



ASSESSMENT OF BEHAVIOURAL & EMOTIONAL PROBLEMS AMONG CHILDREN ATTENDING PAEDIATRIC OPD IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Introduction: Behavioural and emotional problems are one of the common problems in children attending paediatric outpatient department. Identification of behavioural and emotional problems is most important not only to prevent further progression of illness but also for proper growth and development of the child. **Background:** Assessment of behavioural & emotional problems among children of age 3-10 years attending PAEDIATRIC OPD at tertiary care hospital. **Material and Methods:** This cross-sectional study was conducted for a period of 18 months from 2021-2023. Study was done on 200 children attending PAEDIATRIC OPD with parent complaining of some behavioural issues. Children were screened using PAEDIATRIC symptom check list (PSC). **Results:** We found that 22% children had positive PSC score for behavioural problems. Among children 10% children had attention disorder, 6% externalizing and 6% internalizing disorder. Habit problems were found in 22%. Among this main problem was eating disorder (33%), Others included Hyperactivity (9.96%), Thumb sucking (5.62%), Temper Tantrums (26.11%) and bed wetting (15.12%). **Conclusion:** Identification of behavioural and emotional disorders is most important so that prevention and treatment strategies can be planned as the earliest to prevent psychiatric morbidity in later life.

KEYWORDS : Behavioural and Emotional Problems; Children; Assessment; Check list.

INTRODUCTION

Behavioural and emotional problems among children is showing increasing trend in recent decades. According to WHO, behavioural disorders are universal and seen at all ages and 20% of children and adolescents suffer from a disabling mental illness.¹

Prevalence of behavioural and emotional problem has been reported to be around 6.46% to as high as ~45% in children and adolescent from many Indian studies.^{1,2} An awareness of the prevalence of these problems is important to plan mental health services for children in order to offer help and thereby improve the quality of life of the affected children. About half of all lifetime mental disorders begin before the age of 14 years. Children and adolescents in low- and middle-income countries (LAMIC) constitute 35–50% of the population.^{2,3,4,5,6} In children and adolescents several types of emotional and behavioural problems are seen including disruptive, depression, anxiety and pervasive developmental (autism) problems characterized as either internalizing or externalizing problems. Disruptive behavioural problems such as temper tantrums, attention deficit hyperactivity disorder, oppositional, defiant or conduct problems are the commonest behavioural problems in children.⁷ Many scales are used for assessment and one such was PAEDIATRIC Symptom Checklist.⁸

Use of the PSC offers an approach to the recognition of psychosocial dysfunction that is sufficiently consistent across groups and locales to become part of comprehensive paediatric care in virtually all out-patient settings.^{9,10,11}

MATERIAL AND METHODS

This cross-sectional study was carried out at paediatric department of L N Medical college & J K Hospital from February 2021- August 2022. It was approved by institutional medical ethics committee. A total of 200 children (male=91 and females=109) were included. Majority of the children were from the age group of 6-10 years i.e., 133 (66.5%). A written informed consent was obtained by the parent of the children.

Inclusion Criteria

Children of age group 3-10 YEARS attending PAEDIATRIC OPD with parent complaining of some behavioural issues were included

Exclusion Criteria

1. Those children suffering from major chronic illness

2. Children with developmental delay, chromosomal disorders and CNS disorders.
3. Children with known psychiatric disorder.
4. Children with history of chronic drug intake.
5. Children whose parents did not give consent for the study.

Method of Collection of Data: • The study was conducted at OPD of Department of PAEDIATRICs at L.N Medical College and Research Centre and associated J.K Hospital Bhopal. • During the study period children between 3 Years to 10 Years attending PAEDIATRIC OPD were screened for features suggestive of behavioural and emotional problems using few screening questions. • Children having features suggestive of behavioural problem were included in our study after taking informed consent and after explaining purpose of the study. • After getting ethical clearance we started enrolling the patient from OPD of PAEDIATRIC department who fulfilled inclusion criteria of our study. Children were included till the required sample size was reached. • Face-to-face interview was done with parents and information was recorded on predesigned and pretested questionnaire. • Initial part of Proforma consisted of information regarding demographic profile of mother and child. Information regarding various factors that may influence behaviour of children. • In Later part of Proforma Assessment of behavioural & emotional problem was done using, The PAEDIATRIC Symptom Checklist (PSC) which is a 35-item screening predesigned and pretested questionnaire approved for age group of 3-10 years.^{8,9} • Parents were interviewed on personal basis for the questions of the PSC scale • The PSC consists of 35 items that are rated as "Never," "Sometimes," or "Often" present and scored 0, 1, and 2, respectively. The total score is calculated by adding together the score for each of the 35 items. 10,11 • A positive score on the PSC suggests the need for further evaluation by a qualified health or mental health professional. • After assessment of score, parents were counselled whether the child needs further evaluation or not. • Parents of child having normal score were counselled for promotion of positive behaviour.

The raw data that were collected in the study were cleaned, recoded and keyed into the computer using Epi Info software. Quantitative variables were organized and summarized using descriptive statistics such as frequencies and percentages. Chi square test was used to test the association between categorical variables where a P value of < 0.05 was considered significant.

OBSERVATIONS AND RESULTS

There were two hundred children in this study, ninety-one were males and one hundred nine were females. The mean age of the participant was 6.82 ± 2.08 years. 66.5% participants were in the age group of 6-10 years and 33.5% of the participants were between 3-5 years of age. In the present study, the ratio of male to female was 3.2:4. The educational status of the Participant's father, only 2% of fathers were illiterate and 52% were Graduate & above. The educational status of the Participant's Mother, 12% of mothers were illiterate and 49% were graduate & above. The occupational status of father as defined by Kuppaswamy Scale of socioeconomic status. Maximum fathers were skilled worker (46%) working as drivers, carpenters etc. In total 40% fathers were Professionals and 12% had elementary occupation working as labour. The occupational status of mother. Maximum (61.5%) mothers were homemaker and rest 38.5% mothers were Working either as Teachers or as Maid. The socioeconomic status of children. 68% of them belonged to Lower Middle class as per Modified Kuppaswamy scale of Socioeconomic Status. The participant's family. Most of the children (60%) were living in a joint family and only 40% lived in nuclear family. The participant's status of parents. 96% of the children had their parents living together and 4% had separated parents. The Hobby of study subjects, most common Indoor hobby was Dancing (20%) and Outdoor Hobby was Cricket (40%). 42% children had no Indoor Hobby and 50% had no Outdoor Hobby. The total screen time of study subjects and it was observed that 76% had more than 2 hours of screen time and 24% used screen for less than 2 hours. The total time spent with each parent doing common activities. 84% of children spent less than 2 hours with father and 52% children spent 2-4 hours with mother. No child spent more than 4 hours with father whereas 26% children spent more than 2 hours with mother. The Scholastic Performance of Study subjects. Only 14% children had excellent performance whereas 38% had average performance at school. Domestic violence in study subjects and it was observed that 8% of children were subjected to domestic violence. Habit problems were found in 22%. Among this main problem was eating disorder (33%), Others included Hyperactivity (9.96%), Thumb sucking (5.62%), Temper Tantrums (26.11%) and bed wetting (15.12%). The overall behavioural problems among study subjects and as a result it was found that 10% had attention problem whereas both externalizing & internalizing disorders had same prevalence of 6%. The age wise distribution of behavioural problems among study subjects and a strong association was found. Children belonging to age group 6-10 years suffered from more behavioural disorder i.e., 26.3%. The association of gender with study subjects and in our study, it was found that behavioural problems were almost equal in both males and females. The relation between the educational status of the mother and behavioural problems in children. Behavioural problems were found to be more prevalent i.e., 25% in children whose mothers were educated < High School. The association of Mother Occupation with behavioural problems in children and out of 123 nonworking mothers and 77 working mother's behavioural changes were noticed in children of 22.8% of Nonworking Mothers and 20.8% Working mothers. The association of Socioeconomic Status with behavioural changes in children. A strong association was found among children belonging to Lower Middle class. The participant's sibling status. Behavioural Problems were more common in children having younger sibling (26.1%). 31.2% children who were living in a nuclear family had strong association with behavioural disorders. The association of screen time with behavioural changes and most of the children i.e., 25.7% with behavioural disorders had screen time of >2 hrs. most of the children who spend <2 Hr (26.5%) with father, problem in behaviour was noticed. 29.5% children who spent 4 hr with their mother had behavioural problems. Most of the children i.e., 136 the mother was the sole caretaker and out of it 21.3% manifested behavioural problem. Among

Males maximum (11.9%) had Attention Disorder whereas among females Internalizing disorder (9.9%) was the predominant behavioural problem. Among children between 3-5 years maximum (7.5%) had Attention Disorder and Externalizing disorder was present in 1.5% children whereas among 6-10 years Attention disorder was present in 11.3% and least (6.8%) was Internalizing Disorder.

DISCUSSION

Literature on the incidence of childhood behavioural and emotional disorders is scarce and very few studies are conducted in India highlighting the same issue. Also there has been great difficulty in determining the point at which behaviour or a combination of behaviours to be considered as pathological which may again be dependent on the age or the wide socio-cultural context in our country.

The present research was done to assess such children with Behavioural and Emotional Disorders and helped us in understanding the role of this early childhood, familial, ecological factors in relation to behavioural problems among age group 3 to 10 years. In our study 200 children were analysed for the prevalence of behavioural and emotional problems and various factors associated with it. There is a wide variation in the prevalence of emotional and behavioural disorders among children and adolescent. Studies have suggested that the prevalence of behavioural problems increase with advancing age. Many Indian studies have reported the prevalence of behavioural problems in the PAEDIATRIC age groups ranging from 6% to as high as 46%. The prevalence of behavioural problems was 22.2% in our study. Similar results were seen in study of Malhotra et al and Salwar et.al who reported it to be 23.3% & 24.6% respectively.^{2,12}

The prevalence in our study was found to be high as compared to the studies of Rahi et al. and Anita et al.¹³ & and Patil et.al.¹⁴, who reported prevalence of psychiatric morbidity in children as 12.0% (4-16 years), 16.5% (4-14 years), and 14.8% respectively. Similar prevalence of 9.5-10% was also reported in a WHO report of 20131. In comparison to our study, Rasote et.al.³ and Chaturvedi et.al.¹⁵ have even reported a very high prevalence of 42% and 46% respectively. Such a wide variation in the prevalence of behavioural problems from different parts of India could be due to different age groups selected by researchers or it could be due to the various socio demographic factors. Many factors may affect the prevalence of behavioural problems in the Paediatric age group. One of the most important ones is the age group selected.

Studies have suggested that the prevalence of behavioural problems increase with advancing age. None of the study done on behavioural problems has similar age group included. Most of the studies have chosen groups from the age 3 up to 18-19 yrs. Among the other factors responsible for difference in behavioural problem are the area in which study has been done, cultural practices and the most important one is the screening scale that is used in screening for behavioural problems behavioural problems has been studied in age group from. In our study the prevalence of behavioural problems was found to be more i.e., 26% in the 6-10 yrs. of age group as compared to 13% in 3-5 years of age group.

Srinath et.al.¹⁶ and Nitin et.al.¹⁷ has reported prevalence of 12% and 6% in children above 6 years respectively which is much low as compared to our study.¹⁷ Increased prevalence of behavioural problem in our study in the age group 6-10 yrs. as compared to study of Srinath et.al.¹⁶ and Nitin et.al.¹⁷ could be because of the reason that our study was done during covid and post covid period and children of this age group were most affected by the impact of lockdown i.e., school closure and activity restriction. In comparison to 13.5% prevalence of behavioural problems in the age group of 3-5 yrs. of our study, a very high prevalence of 46.7% was reported by Chaturvedi

et.al in the similar age group.¹⁵ This high prevalence warns us that problems in this age group should be regularly picked up in routine Paediatric visits. Moreover, Parents of children of 3-5 years and teachers of play school should be made aware of these problems so that they can be picked and managed early. Behaviour of the child is very much influenced by the environment in which a child is brought up. Literature suggests that the child's gender is another individual factor which has been associated with behaviour problems In Indian culture Girls and boys from their early childhood are exposed to different responsibilities shared by male and female in a family. This exposure sometimes affects the behaviour of the growing child. Boys constituted 45.5% and 54.5 % were girls in our study.

Many studies done previously has shown that males are at higher risk of mental health problems than females.^{3, 15} In our study male children were slightly at higher risk (22.9%) than female children (20.9%) but it was not significant. This result was although different from the one given by study done during covid lockdown by Nitin et.al stating males with lower prevalence 10%.¹⁷ This can be because male children often exhibit externalizing behavioural problems which are noticed earlier and more easily than the internalizing behavioural problems of girls.¹⁸ In our study attention disorder was the predominant type of behavioural problem constituting 10%, This result was different from Gaur et.al and Salwa et.al who found higher rates of conduct disorder than attention disorder among children ranging from 4.5 % to 13.8% respectively. Conduct disorder is found to be associated with failure to complete schooling, attaining poor school achievement, poor interpersonal relationships.^{12, 13} In our study it was also noted that prevalence of attention disorder was higher in children belonging to both the age groups (7.5% to 11.3%) which is different to the one by Liu et. al where prevalence was 6.3% only.¹⁹

Liukkonen et.al reported that girls ended up showing less externalizing behaviour problems over a school year than boys.²⁰ As child's problems are often multi-factorial and the way in which they are expressed may be influenced by a range of factors including developmental stage, temperament, parenting, coping, and the nature and the duration of stress. In general, chronic stressors are more difficult to deal with than isolated stressful events such as covid lockdown, parental disputes, isolation which all led to attention disorder more than conduct. These findings were strongly supported by Jiao et.al.²¹ Also if we particularly talk about our society then male children are often paid more attention and anything abnormal in them is reported early. Mother's Employment had a positive impact on the health of their children. Our study found that the risk of behavioural problems was higher in children whose mothers were Nonworking (22.8%). We noted that children of working mothers were engaged more in extracurricular activities in their free time while their mothers were at work when compared to other children. Also, these mothers are more aware of their child's behaviour and perceive any deviation early and try to prevent it. This was similar to the result given by Chaturvedi et.al psychiatric disorder was found in more in children whose mother was non-working (51%).¹⁵ But according to Nitin et.al & Rasote et.al children whose mother go out for work resulted in a state of poor interaction among family members which in itself was a source of stress and increased prevalence of behavioural disorder.^{17,3}

Data suggest that children with low socioeconomic status present with behavioural problems due to lack of resources and facility available for growing child. Chaturvedi et.al found that 60% of children with monthly family income of ≤50,000 INR were at risk of a behavioural problem when compared to the families with higher monthly income.¹⁵ Ma J et.al also concluded that prevalence of behavioural disorder is high

(18.3%) in low- and middle-income countries.²² The results of our study were similar with literature, we found that 50% of children belonging to lower class were at risk of a behavioural problem when compared to the families with higher monthly income. Also, it was observed that children whose parents' income was affected during covid lockdown manifested more of behavioural problems as described by Ray et.al.²³

This relatively high prevalence of childhood behavioural problems might be due to a higher level of environmental risk factors such as natural disasters and adverse social circumstances like poverty and child abuse and neglect. Social disadvantages and family fragmentation (e.g., caused by migrant working parents) are known to elevate level of stress affecting the mental health of parents as well as children.

Family atmosphere either filled with tension or joy will affect the children. The association of type of family was found significant (p<0.01). Children living in nuclear family manifested behavioural problems more than the ones living in joint family (31.2%). It was found that the children in nuclear family are emotionally deprived and lack affection from grandparents and cousins. This result was similar to given by Gaur et al (16.5%) and Chaturvedi et al (52%).^{13, 15} Anxiety which is usually seen with the nuclear families invariably affects the children and thus they are at higher risk of behavioural changes. As these children are more subjected to both Parent's overprotectiveness and strictness. But it was different from the one given by Rasote et al who found more prevalence of behaviour disorders in children from joint families (44.4%). It was also noted that such joint family structure has not been so successful in providing a stable environment.³

There have been studies highlighting the importance of a father as a major factor in the behavioural development of a child. About 26.5% of children who spent less than 2 hours with father were found to have risk of behavioural problems. The risk decreased as the time spent with father increased. Time spent with the parents was inversely proportional to the behavioural problems. Fathers who are actively involved in the upbringing of children reduced the frequency of behavioural problem.

COVID19 has also brought new stressors on parent and caregivers. This has hampered their capacity to provide care and remain engaged with their children. Being very keen observers of people and environments, children notice, absorb and react to the stress which unavoidably affect their well-being.

Habit problems were found in 22%. Among this main problem was eating disorder (33%), Frequency of consuming different foods and eating pattern of children is a matter of concern for their health and wellbeing and school age is the sensitive period for this dietary change. Others included Thumb sucking (5.62%), Temper Tantrums (26.11%) and bed wetting (15.12%).

Previous Studies reported 7.47% of children with nail biting, 5.39% children with thumb sucking and 20.33% children with enuresis.^{5,13}

Digital technology has exploded in past decade and media is considered as a mode of both stress and cope for children. As the major period of our research was during covid lockdown and children had no option to go out, the screen time was increased and exceeded the recommended two hours or less time by American Academy of PAEDIATRICs.²⁴ Modern forms of media including iPad, smart phones were used by children for both education and entertainment. Children with Screen time >2 hr had higher prevalence (p=0.02) of behavioural

disorders. This was similar to previous studies such as Lohaus et.al. and Mrug et.al.^{25, 26} Ilamparithi et.al also concluded that when usage of screen time exceeded 2 hours the children had²⁷ times higher conduct problems, 9.01 times higher hyper activity and peer problems, 4.86 times higher pro-social problems.²⁸ And Priya PR et. Al stated that Majority of the children (69.4%) with screen time between 2 to 4 hours where boys as media is easily accessible to them and also children belonging to joint families and children having low parental education.²⁹

Limited or no opportunity for outdoor games and socialization may have a great effect on mental health of children, making them easily bored, angry and sometimes frustrated and hence, vulnerable to mental stress. Due to increased digital connections 'emotional contagion' where the distress and fear experienced by one spread to another person may also be common in children. Moreover, child develops addiction for the screen when he spends more time on screen. He becomes aggressive when he is stopped to see screen or asked to do other activities. Among the total prevalence of behavioural disorder of 22% the rate of attention problem was 10% whereas both externalizing & internalizing disorders had same prevalence of 6% each in our study. This was much lower than the one demonstrated by Ma J et.al where there was higher prevalence of internalizing problems (24.1%) as compared to externalizing problems (14.2%).²² The prevalence rate in childhood psychiatric disorders also depends on the methodology i.e., whether children were interviewed or not and the informants interviewed as there is low agreement among informants i.e., parents, guardian and with the clinician. Thus, such studies without interviewing the child are likely to yield inaccurate estimates and were not included in this analysis. Also instruments that measure the informant's perception of behaviour can be wrong and can identify children as abnormal depending on the values granted to them by their culture therefore Selection of culturally appropriate tools in India is an important issue in epidemiological studies.

Limitations of this Study are as follows

1. This was a cross-sectional study. And it is recommended to conduct a long-term psychological cohort study for long-term follow-up
2. There was limited resources and time sensitivity during the COVID-19 outbreak.
3. There is also a possibility of non-reporting of information involving sensitive parameters

CONCLUSION

The prevalence of emotional and behavioural problems was 22% in 3-10 years of children Higher economic status, working status of mother and more time spent with father was found to have positive effect on Child's development. Behavioural problems were found to be low in these groups. Increased screen time was found to be negatively associated with Child's behavioural development. Increasing prevalence of behavioural problems in post covid era warns us that every paediatric visit should be utilized to screen and manage such children.

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