The prevalence of behavioral disorders among children under parental care and out of parental care: A comparative study in India

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Abstract

Background: Children may suffer from a wide range of behavioral problems, but children living under conditions of perpetual stress and trauma and experiencing breakdown of family structures are tremendously affected. This study was adopted to identify the prevalence of behavioral disorders among children under parental care and out of parental care.

Methods: A cross-sectional comparative descriptive study was conducted among 300 children of age 6-12 years from a pediatric outpatient department of a selected hospital and 300 children from selected orphanages in Kolkata to compare the prevalence of behavioral disorders in children under parental care and out of parental care using Strengths and Difficulties Questionnaire (SDQ).

Results: Total difficulty was more prevalent in children out of parental care (220 children) than in children under parental care (128 children). Conduct problem was the most prevalent behavioral disorder among all the subscales of SDQ with 48.70% and 84.30% of children, respectively. This was followed by peer problem (44.60% and 48.30%), emotional problem (33.70% and 55.60%), and hyperactivity problem (26.70% and 32.30%), respectively. There was significant difference in total difficulty, all subscales, externalizing score, internalizing score, and impact score between the two groups. Regression analysis showed significant relationship of selected variables such as the child's favorite hobbies and number of close friends the child has using total difficulty score in both the groups. Significant correlation was found among subscales in both the groups.

Conclusion: Family-based care and improvised institutional care should be emphasized to reduce the burden of behavioral problem in children.

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1. Introduction

Children are the valuable possession of parents and future nation makers. A healthy child contributes to a healthy and prosperous society. Since birth, a child passes through phases of physical, mental, and social development until he achieves adulthood. All these aspects of growth and development are equally significant, mental, and social development until he achieves adulthood. These problems include behavioral problems of children reared in family structure, children engaged in child labor and sex, and children orphaned due to AIDS or migrated due to unavoidable circumstances [1]. Children below 15 years of age represent approximately one third of the world's population and approximately 5–15% of them are crippled with this socially handicapping behavioral disorders [2]. According to Malhotra (1992), 80% of world's children live in developing countries where mental health services are negligible [3]. A review of recent studies showed that the prevalence of mental health problems in schoolgoing children varies from 6.33% to 43.1% in Indian context [4]. Children often feel unhappy, anxious, fearful, and angry. They may exhibit lack of concentration, forgetfulness, impulsiveness, and...
difficulty in controlling emotions. They may complain of various somatic problems like unexplained headache, stomachache, anorexia, and insomnia; may have trouble in building friendships or dealing with people; and may show aggressiveness. These indications are some common cues that suggest that all is not well with the child and the child needs attention. Most parents, teachers, and other adults are not sensitive to notice these subtle forms of behavioral problems. It is taken seriously only when the problem becomes severe and disabling. Early identification promotes early recovery and pushes the developmental trajectory into a healthier and adaptive path.

Emphasis should be given to the children out of parental care also, as they are often under stress and trauma and lack parental affection. Children and adolescents who are orphans, runaways, or abandoned by families and reared in institutional homes form one such vulnerable group according to the Integrated Child Protection Scheme, India [5]. Review of literature shows the prevalence of behavioral and emotional problems among orphans and other vulnerable children to range from 18.3% to 64.53% [6–11], while in normal community samples, it was reported to range between 8.7% and 18.7% [12–14]. A study conducted by Raslaviciene G. and Zoborskis A [15] observed that children who are neglected and abandoned develop psycho-emotional problem, namely, nervousness, aggression, frustration, and depression. Very few studies have been conducted on the psychological health of these children and adolescents, thereby giving an urgent call for further research with regard to this in India.

Therefore, this study was adopted to identify and compare behavioral problems among children under parental care and out of parental care so that remedial measures can be adopted at the earliest to reduce the incidence.

2. Methodology

2.1. Design and population

A cross-sectional comparative descriptive study was conducted in the pediatric outpatient department of NRS Medical College and Hospital and selected orphanages in Kolkata, India. Children within the age group of 6–12 years attending pediatric medicine outpatient department of the hospital who were reared by their biological parents were selected for the category of children under parental care, and children of the same age group who were not reared by their biological parents and raised in orphanages were chosen for the category of children out of parental care. Three hundred children, each from both the groups, were included using the nonprobability convenient sampling method.

2.2. Measures

Tool for the study was divided into two parts. Part A consists of background data of the child, which include age, sex, education, any repetition in class, favorite hobby, time spent in hobbies, and number of close friends. Part B was Strengths and Difficulties questionnaire (SDQ) with impact supplement by Robert Goodman. It is a validated screening tool that consists of 25 items covering conduct problems, emotional problems, peer problems, hyperactivity problems, and prosocial behavior [16,17]. Each item is scored according to a three-point scale: not true, somewhat true, and certainly true. Each of these scales is given a score from 0 to 10 and can be grouped as “normal,” “borderline,” or “abnormal.” All scales except prosocial behavior are summed up to obtain a total difficulties score ranging from 0 to 40. The impact supplement consists of questions on severity, distress, social infirmity, and burden for others. Ratings of “Not at all” and “Only a little” were scored as 0, “Quite a lot” as 1, and “A great deal” as 2.

Inter-rater reliability was tested for the tool, and kappa statistic was computed. Prosocial score and hyperactivity score had almost perfect agreement, while rest of the domains had substantial to fair agreement.

2.3. Procedure of data collection

Ethical clearance was obtained from the Institutional ethics committee, NRS Medical College and Hospital. Formal permission was obtained from the Head of the Department, Department of Pediatric Medicine, NRS Medical College and Hospital (NRSMC). Permission was obtained from the Department of Child Rights and Trafficking under the Department of Social welfare, Government of West Bengal, for collecting data in selected orphanages in Kolkata under their jurisdiction. Informed consent was taken from the parents of children attending pediatric OPD, as well as caregivers of children in orphanage. Data were collected by the investigator from parents in hospital and the primary caregiver in orphanage for each child separately.

2.4. Statistical analysis

The data were coded and transferred onto an Excel sheet, and statistical analysis was carried out using SPSS software version 21. Descriptive statistics were expressed as frequency and percentage, and inferential statistics were carried out using the t-test, Pearson correlation, and chi-square test. Regression analysis was done to study the relationship between total difficulty score and selected sociodemographic variables.

3. Results

3.1. Background data

The majority (57.7%) of the children from the pediatric OPD was of the age group of 6–9 years. Fifty-seven percent of them were boys, and 43% were girls. The majority (165) of them were studying in classes I to III. Ninety-one of them had no favorite hobbies. Sixty-four had drawing as their hobby, and 38.7% of children spent average time on their hobbies. Fifty-five children had no friends, whereas the majority (126) of children had 2 to 3 close friends. The majority of the children from the selected orphanages (67.7%) were of the age group of 10–12 years. Fifty-four percent of children were boys, whereas 46% were girls. The majority (148) of children were studying in classes IV to VI. The most common hobby found among them was drawing (32.7%); 46.3% spent average time on their hobbies. The majority of them (35.3%) had four or more very close friends. Table 1 describes the distribution of background data of children under parental care, attending OPD, and children out of parental care residing in orphanages.

3.2. Analysis of SDQ scores

3.2.1. Total difficulty score in children under parental care

Total difficulty score in children attending pediatric OPD of NRSMC showed that 42% of children were having a normal score but 39% of children had abnormal score in terms of total difficulties.

3.2.2. Total difficulty score in children out of parental care

Total difficulty score in children residing in orphanages showed that only 40 (13.3%) children had a normal score and the majority of children, i.e., 220 (74%) children, had an abnormal score. Fig. 1 shows that orphanage polygon is negatively skewed and parental care polygon is positively skewed.
3.2.3. Domains of difficulties as subscales of SDQ in children under parental care

Among the 5 subscales of SDQ, mean score was highest in hyperactivity problem with a mean (SD) of 5.14 (2.36) and a mean percentage of 51.37%. Conduct problem, emotional problem, and peer problem had a mean score of 3.56, 3.55, and 3.06, respectively. Prosocial score had a mean (SD) of 7.67 (1.72), which was a positive behavioral indicator.

Conduct problem was the most prevalent behavioral disorder among all the subscales of SDQ, with an abnormal score in 146 (48.70%) children. This was followed by peer problem (44.60%), emotional problem (33.70%), and hyperactivity problem (26.70%). Only 13 children had abnormal prosocial score.

3.2.4. Domains of difficulties as subscales of SDQ in children out of parental care

Emotional problems had a mean score of 4.86, with an SD of 2.21. Conduct problem had the maximum mean score, i.e., 5.82, with SD of 2.20. Hyperactivity and peer problem had mean of 5.52 and 3.72, respectively. The average prosocial score is 7.12, with an SD of 2.35. The most common behavioral problem was conduct, which was found in 253 children (84.30%). This was followed by emotional problem (33.70%), peer problem (32.30%), and hyperactivity (28.30%). Two hundred forty-two (80.70%) children had a normal prosocial score (Fig. 2).

Table 1
The frequency and percentage distribution of background data of children under parental care and out of parental care.

| Variables                                      | Children under Parental Care (N = 300) | Children out of Parental Care (N = 300) |
|------------------------------------------------|----------------------------------------|-----------------------------------------|
| Age                                            |                                        |                                         |
| 6–9 Years                                      | 173                                    | 97                                      |
| 10–12 Years                                    | 127                                    | 203                                     |
| Sex                                            |                                        |                                         |
| Male                                           | 171                                    | 162                                     |
| Female                                         | 129                                    | 138                                     |
| Informant’s relation with the child            |                                        |                                         |
| Parent                                         | 273                                    | 0                                       |
| Caregiver                                      | 0                                      | 300                                     |
| Others                                         | 27                                     | 9                                       |
| Educational status of the child                |                                        |                                         |
| Not going to school                            | 6                                      | 2                                       |
| Class I-III                                    | 165                                    | 135                                     |
| Class IV-VI                                    | 105                                    | 148                                     |
| Class VII-IX                                   | 24                                     | 15                                      |
| Has the child repeated any class               |                                        |                                         |
| Yes                                            | 5                                      | 4                                       |
| No                                             | 295                                    | 296                                     |
| Does the child receive any special education?  |                                        |                                         |
| Yes                                            | 1                                      | 0                                       |
| No                                             | 299                                    | 300                                     |
| The child’s favorite hobbies                    |                                        |                                         |
| Nothing                                        | 91                                     | 76                                      |
| Playing with dolls                             | 37                                     | 11                                      |
| Singing                                        | 12                                     | 18                                      |
| Drawing                                        | 64                                     | 98                                      |
| Computer                                       | 11                                     | 7                                       |
| Reading books                                  | 4                                      | 10                                      |
| Others                                         | 81                                     | 80                                      |
| How much time he or she spent in hobbies?      |                                        |                                         |
| Very less                                      | 79                                     | 59                                      |
| Average                                        | 116                                    | 139                                     |
| More than average                              | 61                                     | 42                                      |
| Can’t say                                      | 44                                     | 60                                      |
| How many close friends the child has?          |                                        |                                         |
| None                                           | 55                                     | 52                                      |
| One                                            | 84                                     | 57                                      |
| Two to three                                   | 126                                    | 85                                      |
| Four or more                                   | 35                                     | 106                                     |
| Does the child have any disability or illness? |                                        |                                         |
| Yes                                            | 13                                     | 2                                       |
| No                                             | 287                                    | 298                                     |

Fig. 1. Frequency polygon of total difficulty score among children under parental care and out of parental care (orphanages).
3.2.5. Correlation among subscales of SDQ in children under parental care and out of parental care

There was statistically significant correlation among the subscales of SDQ and with total difficulty score of children under parental care, as the P value was less than 0.01 as well as 0.05 levels of significance, which was similar to the findings of children out of parental care except for the correlation of emotional problem scores with conduct problem scores (P > .05). Table 2 illustrates the correlation matrix of subscales of SDQ with total difficulty score in both the groups.

3.2.6. Association of total difficulty and subscales with selected demographic variables among children under parental care

There was a statistically significant association between total difficulty score and selected demographic variables such as sex, educational status of the child, the child’s favorite hobbies, time he or she spent in hobbies, and number of close friends the child has. Male gender, children of classes I-III, no hobbies, spending average time in hobbies, and having two to three close friends had more difficulty. Emotional and conduct problem had no significant association with demographic variables. Hyperactivity scores were significantly associated with sex and time spent in hobbies. Male children and those who spent more than average time were more hyperactive. Peer problem was also significantly associated with the number of close friends. It was more significant in children with no close friends. No significant association was found between prosocial score and any demographic variable. Table 3 depicts the association of behavioral problems and selected demographic variables.

3.2.7. Association between total difficulty and subscales with selected demographic variables among children out of parental care

There was a statistically significant association between total difficulty scores with various demographic variables, namely, educational status of the child, sex, time he or she spent in hobbies, and number of close friends the child has. Males, children of classes IV-VII, spending average time in hobbies, and having four or more close friends had more difficulty. Emotional problem was associated with time he or she spent in hobbies and the number of close friends the child has. Children of classes IV-VII and who spent average time in hobbies had significantly higher conduct problem. Hyperactivity was associated with age, sex, and number of close friends. Older boys with four or more close friends were more hyperactive. Peer problem was significantly higher in male children with drawing as hobby, spending average time in hobbies, and having no close friends. Prosocial behavior was significantly associated with sex, hobbies, time spent in hobbies, and number of close friends. Table 4 shows the association of domains of difficulties with demographic variables in children out of parental care.

3.3. Comparison between children under parental care and out of parental care

There was a significant difference in mean values of total difficulty, all subscales, externalizing score, and internalizing score, as well as impact score between the two groups. Therefore, behavioral problems were more prevalent in children out of parental care than in children under parental care. Table 5 shows the significant difference in SDQ scores in the two groups of children.

Regression analysis showed that there was a significant relationship of selected variables such as child’s favorite hobbies and the number of close friends the child has with a total difficulty score at the 5% level of significance in both the groups. Therefore, total difficulty varies with these variables in both types of care.

4. Discussion

This study attempted to identify the prevalence of behavioral disorders in children who are not under parental care or reared in orphanages and compare their prevalence with that of the children under parental care. This study revealed that prevalence of behavioral disorders was more in children out of parental care than in children under parental care. Two hundred twenty children in orphanage had an abnormal total difficulty score, whereas 128 children from OPD had an abnormal total difficulty score. There are several studies conducted on behavioral problems of children from families or orphanages separately, but very few had compared the prevalence in these two distinct groups. Kaur Ravneet et al. [18]

Table 2

| Pearson correlation | Emotional problem | Conduct problem | Hyperactivity | Peer Problem | Prosocial behavior | Total Difficulty |
|--------------------|-------------------|-----------------|--------------|-------------|-------------------|-----------------|
| Parental care      |                   |                 |              |             |                   |                 |
| Out of parental care | .223             | .036            | .178         | .154        | .342              | .396            |
| Parental care      |                   |                 |              |             |                   |                 |
| Out of parental care | .454             | .422            | .195         | .257        | -.375             | -.461           |
| Parental care      |                   |                 |              |             |                   |                 |
| Out of parental care | -.157            | .282            | .281         | .282        | -.331             | -.427           |
| Parental care      |                   |                 |              |             |                   |                 |
| Out of parental care | -.281            | -.473           | -.331        | -.427       | .599              | .723            |
| Parental care      |                   |                 |              |             |                   |                 |
| Out of parental care | -.331            | -.427           | .599         | .723        | -.463             | -.581           |
| Parental care      |                   |                 |              |             |                   |                 |
| Out of parental care | -.463            | -.581           | .599         | .723        | 1                 | 1               |

*Correlation is significant at the 0.01 level (2-tailed).
conducted a study on orphans and the other vulnerable children and adolescents (OVCA) living in institutional homes in India with SDQ, in which 49 (16.78%) out of 292 children and adolescents were found to have behavioral and emotional problems. Another similar study conducted in Tiruchirappalli, India [9], among orphans in institutional homes reported a prevalence of emotional and behavioral problems to be 56%. Another study using SDQ questionnaire found 49% of Ghanaian orphans and vulnerable children to have emotional and behavioral problems [10].

In the current study, 39% of children under parental care, who attended the pediatric OPD, had an abnormal total difficulty score. This result is identical to that reported in the study conducted in Mongolia (43.3%) [19] but with relatively lower prevalence in Egypt (20.6%) [20]. In the United States [21], National Health Interview

| Table 3 |
| Association between total difficulty and subscales with selected demographic variables in children under parental care. |
| Variables | Total difficulty | Emotional problem | Conduct problem | Hyperactivity | Peer problem |
| Age | | | | | |
| 6-9 Yrs | 76 | 1.534 | 58 | 0.043 | 86 | .819 | 49 | 1.078 | 79 | .264 |
| 10-12 Yrs | 52 | 43 | 60 | 31 | 55 |
| Sex | | | | | |
| Male | 82 | 5.001^ | 50 | 35.989 | 89 | 2.063 | 55 | 7.541^ | 76 | 1.311 |
| Female | 46 | 51 | 57 | 25 | 58 |
| Educational status of the child | | | | | |
| Not going to school | 4 | 6.234^ | 3 | 6.490 | 3 | 3.953 | 4 | 10.062 | 4 | 2.520 |
| Class I-III | 73 | 55 | 80 | 45 | 74 |
| Class IV-VI | 41 | 36 | 52 | 27 | 44 |
| Class VII-IX | 10 | 7 | 11 | 4 | 12 |
| Repeated any class | | | | | |
| Yes | 3 | .821 | 3 | 3.810 | 3 | .847 | 3 | 3.359 | 3 | .877 |
| No | 125 | 101 | 143 | 77 | 131 |
| The child's favorite hobbies | | | | | |
| Nothing | 30 | 21.342^ | 23 | 16.944 | 41 | 11.400 | 23 | 10.841 | 44 | 11.791 |
| Playing dolls | 16 | 19 | 16 | 9 | 15 |
| Singing | 4 | 3 | 6 | 3 | 6 |
| Drawing | 23 | 20 | 27 | 17 | 30 |
| Computer | 8 | 7 | 8 | 2 | 5 |
| Reading books | 2 | 2 | 3 | 0 | 3 |
| Others | 45 | 27 | 45 | 26 | 31 |
| Time he or she spent in hobbies | | | | | |
| Very less | 31 | 21.932^ | 24 | 10.443 | 37 | 11.482 | 17 | 32.947^ | 46 | 10.793^ |
| Average | 46 | 33 | 51 | 19 | 50 |
| More than average | 39 | 37 | 40 | 32 | 19 |
| Can't say | 12 | 7 | 12 | 19 |
| Number of close friends the child has? | | | | | |
| None | 30 | 9.240^ | 24 | 10.443 | 29 | 1.221 | 15 | 3.001 | 44 | 48.637^ |
| One | 36 | 33 | 39 | 21 | 41 |
| Two to three | 50 | 37 | 61 | 34 | 39 |
| Four or more | 12 | 7 | 17 | 10 | 10 |

^ Significant at the .05 level.

| Table 4 |
| Association between total difficulty and subscales with selected demographic variables in children out of parental care. |
| Variables | Total difficulty | Emotional problem | Conduct problem | Hyperactivity | Peer problem |
| Age | | | | | |
| 6-9 Yrs | 68 | 1.279 | 58 | 1.031 | 80 | .515 | 32 | 9.025^ | 51 | 2.302 |
| 10-12 Yrs | 152 | 109 | 173 | 65 | 94 |
| Sex | | | | | |
| Male | 127 | 8.690^ | 100 | 5.611 | 140 | 4.643 | 61 | 6.813^ | 95 | 14.987^ |
| Female | 93 | 67 | 113 | 36 | 50 |
| Educational status of the child | | | | | |
| Not going to school | 0 | 17.571^ | 1 | 12.036 | 0 | 27.811^ | 0 | 7.608 | 1 | 8.248 |
| Class I-III | 97 | 77 | 108 | 48 | 64 |
| Class IV-VI | 114 | 85 | 132 | 46 | 74 |
| Class VII-IX | 7 | 4 | 13 | 3 | 6 |
| Repeated any class | | | | | |
| Yes | 3 | .956 | 3 | 1.477 | 2 | 3.691 | 3 | 3.499 | 2 | .110 |
| No | 217 | 164 | 251 | 94 | 143 |
| The child's favorite hobbies | | | | | |
| Nothing | 62 | 12.366 | 49 | 18.191 | 68 | 13.978 | 33 | 17.476 | 49 | 25.172^ |
| Playing dolls | 10 | 9 | 11 | 2 | 3 |
| Singing | 12 | 9 | 17 | 4 | 10 |
| Drawing | 70 | 4 | 78 | 32 | 44 |
| Computer | 6 | 3 | 7 | 4 | 5 |
| Reading books | 8 | 8 | 8 | 3 | 7 |
| Others | 52 | 40 | 64 | 20 | 27 |
| Time he or she spent in hobbies | | | | | |
| Very less | 49 | 16.671^ | 45 | 18.309^ | 48 | 18.309^ | 21 | 8.654 | 41 | 32.729^ |
| Average | 95 | 67 | 116 | 40 | 52 |
| More than average | 24 | 19 | 35 | 10 | 13 |
| Can't say | 52 | 36 | 54 | 26 | 39 |
| Number of close friends the child has? | | | | | |
| None | 50 | 23.228^ | 42 | 25.569^ | 49 | 9.860 | 25 | 12.767^ | 51 | 63.297^ |
| One | 43 | 32 | 42 | 20 | 19 |
| Two to three | 61 | 49 | 73 | 21 | 34 |
| Four or more | 66 | 44 | 89 | 31 | 41 |

^ Significant at the .05 level.
Survey conducted during 2001–2007 revealed that only 7% children scored high on brief SDQ or have serious overall difficulties. This indicates severity of behavioral problems in developing countries.

A study similar to the present study conducted by Musisi Seggane et al. [22] in Uganda on primary schoolgoing orphans and nonorphans revealed that more orphans had behavioral and emotional problems than nonorphans (45.1% and 36.5%, respectively). Both studies indicate that children who are deprived of the parental care and a secure family environment often become vulnerable to a host of psychological problems and psychiatric disorders. This result was further in agreement with that given in a study conducted by Padmaja G et al. [24] in Vishakhapatnam, more number of adolescents (20.77%) had emotional and behavioral problems than the younger children (10.09%), which correspond to the results obtained in the present study. This indicates that behavioral problems tend to increase with increasing age of the children. In both groups, male children had higher scores than female children on the entire scales and on all subscales except for the emotional problem score. Such gender differences were found in a study conducted by Gustafson BM [28] in Sweden. In the study conducted in Hyderabad also, gender showed a significant main effect, with F (1,112) = 6.035, P < .05, thus indicating that girls had more emotional problems than boys. Simsek et al. showed that orphanage boys presented more attention problems, externalizing, and total problems than orphanage girls.

Few demographic variables proved to be significant in the prevalence of behavioral problems such as educational level, favorite hobbies, time spent in hobbies, and number of close friends. These factors were equally important in both the groups. The number of close friends the child has in both groups influenced significantly with the occurrence of peer problem. Prosocial score showed significant association with the number of close friends and hobbies in children out of parental care. Children with more friends showed to have a better prosocial score.

Impact score in the present study was significantly higher in children out of parental care than in children under parental care. This is in accordance with a study conducted in Vishakhapatnam, which showed that children with behavioral problems have more learning problems, poor social functioning, academic under achievement, and also more numerous and intense family conflicts than the normal controls. This result shows that there is an adverse impact on children out of parental care for their behavioral problems due to the lack of parental attention, love, and affection. Parental love and care has an influence on the developing positive health.

Although this is a multicenter study with a relatively larger sample size, this study also has certain limitations. This study was limited to a single city. The study used a single informant for both the groups. No interventional measure was planned for the children identified with behavioral problems except giving advice for consultation with the child psychologist.

Further studies can be carried out with a focus on specific behavioral problems and in special populations like children with HIV/AIDS. The same study can be conducted in multiple cities with a larger sample size and multiple informants. Interventional studies can be helpful to implement remedial measures for children out of parental care.

5. Conclusion

Behavioral problems are more among children out of parental
care because they are exposed to abuse, exploitation, neglect, and lack of love and care from parents. They are also more likely to be emotionally needy, insecure, and poor. In addition to these factors, most of them are brought up in institutional homes, where individual care is inadequate. There is a need for a paradigm shift in the focus of care of children out of parental care, thus emphasizing upon the promotion of wellbeing and improvement in quality of life. A more positive psychological perspective has to be undertaken to ensure that the child is happy, content, and optimistic about his future. Children out of parental care have to be encouraged for their inherent qualities and excel in their life. Tailor-made interventions satisfying the unmet psycho-social needs and enhancing the strengths, while helping the children gain control over the identified weaknesses, need to be developed. In a nutshell, family-based care and improvised institutional care with foster families should be emphasized to reduce the burden of behavioral problems in our most precious population.

Conflicts of interest

The authors declare that they have no conflict of interest.

Ethical approval and consent

Ethical approval was obtained from the institutional ethical committee of NRS Medical College and Hospital. All parents and caregivers provided written informed consent to participate in this study. Data collection and handling were done with strict confidentiality. In addition, all participants were informed of their right to withdraw their participation in the study at any stage.

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CRediT authorship contribution statement

Panchali Datta: Conceptualization, Methodology, Formal analysis, Writing - original draft. Sutapa Ganguly: Conceptualization, Methodology, Formal analysis, Writing - original draft. B.N. Roy: Conceptualization, Methodology, Formal analysis, Writing - original draft.

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References

[1] Faraone SV, Brown CH, Glatt SJ, Tsuang MT. Preventing schizophrenia and psychotic behaviour: definitions and methodological issues. Can J Psychiatr 2002 Aug;47(6):527–37.
[2] NPCCDC. A report of child guidance clinic in India. New Delhi Documentation and information Centre. India: National Institute of Public Cooperation and Child Development; 1989.
[3] Malhotra S. Needs and priorities. In: Malhotra S, Malhotra A, Varma VK, editors. Child mental health in India. MacMillan India Limited; 1982. p. 1–14.
[4] Prakash Jyoti, Mitra AK, Prabhu HRA. Child and behaviour: a school based study. Delhi Psychiatr J 2008;11(1):79–82.
[5] Ministry of Women and Child Development. Integrated child protection scheme-ICPS [Last updated on 2017 Feb 06; [Last accessed on 2017 Jul 13].
[6] Rahman W, Mullick MS, Pathan MA. Prevalence of behavioral and emotional disorders among the orphans and factors associated with these disorders. Bangangabandhu Sheikh Mujib Med Univ J 2012;5:29–34.
[7] Erol N, Simsek Z. Mental health of Turkish children: behavioral and emotional problems reported by parents, teachers, and adolescents. In: Singh NN, Leung JP, editors. International perspectives on child and adolescent mental health. Amsterdam (NE): Elsevier Science Ltd; 2000. p. 223–47.
[8] Shanthi K, Jeryda Gnanajane Eljo JO. Emotional and behaviour problems of institutionalized street children. Indian J Appl Res 2014;4:135–7.
[9] Doku PN, Minuis H. Multi-informant perspective on psychological distress among Ghanaian orphans and vulnerable children within the context of HIV/AIDS. Psychol Med 2016;46:2329–36.
[10] Simsek Z, Erol N, Oztop D, Minuis K. Prevalence and predictors of emotional and behavioral problems reported by teachers among institutionally reared children and adolescents in Turkish orphanages compared with community controls. Child Youth Serv Rev 2007;29:883–95.
[11] Naqibh MM, Sehgal R, Hassan F. Orphans in orphanages of Kashmir and their psychological problems. Int NGO J 2012;7:55–62.
[12] Ćurj CR, Golfeito JH. Strengths and difficulties questionnaire (SDQ): a study of school children in Riberão Preto. Rev Bras Psiquiatr 2003;25:139–45.
[13] XR BKR, Biswas A, Rao H. Assessment of mental health of Indian adolescents studying in urban schools. Malaysian J Paediatr Child Health 2011;17(2):35–40.
[14] Hashemi MS, Yarian E, Bahadoran F, Jandaghi J, Khani MM. Prevalence of mental health problems in children and its associated socio-familial factors in urban population of Semnan, Iran (2012). Iran J Pediatr 2015 Apr;25(2).
[15] Raslaviciene G, Zaborskis A. The development of mixed emotional and behavioral disorders in children raised in foster care institutions. Medicina (Kaunas, Lithuania) 2002;38(7):759–68.
[16] SDQ. Information for researchers and professionals about the strengths and difficulties questionnaires. Available from: http://www.sdqinfo.com/ahtml; 2012.
[17] Goodman R. The strengths and difficulties questionnaire: a research note. J Child Psychol Psychiatr 1997;38:581–6.
[18] Kaur R, Vinnakota A, Panigrahi S, Manasa RV. A descriptive study on behavioral and emotional problems in orphans and other vulnerable children staying in institutional homes. Indian J Med Pediatr 2018 Mar 1;40(2):161.
[19] Bayarmaa V, Tuya N, Batsorig B, Ye G, Altanzul N, Soyolmaa B, et al. Using the Strengths and Difficulties Questionnaire (SDQ) to screen for child mental health status in Mongolia. J Ment Disord Treat 2017;3:136.
[20] Elhamid AA, Howe A, Reading R. Prevalence of emotional and behavioural problems among 6–12 year old children in Egypt. Soc Psychiatr Psychiatr Epidemiol 2009 Jan 1;44(1):8.
[21] Pastor PN, Reuben CA, Duran CR. Identifying emotional and behavioral problems in children aged 4-17 years: United States, 2001–2007. Nat Health Stat Rep 2012 Feb;48(1):1–7.
[22] Muzzi S, Kinyanda E, Nakasuiga N, Nakigudde J. A comparison of the behavioral and emotional disorders of primary school-going orphans and non-orphans in Uganda. Afr Health Sci 2007;7:202–13.
[23] Erol N, Oztop D, Ozcak AO. Prevalence and predictors of emotional and behavioral problems in children and adolescents reared in orphanages: a national comparative study. Turk J Psychiatr 2008 Sep;1;18(3).
[24] Padmaja G, Sushma B, Agarwal S. Psychosocial problems and wellbeing in institutionalized and non-institutionalized children. J Humaniat Soc Sci 2014;19:59–64.
[25] Reddy K, Jayashankar, Comparative study on the behavioral problems and Achievement motivation among institutionalized orphan and Non-orphans children. Contemp Res India (ISSN 2231-2137); 2(3) 171-179.
[26] Sujatha R, Jacob SM. Study on emotional and behavioural problems among adolescent children in selected orphanages at Mangalore. Zenith Int J Multidiscip Res 2014;4:253–9.
[27] Elebiary H, Behilak S, Kabbash I. Study of behavioral and emotional problems among institutionalized children, Egypt. Med J Cairo Univ 2010;78:293–9.
[28] Gustafsson Berit M, Proczkowska-Björklund Marie, Gustafsson Per A. Emotional and behavioural problems in Swedish preschool children rated by preschool teachers with the Strengths and Difficulties Questionnaire (SDQ). BMC Pediatr 2017;17:110.