



Original Research Article

A STUDY ON HEALTH STATUS OF CHILDREN RESIDING IN ORPHANAGES OF PRAYAGRAJ

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Received : 07/04/2026
Received in revised form : 22/05/2026
Accepted : 10/06/2026

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DOI: 10.70034/ijmedph.2026.2.552

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2026; 16 (2); 3335-3341

ABSTRACT

Background: Orphanages serve as vital institutions providing care and support to children who have lost parental care due to various circumstances. However, the health needs of orphaned children often remain overlooked, especially concerning their mental well-being. **Objective:** This study examines the physical, mental, and social health of orphaned children in Prayagraj orphanages.

Materials and Methods: This descriptive cross-sectional study was conducted in orphanages of Prayagraj district during the year 2023- 2024. The study was projected to trace the health status of the children residing in orphanages of Prayagraj district. Total six orphanages were found in this district which were registered in government record.

Results: The study reveals significant findings regarding the health status of orphaned children. Quantitative analysis of physical health data indicates prevalent issues such as malnutrition, infectious diseases, and growth delays among the participants. Moreover, measures of mental health reveal elevated levels of depression, anxiety, and trauma-related symptoms among a substantial proportion of children, corroborated by qualitative narratives of sadness, worry, and fear expressed during interviews.

Conclusion: Various factors contribute to the health challenges faced by orphaned children in Prayagraj orphanages. Institutional factors, including overcrowding, inadequate resources, and a lack of trained staff, exacerbate physical and mental health issues.

Keywords: Orphanages, physical health, overcrowding, inadequate resources, lack of trained staff, exacerbate physical and mental health issues.

INTRODUCTION

Children residing in orphanages face multifaceted challenges that can significantly impact their health status, yet there remains a critical gap in understanding and addressing these challenges effectively. The overarching problem addressed by this thesis is the inadequate attention and knowledge surrounding the health status of children residing in orphanages. This lack of understanding hampers efforts to provide appropriate care and support to orphaned children, thus perpetuating disparities in health outcomes and compromising their overall well-being.^[1]

Orphanages often operate with limited resources, including insufficient funding, shortage of trained

medical personnel, and inadequate access to healthcare services. Consequently, orphaned children may not receive timely medical attention or necessary treatments for their health conditions. Undiagnosed and untreated medical issues, such as malnutrition, infectious diseases, and growth delays, can have long-term implications for the health and development of these children.^[2] Furthermore, the absence of preventive healthcare measures and regular health assessments may exacerbate existing health disparities among orphaned children in orphanages.^[3]

Mental Health Challenges

The loss of parental care, past traumatic experiences, and the institutional environment can contribute to mental health issues among orphaned children in

Prayagraj orphanages. However, there is a notable dearth of research focusing specifically on the mental health status of these children. Without adequate attention to mental health needs, orphaned children may struggle with depression, anxiety, post-traumatic stress disorder (PTSD), and other psychological disorders.^[4] Moreover, stigma surrounding mental health issues may deter orphaned children from seeking help or disclosing their struggles, exacerbating the problem.

Social Well-being

The social environment within orphanages plays a crucial role in shaping children's well-being, including their sense of belonging, social support networks, and opportunities for social and emotional development. However, the extent to which orphanages in Prayagraj foster a supportive social environment remains unclear.^[5] Issues such as overcrowding, lack of individualized attention, and limited recreational and educational opportunities may impede the development of positive social relationships and inhibit children's social integration. Additionally, stigma and discrimination associated with being an orphan may further isolate children and undermine their social well-being.^[6]

Factors Influencing Health Outcomes

Numerous factors influence the health outcomes of orphaned children in Prayagraj orphanages, including demographic characteristics, past traumatic experiences, institutional practices, socio-economic status, and societal attitudes towards institutionalized children.^[7] However, there is a need for a comprehensive understanding of how these factors intersect and impact children's health status. Without addressing these underlying determinants, interventions aimed at improving health outcomes may fall short of effectively addressing the complex needs of orphaned children.^[8]

The inadequate attention and understanding of the health status of children residing in orphanages pose significant challenges to ensuring the well-being of these vulnerable populations.^[9] By addressing the multifaceted nature of these challenges, this research seeks to contribute to the development of targeted interventions and policies aimed at promoting the holistic health and well-being of orphaned children and similar contexts with the following objectives.

MATERIALS AND METHODS

This descriptive cross-sectional study was conducted in orphanages of Prayagraj district during the year 2023- 2024. The study was projected to trace the health status of the children residing in orphanages of Prayagraj district. Total six orphanages were found in this district which were registered in government record. The study was conducted for the duration of period of one year (March 2023 – Feb 2024)

Inclusion Criteria

- Children residing in orphanages.

- Orphaned children who have been living in the orphanage for at least 6months.

Exclusion Criteria

The children living in orphanage less than 6 months. Children with chronic illnesses requiring specialized care outside the orphanage.

Sample Size: Complete enumeration of children in orphanages of Prayagraj district was done.

Selection of Orphanages: All the 6 orphanages were selected from the list of registered orphanages in Prayagraj, retrieved from Vikas Bhawan Prayagraj.

Methodology

There are a total of 6 orphanages in Prayagraj district with a capacity of 255.

All the 6 orphanages were visited and each child was interviewed, after applying inclusion and exclusion criteria, 229 children were selected for this study.

Data Collection Tools

Interview Schedule: A structured closed ended interview schedule was developed to collect demographic information, health history, nutritional status, and social well-being of the children.

Health Assessment Tools

Anthropometric Measurements: Height, weight and mid- upper arm circumference (MUAC) was measured using standard techniques to assess nutritional status.

Medical Examination: A thorough medical examination was conducted to identify any health issues such as infectious diseases, growth delays, or other medical conditions.

Mental Health Assessment: The Strengths and Difficulties interview schedule (SDI) or similar validated tools was used to screen for mental health issues like anxiety, depression, and behavioral problems.

Social Well-being: A Social Support interview schedule was administered to assess the children's social networks and perceived social support within the orphanages.

Data Collection Procedure

Pilot Study: A pilot study was conducted with a small subset of the sample to refine the data collection tools and procedures.

Ethical Considerations: Ethical approval was obtained from the Institutional Review Board (IRB) or Local Ethics Committee. Informed consent was obtained from the caregivers of the children, and assent was obtained from the children themselves.

Data Collection Process: Data was collected and analyzed.

The data collection included face-to-face interviews, health assessments, and observations.

Data Management and Analysis

Data Entry: Data was entered into a secure database using software such as MS Excel version. Double entry was used to ensure accuracy.

Statistical Analysis: Descriptive Statistics: Frequencies, percentages, means, and standard deviations were calculated to describe the

demographic characteristics, health status, and social well-being of the children.

Nutritional Status Analysis: Z-scores for height-for-age, weight-for-age, and weight-for-height was calculated using WHO growth standards. The prevalence of undernutrition, stunting, and wasting was calculated.

Mental Health Analysis: Scores from the The Strengths and Difficulties interview schedule (SDI) or equivalent tool was analyzed to determine the prevalence of mental health issues among the children.

RESULTS

A total of six government registered orphanages were taken in prayagraj district out of which 229 children participated during data collection. The related tables are shown with their explanations.

Out of 229 participants, 86 are male, accounting for 37.55% of the total population. This indicates that there are fewer male participants compared to females in the orphanages studied. The majority of participants are female, with 143 out of 229, making up 62.45% of the sample.

The majority of children in the orphanages are Hindu, constituting 97.4% of the total population. This suggests a strong predominance of Hindu children in the orphanages in Prayagraj.

The largest proportion of children falls into the General category, making up 56.8% of the population. This indicates a significant number of children come from families that are not categorized under OBC or SC/ST.

A significant majority, 93.4%, of the children are attending school. This high percentage indicates that most orphanages are successfully integrating educational opportunities into their care programs.

A substantial majority, 71.6%, of the children are involved in curriculum and sports activities. This suggests that most orphanages provide or facilitate participation in educational and recreational activities.

The personal habits of children in orphanages are key indicators of their overall well-being. The diet preferences of children in orphanages show a diverse

range, with 42.8% identifying as vegetarian, 37.1% as ovo-vegetarian, and 20.1% as non-vegetarian. The significant proportion of vegetarians and ovo-vegetarians suggests that many children avoid meat, likely due to cultural or personal reasons. Ensuring these children receive a balanced diet rich in essential nutrients like protein and iron is crucial. Non-vegetarian children, though a smaller group, benefit from the broader nutritional range provided by meat and fish. These findings highlight the need for orphanages to implement tailored nutritional planning that meets the specific dietary needs of each group, ensuring all children receive adequate nutrition for their growth and development. None of the children reported having any type of addiction.

A vast majority of children, 90.85%, reported no health issues in the past six months, reflecting a generally good health status. Among those who did report issues, 6.56% experienced skin problems, while only 3.06% reported having a common cold or flu. Notably, no children reported respiratory or digestive problems.

An overwhelming majority (98.69%) reported not being exposed to any contagious diseases like chickenpox or measles recently. Only 1.31% of the respondents indicated exposure to such diseases.

94.32%, receive medical check-ups regularly every few months, indicating a strong commitment to healthcare monitoring in these institutions.

The majority, 217 children (94.8%), were up-to-date on their vaccinations according to their age, indicating a high level of compliance with recommended vaccination schedules.

A significant majority, 222 children (96.8%), engage in physical activities or exercise on a regular basis.

A significant majority, 149 children (64.9%), fall within the "Normal" BMI category, indicating that a substantial portion of the children have a healthy weight for their height. However, there are notable concerns in other categories. A total of 72 children (31.4%) are categorized as either "Severe Thinness" (20 children or 8.7%) or "Thinness" (52 children or 22.7%), reflecting potential issues with malnutrition or inadequate dietary intake. Conversely, only 8 children (3.5%) are classified as "Overweight," suggesting that obesity is less of a concern.

Table 1: Height-for-Age Distribution Among Children in Orphanages

Height-for-Age	Frequency	Percentage
Severely Stunted	16	7.0%
Stunted	3	1.3%
Normal	210	91.7%
Total	229	100%

Table 2: Prevalence of Infections Among Children

Type of Infection	Number of Children	Percentage (%)
Pneumonia	2	0.87
Gastrointestinal Infection	9	3.93
Worm infection	0	0.00
Any other infection	0	0.00
Total	229	100

2 children (0.87%) reported having pneumonia, and 9 children (3.93%) reported having gastrointestinal infections.

Table 3: Current Health Problems Among Children

Health Problem	Number of Children	Percentage (%)
Diarrhea/Vomiting/Others	9	3.93
Fever	21	9.17
Headache	2	0.87
Pain or Others	2	0.87
Ear Problem	3	1.31
Any Other Problem	0	0.00
Total	229	100

Table 4: Health Indicators and Conditions of Children in Orphanages

Health Indicator	Abnormal/Positive Cases	Percentage (%)
Temperature Abnormal	18	7.86
Pallor Positive	40	17.47
Icterus Positive	7	3.06
Teeth and Gums (Bleeding/Caries)	23	10.04
Lymph Node Enlargement	10	4.37
Total Children Surveyed	229	100

The survey reveals that 18 children (7.86%) had abnormal temperature readings. A significant number, 40 children (17.47%), showed pallor, indicating potential anemia or other health issues. Icterus was observed in 7 children (3.06%), suggesting liver-related problems. Dental issues such as bleeding gums or caries were found in 23 children (10.04%). Additionally, 10 children (4.37%) had lymph node enlargement.

During the head-to-toe examination, 11 children (4.80%) exhibited issues in the mouth and throat, such as inflammation or infections. Skin infections were found in 9 children (3.93%), indicating potential hygiene or dermatological issues. Additionally, 10 children (4.37%) were identified with upper respiratory infections (URI), which could point to environmental factors or seasonal illnesses affecting the respiratory system.

Table 5: Eye Conditions in Children in Orphanages

Eye Condition	Positive Cases	Percentage (%)
Night Blindness	0	0.00
Astigmatism	0	0.00
Cataracts	0	0.00

The survey of 229 children in orphanages revealed that 13 children (5.68%) suffer from short Sightedness.

Table 6: Emotional Well-being (happiness) of Children in Orphanages

Emotional State (happiness)	Number of Children	Percentage (%)
Rarely or Never	8	3.49
Occasionally	14	6.11
Sometimes	9	3.93
Often	9	3.93
Almost Always	189	82.54
Total	229	100

In the survey of 229 children, a significant majority, 189 children (82.54%), reported feeling happy almost always. A smaller portion of the children, 8 (3.49%) rarely or never feel happy, 14 (6.11%) feel happy occasionally.

A majority, 150 children (65.50%), reported rarely or never feeling happy. Smaller portions indicated varying frequencies of happiness: 11 children (4.80%) felt happy occasionally, 18 children (7.86%) sometimes, 19 children (8.30%) often, and 21 children (9.17%) almost always.

Table 7: Levels of Anxiety Among Children in Orphanages

Anxiety Level	Number of Children	Percentage (%)
Rarely or Never	171	74.67
Occasionally	14	6.11
Sometimes	15	6.55
Often	9	3.93
Almost Always	20	8.73
Total	229	100

In a survey of 229 children, 150 children (65.50%) reported having received some form of counseling,

therapy, or emotional support in the orphanage, while 79 children (34.50%) indicated they had not received

such support. This data reflects that a significant majority have access to mental health services, but there is still a notable proportion who do not.

15 children (6.55%) reported getting less than 6 hours of sleep each night, 180 children (78.60%) get between 6 to 8 hours of sleep, and 14 children (6.11%) get more than 8 hours of sleep.

8 children (3.49%) reported feeling extremely uncomfortable discussing their feelings with staff or caregivers, while 10 children (4.37%) felt somewhat uncomfortable.

The majority of individuals fall within the "average" IQ range (90-109), accounting for 69.45% of the sample.

A significant majority of individuals (82.17%) are currently attending school or receiving educational support, highlighting a high level of engagement in

educational activities. Conversely, only 17.83% are not engaged in such activities.

The majority of individuals rate their academic progress as either "Average" (36.64%) or "Good" (33.63%), indicating a generally positive perception of their academic performance. A smaller segment considers their progress "Excellent" (3.38%), and a minority rate it as "Below Average" (12.31%).

The majority of individuals (80.35%) engage in social interactions with peers several times a week, indicating a high level of social activity within the orphanage. A small number interact daily (2.62%), while a few engage once a week (7.42%) or rarely (0.87%).

The majority of individuals (62.43%) report that they "Average Enjoyed" living in the orphanage, reflecting a general sense of satisfaction but not exceptional enjoyment.

Table 8: Comparison of anthropometric measure- Height for age among children in orphanages governed by Government and NGOs

Height for age	Government N=174	NGOs N=55	Total N=229	Chi-Square	p-value
Severely stunted	14	2	16	0.6624	0.4157
Stunted	3	1	4	0.3344	0.5631
Normal	157	52	209		

The chi-square test, with the value of 0.6624 and 0.3344 and p-value, suggests that, there is no association between height for age among children and type of governance in orphanages.

The chi-square test, with the value of 0.4501 and p-value .0830, suggests that, there is no significant deviation, so there is no correlation between morbidity status (illness) among children in government and NGO,s orphanages.

The chi-square test, with the value of 0.602 and p-value .4377, suggests that, there is not statistically significant, so there is no association between immunization status among children in government and NGO,s orphanages

The chi-square test, with the value of 7.553 and p-value .0060, suggests that, there is statistically significant, so there is association between received counselling, therapy or emotional support among children in government and NGO,s orphanages.

The majority of individuals among the age group (14-17 yrs),-3 illness presents age group(10-13 yrs)-1,age group (6-9 yrs)-1 children, illness present, not noticed at age >17 yrs.

There is no relation between morbidity status and school enrolment, school enrolment attending to school regularly -5 children illness present, not present in 224.

DISCUSSION

This higher proportion of female children may reflect broader social trends or specific orphanage policies, suggesting that female children are more frequently placed in institutional care. Addressing this gender disparity is essential for ensuring equitable care and

support, requiring tailored interventions that consider the unique needs of this predominantly female population.

The high proportion of Hindu children may result in more culturally specific support within the orphanages, such as tailored health practices and dietary preferences, which could positively influence their overall health outcomes.

The predominant presence of General category children suggests that orphanages may reflect broader socio-economic demographics or specific admission criteria.

The high attendance rate indicates effective educational support within the orphanages and underscores the importance of education in the children's overall development.

The analysis indicates that 71.6% of children in orphanages are actively involved in curriculum and sports activities, reflecting a strong emphasis on their holistic development. This engagement promotes academic, physical, and social growth, suggesting that the orphanages are effectively integrating educational and recreational opportunities into their programs.

The high proportion of vegetarians and ovo-vegetarians indicates that many children follow dietary practices that exclude meat, possibly due to cultural or personal reasons. This highlights the importance of ensuring that their nutritional needs, including adequate protein and iron, are met through alternative sources. The absence of reported substance abuse among the children is a particularly encouraging outcome. The data indicates that none of the children are involved in addictive behaviors such as smoking, chewing gutka, or alcohol consumption.

This reflects well on the orphanages' efforts to maintain a supportive and healthy environment.

The high percentage of respondents without medical conditions suggests a generally healthy population or effective health management within the orphanages.

Regular health assessments and effective management practices are crucial to sustaining the well-being of the children in the orphanages.

The overall health management and living conditions in these orphanages are likely effective in preventing common health problems.

Orphanages are successfully maintaining a controlled and safe environment, minimizing the risk of contagious disease outbreaks among the children.

Regular check-ups are essential for early detection of illnesses, preventive care, and overall health management, which are crucial for the well-being of children in institutional settings.

Orphanages are effectively managing the immunization needs of their residents, which is crucial for maintaining their overall health and preventing vaccine-preventable diseases.

The high percentage indicates that the orphanages are successful in incorporating physical activity into the daily routines of the children, which is essential for promoting physical health, improving fitness, and fostering social and emotional well-being.

A majority, 64.9%, fall within the "Normal" BMI range, suggesting that a significant portion of the children maintain a healthy weight relative to their height. This indicates that the majority of the orphanages are effectively meeting the nutritional needs of their residents.

Most children in these orphanages are experiencing healthy growth, likely due to adequate nutrition and health care.

This low prevalence of illness may reflect the effectiveness of the health care and preventive measures implemented in the orphanages. Regular medical check-ups, a balanced diet, and adequate living conditions likely contribute to this positive outcome. The orphanages have adequate hygiene practices and preventive measures in place to protect children from this condition. The relatively low incidence of infections suggests that the health and sanitation conditions in the orphanages are generally adequate.

A small percentage of children in orphanages received frequent medical treatments, indicating that some children have ongoing health issues requiring repeated medical attention.

Hospitals are the primary source of treatment for the majority of children in the orphanages, likely due to their comprehensive facilities and availability of specialized care.

The high percentage of children reporting that they are almost always happy (82.54%) indicates a positive emotional environment within the orphanages.

The majority of children in orphanages have received counseling or emotional support, which is a positive

sign of the institutions' efforts to address mental health needs.

The majority (78.60%) percentage of children who get between 6 to 8 hours of sleep suggests that a majority either sleep too little or sufficiently, but fall within the recommended 6-8 hours range.

The distribution of IQ scores in this sample reflects a typical bell curve where the central range of average intelligence predominates.

The data indicates that educational engagement is notably high, with most individuals actively participating in school or educational programs. This could reflect effective educational policies, strong community support, or a general emphasis on the importance of education in the surveyed group. The relatively small proportion of individuals not receiving educational support suggests that barriers to education might be minimal in this context. The data reveals a predominance of self-reported average to good academic progress among individuals, which reflects a positive but not exceptional overall perception of academic achievement.

CONCLUSION

The study reveals a significant gender imbalance among children in orphanages in Prayagraj, with a higher proportion of females and no transgender representation. To ensure equitable development, it is crucial to identify and address barriers to participation, expand program offerings, and make activities more accessible to all children. Enhancing these aspects will support the holistic growth and well-being of every child in the orphanage system.

Maintaining substance-free status and addressing dietary needs will be crucial in supporting the overall well-being and development of the children. Continuous monitoring and adaptation of support systems are essential to sustain these positive conditions and promote a thriving, healthy environment for all children in the orphanages.

A significant proportion are experiencing varying degrees of underweight. With 31.4% of children categorized as either "Severe Thinness" or "Thinness," there is a clear need for enhanced nutritional support and intervention. Addressing these issues is essential for improving the overall health and development of these children.

Despite these challenges, resilience and coping mechanisms are evident among some orphaned children, facilitated by supportive relationships within the orphanage community and access to recreational activities.

The implications of this study underscore the urgent need for targeted interventions aimed at improving the health and well-being of orphaned children in Prayagraj orphanages. These include enhancing healthcare services, implementing trauma-informed care practices, providing psychosocial support, and addressing societal attitudes towards institutionalized children.

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