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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.

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 for the sound health of the child. Any interference in mental or emotional development can cause behavioral disorders in a child.

The intensity of behavioral problems in children has not yet been well recognized by many governments and decision makers. 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

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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 trajectories 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 (NRSMCH). 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 depicts 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 NRSMCH 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.

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)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Age				
6–9 Years	173	57.7	97	32.3
10–12 Years	127	42.3	203	67.7
Sex				
Male	171	57.0	162	54.0
Female	129	43.0	138	46.0
Informant's relation with the child				
Parent	273	91.0	0	100.0
Caregiver	0	0	300	0
Others	27	9	0	
Educational status of the child				
Not going to school	6	18.3	2	0.7
Class I-III	165	28.0	135	45.0
Class IV-VI	105	42.0	148	49.3
Class VII-IX	24	11.7	15	5.0
Has the child repeated any class				
Yes	5	1.7	4	1.3
No	295	98.3	296	98.7
Does the child receive any special education?				
Yes	1	0.3	0	0
No	299	99.7	300	100.0
The child's favorite hobbies				
Nothing	91	30.3	76	25.3
Playing with dolls	37	12.3	11	3.7
Singing	12	4.0	18	6.0
Drawing	64	21.3	98	32.7
Computer	11	3.7	7	2.3
Reading books	4	1.3	10	3.3
Others	81	27.0	80	26.7
How much time he or she spent in hobbies?				
Very less	79	26.3	59	19.7
Average	116	38.7	139	46.3
More than average	61	20.3	42	14.0
Can't say	44	14.7	60	20.0
How many close friends the child has?				
None	55	18.3	52	17.3
One	84	28.0	57	19.0
Two to three	126	42.0	85	28.3
Four or more	35	11.7	106	35.3
Does the child have any disability or illness?				
Yes	13	4.3	2	0.7
No	287	95.7	298	99.3

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.

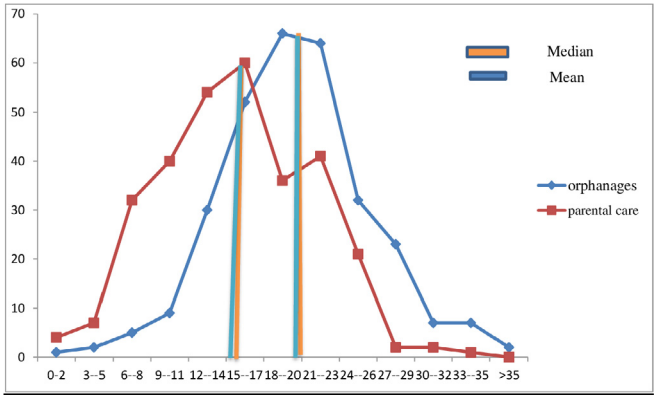

Fig. 1. Frequency polygon of total difficulty score among children under parental care and out of parental care (orphanages).

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 (55.60%), peer problem (48.30%), and hyperactivity (32.30%). Two hundred forty-two (80.70%) children had a normal prosocial score (Fig. 2).

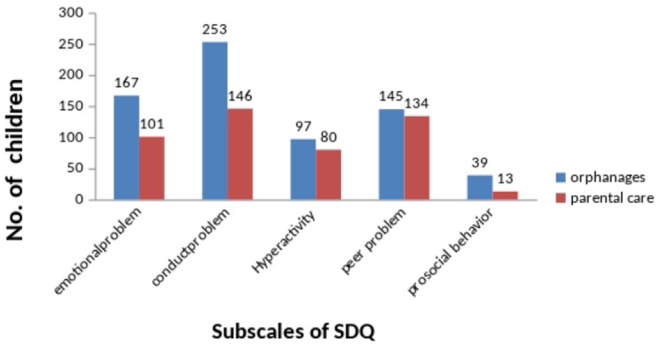

Fig. 2. Distribution of subscales of SDQ in abnormal category among children under parental care and out of parental care.

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 time spent in hobbies and 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
Correlation matrix of subscales of SDQ with total difficulty in children under parental care and out of parental care.

Pearson correlation	Emotional problem		Conduct problem		Hyperactivity		Peer Problem		Prosocial behavior		Total Difficulty	
	Parental care	Out of parental care	Parental care	Out of parental care	Parental care	Out of parental care	Parental care	Out of parental care	Parental care	Out of parental care	Parental care	Out of parental care
Emotional problem	1	1	.223[a]	.36	.178[a]	.154[a]	.342[a]	.396[a]	-.252[a]	-.185[a]	.663[a]	.598[a]
Conduct problem	.223[a]	.036	1	1	.454[a]	.422[a]	.195[a]	.257[a]	-.375[a]	-.461[a]	.704[a]	.648[a]
Hyperactivity	.178[a]	.154[a]	.454[a]	.422[a]	1	1	.157[a]	.282[a]	-.281[a]	-.473[a]	.691[a]	.693[a]
Peer problem	.342[a]	.396[a]	.195[a]	.257[a]	.157[a]	.282[a]	1	1	-.331[a]	-.427[a]	.599[a]	.723[a]
Prosocial behavior	-.252[a]	-.185[a]	-.375[a]	-.461[a]	-.281[a]	-.473[a]	-.331[a]	-.427[a]	1	1	-.463[a]	-.581[a]
Total Difficulties	.663[a]	.598[a]	.704[a]	.648[a]	.691[a]	.693[a]	.599[a]	.723[a]	-.463[a]	-.581[a]	1	1

[a] Correlation is significant at the 0.01 level (2-tailed).

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	
		Abnormal	Chi-square	Abnormal	Chi-square	Abnormal	Chi-square	Abnormal	Chi-square	Abnormal	Chi-square
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	5.501[a]	50	3.598	89	2.063	55	7.541[a]	76	1.311
	Female	46		51		57		25		58	
Educational status of the child	Not going to school	4	6.234[a]	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	0	3.810	3	.847	3	3.359	3	.877
	No	125		101		143		77		131	
The child's favorite hobbies	Nothing	30	21.342[a]	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[a]	24	10.443	37	11.482	17	32.947[a]	46	10.793[a]
	Average	46		33		51		19		50	
	More than average	39		37		40		32		19	
	Can't say	12		7		18		12		19	
Number of close friends the child has?	None	30	9.240[a]	24	10.443	29	1.221	15	3.001	44	48.637[a]
	One	36		33		39		21		41	
	Two to three	50		37		61		34		39	
	Four or more	12		7		17		10		10	

[a] Significant at the 0.05 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	
		Abnormal	Chi-square	Abnormal	Chi-square	Abnormal	Chi-square	Abnormal	Chi-square	Abnormal	Chi-square
Age	6-9 Yrs	68	1.279	58	1.031	80	.515	32	9.025[a]	51	2.302
	10-12 Yrs	152		109		173		65		94	
Sex	Male	127	8.690[a]	100	5.611	140	4.643	61	6.813[a]	95	14.987[a]
	Female	93		67		113		36		50	
Educational status of the child	Not going to school	0	17.571[a]	1	12.036	0	27.811[a]	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	9		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[a]
	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		2		7	
	Others	52		40		64		20		27	
Time he or she spent in hobbies	Very less	49	16.671[a]	45	18.309[a]	48	18.309[a]	21	8.654	41	32.729[a]
	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[a]	42	25.569[a]	49	9.860	25	12.767[a]	51	63.297[a]
	One	43		32		42		20		19	
	Two to three	61		49		73		21		34	
	Four or more	66		44		89		31		41	

[a] Significant at the .05 level.

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 5
Comparison of prevalence of behavioral disorder between children under parental care and out of parental care.

Area	Children under parental care			Children out of parental care			t value	Significance *P*
	Mean	Median	SD	Mean	Median	SD		
Total difficulty	15.32	15	5.94	19.9	20	5.77	9.59	< .05
Emotional Problem	3.55	3	2.38	4.86	5	2.21	3.97	< .05
Conduct Problem	3.56	3	2.21	5.82	6	2.20	12.55	< .05
Hyperactivity	5.14	5	2.36	5.52	5	2.13	2.07	< .05
Peer Problem	3.03	3	1.97	3.72	3	2.13	4.12	< .05
Prosocial behavior	7.69	8	1.72	7.32	8	2.35	2.20	< .05
Externalizing score (Conduct problem + Hyperactivity Score)	8.70	9	3.91	11.35	12	3.64	8.59	< .001
Internalizing score (Emotional problem + Peer problem score)	6.57	7	3.57	8.57	8	3.63	6.80	< .001
Impact score	.66	0	1.56	2.20	2	2.26	9.71	< .001

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 previous study conducted by Simsek Zeynep et al. [23] in Turkey, where the prevalence rate of total problems was reported between 18.3% and 47% among children in institutional care in comparison to 9% and 11% among the children living with their families.

Padmaja G et al. [24] conducted a comparative study between institutionalized and noninstitutionalized children for psychosocial problems in Hyderabad, India, which also reflected that type of care has an impact on almost all the dimensions measured, with institutionalized children showing more internalizing problems, externalizing problems, and poor wellbeing. The externalizing and internalizing scores showed significant difference in the two groups ($P < .001$) in the present study, which is also supported by the results of the Turkish study, although that study has used a different screening tool.

Children out of parental care were reported to have significantly more problem than the children under parental care on all subscales. Conduct problem was the major problem found in both groups, but he prevalence rate was nearly double in case of children from orphanages. This finding is consistent with those in many of the previous studies. K. Jayashankar Reddy [25] showed a similar result in a study in Bangalore, with 30 samples in each group. Other studies conducted on institutionalized orphans reported varying rates of emotional and behavioral problems. In the study conducted by Kaur Ravneet et al., most of the orphans were found to have conduct problems (34.90%) followed by peer problems (15.80%), emotional problems (14.70%), hyperactivity (8.60%), and low prosocial behavior (3.40%). Sujatha and Jacob [26] showed a prevalence of 12.5% for peer problems and 5% for abnormal prosocial behavior. A study conducted by Elebiary et al. [27] showed a prevalence of 86.0% for withdrawal, 73.7% for aggressiveness, 66.7% for hyperactivity, and 64.9% for disobedience among institutionalized children. As evident, no general trend can be ascertained from these studies. This difference in prevalence rates might be due to the differences in the scales used and the geographic distribution of the study samples.

In terms of age, total difficulties were higher in children under parental care of age 6–9 years, whereas the score was more in children aged 10–12 years from orphanages. In a study conducted 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 Gustafsson 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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