THE PREVALENCE OF ORAL AND SYSTEMIC DISEASE BETWEEN BONDED CHILD LABORERS AND SCHOOL CHILDREN IN BAGALUR, TAMIL NADU, INDIA

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ABSTRACT

Anna N. Hilla: The Prevalence of Oral and Systemic Disease Between Bonded Child Laborers and School Children in Bagalur, Tamil Nadu, India
(Under the direction of Benjamin A. White)

Objective: This study compares the prevalence of oral and systemic disease between bonded child laborers and school children living in Bagalur, Tamil Nadu, India. This is the first study to compare both the oral and systemic health between bonded child laborers and school children. The research hypothesis was that public school children were less likely to experience oral and systemic disease than bonded child laborers. Methods: School children (N=50) and bonded child laborers (N=52) were examined by a medical doctor and two dental examiners (IRB # 15-3001), who recorded the presence or absence of disease. Chi-square analysis was used to compare the two groups of children. Level of significance was set at 0.05. Results: The proportion of children (p=0.001) with at least some dental decay was significantly different (71% vs 36%) for child laborers (N =52) than school children (N=50). Child laborers were 1.9 times more likely to have decay than school children (95% CI, 1.2-2.9). Dental pain was reported by 40% of the child laborers compared to 18% of school children (p=0.018) and child laborers were 2.2 times more likely to experience dental pain than school children (95% CI,1.1-4.4). Fifty-one percent of child laborers required urgent dental treatment compared to 12% of school children (p<0.001) and they were 4.2 times more likely to require dental treatment than school children (95% CI,1.9-9.5). Child laborers were also 3 times more likely to require urgent medical treatment (95% CI,1.1-8.9). Conclusion: Bonded child laborers in Bagalur, India are more likely to experience dental decay, dental related pain, and require urgent dental and medical treatment, than school children.
ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to the University of North Carolina School of Dentistry for facilitating my graduate studies. I would also like to thank my thesis committee members Dr. Ceib Phillips, Professor Rebecca Wilder, and Dr. Benjamin A. White for their guidance and wisdom along the way.

I am beyond grateful for the people of Bagalur, India for the genuine richness and meaning you have brought to my life. This research would be unimaginable without all of the men, women, and beautiful children of Bagalur.

I am forever grateful for each team member who made the journey to India and touched the lives of so many.

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LIST OF ABBREVIATIONS

DMFT  Decayed, Missing, Filled, Teeth

SPSS  Statistical Package for the Social Sciences

Rs.   Indian Currency of Rupees

OHI-S Simplified Oral Hygiene Index

WHO  World Health Organization
INTRODUCTION

Worldwide, there are 186 million child laborers (ages 5-14), of which 12.6 million are in India.\(^1\) The Indian state of Tamil Nadu ranks in the top prevalence of bonded laborers in India.\(^2\) While physiological and psychological health issues of child laborers can be found in the scientific literature,\(^3,4,5\) currently no publications have been identified that report research conducted regarding the oral and systemic health of the children in Bagalur, Tamil Nadu, India.\(^,\) The objectives of this study were to identify the prevalence of oral and systemic disease between the two groups of children, school children and bonded child laborers. The overall goal of this study was to create awareness of oral disease amongst child laborers and influence further initiatives in education and health care for child laborers in India.
REVIEW OF THE LITERATURE

Oral and Systemic Health

Oral health is one of many aspects of well-being that ensures people of every age, race, gender, and ethnicity are able to eat, drink, smile, and communicate without disease, discomfort, or social embarrassment. According to the World Health Organization (WHO), oral health is the status of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth loss, and other diseases and disorders that affect the oral cavity. Oral health is also important in terms of overall health. Recent literature suggests that poor oral health is often associated with chronic diseases such as diabetes, cardiovascular disease, and respiratory disease. Therefore, prevention of oral disease is a recognizable priority.

Global Burden

Dental caries and periodontal disease remain prevalent across various populations and cultures. Worldwide, 60-90% of school children have dental cavities. As these children age, severe periodontal disease, which can lead to tooth loss, can be found in 15-20% of middle-aged adults across the globe. This prevalence is increasing, especially in developing countries such as Asia, and Latin America, as cited in Guo et al. More severely, those who have lost all of their natural teeth comprise 30% of people aged 65-74 and those with severe periodontal disease, associated with diabetes and compromised immunity, involves 5-15% of the population, as cited in Guo et al.
The high prevalence of dental caries and periodontal disease is increased by various risk factors such as tobacco and alcohol use and an unhealthy diet. In addition, poor oral hygiene and social determinants play a large role as well. The World Health Organization (WHO) reports that the prevalence of oral disease is "Increasing in low-and middle-income countries, and in all countries the disease burden is significantly higher among poor and disadvantaged population groups." 6

Despite efforts towards prevention, the treatment of oral disease by means of professional dental care remains an economic burden for many countries. As recommended by WHO, health for all is possible only when every country spends 5% of gross national product (GNP) for health care but India is spending only 3%. 8

India’s Economic Burden

Low-income, developing countries, such as India, face the issue of dental caries and periodontal disease. India has 28 states and seven territories and is home to more than 1.2 billion people, which is four-times the population of the United States. Despite India’s considerably larger population, the Gross Domestic Product (GDP), representing the total dollar value of all goods and services produced, is 88.8% lower than the United States. This indicates a remarkable difference in the health and size of the economies between India and the United States. The majority of India is considered lower-middle income with greater than thirty-percent of the population living below the international poverty line of US $1.25 per day. Thus, access and ability to finance medical and dental care remains a struggle for the country of India.

Vulnerable Populations

Populations most vulnerable to oral health disparities, and consequently overall health disparities, include those in developing countries. According to a cross-sectional study, by Peltzer et al., across six countries analyzing the prevalence of edentulism, the country of India was identified
among the highest percentage of adults experiencing a complete loss of teeth. In this study, the most common factors correlating to the prevalence of edentulism include sociodemographic factors, chronic conditions, health risk behaviors, and low social cohesion.

The prevalence of oral disease does not only affect the oral and overall health of the school children, but is also responsible for a portion of the more than 50-million hours lost from school worldwide, due to oral disease. For populations already vulnerable to disease, hours lost from school only further hinders development and economic growth.

**Bonded Child Laborers**

While more than fifty-million hours are lost from school worldwide, due to oral disease, the oral health of children not able to attend school cannot be overlooked. For a population of children in India, oral disease does not determine whether they are able to attend school. This population consists of bonded child laborers.

Bonded labor refers to “The status or condition arising from a pledge by a debtor of his personal services...as security for a debt.” Essentially, the laborers are bound to their employer by means of a loan. For the bonded child laborers, the parents of the children have a loan from the government that is paid off by their child’s work. Many bonded child laborers begin as early as 4-5 years of age.

Bonded child laborers are involved in a variety of different work industries. Based upon a survey by the Human Rights Watch of five states in India including Tamil Nadu, the main work occupations include agriculture, brick kilns, stone quarries, carpet weaving, rearing of silk cocoons, production of silk sarees, silver jewelry, synthetic gems, diamond cutting, and leather products.
Historically, bonded labor was outlawed by the Indian government in 1976. At the time of this abolition, an estimated 2.62 million bonded laborers were recorded through the National Labor Institute. In response, the Supreme Court in India issued an order to collect information via a survey on the prevalence of bonded labor in order to rehabilitate the laborers. This survey, conducted in 1996 identified the state of Tamil Nadu of having the highest prevalence of bonded laborers. It was reported that over one million bonded laborers were present in Tamil Nadu, amongst 20 occupations, of which 10 percent were child laborers. The majority of bonded child laborers were reportedly female.

Child Labor in Tamil Nadu

One major industry prevalent in the state of Tamil Nadu, India is the silk weaving industry. The Human Rights Watch (1996) reported that the majority of children working in these silk industries were aged 5-12 and worked 12 or more hours per day for six and a half to seven days per week. The children in this industry are considered at-risk as they work under hazardous conditions and are often beat by their employers.

A more recent investigation conducted by the Human Rights Watch (2003) reveals that an estimated 350,000 children are engaged in the silk weaving industry alone and work 12 hours per day. The demographics of these children reveal that the majority of these children were from scheduled castes/scheduled tribes or Muslims.

Bagalur, Tamil Nadu, India

Located in the Southern region of India, Bagalur is a village located in the state of Tamil Nadu, India. Bagalur is a village located outside of Bangalore, India. With an approximate population
of 500,000 people, this population consists of a portion of the 350,000 child laborers within the state of Tamil Nadu who are bound to work in the silk reeling and weaving industries as well as children who are fortunate to attend school during the day.\textsuperscript{9}

The children living in Bagalur who are forced to work as laborers begin working early in the morning and work through the night. These children do not receive consistent meals and do not receive any formal education during the day. These children are not only bonded to long hours and poor compensation, but also hazardous machinery and carcinogenic chemicals. Thus, these children are exposed to multiple risk factors on a daily, prolonged basis. An inspection completed in 1998 in a silk unit similar to ones present in Bagalur, revealed that children were required to work for 12-14 hours per day and received only 2-3 Rs. as wages. This equivocates to 3 to 5 US cents per day.

The children living in Bagalur who are able to attend either public or private school spend the majority of their day in the classroom learning a wide variety of academic subjects. Children arrive at school in the morning and remain until the late afternoon. Children at one particular school in Bagalur are given a lunch break to eat meals and are instructed by their teachers to brush their teeth afterwards. The students have access to clean drinking water and clean facilities. While the school children spend the majority of their day sitting in classrooms, they are given about one hour of recess per day to go outside.

The school children and bonded child laborers of Bagalur geographically live very close to each other. However, their daily lifestyle and access to food and water is significantly different. Thus, the oral and systemic health effects of the lifestyle differences between the two groups is unknown.

**Known Health Effects of Child Labor**
The current literature reveals that child labor not only harbors an environment of long work hours and poor compensation, but also a variety of health problems.

According to a cross-sectional study conducted in Jaipur, India, by Tiwari et al., gem polishing working children reported a variety of medical problems including eyestrain, headache, gastrointestinal complaints, musculoskeletal symptoms, and skin disease. More severely, a scientific review by Woolf, revealed that working children are vulnerable to anemia, fatigue, and other health problems. In addition, children involved in manual labor were exposed to injury and even chemical poisoning. Banerjee et al. indicated that bonded child laborers suffered both nutritional deficiencies as well as various medical problems. Another study conducted in Pondicherry, India investigated the prevalence and factors related to child labor. The overall prevalence of child labor was 32.5% and 65.1% of working children were beaten or scolded by their employer for working too slow. The conclusions of the study were that bonded child laborers suffer psychological as well as physiological negative health effects.

**Oral Health of Child Laborers**

Regarding the oral health of child laborers, current research is sparse. However, one available study suggests that bonded child laborers are at more of a risk for oral disease or decay. Gangwar et al. conducted a cross-sectional study in Bareilly City, India where four hundred children were sampled using the DMFT index and OHI-S score. The mean DMFT score was 3.8 for school children and 2.9 for school children. The results of the study reported that child laborers have poorer oral health status (dental caries and oral hygiene) compared to school children.

Scientific literature currently reveals that child laborers are more likely to experience various
health problems as well as experience more dental caries and oral hygiene.\textsuperscript{16} However, no studies have reported on both of these elements for the same population group. Further, the specific population of bonded child laborers and school children in Bagalur, Tamil Nadu, India, have never been reported.

**Purpose**

Although studies have been conducted on the physiological effects of bonded labor\textsuperscript{3-5} as well as oral health of bonded child laborers\textsuperscript{16}, no publications have been identified regarding research on the oral and systemic health of the children in Bagalur, Tamil Nadu, India. The objectives of this study were to identify the prevalence of oral and systemic health between the two groups of children, school children and bonded child laborers. The overall goals of this study were to create awareness of oral disease amongst child laborers and influence further initiatives in education and health care for child laborers in India. The research hypothesis was that public school children were less likely to experience oral and systemic disease than bonded child laborers.
INTRODUCTION AND REVIEW OF THE LITERATURE

Worldwide, there are 186 million child laborers (ages 5-14), of which 12.6 million are in India.¹ The Indian state of Tamil Nadu ranks in the top prevalence of bonded laborers in India.² While physiological and psychological health issues of child laborers can be found in the scientific literature ³-⁵ currently no publications have been identified that report research conducted regarding the oral and systemic health of the children in Bagalur, Tamil Nadu, India. The objectives of this study were to identify the prevalence of oral and systemic disease between the two groups of children, school children and bonded child laborers. The overall goal of this study was to create awareness of oral disease amongst child laborers and influence further initiatives in education and health care for child laborers in India.

Low-income, developing countries, such as India, face the issue of dental caries and periodontal disease. India has 28 states and seven territories and is home to more than 1.2 billion people, which is four-times the population of the United States.⁹-¹⁰ Despite India’s considerably larger population, the Gross Domestic Product (GDP), representing the total dollar value of all goods and services produced, is 88.8% lower than the United States. This indicates a remarkable difference in the health and size of the the economies between India and the United States.⁹-¹⁰ The majority of India is considered lower-middle income with greater than thirty-percent of the population living below the international poverty line of US $1.25 per day.¹⁰-¹¹ Thus, access and ability to finance medical and dental care remains a struggle for the country of India.
Located in the Southern region of India, Bagalur is a village located in the state of Tamil Nadu, India. Bagalur is a village located outside of Bangalore, India. With an approximate population of 500,000 people, this population consists of a portion of the 350,000 child laborers within the state of Tamil Nadu who are bound to work in the silk reeling and weaving industries as well as children who are fortunate to attend school during the day.5

The children living in Bagalur who are forced to work as laborers begin working early in the morning and work through the night. These children do not receive consistent meals and do not receive any formal education during the day. These children are not only bonded to long hours and poor compensation, but also hazardous machinery and carcinogenic chemicals. Thus, these children are exposed to multiple risk factors on a daily, prolonged basis. An inspection completed in 1998 in a silk unit similar to ones present in Bagalur, revealed that children were required to work for 12-14 hours per day and received only 2-3 Rs. as wages. This equivocates to 3 to 5 US cents per day.

The children living in Bagalur who are able to attend either public or private school spend the majority of their day in the classroom learning a wide variety of academic subjects. Children arrive at school in the morning and remain until the late afternoon. Children at one particular school in Bagalur are given a lunch break to eat meals and are instructed by their teachers to brush their teeth afterwards. The students have access to clean drinking water and clean facilities. While the school children spend the majority of their day sitting in classrooms, they are given about one hour of recess per day to go outside. The school children and bonded child laborers of Bagalur geographically live very close to each other. However, their daily lifestyle and access to food and water is significantly different. Thus, the oral and systemic health effects of the lifestyle differences between the two groups are unknown.
The current literature reveals that child labor not only harbors an environment of long work hours and poor compensation, but also a variety of health problems. According to a cross-sectional study conducted in Jaipur, India, by Tiwari et al., gem polishing working children reported a variety of medical problems including eyestrain, headache, gastrointestinal complaints, musculoskeletal symptoms, and skin disease. More severely, a scientific review published in the Journal of Toxicology revealed that working children are vulnerable to anemia, fatigue...and other health problems. In addition, children involved in manual labor were exposed to injury and even chemical poisoning while another study in the Journal of India Pediatrics reported that bonded child laborers suffered both nutritional deficiencies as well as various medical problems. Another study conducted in Pondicherry, India investigated the prevalence and factors related to child labor. The overall prevalence of child labor was 32.5% and 65.1% of working children were beaten or scolded by their employer for working too slow. The conclusions of the study were that bonded child laborers suffer psychological as well as physiological negative health effects.

Regarding the oral health of child laborers, current research is sparse. One available study has suggested that bonded child laborers are at more of a risk for oral disease or decay than school children. A cross-sectional study of 400 children school children and bonded child laborers conducted in Bareilly City, India reported that child laborers have poorer oral health status (dental caries and oral hygiene) compared to school children.

Investigators have reported that child laborers are more likely to experience various health problems as well as experience more dental caries and oral hygiene. However, no studies have reported on both of these elements for the same population group. Further, the specific population of bonded child laborers and school children in Bagalur, Tamil Nadu, India, have never been studied.
MATERIALS AND METHODS

Convenience samples of two population groups, bonded child laborers and school children, living in Bagalur, Tamil Nadu, India were included in this study. Consent from all the parents/guardians of the children were obtained prior to data collection through contact between the principal of the school and the parents of each child. Confidentiality of the data was maintained by a data custodian in India who removed all protected personal information prior to sending the information to the principle investigator. This study was reviewed and approved by the Biomedical Human Subjects committee at the University of North Carolina – Chapel Hill (IRB # 15-3001).

Fifty school children in one school were randomly selected by the principal of the school, by class, to participate. All bonded child laborers present at an afternoon community meal program were selected. The parents of the bonded child laborers gave informed consent prior to the children attending the meal program that day. All children were examined by a single physician and two dental examiners. The physician completed a physical examination for each participant in a private room with a curtain drawn to ensure each participant’s personal privacy. Vital signs, height, weight, temperature, and blood pressure, as well as presence or absence of systemic disease including anemia, jaundice, edema, clubbing, lymphadenopathy, chest abnormality, cardiovascular system abnormality, abdomen abnormality, ears, nose, and throat abnormality, and abnormality of the eyes were recorded by the physician. Recommended urgent systemic treatment was recorded as well as any prescription analgesics, antibiotics, or hypertensive medications prescribed by the physician.

Two dental examiners completed an extraoral and intraoral examination. Examiners were calibrated in regards to qualifications for identifying disease presence or absence. Participants were seated on an elevated bench and examiners wore masks, gloves, and protective eyewear while using
a flashlight and tongue depressor to record findings. Examiners recorded the presence or absence of oral disease, including oral cancer, tonsillitis, dental-related pain, dental abscess, or dental-related facial swelling. The number of decayed teeth were identified visually. No dental explorer, dental probe, or radiographs were used. A recommendation for urgent dental treatment was based on a finding of generalized decay, severe dental pain, swelling, or possible pathology.

The dental and medical outcomes of the two groups of children were compared using Chi square analysis and 95% Confidence Intervals. Level of significance was set at 0.05.
RESULTS

The two groups of children ranged in age from 5 to 18 years old. Overall, 46% of the total subjects were female and 53.9% were male. Between the two groups there were 27 female and 25 male bonded child laborers. Among the school children, there were 20 female and 30 male school children.

The proportion of children with at least some dental decay was significantly different (p=0.001) for child laborers (71%) than school children (36%). Table 1. More child laborers reported dentally-related pain than school children (40% vs 18%) and were 1.9 times more likely to have dental decay than school children (95% CI, 1.2-2.9). Fifty-one percent of child laborers required urgent dental treatment compared to 12% of school children (p<0.001) and overall were 4.2 times more likely to require dental treatment than school children (95% CI,1.9-9.5). More bonded child laborers presented with oral cancer (2.2%) than school children (0%). Table 1. In addition, bonded child laborers presented with higher prevalence of tonsillitis, clinical abscesses, and facial swelling.

The proportion of school children with cardiovascular abnormality (8%) was statistically different (p=0.037) from that of bonded child laborers who exhibited no cardiovascular abnormality (Table 2). However, child laborers were 3 times more likely to require urgent treatment for other systemic diseases when a disease was present (95% CI,1.1-8.9). There was no statistically significant difference between the two groups in the presence of anemia, jaundice, clubbing, lymphadenopathy, chest abnormality, abdomen abnormality, ears, nose, and throat (ENT) abnormality, and abnormality of the eyes. However, more bonded child laborers experienced lymphadenopathy, abnormality of the chest, abdomen, ENT, and eyes. Overall, 20.5% of the children presented with an ENT abnormality, 10.4% with an abdomen abnormality, and 7.7% with an abnormality of the eyes.
DISCUSSION

In comparing India’s oral health status to other developing countries, the World Dental Federation reports that India’s average DMFT score is 5. Among the world’s poorest countries, Central African Republic’s DMFT is 4, Niger is 1.3, Burundi is 1.0, Liberia is 0.4, and Malawi is 0.8. Thus, India has a higher DMFT index than some of the poorest countries in the world. While there are limited studies reported in India regarding the DMFT index of child laborers and school children, one study in India by Gangwar et al. reported a mean DMFT of 3.8 for child laborers and 2.9 for school children. Thus, it was reported that child laborers have poorer oral health status with dental caries and oral hygiene compared to school children but a lower average DMFT index than India’s average DMFT index.

On a national level, the National Institute of Health reports that 23% of children age 2-11 have untreated dental caries while 20% of adolescents age 12-19 have untreated dental caries. Both of these statistics are significantly lower than the school children (36%) and bonded child laborers (71%) in Bagalur, India. Thus, the prevalence of untreated dental caries in Bagalur, India is higher than the national average in the United States. This comparison suggests further research into the factors contributing to India’s higher prevalence of oral disease.

Confounding factors responsible for India’s higher prevalence are abundantly present. Further research studies regarding the difference in diet, oral health habits, access to dental care, access to oral hygiene products, access to medicine, family income, caste systems, type of bonded labor work, number of years worked, age of starting work, and pre-existing health conditions are strongly suggested and anticipated. Further studies would potentially identify factors likely to affect both groups of children and suggest possible connections between oral and systemic health.
The results reported by Tiwari et al. are in agreement with the current study in that both found child laborers to suffer from eyestrain, headache, gastrointestinal complaints, and musculoskeletal symptoms. However, in this study, school children are more likely to experience cardiovascular abnormalities than bonded child laborers. This could possibly be attributed to the difference in physical activity between the bonded child laborers and school children. The bonded child laborers spend their days moving and working, while the school children are sitting in a classroom for the majority of the day.

The diversity between the bonded child laborers and school children results in different oral and systemic health outcomes. For the dental hygiene profession, it is imperative that both clinicians and educators remain informed of the powerful effect of diversity on oral health. Clinicians and educators are not only faced with diversity when overseas, but rather every day in the United States as well. Being aware of the positive and negative effects of diversity is a necessary knowledge base for any member of the dental profession.

As a profession, it is our duty to expand our minds outside of the typical private practice setting. In recognition of the underserved needs of those in India, clinicians and educators are equally reminded of the needs of diverse groups all over the world. This approach to dentistry emphasizes the strong movement towards a more culturally competent group of professionals.

Research thus far regarding the oral and systemic health of bonded child laborers is quite limited. No research data has been conducted for the city of Bagalur, Tamil Nadu, India. Being the first of its kind, this study aims to create awareness of oral and systemic disease experienced by bonded child laborers and school children currently living in the untouched city of Bagalur. The results of this research suggest and elicit the need for further research into factors affecting the oral and systemic health of the bonded child laborers and school children.
CONCLUSION

Bonded child laborers in Bagalur, India are more likely to experience dental decay, dental related pain, and require urgent dental and systemic medical treatment when compared to school children. School children are more likely to experience cardiovascular abnormalities than bonded child laborers. The data does not suggest that either group is more likely to experience anemia, jaundice, edema, clubbing, lymphadenopathy, chest abnormality, cardiovascular abnormality, abdomen abnormality, ears, nose, and throat abnormality, and or abnormality of the eyes. However, when a systemic disease condition is present, bonded child laborers are more likely to require urgent medical attention.
Table 1. Percentage of School Children and Child Laborers with Dental Disease

<table>
<thead>
<tr>
<th>Dental Disease</th>
<th>School Children (N = 50)</th>
<th>Child Laborers (N = 52)</th>
<th>Both Groups (N = 102)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Decay</td>
<td>36.7%</td>
<td>71.1%</td>
<td>53.9%</td>
</tr>
<tr>
<td>Dental Pain</td>
<td>18%</td>
<td>40%</td>
<td>29%</td>
</tr>
<tr>
<td>Tonsillitis</td>
<td>6%</td>
<td>13.3%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Clinical Abscess</td>
<td>2%</td>
<td>4.4%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Oral Cancer Dx</td>
<td>0%</td>
<td>2.2%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Facial Swelling</td>
<td>0%</td>
<td>2.2%</td>
<td>1.1%</td>
</tr>
</tbody>
</table>
Table 2. Percentage of School Children and Child Laborers with Systemic Disease

<table>
<thead>
<tr>
<th>Systemic Abnormality</th>
<th>School Children (N = 50)</th>
<th>Child Laborers (N = 52)</th>
<th>Both Groups (N = 102)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT</td>
<td>16%</td>
<td>25%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Abdomen</td>
<td>10.2%</td>
<td>10.6%</td>
<td>10.4%</td>
</tr>
<tr>
<td>Eyes</td>
<td>4%</td>
<td>11.5%</td>
<td>7.7%</td>
</tr>
<tr>
<td>CVS</td>
<td>8%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Lymph.</td>
<td>2%</td>
<td>5.7%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Edema</td>
<td>2%</td>
<td>1.9%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Anemia</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Jaundice</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Chest</td>
<td>0%</td>
<td>1.9%</td>
<td>1%</td>
</tr>
<tr>
<td>Clubbing</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
FIGURES

Figure 1. Presence of Dental Decay in School Children and Child Laborers
Figure 2. Comparing the Need for Urgent Systemic Treatment in School Children and Child Laborers
REFERENCES


