

Research Article

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## Socio-demographic profile of HIV infected children accessing care at pediatric clinic of a tertiary level hospital in North India

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### ABSTRACT

**Background:** An increasing number of Human Immunodeficiency Virus (HIV) infected children are being identified and registered for Anti-Retroviral Therapy (ART). The parents of HIV infected children are more likely to die and thus render the children orphan. The socio-demographic characteristics of children with HIV infection are different than the other children of the same age group. So it is important to describe the socio-demographic characteristics of HIV infected children and ascertain factors associated with orphan-hood.

**Methods:** During 2010-11, a hospital based descriptive study was done where one hundred fifty six children registered at the pediatric chest clinic of a tertiary care hospital in Delhi and their caregivers were included in the study. Semi-structured, pretested interview schedule was used for data collection through face to face interview.

**Results:** Nearly half of the children were in age group of 5-9 years (mean age  $8.1 \pm 3.45$  years) and two-thirds (73.3%) were male. In 66% of children both parents were HIV infected, in 17.3% cases either parent was infected. None of the parent was reported to be HIV positive in 16.7% of children. The prevalence of orphan-hood was 39.1% with majority as paternal orphans. The primary caregiver was either the surviving parent (82.0%) or extended family members and 87.8% of children were living with their parents/surviving parent.

**Conclusion:** The prevalence of orphan-hood among the HIV-positive children was high. It might lead to significant health consequence for the children. Larger community-based studies are needed to determine the true magnitude of orphan-hood.

**Keywords:** HIV, Children, Demographic profile

### INTRODUCTION

HIV continues to be a major global public health issue, having claimed more than 36 million lives so far.<sup>1</sup> Globally, an estimated 35.3 million people were living with HIV and 1.6 million AIDS deaths occurred in 2012.<sup>2</sup> Although the prevalence of HIV infection is low in India but due to large population, third largest number (1.9 million) of people living with HIV/AIDS are in India.<sup>3</sup>

Globally, the number of people receiving antiretroviral treatment has tripled over the last five years. By reducing the virus circulating within a population, scaled-up antiretroviral therapy helps reduce the number of new HIV infections. From 1995 to 2012, antiretroviral therapy averted 6.6 million AIDS-related deaths worldwide, including 5.5 million deaths in low- and middle-income countries.<sup>4</sup>

As a result of scaled-up HIV prevention services, the annual number of newly infected children in 2012 was

reduced to 260000 in low- and middle-income countries which was 35% lower than in 2009.<sup>4</sup> But as most children acquire HIV from their HIV-infected mothers during pregnancy, birth and breast feeding, either or both of their parents are infected with HIV and the parents of infected children are more likely to die and thus render the children orphans. Estimated 1.7 million children were orphaned due to AIDS in 2012.<sup>2</sup>

Being sexual transmission of HIV in most of cases, children remain the least focused group and they share the burden of the epidemic at early age. In many families they act as caregiver for sick parents who have AIDS. An increasing number of households are headed by children. Family which is primary source of protection and support to children and most effective structure for responding to children's need is disrupted. Thus assessment of the socio-demographic characteristics of children living with HIV is important.

## METHODS

A hospital based cross-sectional study was conducted at All India Institute of Medical Sciences (AIIMS), New Delhi in India where approximately 200 Children Living With HIV/AIDS (CLWH) were enrolled for pre-ART care in 2010. Conveniently, all the eligible children (less than fifteen years of age and receiving treatment & care for HIV/AIDS at AIIMS) and their informal caregiver were intent to be enrolled in the study. A total of 156 children and their caregivers were approached during June 2010 to May 2011 during their visit to paediatric chest clinic at AIIMS hospital. After ethical clearance from institute ethics committee of AIIMS, study was started. Data were collected by a single investigator using a pretested structured interview schedule. Participant information sheet was provided to all the participants and written informed consent was taken before interview. Children related data was collected from the record available and caregivers were interviewed. An AIDS orphan was defined as a child who has lost one or both parents to HIV/AIDS. Data analysis was done using SPSS statistic 17.0.1 for Windows version. For categorical variables, data were compiled as frequency and percent. For continuous variables, data were calculated as mean  $\pm$  Standard Deviation (SD).

## RESULTS

Nearly half (50.6%) of the children were in age group of 5-9 years (mean age  $8.1 \pm 3.45$  years) and two-thirds (73.3%) were male. In 66% of children both parents were HIV infected, in 17.3% cases either parent was infected. None of the parent was reported to be HIV positive in 16.7% of children. Majority of children were coming from other nearby states. For majority of children (66%), both parents were infected with HIV. In 16.7% children, no parent reported as having HIV infection (Table 1).

**Table 1: Socio-demographic characteristics of children living with HIV (N=156).**

Characteristic	Number (%)	Percent
<b>Age group (years)</b>		
0-4	22	14.1
5-9	79	50.6
>10	55	35.5
<b>Sex</b>		
Male	115	73.3
Female	41	26.3
<b>State of residence</b>		
Delhi	76	48.7
Uttar Pradesh	47	30.1
Haryana	18	11.5
Others	15	9.6
<b>Parents HIV status (HIV +ve)</b>		
Both	103	66
Father only	5	3.2
Mother only	22	14.1
None	26	16.7

Mother to child transmission was the most common (80.1%) route of transmission among CLHA. Another 4.5% children, there was history of blood transfusion and 5.8% attributed the infection to hospital admissions, multiple surgeries etc. Interestingly, in 9.6% children route of transmission was unknown and none of their both parents was infected with HIV (Table 2).

**Table 2: Distribution of children by their reported mode of transmission of HIV.**

Mode of transmission	Numbers	Percent
Mother to child transmission	125	80.1
History of blood transfusion	7	4.5
Others*	9	5.8
Don't know	15	9.6
<b>Total</b>	156	100.0

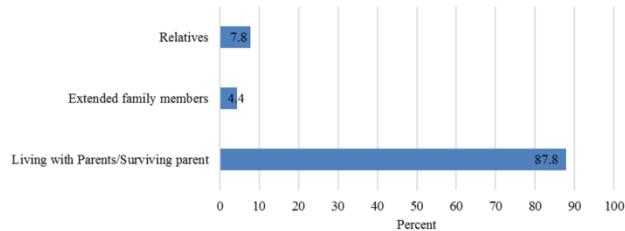
\*Others-Infected syringes, multiple surgeries

The prevalence of orphans was 39.1% with majority as paternal orphans. In 8.3% cases none of the parents were alive and another 16.7% and 14.1% only mother and father were alive (Table 3).

**Table 3: Distribution of children by living status of their parents.**

Parents alive	Numbers	Percent
Both	95	60.9
Father only	22	14.1
Mother only	26	16.7
None	13	8.3
<b>Total</b>	156	100.0

The primary caregiver was either the surviving parent (82.0%) or extended family members. Majority (87.8%) of children were living with their parents/surviving parent. Some 4.4% and 7.7% children were living with other family members and relatives respectively (Figure 1).



**Figure 1: Living arrangement of children (N=156).**

## DISCUSSION

Children affected by HIV/AIDS have to face many problems as in addition to their own illness, the parents of the child also usually suffers from HIV/AIDS and they may not be able to provide proper nutrition and treatment for the child. In case the parents of the child die due to AIDS or other illness, the child becomes orphan and is left to fend for himself. These children are forced to live a life of poverty and may thus fall prey to antisocial elements of the society.

In our study, majority of the children were in age group of 5-9 years and were male. Similar age and sex distribution was found in other hospital based studies in India and abroad.<sup>5,6,9,10</sup> The HIV status all mothers was known and most of them were positive, whereas the HIV status of was proportionally less positive. Similarly in a study done in Senegal, 99% of the mothers and 15.3% fathers were positive.<sup>12</sup>

In present study, Mother to child transmission was the principal mode of infection in 80.1% of the children. This observation is similar to what was found in Cameron, Nigeria and India.<sup>9-11</sup> This study found that the prevalence of orphans was nearly 39.1% and the paternal orphans were more than maternal orphans. Similar prevalence is reported from other clinic based studies in India and Nigeria.<sup>6-8</sup>

## CONCLUSION

Majority of the children attending pediatric OPD for HIV care were in the age group of 5 year or above. The prevalence of orphan-hood among the HIV-positive children was very high. It might lead to significant health consequence for the children. Larger community-based studies are needed to determine the true magnitude of orphan-hood. The menace of HIV is more profound in children due to its effect on social standing and upbringing of the child. There is a need to do community

based study and to provide support to the parents/caregivers of these children.

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