problems	Normal	670 (32.6%)
	Borderline	762 (37.1%)
	Abnormal	621 (30.2%)

Table 3: Mean difference and t value on gender difference on strength and difficulty questionnaire and its subtype (n=2053).

Variables	Male (n=1768) M±SD	Female (n=285) M±SD	t value (Sig)	Cohen's d
SDQ Total	.87+.847	.34+.681	10.057 (.000)	0.689
Emotional Problems	.25+.601	.27+.622	-.315 (.753)	0.033
Conduct Problems	.87+.882	.55+.810	5.687 (.000)	0.377
Hyperactivity	.59+.799	.10+.376	10.036 (.000)	0.784
Peer Problems	1.08+.774	.32+.556	15.978 (.000)	1.127

which indicates that 48% of the variance in the SDQ can be explained by the age, gender, birth order, and educational level of the students. The adjusted R^2 is 0.047, showing the fit of the regression model to one another. Complete details are given in Table 4.

DISCUSSION

This study was conducted in private institutes in Peshawar to estimate the prevalence of children's "emotional and behavioral problems". Based on the research findings, we estimated that the prevalence of emotional and behavioral of children in primary and middle schools in Peshawar aged 10-13 years, is 27.6%, which is almost similar to the estimated prevalence presented in UNICEF's The State of the World's Children in 2021.[29] However, only a few of the studies revealed a little greater prevalence than the 34% in our study.[22,30] The overall prevalence rate of emotional and behavioral problems was slightly more than a tenth of the study population, which could be a good reason why our research findings were low due to good healthcare facilities, surveys, and school programs on child's mental health and behavior modification. According to other studies, children's emotional and behavioral issues have an epidemiological rate between 7.8% to 26%.[31-35] Furthermore, the breakdown of the percentage was given in one study where hyperactivity was 8.5%, peer problems were 6%, emotional issues were found in 11.5%, and conduct issues were 9.7%, which are all lower than our research findings.[36]

This research study found that male students have more peer, hyperactivity, and conduct problems, which is in contrast with other research findings, where female students have more problems,[36] but our research findings are in favor of other studies, where males have more problems than females.[37] Few of the studies are in favor of our findings that female students suffered more

Table 4: The simple linear regression analysis on the strength and difficulty questionnaire as predictor (n=2053)

Variables	B (SE)	P	95% CI
SDQ Total	.873 (.312)	.005	.262-1.485
Age	.043 (.028)	.121	-.011-.098
Gender	-.528 (.053)	.000	-.632--.424
Birth order	.055 (.076)	.469	-.094-.205
Educational Level	-.020 (.027)	.465	-.074-.034
R Value	.220		
R2 Value	.048		
F Value	26.097		
P Value	0.000**		

NOTE * P<0.05, ** P<0.01. CI= CONFIDENCE INTERVAL

from emotional problems and males with peer-related problems and hyperactivity.[38, 39] Majority of the students belong to middle socio-economic status in our study which is in contrast with other study findings, where the majority belonged to low socio-economic status (78.6%).[38]

Our research found that strong positive and significant inter-scale relationship, which is similar to the other research findings.[38] One study concluded that there was a substantial association between socio-economic class and various institutions and emotional and behavioral issues, which is in favor of our research finding.[36] Similarly the same study conducted regression analysis and showed institutions, and socio-economic-status had a significant relationship with SDQ total score.[36]

LIMITATIONS

The study's findings on the incidence of emotional and behavioural disorders among youngsters in Peshawar cannot be extrapolated to other parts of the country. This is due to the study's focus on a single geographic region.

CONCLUSION

According to the findings of the study, the incidence of emotional and behavioural disorders among school-aged children in Peshawar was greater, with behavioural problems being more prevalent in males and emotional difficulties being more prevalent in females. It is worth noting that our research was the very first large population - based survey to use the SDQ in Pakistan.

RECOMMENDATIONS

Furthermore, because the study was done in a school context and did not involve children outside of school, a community-based survey is needed in the future to acquire a more comprehensive knowledge of the issue.

REFERENCES

1. Kollbrunner J, Seifert E. Functional hoarseness in children: short-term play therapy with family dynamic counseling as therapy of choice. J Voice. 2013;27(5):579-88. DOI:10.1016/j.jvoice.2013.01.010.
2. Briggs Gowan MJ, Carter AS, Bosson Heenan J, Guyer AE, Horwitz SM. Are infant-toddler social-emotional and behavioral problems transient? J Am Acad Child Adolesc Psychiatry. 2006;45(7):849-58. DOI:10.1097/01.chi.0000220849.48650.59.
3. Feldman R, Eidelman AI. Biological and environmental initial conditions shape the trajectories of cognitive and social-emotional development across the first years of life. Dev Sci. 2009;12(1):194-200. DOI:10.1111/j.1467-7687.2008.00761.x.
4. Bornstein MH, Hahn CS, Haynes OM. Social competence, externalizing, and internalizing behavioral adjustment from early childhood through early adolescence: developmental cascades. Dev Psychopathol. 2010;22(4):717-35. DOI:10.1017/S0954579410000416.
5. Hussein SA. Dual Informant Ratings of Emotional and Behavioral problems among Primary School Children. Pak J Psychol Res. 2010;25(2):165–77.
6. Cameron JL. Interrelationships between hormones, behavior, and affect during adolescence: complex relationships exist between reproductive hormones, stress-related hormones, and the activity of neural systems that regulate behavioral affect. Comments on part III. Ann N Y Acad Sci. 2004;1021:134-42. DOI:10.1196/annals.1308.015.
7. Van Oort FV, Greaves-Lord K, Verhulst FC, Ormel J, Huizink AC. The developmental course of anxiety symptoms during adolescence: the TRAILS study. J Child Psychol Psychiatry. 2009;50(10):1209-17. DOI:10.1111/j.1469-7610.2009.02092.x.
8. Salk RH, Petersen JL, Abramson LY, Hyde JS. The contemporary face of gender differences and similarities in depression throughout adolescence: Development and chronicity. J Affect Disord. 2016;205:28-35. DOI:10.1016/j.jad.2016.03.071.
9. Abdi B. Gender differences in social skills, problem behaviors and academic competence of Iranian kindergarten children based on their parent and teacher ratings. Procedia Soc Behav Sci. 2010;5:1175–9.
10. Slemming K, Sorensen MJ, Thomsen PH, Obel C, Henriksen TB, Linnet KM. The association between preschool behavioural problems and internalizing difficulties at age 10-12 years. Eur Child

Adolesc Psychiatry. 2010;19(10):787-95. DOI:10.1007/s00787-010-0128-2.

11. Egger HL, Angold A. Common emotional and behavioral disorders in preschool children: presentation, nosology, and epidemiology. J Child Psychol Psychiatry. 2006;47(3-4):313-37. DOI:10.1111/j.1469-7610.2006.01618.x.
12. Gelfand DM, Jenson WR, Drew CJ. Understanding child behavior disorders. Harcourt College Pub; 1997.
13. Najman JM, Heron MA, Hayatbakhsh MR, Dingle K, Jamrozik K, Bor W, et al. Screening in early childhood for risk of later mental health problems: a longitudinal study. J Psychiatr Res. 2008;42(8):694-700. DOI:10.1016/j.jpsychires.2007.08.002.
14. Prakash K, Coplan RJ. Socioemotional characteristics and school adjustment of socially withdrawn children in India. Int J Behav Dev. 2007;31(2):123–32. DOI:10.1177/0165025407073580.
15. Reef J, Diamantopoulou S, van Meurs I, Verhulst F, van der Ende J. Predicting adult emotional and behavioral problems from externalizing problem trajectories in a 24-year longitudinal study. Eur Child Adolesc Psychiatry. 2010;19(7):577-85. DOI:10.1007/s00787-010-0088-6.
16. Al-Asmary SM, Abdel-Fattah MM, Asal AA, Al-Helali NS, Al-Jabban TM, Arafa MA. Emotional and behavioral problems among male Saudi schoolchildren and adolescents. Neurosciences (Riyadh). 2004;9(4):299-306.
17. Verhulst FC, Achenbach TM. Empirically based assessment and taxonomy of psychopathology: cross-cultural applications. A review. Eur Child Adolesc Psychiatry. 1995;4(2):61-76. DOI:10.1007/BF01977734.
18. Harland P, Reijneveld SA, Brugman E, Verloove-Vanhorick SP, Verhulst FC. Family factors and life events as risk factors for behavioural and emotional problems in children. Eur Child Adolesc Psychiatry. 2002;11(4):176-84. DOI:10.1007/s00787-002-0277-z.
19. Angold A, Costello EJ. Nosology and measurement in child and adolescent psychiatry. J Child Psychol Psychiatry. 2009;50(1-2):9-15. DOI:10.1111/j.1469-7610.2008.01981.x.
20. Connell AM, Goodman SH. The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems: a meta-analysis. Psychol Bull. 2002;128(5):746-73. DOI:10.1037/0033-2909.128.5.746.
21. Javed MA, Kundi MZ, Khan PA. Emotional and behavioural problems among school children in Pakistan. J Pak Med Assoc. 1992;42(8):181-3.
22. Syed EU, Hussein SA, Mahmud S. Screening for emotional and behavioural problems amongst 5-11-year-old school children in Karachi, Pakistan. Soc Psychiatry Psychiatr Epidemiol. 2007;42(5):421-7. DOI:10.1007/s00127-007-0188-x.
23. Bandeali S, Jawad A, Azmatullah A, Liaquat HB, Aqeel I, Afzal A, Umal A, Abidi K, Israr SM. Prevalence of behavioural and psychological problems in working children. J Pak Med Assoc. 2008;58(6):345-9. 29.Goodman R. The Strengths and Difficulties Questionnaire: a research note. J Child Psychol Psychiatry. 1997 Jul;38(5):581-6. doi: 10.1111/j.1469-7610.1997.tb01545.x. PMID: 9255702.
24. Mullick MS, Goodman R. The prevalence of psychiatric disorders among 5-10 year olds in rural, urban and slum areas in Bangladesh: an exploratory study. Soc Psychiatry Psychiatr Epidemiol. 2005;40(8):663-71. DOI:10.1007/s00127-005-0939-5.
25. Saleem S, Mehmood Z. Development of a scale for assessing emotional and behavioral problems of school children. Pakistan Journal of Social and Clinical Psychology. 2011;9:73-8.
26. Egger HL, Angold A. Common emotional and behavioral disorders in preschool children: presentation, nosology, and epidemiology. J Child Psychol Psychiatry. 2006;47(3-4):313-37. DOI:10.1111/j.1469-7610.2006.01618.x.
27. Hong JS, Tillman R, Luby JL. Disruptive behavior in preschool children: distinguishing normal misbehavior from markers of current and later childhood conduct disorder. J Pediatr. 2015;166(3):723-30.e1. DOI:10.1016/j.jpeds.2014.11.041.
28. Goodman R. The Strengths and Difficulties Questionnaire: a research note. J Child Psychol Psychiatry. 1997 Jul;38(5):581-6. DOI:10.1111/j.1469-7610.1997.tb01545.x.
29. The State of the World's Children 2011: Adolescence: an age of opportunity. New York: Unicef; 2011.
30. Samad L, Hollis C, Prince M, Goodman R. Child and adolescent psychopathology in a developing country: testing the validity of the strengths and difficulties questionnaire (Urdu version). Int J Methods Psychiatr Res. 2005;14(3):158-66. DOI:10.1002/mpr.3.
31. U H, Arif A, H S. Assessment of mental health status among school going adolescents in North East India: A cross sectional school based survey. Asian J Psychiatr. 2017;30:114-117. DOI:10.1016/j.ajp.2017.08.021.
32. Ginige P, Tennakoon SU, Wijesinghe WH, Liyanage L, Herath PS, Bandara K. Prevalence of behavioral and emotional problems among seven to eleven year old children in selected schools in Kandy District, Sri Lanka. J Affect Disord. 2014;167:167-70. DOI:10.1016/j.jad.2014.05.062.
33. Nair S, Ganjiwale J, Kharod N, Varma J, Nimbalkar SM. Epidemiological survey of mental health in adolescent school children of Gujarat, India. BMJ

Paediatr Open. 2017;1(1):e000139. DOI:10.1136/bmjpo-2017-000139.
34. Ali A, Keyho K, Gujar N. Prevalence of mental health status in adolescent school children of Kohima District, Nagaland. Ann Ind Psychiatr. 2019;3(1):39. DOI:10.4103/aip.aip_52_18.
35. Arman S, Keypour M, Maracy MR, Attari A. Epidemiological Study of Youth Mental Health Using Strengths and Difficulties Questionnaire (SDQ). Iran Red Crescent Med J. 2012;14(6):371-5.
36. Harikrishnan U, Sailo GL. Prevalence of emotional and behavioral problems among school-going adolescents: A cross-sectional study. Indian J Community Med. 2021;46(2):232–5. DOI:10.4103/ijcm.IJCM_451_20.
37. Prior M, Virasinghe S, Smart D. Behavioural problems in Sri Lankan schoolchildren: Associations with socio-economic status, age, gender, academic progress, ethnicity and religion. Soc Psychiatry Psychiatr Epidemiol. 2005;40(8):654–62. DOI:10.1007/s00127-005-0942-x.
38. Syed EU, Hussein SA, Haidry SE. Prevalence of emotional and behavioural problems among primary school children in Karachi, Pakistan--multi informant survey. Indian J Pediatr. 2009;76(6):623-7. DOI:10.1007/s12098-009-0072-7.
39. Naerland T, Bakke KA, Storvik S, Warner G, Howlin P. Age and gender-related differences in emotional and behavioral problems and autistic features in children and adolescents with Down syndrome: a survey-based study of 674 individuals. J Intellect Disabil Res. 2017;61(6):594-603. DOI:10.1111/jir.12342.

Author's Contribution

MRS conceived the idea, designed the study, conducted the data analysis, and wrote the final manuscript. FJ, EE, and MI provided supervision throughout the study and contributed to the manuscript writing process. Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest

Authors declared no conflict of interest

Grant Support and Financial Disclosure

None

Data Sharing Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.