



## Health problems and their associated factors among orphan children living in orphanage of Bhubaneswar

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### Abstract

**Background:** Orphan children's globally and in India increasing, orphanage residents frequently receive no care. The physical health of orphan children is crucial because they are highly susceptible to health problem.

**Materials and Methods:** A descriptive research design was used to assess health problems and their associated factors among orphan children. Hundred thirty two (132) orphan children were selected conveniently from orphanages, Bhubaneswar, Odisha the data were analysed by using descriptive and inferential statistics.

**Results:** Reveals that health problems among orphan were significantly higher including many disease. (93.18%) had common cold, highest percentage of orphan (63.63%) had diarrhoea, highest percentage of orphan (15.90%) had eye itching, (15.90%) had dental caries, highest percentage (15.15%) had scabies. (13.63%) had less social activity and (43.18%) had poor concentration.

**Conclusion:** It is concluded that the orphaned children, those living in orphanages, they have experience of common health problem and psychosocial problem. Frequent assessment of their physical health and mental health are advocated for early detection, prevention and timely intervention.

**Keywords:** Health problems, associated factors, orphan children and orphanage

### Introduction

UNICEF defines an orphan as a child under 18 who has lost one or both parents to any cause of death <sup>[1]</sup>. Around 140 million orphan children are thought to exist in the world <sup>[2]</sup>.

Orphanage children are socially vulnerable group that is frequently disregarded by society at large <sup>[3]</sup>. Lack of parental attention and support causes developmental and behavioral issues in children living in orphanages <sup>[4]</sup>. Behavior and mental health issues influence the orphan's overall development, which could have a negative effect on their adult academic and social outcome <sup>[5]</sup>.

Numerous health issues among orphans are caused by physical neglect, poor hygiene and lack of nurturing <sup>[6]</sup>. Orphanage children are at higher risk of malnutrition, leading to increased mortality and morbidity rates compared to children living with their parents <sup>[7]</sup>. Research shows that, 78% of people had multiple morbidities. Low awareness of disease and their complications, and a high prevalence of self-care for the majority of health issues <sup>[8]</sup>.

Most orphaned children suffer from varying degree of malnutrition, with adolescent in residential care being

particularly vulnerable and need of proper care <sup>[9]</sup>. Orphanage children are experiencing psychosocial problems such as anxiety, depression, loneliness and social isolation <sup>[10]</sup>. The daily increase in orphan is accompanied by severe violations of their basic human rights, including emotional deprivation, financial challenges and a sense of desperation <sup>[11]</sup>.

Poor hygiene, inadequate water/sanitation, overcrowding in orphanages lead to protozoan, helminthic, viral infections, and diarrheal illness in orphan children <sup>[12]</sup>. Research is needed on parentally bereaved children to better understand their specific needs and challenges. This can inform interventions and support systems to improve their mental well-being <sup>[13]</sup>. It is concerning to hear that orphan children have lower psychological well-being scores compared to non-orphan children <sup>[14]</sup>.

Many orphan children's are suffered from numerous health issues such as malnutrition, psychological issues, physiological issues, etc. Hence this study was planned with aimed to assess health problems and their associated factors among orphan children living in orphanages.

## Methods

A quantitative approach with non-experimental, descriptive research design was adopted to assess the health problem and their associated factor among orphan children. The study was carried out in three orphanages in Bhubaneswar: Jeevan Jyoti Ashram, Sri Sri Maa Ananda Ashram, and Ashraya. In this study, orphans of all age groups who could understand the Odisha language and were available during the data collection period were included. Orphan were not willing to give consent were excluded from the study. A total of 132 orphan children are selected conveniently. Institutional Ethical Committee (IEC) and administrative

permission was taken from authority of orphanages. The tools used to collect the data were as follows: 1) demographic questionnaire to assess demographic characteristics, 2) Self-structured physical assessment tool was used to assess the systemic disorder and 3) self-structured questionnaire used to assess factors of health problem. Data were collected by an interviews schedule. The data were analysed using descriptive and inferential statics with SPSS 21 version.

## Results

**Table 1:** Frequency and percentage distribution of demographic characteristics of orphan children, N=132

Sl. No	Socio-demographic data	Criteria	Frequency	Percentage (%)
1.	Age	5-8 years	30	22.72
		8-10 years	35	26.51
		11-13 years	28	21.21
		Above 13 years	39	29.54
2.	Gender	Male	36	27.27
		Female	96	72.72
3.	Education Standard	No formal education	2	1.51
		Lower primary	51	38.63
		Upper primary	53	40.15
		Secondary	26	19.69
4.	BMI	Normal weight	29	21.96
		Under weight	103	25.0-29.9
5.	Frequency of falling sick in a year	One time	39	29.54
		Two time	57	43.18
		More than two time	36	27.27
6.	Immunization	Taken	46	34.84
		Not taken	86	65.15

Table 1 shows that demographical characteristics that highest percentage of orphan belonging to the age group above 13 years (29.54%). The majority (72.72%) of the orphan children were female. In terms of education, the highest percentage (40.15%) had completed upper primary education. Regarding BMI, the majority of the orphan

children (21.96%) fell into the range of 18.5-24.9. The study also found that the highest percentage (43.18%) of orphan children reported falling sick twice a year on average. Additionally, a significant percentage (65.15%) of the orphan children had not received immunizations.

**Table 2:** Distribution of systemic disorder of orphan children

Sl. No	System	Disorders	Frequency	Percentage (%)
1.	Respiratory system	Asthma	2	1.51
		Tonsilitis	6	4.54
		Sinusitis	0	0
		Common Cold	123	93.18
		Rhinitis	0	0
		Pneumonia	0	0
		No other	1	0.75
		Congenital disease	0	0
		Cardiac support device	0	0
		Rheumatic heart disease	0	0
		No other	132	100
		Thyroid	0	0
		Obesity	0	0
		Growth Disorder	0	0
		Adrenal Gland Disorder	0	0
		Diabetes	0	0
		No other	132	100
2.	Gastro intestinal system	Indigestion	13	9.84
		Gastritis	5	3.78
		Hepatitis	0	0
		Abdominal pain	14	10.60

		Loss of appetite	2	1.51
		Pancreatitis	0	0
		Worm infestation	14	10.60
		Diarrhoea	84	63.63
		No other	0	0
		<b>Menstrual problem</b>		
3.	Reproductive system	i) Dysmenorrhea	2	1.51
		ii) Amenorrhea	1	0.75
		iii) Menorrhagia	0	0
		Any infection	0	0
		Any ovarian problem	0	0
		No other	89	67.42
4.	Genitourinary system	Nephrotic syndrome	0	0
		Glomerulus nephritis	0	0
		UTI	0	0
		No other	132	100
5.	Musculoskeletal	Joint Pain	1	0.74
		Leg Cramps	0	0
		Polio	0	0
		Arthritis	0	0
		Scoliosis	0	0
		Osteomyelitis	0	0
		Muscle Stiffness	0	0
		Heel Pain	0	0
		Sprains	2	1.51
		Lordosis	0	0
		Kyphosis	0	0
		Joint tumour	0	0
		No other	129	97.72
6.	Nervous system	Epilepsy	0	0
		Meningitis	0	0
		No other	132	100
7.	Immune system	Food allergy	2	1.51
		Drug allergy	0	0
		Systemic lupus erythematosus	0	0
		No other	130	98.48
8.	Haematological problem	Anaemic or pallor if any	2	1.51
		Generalized to weakness	130	98.48
		Fatigue	0	0
		No other	0	0
9.	Eye problem	Eye itching	21	15.90
		Night blindness	0	0
		Vision problem	1	0.75
		No other	110	83.33
10.	Ear problem	Ear infection	2	1.51
		Hearing problem	1	0.75
		Any discharge	13	9.84
		No other	116	87.87
11.	Dental problem	Caries	21	15.90
		Gum bleeding	8	6.06
		Gum swelling	0	0
		No other	103	78.03
12.	Skin problem	Scabies	20	15.15
		Rashes	13	9.84
		Psoriasis	0	0
		Cellulitis	0	0
		No other	99	75

Table 2 shows that among orphan children, the highest percentage (93.18%) had common cold as a respiratory system disorder. Among gastrointestinal system disorders, the highest percentage (63.63%) had diarrhea. For menstrual problems, the highest percentage (7.57%) had amenorrhea. Among immune system disorders, the highest percentage (1.51%) had food allergies. Among haematological

problems, the majority (98.48%) had generalized weakness and a small percentage (1.51%) had anemia. For eye problems, the highest percentage (15.90%) had eye itching. Among ear problems, the highest percentage (9.84%) had ear discharge. For dental problems, the highest percentage (15.90%) had dental caries. Lastly, among skin problems, the highest percentage (15.15%) had scabies.

**Table 3:** Distribution of associated factors of health problems among orphan children

SL No	Factors	Criteria	Frequency	Percentage (%)
1.	Physical factors	Taken daily bath	130	98.48
		Wash hand before/after food	117	88.63
		Wash hand after toilet	113	85.60
		Wear neat and clean dress	117	88.63
		Brushing daily	110	83.33
		Combing daily	123	93.18
		Cut nails weekly	128	96.96
		Wears chappals	132	100
		Environment is clean or not	132	100
2.	Psychological factors	<b>a) Anxiety</b>		
		Feeling nervous, restless or tense	27	2.04
		Sweating	0	0
		Feeling weak	23	17.42
		Sleeping Disturbance	20	15.15
		No other	62	46.96
		<b>b) Depression</b>		
		Sadness	0	0
		Less social activity	18	13.63
		Loneliness	3	2.27
	Withdrawal symptoms	Suicide thought	0	0
		Feeling of guilt	0	0
		Feeling to cry	4	3.03
		Impaired thinking and concentration	2	1.51
		No other	105	79.54
		<b>C) Withdrawal symptoms</b>		
		Irritability	22	1.66
		Lack of impairment	12	9.09
		Fatigue	0	0
		Poor memory	19	14.39
		Poor concentration	22	16.66
		No other	57	43.18
		<b>d) Hyper active</b>		
		Carelessness	15	11.36
		Lack of attention	28	21.21
		Restlessness	52	39.39
		Excessive talking	29	21.96
		Acting without thinking	0	0
		No other	8	6.06
		3.	Nutritional Factor	<b>a) Food habit</b>
Vegetarian	24			18.18
Non-vegetarian	108			81.81
<b>b) frequency of taken meal</b>				
< Four times	0			0
< Four times	18			13.63
More than four times	114			86.36
<b>c) Appetite</b>				
Good appetite	91			68.93
Average appetite	31	23.48		
Poor appetite	10	7.57		
4.	Medical condition	a) Any past history of illness	72	54.54
		b) Frequency hospitalization	3	2.27

Table 3 shows that majority of orphan children (98.48%) were taking daily baths, (17.42%) were having weakness, (13.63%), having less social activity (16.66%) were poor concentration and (39.39%) were having restlessness. In terms of nutritional factors, the highest percentage of children (81.81%) consumed a non-vegetarian diet (54.54%) of children had a past history of illness.

#### Association between demographic characteristics and health problems of orphan children

Chi-square test was used to analyse the association between

demographic characteristics and health problems of children. The results revealed significant associations between age with common cold, worm infestation, eye problems, ear problems, dental problems, and depression ( $\chi^2 = 9.92$ ,  $p = 0.01$ ;  $\chi^2 = 17.68$ ,  $p = 0.0005$ ;  $\chi^2 = 13.20$ ,  $p = 0.004$ ;  $\chi^2 = 16.87$ ,  $p = 0.0007$ ;  $\chi^2 = 17.13$ ,  $p = 0.0006$ ;  $\chi^2 = 21.43$ ,  $p = 0.00008$ ) respectively. These findings suggest that there is a relationship between demographic characteristics and the occurrence of these health problems among children.

## Discussion

In this study most of orphan (29.54%) were belonging to the age group above 13 years. In Shukla *et al.* (2011), the highest percentage of children (29%) fell within the age group of 13-14 years [15]. Mahanta *et al.* (2022), reported that the majority (49.4%) of orphans belonged to the 10-14 age group [16].

Present study shows that among GI system disorder highest percentage of children (63.63%) had diarrhoea. (9.84%) had ear discharge, (15.90%) had eye itching, (9.84%) had eye discharge, Toutem *et al.* (2018) found that 26% of the participants had diarrhea and 74% had ear problems [17]. In Reddy *et al.* (2017), it was discovered that the highest percentage of orphans (3.9%) had eye problems [18]. El-Sherbeny *et al.* (2015) found significantly higher health problems among orphan children, including: sensitive eyes (49.4%), ear problems (22.1%), mouth and teeth issues (44.9%), upper respiratory tract problems (60.9%), and gastrointestinal tract problems (70.2%) [19].

Present study study shows that, highest percentage of children (15.90%) had dental caries. El-Sherbeny *et al.* (2015) revealed that 44.9% of the participants had mouth and teeth problems [19]. Mayavati *et al.* (2013) found that the majority of children (65.1%) were suffering from dental caries, followed by 38.2% having upper respiratory tract infections [20]. Kamran *et al.* (2017), stated that 5% of orphan children had dental caries [21].

Present study shows that, among skin problem highest percentage of orphan (15.15%) had scabies. In a similar study conducted by El-Moamly *et al.* (2021), it was found that 98% of children had scabies, and 71% had been infected with another condition [22]. Shiferaw *et al.* (2018), reveals that 35.5% of orphans had skin problems [23]. Chhabra *et al.* (1996) conducted a study among orphans in Delhi, it was revealed that skin disease was the most common morbidity, accounting for 31.7% of cases, followed by disease of the oral cavity, which accounted for 16.1% of cases [24]. Toutem *et al.* (2018), he was found that 76% of the participants had a skin infection [17].

In present study highest percentage of orphan (16.66%) were having poor concentration and (13.63%) were having less social activity. Shiferaw G *et al.* (2018) found that 73% had orphan are having concentration difficulties [25]. Sameena *et al.* (2016) stated that 33.8% of orphan children had attention problem [26]. Wasima Rahman (2012) stated that 33.3% had attention problems and 5% had abnormal prosocial behavior [27].

In the present study, the most common illnesses observed in children were skin infections, ear infections, gastrointestinal problems such as diarrhea, eye disorders, and worm infestations. In a similar study conducted by Machhi *et al.* (2020), it was reported that orphan children are more likely to suffer from chronic conditions. The most common illnesses observed in these children were minor respiratory infections, minor skin infections, ear infections, gastrointestinal problems, and eye disorders [28]. Reddy *et al.* (2017), stated that common health problems observed in orphans included anaemia, skin infections, dental problems, and malnutrition [18]. Navpreet *et al.* (2017) found that out of 120 orphan children, 109 of them, accounting for 91%, reported various types of physical health problems [29].

In this study, it was observed that personal hygiene was

generally good among all children. The majority of orphan children (98.48%) were taking daily baths, (88.63%) washed their hands before and after food, and (85.60%) washed their hands after using the toilet. Deb *et al.* (2010), he reported that the majority of children (50%) had average personal hygiene, followed by good personal hygiene in 30.4% of the children [30].

## Conclusion

The study found that most children in orphanages had good health, but many experienced skin diseases, common colds, and dental issues due to poor personal hygiene. To address this, it is important to prioritize health education on hygiene practices and balanced diets. Regular health check-ups and screenings for malnutrition should be conducted. Additionally, providing behavioural and divisional therapy can help reduce social isolation.

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## Declaration

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