

Parental Knowledge and Educational Intervention on Behavioural Disorders in Pre-school Children in Kolkata

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Abstract

Parents need to know the common behavioural disorders and their prevention in order to detect deviations early and promote healthy childhood. A prospective interventional study was conducted to assess the impact of an educational intervention on the awareness of behavioural disorders among the mothers of pre-school children attending child guidance clinic in a tertiary care hospital in Kolkata, India. Knowledge of 50 mothers of children between 3 to 6 years of age was assessed before and one week after the educational intervention by administration of a pre-validated questionnaire and analysed with inferential statistics like paired t test. The pre-test scores of parents on knowledge of behavioural problem of children did not vary significantly with age of the child, birth order of child, type of the family, educational background of parents and behavioural disorder of child. There was a significant improvement in post-test score (17.26 ± 4.11) over pre-test score (8.28 ± 4.54) which was statistically significant ($p\text{-value } 4.494e-12 < 0.0001$). This study establishes the significance of educating parents on behavioural disorders in children and reflects the need for sustained structured educational services for parents to improve mental health of the children in a developing nation like India.

Children are the precious possession of parents, future of mankind and asset of a nation. A healthy child makes a society healthy and prosperous. From birth to adulthood a child passes through phases of physical, mental and social development. The emotional needs are considered as emotional food for healthy behaviour. The children are dependent on their parents, so parents are responsible for fulfillment of the emotional needs. They should have opportunity for development of independence, trust, confidence and self respect. Any disruption in mental or emotional development can lead to behavioural disorders in children. Review of recent studies on mental health problems among school going children showed prevalence rate varying from 6.33 percent to 43.1 percent in Indian context (Prakash et al, 2008).

Children may suffer from wide range of behavioural problems such as psychosocial disorder, conduct disorder, eating disorder, attention deficit hyper activity disorders, adjustment disorder, disruptive behavior, sleep disorder, elimination disorder and in extreme cases depression, anxiety and substance abuse. According to Malhotra (2005), common

disorders in India are enuresis, ADHD, learning disorder, conduct disorders etc.

Children less than 15 years of age constitute approximately one third of the world's population and between 5-15 percent are affected by persistent socially handicapping behavioural disorders. According to Malhotra (1992), 80 percent of world's children live in developing countries where mental health services are meagre or non-existent.

Children too feel unhappy, anxious, fearful and angry. They may lack concentration, be forgetful, impulsive, have difficulty in controlling anger and fight. They may have difficulty in getting their mind off certain thoughts; may suffer unexplained headache, stomachache, anorexia, insomnia; may have trouble in maintaining friendships or dealing with people and may feel like hurting themselves or others. These are not uncommon scenarios. They all indicate that all is not well with the child. Most parents, teachers and other adults are not sensitive to pick up these subtle forms of behavioural indications. It is only when the problem becomes severe and disabling that some attention is paid to the child. In early stages it is much easier and simpler to intervene and push the developmental trajectories into a healthier and adaptive course. Studies regarding parental knowledge on behavioural problems are very few and no

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evidential data was found from Eastern India.

So it is necessary to assess the level of awareness of parents regarding behavioural disorders in children. This study was conducted to assess the baseline knowledge of parents of preschool children attending child guidance clinic in a tertiary care hospital in Kolkata and to find out the effectiveness of an educational intervention on their knowledge with an aim to strengthen mental health of children in India.

Review of Literature

Gupta I (2001) conducted a study to determine the prevalence of behavioural problem in 957 school children of Ludhiana, India. The result showed that 45.6 percent of the children had behavioural problems, of which 36.5 percent had significant problems. Conduct disorders (5.4%) hyperkinetic syndrome (12.9%) scholastic under achievement (17%) and enuresis (20.3%) were detected to be the main problems in children. The study concluded that behavioural deviance does exist in our children.

In a school-based cross-sectional study by Pathak et al (2011) to explore the prevalence and patterns of behavioural and emotional problems in adolescents, stratified random sampling was done and 1150 adolescents in 12 to 18 years age group in grades 7 to 12 in 10 co-educational schools from Chandigarh were assessed using Youth Self-Report questionnaire. Family stressors were assessed using a pre-tested 23-item questionnaire. Prevalence of behavioural and emotional problems in adolescents was found to be 30 percent, with girls exceeding boys in all age groups. Internalising syndrome was the most common (28.6%) psychiatric problem. Stepwise regression analysis showed that a perceived lack of emotional proximity to mother had the highest odds (3.489) followed by addiction in father (2.642) and marital discord in parents (1.402). These data suggested urgency in establishing a school-based mental health service.

Sharma & Kaur (2014) conducted a quasi-experimental study in Ludhiana to assess the effect of structured teaching programme on knowledge of mothers regarding behavioural problems in children. Sample of 60 mothers were chosen by purposive sampling technique; 30 mothers were kept in experimental group and 30 in control group. Findings revealed that majority of mothers (50%) in both control and experimental group had average pre-test knowledge regarding behavioural problems in children. Maximum mothers (66.66%) obtained below average post-test knowledge score in control group whereas maximum mothers (93.33%) obtained excellent post-test

knowledge score in experimental group. Education and type of family were found to be significantly related with knowledge of mothers regarding behavioural problems in children.

A study by Karl F Riem et al (2009) to assess the mother's knowledge regarding reinforcement for behavioural problems of infants, toddlers, and preschoolers among 583 mothers with children aged 59 months or younger showed the need for parent education programmes regarding reinforcement for behavioural problems to help parents manage their children. The study concluded that knowledge regarding reinforcement will change the attitude of mothers towards behavioural problems.

Objectives

- To assess the knowledge on behavioral problems of pre-school children among parents before and after educational intervention
- To assess the effectiveness of educational intervention on the knowledge of parents of pre-school children
- To associate the pre-test knowledge score with selected background variables.

Methodology

It was a prospective interventional study using dedicated hours of teaching on behavioural disorders to investigate the level of awareness regarding childhood behavioral problems among parents after formal approval from the institution. Pre-experimental research design was adopted. Informed consent was obtained from the participants before including in the study.

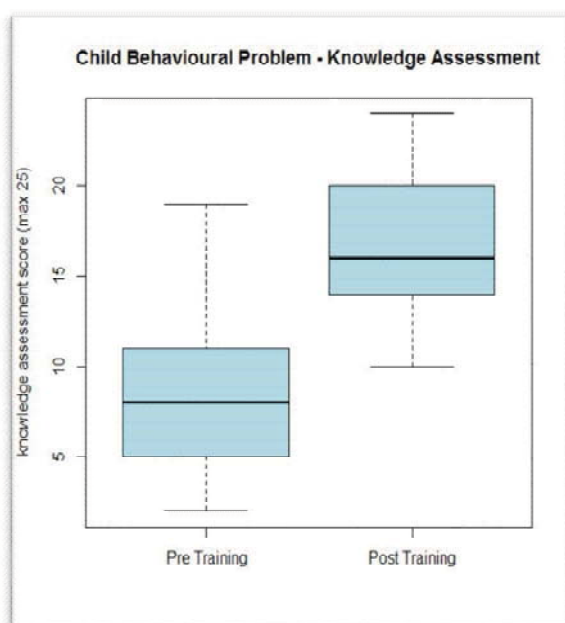
A questionnaire was developed to assess the knowledge before and after an educational intervention. It consisted of two parts: Part A containing items on background information and part B containing questions on knowledge on behavioural problems. Part B consisted of 25 questions. Knowledge questions focused mainly on causes, various types of behavioural problems, their features, treatment and prevention. Content validity was evaluated by various subject experts, including the consultant clinical child psychologists. Reliability was assessed by test-retest method applied on 10 randomly selected parents attending paediatric outdoor. The reliability score of Cronbach's alpha was 0.87 implying good reliability. A teaching module was prepared and validated by the consultant paediatrician and senior paediatric nursing faculty to conduct the teaching programme.

Table 1: Distribution of subjects as per demographic variables

Demographic variables	Frequency
Age of the child	
3 years	13 (26.00%)
4 years	24 (48.00%)
5 years	9 (18.00%)
6 years	4 (8.00%)
Birth order of the child	
First child	35 (70.00%)
Second child	13 (26.00%)
Third child	2 (4.00%)
Education of the mother	
Illiterate	0 (0.00%)
Primary education	2 (4.00%)
Secondary education	12 (24.00%)
Above higher secondary	36 (72.00%)
Type of family	
Nuclear	33 (66.00%)
Joint	17 (34.00%)
Extended	0 (0.00%)
History of behavioural disorder	
Yes	7 (14.00%)
No	43 (86.00%)

Fifty parents were selected from child guidance clinic of a tertiary care hospital in Kolkata using non-probability convenient sampling method. Questionnaires were administered to all the parents at the beginning of the programme to assess their knowledge followed by a dedicated two hour teaching

Fig 1: Pre-test and post-test knowledge score of parents regarding behavioural problems in pre-school children



programme by a set of assigned teachers. After 7 days the questionnaire was re-administered on their next follow-up visit.

The filled-in questionnaires were analysed by descriptive and inferential statistics using statistical software R. Score 1 was assigned to the correct answers and zero was assigned to wrong answers. Test statistic Analysis of Variance was used for study of association of pre-test knowledge score with selected demographic variables. Effectiveness of the educational intervention was analysed using one sided (greater than type) paired t test. One-sided Pearson's chi-squared test statistic (greater than type) was used to assess the impact of educational intervention to the parents and proportion of parents attempting correct alternatives in selected questions.

Results

Half of the parents of pre-school children attending child guidance clinic in Peerless Hospitex Hospital & Research Centre, Kolkata was administered questionnaire and teaching given. The observed demographics and characteristics of the respondents are depicted in Table 1; 48 percent of the children were 4 years old. 70 percent of the children attending outdoor was first born child. Majority (72%) of the parents were having education above higher secondary level.

Pre-test scores of parents on knowledge of behavioral problem of children did not vary significantly with age of the child ($p=0.5488$, > 0.05); birth order of child ($p=0.93$, > 0.05); type of the family ($p=0.1873$, > 0.05); educational background of parents ($p=0.6364$, > 0.05) and history of behavioral disorder of child ($p=0.9971$, > 0.05).

Pre-test scores and post-test scores were measured on a total of 25 score points on knowledge of Parents regarding behavioral problems of pre-school children attending a clinic. There was a significant improvement in post-test score (17.26 ± 4.11) over pre-test score (8.28 ± 4.54) with p -value $4.494e-12$, < 0.0001 . Pre-test and post-test knowledge scores are demonstrated in Fig 1.

There is a significant impact of teaching to the parents and proportion of parents attempting correct alternatives are significantly higher in the post-training score compared to pre training score for all Questions except No. 20 & 22 i.e. questions regarding meaning of school phobia and meaning of autism. Table 2 shows the question wise impact on knowledge score of parents after the educational intervention. Knowledge score on management of temper tantrum increased from 26 percent to 70 percent which

Table 2: Question-wise knowledge score of parents in pre-test and post-test

Q. No	Question	No. of Correct Answers (%)		P value (greater than type test)
		Pre-test	Post-test	
1	Meaning of behavioural problem in children	24 (48.00%)	44 (88.00%)	2.32e-05 < 0.05
2	Common behavioural problems in pre-school children	20 (40.00%)	39 (78.00%)	0.00013 < 0.05
3	The cause of behavioural problem	24 (48.00%)	46 (92.00%)	2.30e-06 < 0.05
4	Definition of temper tantrum	17 (34.00%)	40 (80.00%)	4.42e-06 < 0.05
5	Age of usual occurrence of temper tantrum	6 (12.00%)	28 (56.00%)	4.64e-06 < 0.05
6	The management of temper tantrum	13 (26.00%)	35 (70.00%)	1.32e-05 < 0.05
7	The cause of thumb sucking	16 (32.00%)	35 (70.00%)	0.00016 < 0.05
8	The complication of thumb sucking	7 (14.00%)	34 (68.00%)	6.24e-08 < 0.05
9	The management of thumb sucking	11 (22.00%)	30 (60.00%)	0.00013 < 0.05
10	The meaning of Pica	15 (30.00%)	45 (90.00%)	1.61e-09 < 0.05
11	The symptoms of stuttering	14 (28.00%)	31 (62.00%)	0.00065 < 0.05
12	The causes of nail biting	19 (38.00%)	40 (80.00%)	2.39e-05 < 0.05
13	Definition of bed wetting or enuresis	21 (42.00%)	42 (84.00%)	1.72e-05 < 0.05
14	Step to avoid while managing bed wetting at home	16 (32.00%)	34 (68.00%)	0.00034 < 0.05
15	The causes of encopresis	11 (22.00%)	22 (44.00%)	0.0167 < 0.05
16	The management of encopresis	8 (16.00%)	25 (50.00%)	0.0003 < 0.05
17	Meaning of sleep disorder	14 (28.00%)	28 (56.00%)	0.0042 < 0.05
18	Symptoms of sleep disorder	19 (38.00%)	37 (74.00%)	0.00031 < 0.05
19	The management of sleep disorder	24 (48.00%)	36 (72.00%)	0.0124 < 0.05
20	Meaning of school phobia	36 (72.00%)	43 (86.00%)	0.07036
21	The management of school phobia	32 (64.00%)	42 (84.00%)	0.0201 < 0.05
22	Meaning of autism	7 (14.00%)	14 (28.00%)	0.0704
23	The management of autism	11 (22.00%)	31 (62.00%)	5.92e-05 < 0.05
24	Symptoms of autism	15 (30.00%)	32 (64.00%)	0.00067 < 0.05
25	Manifestations of attention deficit hyperactivity disorders	14 (28.00%)	30 (60.00%)	0.00126 < 0.05

is a significant change. Knowledge on management of enuresis also showed significant improvement (32% to 68%) after the teaching. Parents showed less improvement of knowledge in areas like school phobia (72% to 86%) and autism (14% to 28%).

Discussion

Various studies have been done on behavioural disorders of children but very few are done on impact of educational intervention on parents regarding behavioural disorders in children. This study emphasises the need for increasing parental awareness to prevent the behavioural disorders in children. Ellen C. Perrin et al (2014) conducted a randomised clinical trial in Greater Boston area to investigate the effectiveness of parent-training delivered to parents of toddlers in paediatric primary care settings and greater improvement was observed in intervention group ($p < 0.05$). The present study also reflected significant changes in the knowledge score after the

educational intervention.

Bele SD et al (2013) showed that 22.43 percent children had an abnormal score on at least one domain of strength and difficulties questionnaire and also indicated that male gender (odds ratio / OR=5.51), under-nutrition (OR=2.74), low socioeconomic status (OR=3.73), nuclear family (OR=1.89), working status of the mother, younger age of the mother at the birth of the child, disciplinary method, financial problem at home, conflicts in family (OR=7.29), and depression among mother (OR=3.95) were significant predictors. There was also a significant impact on educational performance ($p=0.008$) and parents had little awareness regarding the condition. The present study established that age of the child, birth order of the child and educational background of the parents has no significant influence on knowledge of parents. But educational intervention is required to protect our children for developing behavioural problems.

BhagyaLakshmi (2012) identified in her study conducted in south India that 19 percent parents had adequate knowledge, 47 percent had moderate knowledge and 34 percent had inadequate knowledge on

behavioural problems of teenage boys. She further suggested that adequate knowledge to parents will help to reduce the behavioural problems among teenage boys. Our study not only assessed the knowledge of parents of preschool children but also provided educational intervention and established a positive impact.

A similar study by Shubhangi S. Dumbray (2014) revealed that in pre-test, majority i.e. 86.7 percent of the subjects had poor knowledge and 13.3 percent of them had average knowledge which improved after a structured planned teaching with majority i.e. 71.7 percent having good knowledge and 28.3 percent having average knowledge in post test. Our study also reflects similar findings emphasising the need for improving parental education services.

The study identified significant knowledge improvement in areas like temper tantrum, enuresis, thumb sucking and pica etc. but less improvement was seen in more complex problems such as school

phobia and autism. These special areas need to be emphasised for early detection and management. This was supported by a study done by Hartley, Sigan L et al (2013) to examine parental attributions for child behaviour problems in 63 married couples of children and adolescents (aged 3-20 years) with autism spectrum disorders (ASDs) and identified that parents tended to attribute the behavior problems of their child/adolescent with an ASD.

Limitations

The study is not a multi-centric study and it is time-bound in nature. However, the present study strongly suggests that educational intervention is necessary for parents to improve parenting style and detect behavioural deviations in their children.

Recommendations

- A similar study can be undertaken in a Govt. hospital or community.
- A similar study can be done on larger sample size.
- A study can be done to assess the effectiveness of other teaching strategies like video-assisted teaching on knowledge of parents on behavioural disorders among pre-school children.
- Information booklet can be developed on behavioural disorder among children.

Conclusion

This study proves the urgent need of educating parents regarding behavioural disorders to reduce the burden of behavioural problems in children. Structured education is required in community setting, outpatient department to improve the mental health in children

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