

# Depression and behavior problems among children residing at welfare hostels and orphanages

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## Abstract

**Context:** Childhood-onset of depression is often associated with childhood family adversity, parental neglect, and problematic peer relationships. Emotional and behavioral problems and high rates of depression were more common in orphans when compared to nonorphan.

**Aim:** The aim was to study and compare the depression and behavioral problems among children residing at welfare hostels and orphanages.

**Materials and Methods:** This study is a cross-sectional and descriptive study. Three welfare hostels and four orphanages run by nongovernment organizations were approached, and children between the ages of six and fourteen were recruited. Children residing at home were taken as controls. Children's Depression Rating Scale and Rutter's Behavior Scale for Children were applied to assess depression and behavioral problems, respectively.

**Statistical Analysis Used:** Statistical analysis was done using Epi Info software.

**Results:** Depression is found to a greater extent among children in the orphanages' group than in the welfare group. Rutter's score  $\geq 9$  was observed in 15%, 8.3%, and 5% of children in the welfare hostels' group, orphanages' group, and controls' group, respectively.

**Conclusions:** The prevalence of depression is found to be more among orphanage children, followed by children residing at welfare hostels compared to the control group. Behavior problems are more among children residing at welfare hostels than children residing at orphanages.

**Keywords:** Behavior problems, depression, orphanages, welfare hostels

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**Submitted:** 30-Oct-2020, **Revised:** 05-Dec-2020, **Accepted:** 14-Jan-2021, **Published:** 03-Mar-2021

## INTRODUCTION

Depression is a common mental illness worldwide affecting people across all age groups, including children. The prevalence of major depression among children (9–17 years of age) has been estimated to be 5%,<sup>[1]</sup> and at any given

time, up to 15% of children and adolescents have some symptoms of depression.<sup>[2]</sup> In children of age group 3 to 17 years, the prevalence of depression is reported as 3.2%, and the diagnosis of depression is more common with increased age.<sup>[3]</sup> The annual incidence rate of depression

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Quick Response Code:	Website: <a href="http://www.amhonline.org">www.amhonline.org</a>
	DOI: 10.4103/AMH.AMH_52_20

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**How to cite this article:** Pasupula SK, Kodali M, Benerji T, Parvathaneni KM. Depression and behavior problems among children residing at welfare hostels and orphanages. Arch Ment Health 0;0:0.

in India is found to be 1.61/1000 children.<sup>[4]</sup> The point prevalence of the depressive disorder in children and adolescents in India ranges from 1.2% to 21% as per the clinic-based studies and 0.1%–6.94% as per the studies conducted in the Indian community.<sup>[5]</sup>

Children diagnosed with depression commonly have another psychiatric problem as comorbidity. About 75% of children with depression have anxiety, and 47.2% present with behavior problems.<sup>[3]</sup> Earlier studies from India have noted the prevalence rates of behavior problems to be 6.3%–12.5%.<sup>[6,7]</sup> A survey conducted in the US has revealed that 7.4% of children have a diagnosed behavior problem.<sup>[3]</sup> Behavioral problems are known to be associated with poor academic performance in school-going children.<sup>[8]</sup>

Childhood-onset of depression is often strongly associated with childhood family adversity, parental neglect, and problematic peer relationships.<sup>[9,10]</sup> Emotional and behavioral problems and high rates of depression were more common in orphans compared to nonorphan.<sup>[11-13]</sup>

A study on institutionalized children in Japan revealed that children with low scores of secure attachment showed higher depressive symptoms.<sup>[14]</sup> Institutionalized adolescents and children exhibited a high prevalence of depression and a positive correlation of externalizing and internalizing behaviors with depression.<sup>[15,16]</sup>

As limited data are available regarding depression and behavioral problems among children residing at welfare hostels and orphanages from this part of the country, the present study is taken up with the aim to study and compare the occurrence of depression and behavioral problems among children residing at welfare hostels and orphanages.

## MATERIALS AND METHODS

This study is a cross-sectional and descriptive study carried out after obtaining approval from the Institution’s Ethical Committee. Three welfare hostels and four orphanages run by nongovernment organizations located in the catchment area of our hospital were approached, and permission for the study was obtained from the concerned authority. Informed consent was obtained from the caretaker, and confidentiality was maintained. Students between the ages of 6 and 14 residing at the welfare hostels and orphanages were recruited for the study by systematic random sampling. Children residing at home and attending regular schools were taken as a control group. Children with intellectual disability were excluded from the study. Students were

approached at the hostel premises, and sociodemographic details were taken from both the student and the caretaker using a structured questionnaire. Rutter’s Behavior Scale for children was applied to assess the behavioral problems. It has 26 items, and the scoring is done on each item as “certainly applies,” “applies somewhat,” or “does not apply.” The scores are indicated as 1, 2, or 0, and children scoring 9 or more on the total are considered to show evidence of some disorders.<sup>[17]</sup> Children’s Depression Rating Scale (CDRS) developed by Poznanski, Cook, and Carroll was applied to assess depression among children. A score of 30 was taken as significant depression, and scores in the 20–30 range were considered borderline depression.<sup>[18,19]</sup>

Statistical analysis was done using Epi Info software, and data were tabulated.

## RESULTS

### Sample characteristics

Sixty children, each residing in welfare hostels, orphanages, and those living with parents (controls), were selected for participation in the study and assigned to three groups.

The sample characteristics are summarized in Table 1.

The mean age of the sample is 12 years. The mean age of those in the welfare hostels’ group, orphanages’ group, and controls’ group is 12.68 years, 11.58 years, and 11.75 years, respectively. The sample consisted of more male children ( $n = 111$ , 61.6%) in all the three groups in our study. Most of the children in the control group ( $n = 51$ , 85%) had siblings, whereas in the welfare hostels’ group, 11 children (18.3%) had siblings. Children

**Table 1: Sample characteristics**

Sociodemographic variable	Number of children		
	Welfare hostel	Orphanage	Control
Age (years)			
9	2	14	5
10	3	3	10
11	2	8	6
12	20	13	22
13	15	13	8
14	18	9	9
Gender			
Female	25	27	17
Male	35	33	43
Siblings			
Yes	11	0	51
No	49	60	9
Standard studying			
5	3	18	13
6	17	19	17
7	12	10	12
8	17	11	14
9	11	2	4

of all the three groups have access to education and most of them were studying standard VI.

### Results of the Children’s Depression Rating Scale

Depression in all the three groups was assessed by applying the CDRS. The mean CDRS score of the sample is 20.22. The mean CDRS scores of the welfare hostels’ group, orphanages’ group, and controls’ group are 20.48, 21.15, and 18.8, respectively. In the orphanages’ group, 13 children (21.7%) had a CDRS score >20, of which four children (6.7%) had a CDRS score in the 20–30 range (borderline depression). The majority (76.9%) of the children from the orphanage group with depression were girls. Only 3 (33.1%) boys had depression in the orphanage group as summarized in Tables 2 and 3.

A CDRS score of >30 (significant depression) was observed in 8 (13.3%), 9 (15%), and 3 (5%) children in the welfare hostels’ group, orphanages’ group, and controls’ group, respectively. Depression is found to a greater extent among children in the orphanages’ group than the in welfare group. In comparison, depression is found least among children living with their parents (control group).

### Results of the Rutter’s Behavior Scale for Children

Problem behaviors in all the three groups were assessed by applying the Rutter’s Behavior Scale for Children. The mean Rutter’s Behavior Scale score of the sample is 7.45. The mean Rutter’s Behavior Scale score of the welfare hostels’ group, orphanages’ group, and control’ group is 8.033, 6.9, and 7.45, respectively. Rutter’s score  $\geq 9$  was observed in 9 (15%), 5 (8.3%), and 3 (5%) children in the welfare hostels’ group, orphanages’ group, and controls’ group, respectively. Of the total sample, problem behaviors were found more often in males ( $n = 12$ , 10.8%) than females ( $n = 5$ , 7.2%), as shown in Tables 4 and 5.

## DISCUSSION

In the current study, depression and behavioral problems have been assessed in the children residing in welfare hostels, orphanages, and those living with their parents. Depression was found to a greater extent among children in the orphanages’ group (21.7%) than the welfare group (13.3%), whereas depression is found least among children living with their parents (5%). On the contrary, a study from Japan noted that 43.4% of the institutionalized children were in a depressive state, with the highest depression score among children who have both parents and lowest among orphans.<sup>[14]</sup> A study conducted at Rajasthan, India, revealed a low prevalence of depression (2.33%) in school-going children residing with their parents.

**Table 2: CDRS scores among children**

CDRS score	Welfare hostel, n (%)	Orphanage, n (%)	Controls, n (%)
<20	52 (86.6)	47 (78.3)	57 (95)
20–30	0 (0)	4 (6.7)	0 (0)
More than 30	8 (13.3)	9 (15)	3 (5)

**Table 3: Number of children with CDRS score >20**

Gender	Number of children with CDRS score >20		
	Welfare hostel	Orphanage	Control
Female	1	10	0
Male	7	3	3

**Table 4: Rutter’s score among children**

Rutter’s score	Welfare hostel, n (%)	Orphanage, n (%)	Controls, n (%)
<9	51 (85)	55 (91.67)	57 (95)
More than or equal to 9	9 (15)	5 (8.3)	3 (5)

**Table 5: Number of children with Rutter’s score  $\geq 9$**

Gender	Number of children with Rutter’s score $\geq 9$		
	Welfare hostel	Orphanage	Controls
Female	2	3	0
Male	7	2	3

Institutionalization could be a risk for depression as it may be considered as a type of parental deprivation, and the shift-work system of the caregivers in the institution may also result in a lowered sense of belonging among the children.<sup>[20,21]</sup>

In the present study, 21.6% of the children residing in orphanages had presented with depression, of which 15% showed significant depression and 6.7% had borderline depression, which was similar to findings of earlier studies,<sup>[22,23]</sup> whereas a few studies have reported a higher prevalence of depression (24%–36%) in children residing in orphanages.<sup>[11,24,25]</sup>

The majority (76.9%) of the orphanage residing children with depression were girls as per the observations of this study, which in accordance with the research done by Ibrahim *et al.*<sup>[23]</sup> High prevalence of depression among girls may be attributed to the factors such as the existing culture where there is a preference of boys over girls and the problems faced by girls in everyday life due to their social status relative to boys.<sup>[23,26]</sup>

In the current study, behavioral problems were more commonly seen in the children residing at welfare hostels (15%) when compared to those living in orphanages (8%) and the control group (5%). Similar results were reported by Ravneet *et al.*<sup>[27]</sup> Higher rates of behavioral problems (33%–56%) have been reported by

Zohra SL *et al.*, Rahman *et al.*, and Shanthi and Jeryda Gnanajane Eljo.<sup>[28-30]</sup> by using the childhood behavioral checklist or strengths and difficulty questionnaire for assessment.

## CONCLUSIONS

The prevalence of depression is found to be more among orphanage children, followed by children residing at welfare hostels compared to the control group. Behavior problems are more among children residing at welfare hostels than children residing at orphanages.

The above findings reflect the need for caretakers to be sensitized to detect children with these problems in the early stages. Hence, periodic assessment of these children and appropriate interventions are recommended to alleviate the suffering.

## Strengths of the study

Standardized instruments and a structured sociodemographic data questionnaire were used for collecting information from the caretakers and parents. The data collection procedure was uniform as only one examiner interviewed the subjects, hence, reducing interobserver bias.

## Limitations of the study

A major limitation of this study is that it was conducted in the institutions and orphanages located in the catchment area of our hospital, so the results cannot be generalized. Caretakers' lack of awareness about the behavioral problems of their children living at institutions might have distorted the data provided by them. Further research can be undertaken to assess the role of psychosocial issues and identify the importance of factors such as living conditions, emotional support, and history regarding abuse in these children.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

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