Impact of Social Support On Decreasing The Infection And Loneliness In Hive Infected Children: A Longitudinal Study

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Abstract: Human immunodeficiency virus (HIV) is a global health threat of significance to child and adolescent psychology and psychiatry. The present study was carried out to study the impact of social support in reducing the infection and loneliness in HIV infected children.

I. Introduction

Human immunodeficiency virus (HIV) infection is a viral infection that progressively destroys certain white blood cells and causes acquired immunodeficiency syndrome (AIDS). Human immunodeficiency virus (HIV) infection is caused by the viruses HIV-1 and HIV-2 and, in young children, is typically acquired from the mother at the time of birth. Signs of infection include slowed growth, enlargement of lymph nodes in several areas of the body, developmental delay, recurring bacterial infections, and lung inflammation. The diagnosis is based on special blood tests. Children who receive anti-HIV drug therapy (called antiretroviral therapy or ART) can live to adulthood. People living with HIV/AIDS are known to have great emotional needs and require enormous support for coming to terms with dire affliction status. As of 2014, of the estimated nearly 37 million people worldwide living with HIV, approximately 2.6 million is children under 15 years of age, with 88 percent of these children residing in sub-Saharan Africa. An estimated 220,000 children were newly infected with HIV in 2014; further, 600 children are newly infected with HIV every day. (UNAIDS, How AIDS Changed Everything, 2015).

Viral Load: Viral load is the term used to describe the amount of HIV in your blood. The more HIV there is in your blood (and therefore the higher your viral load), then the faster your CD4 cell count will fall, and the greater your risk of becoming ill because of HIV. Viral load tests measure the amount of HIV’s genetic material in a blood sample. The results of a viral load test are described as the number of copies of HIV RNA in a millilitre of blood.

CD4 Count: CD4 cells are the most important cells in the immune system. Our immune system protects us against infections and illness. The CD4 count tells you how many CD4 cells there are in a drop of blood. The more there are, the better. Viral load measures how much HIV there is in a drop of blood. When the CD4 count is low, the viral load is usually high. When the CD4 count is high, the viral load is usually low. CD4 and viral load test results give essential information about the effect HIV is having on your body. The aim of HIV treatment is to have a very low (or ‘undetectable’) viral load and a high CD4 count.

Untreated HIV-infected children: Common symptoms of HIV infection in untreated children include:

- Slow growth and a delay of maturation
- Enlargement of lymph nodes in several areas of the body
- Recurring diarrhea
- Lung infections
- Enlargement of the spleen or liver
- Fungal infection of the mouth (thrush)

Sometimes children have repeated episodes of bacterial infections, such as a middle ear infection (otitis media), sinusitis, bacteria in the blood (bacteremia), or pneumonia. A variety of symptoms and complications can appear as the child’s immune system deteriorates. About one third of HIV-infected children develop lung inflammation (lymphoid interstitial pneumonitis), with cough and difficulty breathing.

In a significant number of HIV-infected children, progressive brain damage prevents or delays developmental milestones, such as walking and talking. These children also may have impaired intelligence and a head that is small in relation to their body size. Up to 20% of untreated infected children progressively lose social and language skills and muscle control. They may become partially paralyzed or unsteady on their feet, or their muscles may become somewhat rigid. Anemia (a low red blood cell count—see Overview of Anemia) is common among HIV-infected children and causes them to become weak and tire easily. About 20% of untreated children develop heart problems, such as rapid or irregular heartbeat, or heart failure.

Untreated children also commonly develop inflammation of the liver or inflammation of the kidneys (nephritis). Cancers are uncommon in children with AIDS, but non-Hodgkin lymphoma and lymphomas of the
brain may occur somewhat more often than in uninfected children. Kaposi sarcoma, an AIDS-related cancer that affects the skin and internal organs, is common among HIV-infected adults but is very rare in HIV-infected children.

**Psycho-Social Problems:** The study on psychosocial problems conducted by Whetten et al. (2008) said that the individuals with HIV/AIDS often experience psychosocial challenges, such as social isolation, adjustment problems, depression, anxiety, low self-esteem, emotional problems and traumatic life events that can complicate the course of the disease. The psychological and physical demands of coping with medication side effects and co-morbid illnesses can be overwhelming and may influence behaviors that affect health outcome. Poor academic performance and possibly inconsistent tuition as well as constant absenteeism due to ill health, will lay a good back ground for a high school dropout. A major factor that distinguishes HIV/AIDS from another chronic or terminal illness is the stigma. Too often many HIV infected children, and their families live in a "conspiracy of silence" and shame associated with AIDS. Illness is often kept as a secret. One of the disturbing consequences of "conspiracy silence" is that the families may be withdrawn, become socially isolated and become emotionally cut off from traditional support systems.

The family having children with HIV/AIDS is generally a family dealing with crisis, illness, lack of resources, and social isolation, and in need of medical, psychological and social services. It is important to assist these children, and their families through inter-disciplinary interventions oriented to improving the quality of life. Losing a parent is terrible for any child, but children living in India who lose parents to AIDS face unthinkable hardships. Not only have they watched their parents die, but they are stigmatized for having been associated with HIV and AIDS and are often forced to fend for themselves and their siblings. The result is that a growing number of helpless children are facing a cycle of abuse, neglect, stigmatisation, malnutrition, poverty and disease. The children with HIV infection present with a wide range of psychiatric conditions which warrant intensive intervention. Therapeutic support has the greatest role in the care of the children with HIV infection. Supportive and cognitive therapy for these children and their parents and families is essential because they are most vulnerable to mental health problems, separation and loss. It is equally important to note that poor appetite due to continued ill health may develop among children infected with HIV limiting their capacity to feed adequately.

**Objective Of The Study:** The objective is to study the impact of social support on decreasing the infection and loneliness in HIV infected children.

**Locale Of The Study:** The present study was carried out in West Godavari district where NGO JYOSNA is working on the interventional services of HIV infected children of the district. The objectives of the organization include:
- Medical support
- Nutritional intervention
- Counseling
- Academic support

**Time Period Of The Study:** The study was carried out for a period of 5 years.

**Sample:** Samples of 73 HIV infected children were selected for the present study.

**Tools Used:**
1. Blood test reports
2. Russell, D. (1996) UCLA Loneliness Scale (Version 3) was used for the present study. A 20-item scale designed to measure one's subjective feeling of loneliness as well as feelings of social isolation.

### Results And Discussion:

The present study is a longitudinal study carried for a period of five years to study the impact. At the end of every year the blood report of the sample was collected and the viral load or CD4 count of the blood was recorded. The loneliness scale was also administered to sample to study the perceived loneliness in sample every year. The details were consolidated and presented in the following tables.

<table>
<thead>
<tr>
<th>S.no</th>
<th>WHO Clinical Stage</th>
<th>First year</th>
<th>Second year</th>
<th>Third year</th>
<th>Fourth year</th>
<th>Fifth year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Asymptomatic</td>
<td>2(2.73%)</td>
<td>9(12.3%)</td>
<td>13(17.8%)</td>
<td>19(26.02%)</td>
<td>23(31.5%)</td>
</tr>
<tr>
<td>2.</td>
<td>Mild symptoms</td>
<td>17(23.28%)</td>
<td>30(41.09%)</td>
<td>36(49.3%)</td>
<td>43(58.9%)</td>
<td>46(63%)</td>
</tr>
<tr>
<td>3.</td>
<td>Advanced symptoms</td>
<td>31(42.46%)</td>
<td>21(28.76%)</td>
<td>14(19.1%)</td>
<td>9(12.3%)</td>
<td>4(5.47%)</td>
</tr>
<tr>
<td>4.</td>
<td>Severe symptoms</td>
<td>23(31.5%)</td>
<td>13(17.8%)</td>
<td>10(13.6%)</td>
<td>2(2.73%)</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>CD4 cell count</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>High</td>
<td>64(87.67%)</td>
<td>49(67.12%)</td>
<td>26(35.6%)</td>
<td>17(23.28%)</td>
<td>6(8.21%)</td>
</tr>
<tr>
<td>6.</td>
<td>Low</td>
<td>9(12.32%)</td>
<td>24(32.8%)</td>
<td>47(64.3%)</td>
<td>56(76.7%)</td>
<td>67(91.7%)</td>
</tr>
</tbody>
</table>

**Table 1: Impact of support on HIV infection and CD4 cell count**

DOI: 10.9790/0853-15321719  www.iosrjournals.org 18 | Page
The table 1 gives information about impact of support on HIV infection and CD4 cell count for the past five years. It can be noted from the study that during the first year nearly three fourth of the sample were having advanced and severe symptoms of HIV infection. During the second and third year the percentage of sample in severe and advanced stage decreased to 17.8% and 28.7% respectively. In fourth year meager of 2.7% of sample had severe symptoms and nearly more than half the sample had mild symptoms while 26 percent of them were asymptomatic. It was interesting to note that at the end of fifth year 63 percent of them were in mild symptom stage while 31.5 percent were asymptomatic. Coming to CD4 cell count it can be noted from the study that there is gradual increase in the CD4 cell count from which it can be concluded that with the support from the organization the CD4 cell count in blood sample increased lowering viral load.

### Table 2: Impact of social support on loneliness in HIV infected children

<table>
<thead>
<tr>
<th>Loneliness</th>
<th>First year</th>
<th>Second year</th>
<th>Third year</th>
<th>Fourth year</th>
<th>Fifth year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never felt lonely</td>
<td>-</td>
<td>6(8.2%)</td>
<td>19(26.02%)</td>
<td>28(38.3%)</td>
<td>41(56.1%)</td>
</tr>
<tr>
<td>Rarely felt lonely</td>
<td>2(2.7%)</td>
<td>19(26.02%)</td>
<td>31(42.4%)</td>
<td>38(52.05%)</td>
<td>32(43.8%)</td>
</tr>
<tr>
<td>Sometimes felt lonely</td>
<td>19(26%)</td>
<td>24(32.87%)</td>
<td>13(17.8%)</td>
<td>7(9.5%)</td>
<td>-</td>
</tr>
<tr>
<td>Often felt lonely</td>
<td>52(71.2%)</td>
<td>24(32.87%)</td>
<td>10(13.6%)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The information but how the selected sample perceived loneliness in last five years is presented in the above table. From the table it can be concluded that during the initial year nearly three fourth of them perceived that they felt lonely very often. But as the number of years increased the feeling of loneliness decreased in the sample and by the time of fifth year ending more than half of the sample never felt lonely and the remaining rarely felt loneliness because of the support from the organization.

### III. Support System Therapy

Psychosocial interventions, such as support groups, have been shown to play an important role in enhancing the quality of life for patients suffering a wide range of medical illness. This therapy enhances the quality of life among individuals living with HIV, improve social support, promote good relations with health care providers and, if possible, enhance health. Social support has been shown to be an important mediating factor in dealing with stressful life events. Brief group therapy for depressed persons with HIV infection has already been shown to produced reductions in symptoms of emotional distress. There is strong evidence to suggest that a social structure, such as a support group, provides individuals with meaningful support, encouragement for the expression of relevant emotions, and a buffer from stress. Groups have the potential to impact positively on both adjustment to illness and, ultimately, the course of the disease. The use of group therapy in a sample of depressed HIV infected men has been found to produce significant reductions in symptoms of distress.

### IV. Conclusion

Psychosocial support is interventions that helps the child and adolescent live and cope with life and its stressors. It helps build resilience. It is an on-going process within the family circle and the community, and the care and support offered by caregivers, family members, friends, neighbours, teachers, HCPs and community members, as well as support offered by specialised psychological and social services. PSS is about day-to-day consistent care and support through family and community interaction. It can be concluded from the study that more NGOs working for HIV children should be initiated and government should also support these organization in extended the activities.

### References