INTRODUCTION

HIV is referred as “Modern pandemic” which is a fatal disease caused by retro virus known as ‘Human Immune Deficiency Virus’. These break down body’s immune system and are likely to develop life threatening opportunistic infections, neurological disorder and unusual malignancies (Park, 2009).

It could be continuous to be an escalating health problem throughout the world. It has drawn attention to global inequalities in access to appropriate health care and lack of human rights. This infection has become the eighth leading cause of death. It is estimated that there is one HIV infection related death in every 15 minute, one HIV diagnose in every nine minute and someone infected with HIV in every 13 minute (McEnany, Huges & Lee, 1995).

The people infected with HIV may face profound psychological distress. Moreover, lack of proper understanding about the disease leads to social isolation and rejection. Fear of stigma and feeling of anxiety, hopelessness and depression were frequently reported among HIV positive patients. A study conducted in 1998 at NIMHANS in India among 51 HIV positive patients found that 30 % of samples had anxiety and depression among 40% of subjects (Chandra, Ravi, Desai, & Subbakrishna, 1998). Lesserman et al., in 1999 documented that more stress and less social support accelerate disease process. Patients with more anxiety are at greater risk for poor adherence to ART (anti retro viral therapy) and higher risk of treatment failure. Thus, it is an important issue in the care of HIV positive patients because of the association between anxiety symptoms and the health related outcomes.

Many HIV positive persons cope effectively with their condition and continue to lead productive, meaningful lives. Unfortunately, others have difficulty in managing the stressors associated with
their condition. Coping behaviours are often used as a basis for psychological intervention. Lazarus & Folkman (1984) contended that two forms of coping exist: Problem focused coping and Emotion focused coping. Problem focused coping strategies are similar to problem solving strategies i.e., efforts are more directed to changing the environment or the actual problem. Emotion focused coping efforts are directed at reducing emotional distress. Coping mechanisms should be tested as the health declines (as cited by Nyanmathi & Bennet, 1997).

WHO recommended that attention to the psychosocial needs of people with HIV and AIDS should be an integral part of nursing care (Wagner & et al.,). Accordingly health care providers are required to recognize and address the psychological needs of the growing population of PLWHA.

**OBJECTIVES**

- To assess the level of anxiety among HIV positive patients
- To assess the level of coping mechanisms among HIV positive patients
- To determine the correlation between the level of anxiety and coping mechanisms among HIV positive patients

**MATERIALS AND METHODS**

A Survey approach, with descriptive research design was adopted for the study. Random sampling technique (lottery method) was used to collect data from 150 HIV positive patients who were on Anti Retro Viral therapy (ART) from ART treatment centre in 2012 at St. John’s Medical College Hospital (SJMCH), Bangalore. Based on the review of literature baseline Performa, State anxiety inventory and Dr Kiran Rao’s coping checklist were used to assess the principle variables i.e. anxiety and coping strategies. A list of 16 items seeking information on baseline data was used. State anxiety inventory is a standardized tool comprising 20 state anxiety items. Each statement has four choices and a pictorial representation was used to rate the items. Maximum score of this inventory is 80 and minimum is 20. Dr Kiran Rao’s coping checklist consists of 70 items and it has seven subscales. It includes one problem focused scale (10 items) emotion focused items that is distraction (14 items). Acceptance (11 items), Religion (9 items), Denial/blame (11 items) and combination of problem and emotion focused items (6 items). Ten experts validated the tool and changes were made accordingly. Split half technique was done to establish the internal consistency of the STAI, Reliability of STAI was 0.8 and reliability of Dr Kiran Rao’s coping checklist was 0.78 to 0.85.

An official written permission was taken from the administrator of the hospital, research ethical committee of SJMCH Bangalore, Medical Superintendent, Nursing Superintendent, and Head of the Department of ART centre.

Patients who were visiting ART centre were selected by a random sampling technique with a lottery method from the register in the clinic. The researcher then established a good rapport with the client and purpose of the study was explained to them who met the inclusion criteria. Informed Consent was taken and a patient information sheet was given to them. Then patients were interviewed according to the structured schedule. Each patient was interviewed for 60 to 90 minutes

**RESULT**

**Description of baseline variables**

Findings of the study revealed that 75 (50%) of samples were between the age group of 36-50 years and 61 (40.70%) of subjects were less than 35 years of age group. Among the subjects, 80 (53.30%) were males and 95 (63.30%) of subjects had only secondary education. Subjects who are married were 99 (66%) and 29 (17.30%) of subjects were widowed, single and separated were 16 (10%) and 6 (6%) respectively. Subjects doing unskilled work were 66 (44%) and 40 (26.70%) were unemployed. Subjects residing in the nuclear families were 119 (79.30%) and 78 (50.60%) of subjects had only family income of rupees less than <5000.

Majority [115(77.30%)] of subjects were in stage II disease, 64 (42.70%) of subjects had disease from 1-5 years, 93 (62%) of subjects had opportunistic infection and 134 (89.30%) had no co morbidities. Among subject’s 101 (67.30%) family members were healthy and 136 (90.70%) of subjects had this infection due to
heterosexual relationship. Only 38 (25%) of subjects had 100% medication adherence. All patients received counselling session from ART centre. Among the total sample 133 (88.70%) of subjects had disclosed their disease status to their family members and 52 (34.70%) of them had link with support group.

**Anxiety level of HIV positive patients**

<table>
<thead>
<tr>
<th>No of items</th>
<th>Max score</th>
<th>Range</th>
<th>Mean±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>80</td>
<td>20-70</td>
<td>42.68± 10.67</td>
</tr>
</tbody>
</table>

Table 1 depicts that the mean anxiety level of the HIV positive patients was 42.68 (SD 10.67)

**Coping strategies among HIV positive patients**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Max score</th>
<th>Mean ± SD</th>
<th>Range</th>
<th>Mean%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem focused</td>
<td>11</td>
<td>5.68 ± 2.33</td>
<td>0-10</td>
<td>56.8</td>
</tr>
<tr>
<td>Emotion focused Distraction-positive</td>
<td>14</td>
<td>7.07 ± 2.81</td>
<td>1-14</td>
<td>50.52</td>
</tr>
<tr>
<td>Distraction-negative</td>
<td>9</td>
<td>2.62 ± 1.70</td>
<td>0-7</td>
<td>29.18</td>
</tr>
<tr>
<td>Acceptance</td>
<td>11</td>
<td>7.23 ± 2.28</td>
<td>1-11</td>
<td>65.75</td>
</tr>
<tr>
<td>Religion/faith</td>
<td>9</td>
<td>4.81 ± 1.81</td>
<td>1-9</td>
<td>53.48</td>
</tr>
<tr>
<td>Denial/blame</td>
<td>11</td>
<td>5.30 ± 2.41</td>
<td>0-11</td>
<td>48.24</td>
</tr>
<tr>
<td>Total(emotion focused)</td>
<td>54</td>
<td>27.05 ± 7.70</td>
<td>9-44</td>
<td>50.09</td>
</tr>
<tr>
<td>Problem &amp; emotion focused</td>
<td>6</td>
<td>2.82 ± 1.51</td>
<td>0-6</td>
<td>47.00</td>
</tr>
</tbody>
</table>

Table 2 shows that mean percentage of problem focused coping strategy (56.8) was high among HIV positive patients followed by emotion focused coping strategy (50.09). A large number of people used (65.75) “Acceptance” as the main coping strategy.

**Table 3: Correlation between anxiety and coping among HIV positive patients (n=150)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean ± SD</th>
<th>‘r’</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>42.68± 10.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem focused coping</td>
<td>5.68± 2.33</td>
<td>-0.100</td>
<td>0.226</td>
</tr>
<tr>
<td>Emotion focused coping</td>
<td>7.07± 2.81</td>
<td>-0.061</td>
<td>0.457</td>
</tr>
<tr>
<td>Distraction-positive</td>
<td>2.62± 1.70</td>
<td>-0.013</td>
<td>0.872</td>
</tr>
<tr>
<td>Acceptance</td>
<td>7.23± 2.28</td>
<td>-0.317</td>
<td>0.000**</td>
</tr>
<tr>
<td>Religion/faith</td>
<td>4.81± 1.81</td>
<td>-0.018</td>
<td>0.831</td>
</tr>
<tr>
<td>Denial/blame</td>
<td>5.30± 2.41</td>
<td>0.085</td>
<td>0.304</td>
</tr>
<tr>
<td>Total(emotion focused)</td>
<td>27.05± 7.70</td>
<td>-0.097</td>
<td>0.236</td>
</tr>
<tr>
<td>Problem &amp; emotion focused</td>
<td>2.82± 1.51</td>
<td>-0.121</td>
<td>0.141</td>
</tr>
</tbody>
</table>

Table 3 reveals that there is a significant negative correlation between anxiety and acceptance (r = -0.317, p <0.001) i.e., the acceptance reduces anxiety levels.

**Association of level of anxiety with selected baseline variables**

A significant association (p= 0.03) was found between occupation and anxiety level. High mean anxiety level was found among unskilled workers (46.63± 10.34), Professional (42.34 ± 10.23) and skilled (42.25 SD= 9.93) than unemployed (37.75 SD=14.90). Other baseline variables had not shown any association with the level of anxiety.

**Association of level of coping strategies with selected baseline variables**

Significant association was found between emotion focused coping strategy and baseline variable at p= 0.05 level of significance. Mean coping strategy score for married were high (28.10 SD= 7.70) than widowed (25.45 SD=7.42), Separated (24.02 SD=7.27) and Single (24.06 SD= 7.27). Marital status had a significant association with problem and emotion focused coping strategy (p=0.02). Married people had a high mean score (3.07 SD=1.51) than widowed (2.50 SD=1.37), separated (2.84 SD=1.50) and single (2.13 SD=1.40). People who disclosed their disease status to family members (2.93 SD=1.46) had more problem and emotion focused coping strategy p=0.03 than those who are not (2.12 SD= 1.61).

**DISCUSSION**

In the present study mean anxiety score of HIV positive patients was 42.68±(10.67). Another study found that mean anxiety score was 40.15 and stress and anxiety symptoms among HIV positive patients were significantly higher than the general population (Kabbash, El-Gueneidy, Sharaf, & Hassan, 2008). Sikkemma, Kochman, Difranceisco, Kelly, & Hoffman, (2003), examined the AIDS-related grief and its association with coping among HIV-positive men and women and reported elevated scores on measures of grief reaction and psychological distress including depressive symptoms, anxiety, and traumatic stress related to their losses.
Sewell et al., (2000) assessed anxiety using HADS and found high anxiety in 70.3% among 101 patients. This high level of anxiety could be due to social stigma, knowledge about the fatal disease or uncertainties about the future. Siegel & Schrimshaw, (2005), in their study found that patients in highly active anti retro viral therapy (HAART) era had perceived health problems (37%), stigma and disclosure fears (28%) as the most stressful situation.

In the present study significant association was found between the anxiety level, occupation (p=0.03) and the medication adherence (p=0.02). Mean anxiety level was high among unskilled workers (46.6 ±10.34) followed by skilled workers (42.25 ± 9.93) and professionals (42.34 ± 10.23). Least anxiety level (37.75 ± 14.90) was found among the unemployed. This may be associated with more opportunity for social interaction, social status and social stigma. Thirty nine percent of subjects had <95% adherence to ART. A similar study found that faster progression to AIDS was associated with more cumulative stressful life events (p=0.008) (Lesserman et al., 1999).

In a prospective study HIV infected individuals who are compliant to medication had significantly less depression than non-compliant patients.

In the present study, the mean percentage of problem focused coping strategy (strategies focused on situation itself) was high (56.80) than the emotion focused coping strategy (strategies that deal with emotions evoked by a situation). Among emotion focused coping strategy mean percentage of “Acceptance” was high (65.75). Siegel & Schrimshaw, also showed in their study that people in the HAART era use more problem focused coping than emotion focused coping behaviours, in general more accepting responsibility coping. This may be attributed to the perception of people about the disease as more controllable with HAART (Siegel & Schrimshaw, 2005).

In this study, 100 percent of subjects underwent counselling session as a part of their treatment in ART clinic. Acceptance may be due to the effectiveness of counselling session. Religion and faith coping strategies also found high among HIV positive patients. Pray to God was the most commonly used coping strategy and drinking alcohol/smoking was used as the least common coping strategy. In a study to assess the spirituality and religion among HIV/AIDS patients found that 23 percent of participants attended religious service weekly, 32 percent engaged in prayer or meditation at least daily and 75 percent of samples said that their illness strengthen their faith (Cotton, et. al., 2006).

In the present study shows marital status and disclosure status had a significant association with problem and emotion focused coping strategy. It was found that married people used more problem and emotion focused coping strategy than the subjects who live as single. Subjects who disclosed their disease status to family members showed better problem and emotion focused coping strategy than those who did not. This may be attributed to high family support.

Money et al., in their study for assessing the effectiveness of coping strategies among HIV positive patients found that active coping was negatively related to emotional distress. The present study also observed that a significant negative correlation between anxiety and acceptance coping (p =0.000).

CONCLUSION

The present study has thrown light on the level of anxiety and coping strategies among HIV positive patients. This patient’s exhibit significant high level of anxiety is usually unnoticed. But anxiety symptoms in PLWHA are of greater concern due to its potential effect. It is evident from this study that HIV positive patients adopt different coping strategies in response to their anxiety. In that, situation based strategy i.e., problem focused coping strategy was high and found that acceptance was used as the most common coping behaviour. By understanding this nurses can effectively plan for counselling and teaching sessions to reduce anxiety and improve coping behaviours.

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REFERENCE


