CHAPTER II
REVIEW OF LITERATURE

2.1 INTRODUCTION

Since there is a vast amount of research, this chapter has been presented in five different sections for clarity and clear understanding. The sections presented for review are

a. Studies related to Knowledge and opinion regarding HIV/AIDS
b. Studies related to family environment of HIV/AIDS affected
c. Studies related to Marital adjustment of HIV/AIDS affected
d. Studies related to treatment aspects
e. Other related studies

2.2 STUDIES RELATED TO KNOWLEDGE AND OPINION REGARDING HIV/AIDS

This section on review of related literature deals exclusively with knowledge and opinion regarding HIV/AIDS.

Chersich et al (2008) assessed the potential for HIV testing at child health clinics to increase knowledge of HIV status, and entry to infant feeding counseling and HIV treatment. At a provincial hospital in Mombasa, Kenya, HIV testing and counseling were offered to women bringing their child for immunization or acute care services. Measured by uptake and attitudes, HIV testing in child health clinics is acceptable. This could optimize entry into HIV treatment, infant feeding counseling and family planning services.

The purpose of the study conducted by Cummins and Millar (2004) was to gain a current view of the experiences and use of health services by women who are living with HIV/AIDS. The study was conducted within the Central Sydney Health Service (CSAHS), which incorporates 71 suburbs, including Sydney city, and is one of 17 area health services in the state of New South Wales. Women who were HIV-
positive and aged 18 years or older were eligible for inclusion in this study. A comprehensive questionnaire was developed by the researchers and distributed through HIV/AIDS organizations within CSAHS. Their study has highlighted a need for review of the current service provision within CSAHS. Many respondents discussed negative health experiences and or their lack of knowledge of local HIV services as well as the need for health care providers not only to be aware of women’s issues but also to have an updated knowledge of clinical care and current services available.

Abel, Painter and Lisa (2003) conducted a pilot study to explore factors that influence adherence to antiretroviral therapy (ART) in women with human immunodeficiency virus (HIV) disease. Antiretroviral medications that reduce viral count and prolong the time between a diagnosis of HIV disease and acquired immunodeficiency syndrome (AIDS) are expensive, numerous, and have multiple side effects. Common reasons for not adhering to the medication regimen include ART side effects and a dosage schedule that disrupts daily activities. Failure to take or errors in taking ART can result in an exacerbation of symptoms and disease progression or the development of drug-resistant strains of HIV. Women and providers in separate focus groups identified factors that facilitated and hindered adherence to ART. Knowledge of factors that influence adherence to ART will facilitate the development of interventions. Patient-provider relationships and side effects of weight gain are discussed as factors that influence adherence to ART.

DeMarco and Johnson (2003) studied a successful collaboration of a medical center, a community-based HIV/AIDS service organization, a university school of nursing, and women living with HIV/AIDS in an inner city community resulted in a series of educational programs for women living with HIV/AIDS, their family, friends and caregivers. These programs were intended to provide inner-city women who were living with HIV/AIDS with knowledge and new insights from the voices of their peers. Topics focused on their self-care and empowerment so that they could take control of their wellness and their health care while remaining in their community. The efforts made in launching the collaborative educational series created trusting relationships between academic, clinical, and community service agencies, professional caregivers, and the recipients of their care. The most significant
contribution belonged to the women living with HIV/AIDS themselves: After the programming they turned their health and life experiences into "action" by planning a research project that will test the efficacy of an intergenerational HIV prevention program for adolescent women of color in their community in the future.

According to Gwendolyn (2008), the impact of HIV/AIDS, from diagnosis to death, affects the African American community more than any other racial or ethnic group. African American women account for 74% of all newly diagnosed HIV cases among women aged 13 to 19. Previous studies of adolescent sexual behavior have focused on peer norms, self-efficacy, and parental communication as influencing factors on sexual behavior. In this study, knowledge of HIV/AIDS, spirituality, attitude toward abstinence, attitude toward condom use, sexual self-efficacy, and perceived parental attitudes toward premarital sex were examined as correlates and predictors of sexual activity and condom use. Additionally, their study identified the sexual activities (vaginal-penile, oral, and/or anal sex) in which African American adolescent girls were most likely to engage. Findings from this study extend knowledge of healthcare providers and researchers about the types of sexual activities in which African American adolescent girls engage. It also contributes to existing literature on the timing of initiation of sexual activity among African American adolescent girls. Furthermore, findings of the study may provide information needed to understand the factors that predict sexual activity among African American adolescent girls from low socioeconomic backgrounds. Additionally, these findings may contribute to the development of gender and culturally sensitive HIV/AIDS risk reduction programs.

A Study by Finn, Sommers and John (2007) says the unique experience of HIV/AIDS among rural women in the United States was explored using qualitative interviews with 7 women who are HIV positive. Based on these interviews, eight themes emerged. These included (a) daily powerful emotions, (b) emotional and physical abandonment, (c) romantic betrayal, (d) medical treatment issues, (e) loss and grief (f) appreciating a good support system, (g) renewed purpose for living, and (h) personal growth and transformation. Results are discussed with regard to future research and practice with rural women with HIV/AIDS, with an emphasis on the importance of social support and counseling opportunities in facilitating women's
progress through the emotional process associated with HIV/AIDS diagnosis and treatment

Burkina et al (2005) conducted a random community based survey of 300 young (15-29 years) rural women in Nouna, Burkina Faso. Only one-third of women were aware that a person could have HIV without having symptoms and these women were significantly more likely to classify themselves to be at high risk for getting HIV. Furthermore, multiple partners, Bwaba ethnicity and having mentioned a health worker as a source of HIV information were significantly associated with perceived high personal risk. Perceived willingness to participate in VCT was high (69%). The dissemination of information on the asymptomatic nature of HIV infection could potentially be very important in forming risk perception, awareness, and their willingness to participate in HIV interventions.

Whyte et al (2004) proved that there is an epidemiological shift toward increased rates of HIV infection in African American women, despite widely available information regarding HIV prevention. The purpose of this study was to determine the relationship between HIV-related knowledge and high-risk sexual behavior while controlling for related variables. A multivariate regression model was selected to differentiate the effects of these variables. The participants were 75 African American women, aged 18 to 38. The results indicated a positive relationship between HIV-related knowledge and high-risk sexual behaviors using the Pearson's r correlation coefficient (0.411, p < .001). Age of first sexual experience, number of lifetime sexual partners, income, educational level, and level of HIV-related knowledge were then regressed onto level of high risk sexual behavior using a hierarchical technique. Only total years of education achieved statistical significance (p < .001 on the first step and p < .05 on the second step).

Dane and Barbara (2002) presented findings from an exploratory study in Chiang Mai, Thailand that examined the extent and nature of the disclosure of mothers who had contracted HIV from their husbands. A second goal was to examine the effects of maternal disclosure on the child, family, and friends. Collected data included sociodemographic characteristics, household income, and health, formal and informal supports personal concerns of living with HIV, and individual strategies for coping with the disease. The results of this study are discussed within the context of
findings on disclosure, toward the family, toward the children, towards the friends and community, and future care plans for the children.

Sowell et al (1997) interviewed a cross-sectional sample of HIV-infected, rural women in Georgia (15–63 year) to determine their perceptions regarding the adequacy of available resources, level of perceived stigma encountered, and patterns of disclosure of their HIV serostatus. Results showed that although a majority of the women reported adequate resources, there was a group of women for whom resources for basic needs were not always adequate. Also, women with HIV who had not progressed to AIDS had greater difficulty in obtaining a number of resources. Almost half of the women felt stigmatized due to having HIV. Yet, a high percentage of these women had disclosed their HIV status to health care workers, sexual partners, and family.

Harley (1997) outlines issues related to women living with AIDS and provides recommendations for rehabilitation management and implications for training. Women with HIV/AIDS have specific issues that require specialized approaches to address the effects of AIDS on their psychosocial and physical functioning. Cultural factors and drug use also play a part in the need for specialized rehabilitation management. Implications for rehabilitation education are discussed.

Pallikadavath et al. (2005) aimed to identify socio-cultural and reproductive health correlates of knowledge about AIDS among rural women using multivariate analysis of 1998-1999 National Family Health Survey (NFHS) data from two Indian states, Maharashtra and Tamil Nadu, where the urban HIV prevalence is relatively high. Analysis using multiple logistic regressions was undertaken, modeling women's knowledge of AIDS, of whether the disease can be avoided, and of effective means of protection. Although 47% of all rural women in Maharashtra were aware of AIDS only about 28% knew that one can avoid it, and only about 16% possessed correct knowledge about its transmission. In Tamil Nadu, where overall 82% of rural women had awareness of AIDS, about 71% knew that one can avoid the disease but only about 31% possessed correct knowledge about its transmission. In both states, women from socially and economically backward groups had lower odds both of having awareness of AIDS and knowledge of ways to avoid getting the disease. Associations with socio-cultural and reproductive variables and the impact of contact with family
planning services differed in the two states. The spread of the epidemic to rural areas presents a need actively to disseminate AIDS related knowledge for health protection rather than waiting for knowledge to follow the appearance of the disease in communities. Approaches to health promotion that do not consider differing contextual factors are unlikely to succeed. In particular, innovative strategies to disseminate knowledge among disadvantaged population groups are needed.

Tanzan (2008) conducted a study to determine knowledge, attitude and practice towards Sexually Transmitted Diseases and HIV infections among communities in Biharamulo and Muleba districts, Kagera, Tanzania. A total of 915 participants were recruited and most of them (96.3%) knew that there are diseases which could be transmitted through sexual contact. Seventy one percent of participants thought STDs could be acquired through sharing a towel while fifty percent thought HIV could be transmitted through insect bites. Most schoolboys and about 50% of schoolgirls reported to have experienced sex by the time of the study. Thirty eight percent of girls reported to have first sex at the age of 14 years. Nine percent of the participants who reported to have experienced sex were forced to do so. Knowledge regarding STDs and HIV/AIDS was high among participants, but a sizeable proportion report misconception on transmission of STDs and HIV such as through sharing a towel and insect bites. Therefore it is recommended that S&RH intervention programme should address these misconceptions in order to match knowledge and practice, and achieve the intended objectives.

Oser et al (2006) showed that individuals involved in the criminal justice system are at substantial risk for HIV infection and have elevated rates of AIDS. Offenders under community supervision, such as probationers, have substantially more opportunities to engage in high-risk behaviors than prisoners. Furthermore, probationers in rural areas are at risk because rural areas may be slower to adopt HIV risk-reduction approaches. Consequently, the primary goal of this study is to describe the HIV risk behaviors and level of HIV knowledge of 800 rural felony probationers. Bivariate results indicate that males have substantially greater criminal histories and engage in more substance use risk behaviors than females. Overall, there was minimal and inconsistent use of condoms, but there were no significant differences by gender. Gender differences prevailed in perceived HIV knowledge, with females reporting
high levels of perceived HIV knowledge. Multivariate models did not support the hypothesis that perceived knowledge would be a more robust correlate of scores on the HIV Risk Behavior Knowledge Test for males than females. Results suggest that rural residents are not protected from engaging in HIV risk behaviors and future studies should examine gender discrepancies between perceived and actual HIV knowledge among offenders under community supervision.

Biosoc (2006) explored people’s knowledge, attitude, behavior and practice towards HIV/AIDS and sexual activity in rural Kenya, where HIV is widespread. The study community was located in south-eastern Kenya, 50 km north of Mombassa, and had an estimated population of 1500. Subjects aged between 16 and 49 were recruited using a stratified cluster-sampling method and they completed self-administered questionnaires. Almost all respondents knew the word 'IV' around 50% knew of a person living with HIV. About 80% gave 'death' or 'fear' as words representing their image of AIDS. With regard to sexual activity, the distribution of answers to the question 'how many partners have you ever had in your life' was bimodal in males but had only one peak in females, indicating that some men have a large number of sexual partners in their lifetime. First sexual intercourse was at around 12-13 years for both sexes, but female teenagers were more sexually experienced than their male counterparts.

Demarco et al. (2004) studied community-level health-education intervention on reproductive tract infections sexually transmitted diseases (RTIs and STDs) in three villages of Haryana in north India. The study was aimed at increasing awareness among men and women of reproductive age about the prevention and treatment of RTIs, modes of HIV/AIDS transmission, and methods of prevention. Health education was imparted through one-to-one interactions with men and women during home visits, at village-based clinics and health camps, and through health-education talks with men and women. Cumulative effects of the intervention were examined at the end of the survey by comparing the change in knowledge from the baseline. Records of clinic attendance were examined to assess the probable impact of the intervention on clinic attendance. Baseline and follow-up evaluations revealed that there was an improvement in the median total knowledge score of women from 0 to 6, whereas it remained at 5 for men both at baseline and follow-up. Knowledge about
RTI/STIs increased among both men and women from the median score of 0 to 2 and from 0 to 3 respectively. The median knowledge score on HIV/AIDS declined among men from 4 to 2 but increased from 0 to 3 among women. Clinic attendance for RTI/STI cases, referred to the Naraingarh hospital, showed an eight-fold rise from an average of four cases per month in 1998-1999 to an average of 35 cases per month in 1999-2000. The findings of the study suggest that health-education strategy through home visits, RTI case management and counseling, and organizing a weekly clinic and occasional camps and health-education talks can increase the level of awareness about RTIs/STIs among both men and women and improve clinic attendance.

Cherish and Lechers (2004) explored the knowledge and practices related to HIV/AIDS by rural South Africans in Limpopo Province. Qualitative research methods were used. Twenty-eight key and general informants participated in individual interviews in summer 2001. The setting was a hospital-based HIV clinic in rural Limpopo Province. With this, all, participants were members of a support group, and they had basic knowledge about HIV/AIDS; however, participants indicated that they lacked basic knowledge of HIV/AIDS until they joined the support group. Support groups were effective in educating people about HIV/AIDS.

2.3 FAMILY ENVIRONMENT

Since family environment of HIV/AIDS affected person influences the psychosocial aspects of the affected one’s, in this section an attempt is made to review the literature related to family environment of the affected ones and its relation to other variables.

Mitrani et al (2003) studied clinically derived hypotheses regarding treatment engagement of families of low-income, HIV-positive, African American mothers are tested using univariate and multivariate logistic regression models. Predictors are baseline family relational factors (family support, mother's desire for involvement with family, and family hassles) and mother's history of substance dependence. The study examines a subsample of 49 mothers enrolled in a clinical trial testing the efficacy of Structural Ecosystems Therapy (SET). SET is a family-based intervention intended to relieve and prevent psychosocial distress associated with HIV/AIDS. Participants in the subsample were randomly assigned to SET and attended at least
two therapy sessions. Findings reveal that family relational factors predicted family treatment engagement. Family support predicted family treatment engagement beyond the prediction provided by the other relational factors and the mother's own treatment engagement.

Martinez, Israelski, Walker, and Koopman (2000) examined PTSD in HIV-positive women (mean age 41.8 yrs old) seeking medical care. Specifically, they examined traumatic life events, psychiatric treatment, social support, and demographic characteristics in relation to level of PTSD symptoms. They recruited and obtained informed consent from 47 ethnically diverse HIV-positive women from 2 HIV outpatient clinics in a county medical system. 41 of these women provided complete data on measures assessing demographics, traumatic life events, PTSD symptoms, social support, and an psychotherapy or medical history. Analysis of the data demonstrated that a high percentage (42%) of the HIV-positive women were likely to meet criteria for full current PTSD, and an additional 22% for partial PTSD. Of the women likely with full PTSD, 59% were not receiving any psychiatric treatment, and of those likely with partial PTSD, 78% were not receiving any psychiatric treatment. As hypothesized, the level of PTSD was significantly related to the number of life events experienced and to perceived social support from friends and family. Given the high percentages of women who were found to have experienced traumatic life events and high levels of PTSD symptoms, it seems important to assess and treat PTSD in women with HIV/AIDS.

A study by Ritchie (1997) showing multiple clinical case studies, attempted to elucidate the issues impacting health care utilization for women who are seropositive. It has been demonstrated that women do not utilize health care services with the same frequency or pattern of use as men. Little is known about why this is so. Particularly affected are economically disadvantaged minority women of childbearing age. Women are the most rapidly growing group to be affected by HIV/AIDS. Women are also the primary source of perinatal AIDS. Four co-researchers who have AIDS were interviewed. The participants all relied upon public benefits and insurance for their basic necessities and medical treatment. The interviews were conducted in a semi-structured format. The data was qualitatively analyzed using the Ethnograph, a computer program especially designed to facilitate such analysis. Some of the
research findings confirmed the results of other studies. It was found that women do underutilize health care. Themes that emerged were that women viewed their health care providers as being insensitive, impersonal, and ignorant of the special needs of women. In addition, they do not trust research protocols because they have not taken into account the effects of medications being tested on women. One finding of note indicated that despite the burden of care that women are heir to, women were able to reprioritize family needs in order to focus on self-care. It was also found that women who demonstrated strong self-efficacy and self-care were able to maintain a viable sense of well-being and hope. These findings have strong implications not only for further research, but for treatment protocols as well. This study illuminates the need for incorporating psychological and psycho-educational components in health care for women with HIV or AIDS.

Serovich, Craft, Shonda, and Yoon (2007) have comprehensively documented rates of HIV disclosure to family at discrete time periods and yet none have taken a dynamic approach to this phenomenon. The purpose of this study is to address the trajectory of HIV serostatus disclosure to family members over time. Time to disclosure was analyzed from data provided by 125 primarily single (48.8%), HIV-positive African American (68%) adult women. Data collection occurred between 2001 and 2006. Results indicated that women were most likely to disclose their HIV status within the first seven years after diagnosis, and mothers and sisters were most likely to be told. Rates of disclosure were not significantly impacted by indicators of disease progression, frequency of contact, physical proximity, or relationship satisfaction. The results of this study are discussed in comparison to previous disclosure research, and clinical implications are provided.

Szapocznik et al (2004) studied the efficacy of Structural Ecosystems Therapy (SET), a family-ecological intervention, in improving psychosocial functioning when compared with an attention-comparison person-centered condition and a community control condition. However, contrary to hypotheses, SET was not more - efficacious in increasing family support. Latent growth mixture modeling analyses indicated that SET was most efficacious for women who, on average, were at or near the clinical threshold for psychological distress and for women with high levels of family hassles. Implications for further intervention development are discussed.
Sharon (2003) presents findings from interviews conducted with 18 African American women living with HIV/AIDS. It presents their perceptions of ways in which their families function as a source of support and as a source of stress in their dealings with HIV/AIDS issues. The article provides information on supportive aspects provided by family in emotional, concrete, and cognitive/informational areas. In addition, the family stresses experienced and barriers to dealing with stressful areas are reported. This type of information should be valuable to social work practitioners in efforts to enhance services delivery.

Robbins et al (2003) examined the role of family functioning and social support in protecting HIV-positive African American women from the adverse psychological consequences associated with deterioration in their CD4 cell count. Participants were 38 African American HIV-positive women (mean age 26.9 yrs) who had recently given birth. Results demonstrated that changes in CD4 cell counts were inversely predictive of psychological distress and were moderated by family functioning and social support satisfaction. Women with good family functioning were less affected by changes in their CD4 cell counts, and women with poor family functioning were more emotionally responsive to changes in CD4 cell count. Unexpectedly, women from families where conflicts tended to be clearly laid out and discussed were also more responsive to both changes in CD4 cell counts. Interventions are recommended that increase a client's social support satisfaction, foster an adaptive level of connectedness to family, and enhance the family's range of conflict resolution styles.

Crosby, Decremented, Wingood, and Harrington (2002) examined whether living in a supportive family is an important and independent protective factor from HIV/sexually transmitted disease (STD) among African-American adolescent females. In a prospective study, 469 sexually active African-American females (aged 14–18 yrs) were assessed at baseline and 6-mo follow-up regarding: (1) perceptions of family support (2) HIV/STDs (3) pregnancy prevention (4) condom use (5) recent emotional and physical abuse by sex partners and (6) recent condom use with steady and non-steady partners. Results show that Ss not residing in a supportive family were approximately twice as likely to report not using a condom during their most recent episode of penile–vaginal sex with a steady partner. Those not residing in a supportive
family were 2.8 times more likely to report they had not used condoms for penile–vaginal sex in the past 30 days, and 4 times more likely to report emotional abuse by a sex partner in the previous 6 mo. They were twice as likely to report fear of condom negotiation, low self-efficacy for this negotiation, and high perceived partner-related barriers to achieving safer sex.

Wyatt, Forge, and Guthrie (1998) studied the relationship between social, structural, and economic variables that increased HIV-related sexual risk taking in a random community sample of 835 African American, Latina of Mexican origin, and White women, aged 18–50 years. Multivariate analyses tested relationships between women's family constellations, HIV/AIDS-related sexual risk-taking, perceptions of susceptibility to become infected with HIV, and condom use. The findings identified different patterns of sexual risk taking for each ethnic group. Latinas' risks increased within a committed relationship, and White women's risks were increased by sex outside of their current relationship and by their sexual practices. Due to economic instability and being single African Americans risks increased. Women's sexual risk taking illustrates how relationship building and family formation increase HIV-related risks regardless of ethnicity and current relationship status.

Szapocznik et al (1996) reviewed the environmental stresses (specifically impact of HIV/AIDS) on (African American women) and how African American families tend to respond to these stresses, present a therapeutic model, adapted for the special characteristics of the African American family, provide a sense of the real-life challenges they face and how their families respond to environmental challenges, the family's role in adaptation to environmental stress, the importance of correctly identifying the African American family, social support and African American families, family hassles and family conflict, structural ecosystems therapy.

Kennedy, Skurnick, Foley and Louria (1995) showed the effect of family support on the psychological well-being of heterosexual couples with at least 1 HIV-seropositive partner, family support. Data were obtained from couples, who were separately interviewed. Both HIV positive and HIV negative females had more distress than their male counterparts on several dimensions. Despite the general lack of association of family support with psychological distress, women in couples
affected by HIV had more distress than men. Continued gender comparisons should be done to develop appropriate and effective interventions for these groups.

Kanniappan, Jeyapaul, and Kalyanwala (2008) examined access to prevention of parent-to-child transmission (PPTCT) and antiretroviral therapy (ARV), people living with HIV/AIDS are better able to consider childbearing and parenthood. However, there is limited understanding of the reproductive healthcare needs and the impact of infection on the fertility desires of women living with HIV/AIDS. Research on the relationship between fertility and HIV/AIDS has been largely clinical, focusing on the ability of women living with HIV/AIDS (WLHA) to conceive or their pregnancy outcomes. This paper describes the findings of a qualitative study undertaken in Namakkal district, Tamil Nadu, India that aimed to explore fertility desires, intentions and fertility decision-making in WLHA and the barriers they face in fulfilling these desires. In-depth interviews were held with selected 43 currently married WLHA aged 18-35 years and 10 key informants. The women were classified according to whether or not they had living children and, within that, whether they had experienced abortion, wanted more or any children or were pregnant. The main factors distinguishing women who wanted to have a child and those who did not were their levels of anxiety about the future and available family support. Women who indicated that they did not have family support and were stigmatized by the family were reluctant to opt for a pregnancy as they were not sure of the future, including child care in event of parental death. In contrast, those women who decided to have a child did so based on family support, especially when family members offered to take care of the child in the future in the event of parental death. Awareness and access to PPTCT and ARV was another key factor guiding the final decision on child bearing. Findings highlight the need for further research on issues faced by WLHA in fulfilling their fertility desires and intentions and for programmes that both enable WLHA to exercise informed choice in meeting their fertility desires and sensitize healthcare providers about these needs.

D’ Cruz (2003) examined the family-HIV/AIDS interface with respect to the experiences of wives with an infected spouse. A qualitative study was undertaken in which the units of conceptualization and analysis were the family unit, marital dyad and individual members. The final sample comprised 7 nuclear households (HH).
Ages ranged from 30 to 39 yrs for the husbands and 19 to 35 for the wives. There were 15 children, with ages ranging from 1 to 20 yrs. During the period of data collection, interviews were translated and transcribed. In these 7 HH, 3 couples were discordant (husbands were HIV positive and wives were HIV negative) and 4 were concordant (both spouse were HIV seropositive). Findings facilitated an understanding of the impact of HIV/AIDS on individual family members, the marital dyad, and the household as a unit, from the onset of HIV related illness through diagnosis to the period of data collection. The author describes and discusses one core/organizing theme--moments of truth. The author employed this metaphor to convey wives' descriptions of their experiences of realization and insight in the period following the diagnosis of HIV in their husbands.

It is commonly assumed that the extended family in Africa provides a safety net for individuals in times of need. Seeley et al (1993) examined this assumption using data on the care of people with AIDS in a rural population in South West Uganda. Over a six month period, data was collected by counselors on the care given to 30 (17 women, 13 men) AIDS patients by their families. In 27 of the 30 cases there was evidence of limited care. Various reasons were given for this by the carers, including lack of food and money for medications and the carer's other family responsibilities. For 17 clients who died during the study period, records of seven cases show that other relatives were asked to help with care but refused on the grounds of poverty or other commitments. However, in all but one of these cases, extended families did provide assistance for the funeral. The findings suggest that there is a need to question the assumption that the extended family, in the culture under study, is able to provide adequate support for AIDS patients.

Fernandez and Ruiz (2006) note that women account for an increasing proportion of HIV infection and AIDS cases in the United States. Younger, ethnic minority women, particularly African Americans, are most at risk and are most frequently exposed through heterosexual contact. Numerous biologic and social factors contribute to HIV risk among women; cultural norms, poverty, and violence play a large role in perpetuating the epidemic. Although HIV disease progression appears to be similar for women and men, women may suffer higher mortality rates from other causes and are prone to gynecologic infections, especially with human
papillomavirus (HPV). In the United States, vertical transmission of the infection through pregnancy, labor, and breast feeding has fortunately been dramatically reduced with antiretroviral therapies, cesarean sections, and supplemental feedings. Women with HIV disease have significant mental health needs, given their high rates of depression, violence exposure, and suicidal thoughts; they may be particularly prone to suffering from a lack of social support and stigma. Although women benefit from antiretroviral treatment as do men, they are less likely to receive timely care, often secondary to factors related to their ethnicity and socioeconomic status. Common barriers to care include lack of insurance, money, or transportation; childcare responsibilities, and illness. Several prevention strategies are effective in reducing high-risk sex behaviors among infected and non-infected women, although large percentages of women continue to engage in unsafe practices. Women who are most at risk or infected with HIV frequently fall into not one, but several vulnerable, disadvantaged groups. They are commonly poor, ethnic minority, single mothers who have significant socioeconomic, medical, and mental health needs. These vulnerable groups must continue to be included in efficacy and effectiveness trials of HIV/AIDS treatments and interventions. Future treatment efforts may need to be more comprehensive and multifaceted to address the multiple needs of those infected and may need to be offered in alternative settings. Similarly, prevention efforts must be targeted at multiple tiers to address the numerous factors that place women at risk.

2.4 STUDIES RELATED TO MARITAL ADJUSTMENT OF HIV/AIDS AFFECTED

As family environment of HIV/AIDS affected person influences the psychosocial aspects of the affected one’s, marital adjustment of an HIV/AIDS affected person also affected negatively. This section deals with studies in relation to marital adjustment and its relationship with other variables of the affected individuals.

Satyanarayana, Chandra, Vaddiparti, Vivek and Cottler (2009) examined the influence of socio cultural factors, perception of risk and exposure to violence on consent to HIV testing among at risk women in an urban slum. Married women chosen via a multistage probability sampling in a section of Bangalore, India, between 18 and 44 years, sexually active and considered to be at risk because of their husband’s hazardous drinking were recruited for the study. Written informed consent
was obtained and measures of risk behavior and violence were administered. Pretest HIV counseling was then conducted and consent for HIV testing was sought. Factors influencing refusal of and consent to HIV testing were documented. The findings highlight the role of social, logistic and awareness related factors in utilizing voluntary counseling and testing services by women in the slum community. They have important implications for HIV testing, particularly among at risk monogamous women.

According to Silverman (2008), despite reductions in prevalence of human immunodeficiency virus (HIV) infection among the general population of India, women account for a rising percentage of all HIV cases with husbands' risk behavior described as the major source of women's infection. Intimate partner violence (IPV) has been described as being associated with heterosexual transmission of HIV to women in India and elsewhere. Indian National Family Health Survey 3 was conducted across all Indian states in 2005 through 2006. The nationally representative sample included 124,385 married women; analyses conducted in 2007 and 2008 were limited to 28,139 married women who provided IPV data and HIV test results via systematic selection into respective subsamples. Here Prevalence estimates of lifetime IPV and HIV infection were calculated and demographic differences assessed. Intimate partner violence was conceptualized as physical violence with or without sexual violence and then was further categorized as physical violence only vs. physical and sexual violence. Regression models were used to estimate the odds ratios (ORs) and 95% confidence intervals (CIs) for HIV infection among Indian women based on experiences of IPV after adjusting for demographics and women's HIV risk behaviors. One-third of married among married Indian women, physical violence combined with sexual violence from husbands was associated with an increased prevalence of HIV infection. Prevention of IPV may augment efforts to reduce the spread of HIV/AIDS.

Elizabeth, Bhatti and Ranbir (2004) describe that socio-cultural milieu provides HIV positive women with fewer resources and more role responsibilities. The present research aimed at studying the psychosocial problems encountered in living, post HIV infection, and the coping patterns adopted by HIV seropositive wives of men with HIV/AIDS. Majority of the respondents were the primary caregivers for
their infected spouse and children. Content analysis of the problems revealed increased financial difficulties; problems in child care and support; compromised help-seeking due to stigma; problems in sexual interactions and communication in their marital relationship; role strain in care giving; gender discriminatory and inadequate care; and increased concerns about parenting efficacy, post HIV infection. Escape avoidance was the most preferred coping strategy adopted by them. Situating the illness in a socio-familial context is indicated, and implications for social work and mental health practice follow from the findings.

The rate of HIV/AIDS among women in India is expected to rise, yet few studies have examined factors related to HIV risk among Indian women. Swaminathan et al (2008) conducted a cross-sectional study to characterize similarities and differences in the relationships, psychological well-being, and sexual behaviors among Indian women \( N = 459 \). Both HIV positive \( N = 216 \) and negative \( N = 243 \) women from urban and rural areas in India were included in this study. Chi-square, analysis of variance, and logistic regression analyses revealed that in both geographic groups, HIV-positive women were significantly more likely to report marital dissatisfaction, a history of forced sex, domestic violence, depressive symptoms and husband's extra marital sex when compared to the HIV-negative women. Findings also indicate that specific factors related to the quality of the marital relationship such as domestic violence, marital dysfunction, and depressive symptoms may be related to HIV-related risks for women. Implications for future research and culturally relevant interventions are discussed.

A single recent study has suggested a decrease in HIV risk for women attending antenatal clinics (ANCs) in southern India. (Gupte, et al., 2007), yet, some have questioned the validity of the Indian national surveillance data and analyses. Previous studies suggest that the only major HIV risk factor for married Indian women is the risk behavior of their husbands. Therefore, to address concerns about potential selection bias in the analysis of sentinel surveillance data from multiple sites, we estimated the trajectory of HIV transmission rates among recently married, monogamous, primigravid women attending a single large ANC in Pune, India. HIV infection risk among young primigravid women in Pune seems to have decreased over the past 3.5 years. A decreasing HIV risk among pregnant women in Pune would also
decrease the number of HIV-exposed infants. We hypothesize that decreased high-risk sexual behavior among young recently married men is most likely contributing to a decreasing risk to their wives and children in Pune.

Study by Joseph and Bhatti (2004) revealed that the socio-cultural milieu provide HIV positive women with fewer resources and more role responsibilities. The present research aimed at studying the psychosocial problems encountered in living, post HIV infection, and the coping patterns adopted by HIV seropositive wives of men with HIV/AIDS. Majority of the respondents were the primary caregivers for their infected spouse and or children. Content analysis of the problems revealed increased financial difficulties; problems in child care and support; compromised help-seeking due to stigma; problems in sexual interactions and communication in their marital relationship; role strain in care giving, gender discriminatory and inadequate care and increased concerns about parenting efficacy, post HIV infection. Escape avoidance was the most preferred coping strategy adopted by them. Situating the illness in a socio-familial context is indicated, and implications for social work and mental health practice follow from the findings.

Shankar et al (2003) examined acceptability among pregnant women and their husbands for HIV testing within the antenatal clinic (ANC) and delivery room (DR) of a government hospital in Pune, India from September 2000 to November 2001. It indicated that the majority of women agreed to be tested independently without the need for further consultation with family members, a view that was strongly supported in this sub-sample of accompanying husbands. For delivering women who were not progressing in their labour, counseling in the DR allowed for individual attention to questions and concerns thereby making counseling in the DR feasible.

Vivian et al (2003) examined how marital violence affects women's ability to protect themselves from HIV/AIDS. The study showed that community gender norms tacitly sanction domestic violence that interferes with adopting HIV-preventive behaviors. Given the choice between the immediate threat of violence and the relatively hypothetical specter of HIV, women often resign themselves to sexual demands and indiscretions that may increase their risk of HIV acquisition. In conclusion, AIDS-prevention interventions must incorporate gender-related social
contexts in settings where husbands strictly enforce their locus of control. HIV-prevention messages targeting men may effectively reduce women’s exposure to HIV/AIDS.

Chatterjee et al (2000) examined factors associated with transmission of HIV from intravenous drug users to their wives in Manipur province, India. It was concluded that sexually transmitted diseases are associated with transmission of HIV from husband to wife. The author concludes that improved control of sexually transmitted diseases, condom promotion, and improved blood screening are urgently needed in Manipur.

Newmann et al (2000) undertook a retrospective study on 134 HIV-infected females evaluated at an HIV/AIDS center in south India to characterize their socio-demographics, HIV risk factors, and initial clinical presentations. Nearly half of these women initially presented asymptptomatically, implying that partner recruitment can enable early HIV detection. Single partner heterosexual sex with their husband was the only HIV risk factor for the majority of women. HIV prevention and intervention strategies need to focus on married, monogamous Indian women whose self-perception of HIV risk may be low, but whose risk is inextricably linked to the behavior of their husbands.

Gangakhedkar et al (1997) studied the prevalence of and risk determinants for HIV infection in women who did not report sex work activity and who attended 2 sexually transmitted disease (STD) clinics in Pune, India. During a 3 year period, 916 women were screened for HIV, of which 391 were not sex workers. Despite their relatively low-risk behavioral profiles, an HIV prevalence of 13.6% was found among women not engaged in sex work. The variable significantly associated with HIV infection in women not engaged in sex work was sexual contact with their only partner who had been diagnosed as having an STD. Many of these women may erroneously believe themselves to be at low risk because of a presumably monogamous relationship. Results indicate a need for better condom distribution programs and educational efforts to increase condom acceptance.

Kennedy, Skurnick, Foley, and Louria (1995) evaluated the effect of family support on the psychological well-being of heterosexual couples with at least 1 HIV-
seropositive partner, family support data were obtained from couples, who were separately interviewed. Gender was the most significant predictor of psychological distress. Both HIV positive and HIV negative females had more distress than their male counterparts on several dimensions. Despite the general lack of association of family support with psychological distress, women in couples affected by HIV had more distress than men. Continued gender comparisons should be done to develop appropriate and effective interventions for these groups.

Boileau (2009) explored how sexual and marital trajectories are associated with HIV infection among ever-married women in rural Malawi. Retrospective survey data and HIV biomarker data for 926 ever-married women interviewed in the Malawi Diffusion and Ideational Change Project were used. The associations between HIV infection and four key life course transitions considered individually (age at sexual debut, premarital sexual activity, entry into marriage and marital disruption by divorce or death) were examined. These transitions were then sequenced to construct trajectories that represent the variety of patterns in the data. The association between different trajectories and HIV prevalence was examined, controlling for potentially confounding factors such as age and region. These findings identify the potential of a life course perspective for understanding why some women become infected with HIV and others do not, as well as the differentials in HIV prevalence that originate from the sequence of sexual and marital transitions in one's life. The analysis suggests, however, the need for further data collection to permit a better examination of the mechanisms that account for variations in life course trajectories and thus in lifetime probabilities of HIV infection.

2.5 STUDIES RELATED TO TREATMENT ASPECTS OF HIV/AIDS AFFECTED

Though HIV/AIDS is far from cure, several scientists have tried to treat the HIV/AIDS affected with some drugs to increase the longevity as well as to increase the CD4 counts. In this section an attempt is made to review those studies (including behavioural medicine) which attempted to increase the longevity, CD+ counts and related aspects.
2.5.1 ARV Treatment

HIV has an estimated prevalence of 0.9 % in India. ART drugs are the treatment of choice and non adherence is an important factor in treatment failure and development of resistance as well as being powerful predictor of survival.(Mary, 2008). There study assesses adherence to ARV in HIV positive patients in Bangalore, India a country where only 10% of those who need therapy are receiving it. Regular attendance for follow up was statistically significant for 100% lifetime adherence. Positive trends were seen in those in large families, older those who had AIDS defining illness, simple regimes and side effects. Education income, distance travelled and length of time diagnosed or treated had no effect on adherence.

Study by Pallikadavath, Sreedharan, and Stones, (2006). AIDS awareness among rural and urban Indian women was analyzed using data from the National Family and Health Survey (1998-2000). Two measures were developed to study the impact each source had on knowledge. 'Effectiveness' was defined as the proportion of women who had heard of AIDS from only one source, from among women who had heard of AIDS from that particular source and other sources. ‘Independent effect’ was the proportion who had heard of AIDS from only one source in relation to all women who had heard of AIDS. Television was the most effective medium, and also had the highest independent effect. Television was the most effective medium, and also had the highest independent effect. Although television and print audiences are growing in India, it is likely a sub-group of women will continue to lack media access. There is an urgent need to disseminate AIDS awareness to this 'media underclass'. Since the media will not reach this group, other sources including health workers, community level activities such as adult education programmes, and networks of friends and relatives need to be explored.

MacLachlan et al (2009) have presented the results from a 2005 survey of 377 women in four HIV/AIDS treatment programs in Uganda. The aim of the study was to explore women’s economic hardships and the association with four sexual risk behaviors. Currently women in Ugandan antiretroviral therapy programs are not likely to be sexually active, except for married women. Many women need to find food and other support, which may put them at risk of forced, coercive or survival sex due to dependency on men.
Murray et al. (2009) revealed that Sub-Saharan Africa contains over 60% of the world's HIV infections and Zambia is among the most severely affected countries in the region. The study used qualitative methods to gain local insight into potentially important factors affecting HIV-infected women’s decision to accept or continue with ART. Some of the barriers identified by the study are consistent with factors cited in the existing adherence literature from both developed and developing nations such as side effects, hunger and stigma; other factors have not been previously reported. The results suggest that the reasons for non-uptake of treatment include issues related to local cultural frameworks (e.g., illness ideology), mental and behavioral health (e.g., depression or interpersonal challenges), stigma, and motivating factors (e.g., values of church or marriage) of different cultures that affect the ability and willingness to take life-saving medicine for a long period of time.

Kampala, Masaka, Maclachlan and Ellen (2008) sought to use social-structural variables in exploring women's HIV-related risk behaviors in a sub-Saharan Africa setting in Uganda. Little is known about the potential application of these approaches to studying sexual risk behaviors and adherence to ART among HIV infected women. For all women in the study, the structural equation modeling (SEM) model fitting analyses indicated that gender-based power may be a more important predictor than economic security of women's sexual risk behaviors. Neither factor was, however, predictive of ART adherence in this study sample. In summary, findings suggested that sexual exchange for food and other assistance is probably common and likely driven by economic deprivation. On the contrary, results indicated that sexual exchange is not necessarily linked with risky behaviors such as lack of condom use. There is evidence of increased risk for married women in the study, especially the risk of forced, coercive or survival sex. The complex interactions between poverty, hunger, marital status, gender-based power and different HIV/AIDS risk behaviors should be further examined in order to inform the implementation of HIV/AIDS programs designed for women.

Study by Brickley (2007) revealed that the Vietnamese government has committed to HIV prevention and treatment programs for people living with HIV/AIDS. Yet there is concern among public health advocates that the social stigma of AIDS will have a negative impact on these programs. Brickely describes the
characteristics of clients seeking voluntary counseling and testing (VCT) in Ho Chi Minh City and explores stigma and discrimination experienced by pregnant and postpartum women with HIV. A total of 3325 clients sought HIV testing services at the first VCT in Vietnam between November 2001 and May 2005. The population of ATS clients was primarily male (68%). The majority of clients reported sexual risk behaviors, yet a high percentage of clients (21%) reported injecting drugs. The prevalence of HIV among the client population (28%) was high. A multivariate model showed that only age, education and injection drug use remained associated with HIV seropositivity. Among a sample of pregnant and postpartum women with HIV, nearly all experienced discrimination within the health care setting. These experiences fell within three levels of discrimination: (1) institutionalized, in which clinic and hospital policies and practices resulted in discrimination; (2) personally-mediated, including lack of respect and judgmental attitudes; and (3) internalized stigma, in which women with HIV doubt their own self-worth. Women also reported receiving some positive support in the health care setting. Women with HIV also described being the target of discrimination from their families and communities. All types of people in a woman's life, including family, community, and partners, were afraid of HIV transmission. However stigma and discrimination based on moral judgments was most likely to be perpetrated by community members. Women with HIV often received social support from partners and family members. Yet in order to receive social support, women must disclose their HIV status, and in many cases they were afraid to do so for fear of discrimination.

One of the most common gynecologic conditions among HIV+ women is cervical dysplasia, the precancerous phase of cervical cancer. Therefore, adherence to gynecology visits may be among the most important health care practices for HIV+ women. However, no research has evaluated the psychosocial factors associated with health care practices among HIV+ women at risk for cervical cancer. Pereira, A, (2004). Their study examined the relationship between inhibited interpersonal coping style and adherence to primary care and obstetrics or gynecology visits in HIV+ women with Human Papilloma virus (HPV) infection. Twenty-eight HIV-1 seropositive Black, non-Hispanic women underwent a psychosocial interview, blood draw, and gynecologic examination. The Millon Behavioral Health Inventory was used to assess coping style.
Arango (2003) evaluated the efficacy of two cognitive behavioral treatments, Seeking Safety (SS) and Relapse Prevention (RP), and its impact on HIV risk reduction on a sample of women with co morbid Post Traumatic Stress Disorder and Substance use disorders. In addition, possible relationships between HIV Risk, power and gender were explored and noteworthy qualitative analyses were detailed. Participants were recruited from both the community and clinical populations and were evaluated using both structured and unstructured measures. Results failed to confirm efficacy for either treatment in terms of HIV risk reduction. There was also no statistical significant relationship between HIV risk, power and gender. However, exploratory qualitative analyses reveal the importance of power and gender on HIV risk reduction. Failure to confirm our hypotheses points in the direction of current HIV research, where interventions are more specifically targeted to the particular population in question and highly sensitized to the power and gender dynamics, cultural, social, economical and educational differences within each group.

Schuman et al (2001) assessed patient self-reported prescription of antiretroviral therapy (ART), adherence to prescribed medications, and factors related to prescription and adherence among participants in 2 cohort studies of HIV infection in women. Seventy-seven percent of women reporting ART prescription reported adherence with prescription in the prior 2 weeks either as frequently as prescribed or almost all the time. Reported reasons for nonadherence included forgetting to take medication and unpleasant side effects. Women with CD4[^]+[^] lymphocyte counts ≥200/mm³ at interview were more likely to report adherence, as were women with HIV viral load values below detectable limits. Depressive symptoms were prevalent among participants and were significantly associated with poorer adherence. Improvement in adherence may require increased diagnosis and treatment of these symptoms.

Birbeck et al (2009) conducted a retrospective chart review of antiretroviral therapy (ART) clinic patients treated during the first 12 months after clinics opened in rural Zambia and assessed adherence based on clinic attendance, patient report, and staff assessment. Social support is a key patient-level resource impacting ART adherence in rural Zambia. Limited spousal disclosure affects women more than men. Clinic buddies are associated with better adherence.
According to Bajunirwe et al (2009), large-scale, government-based antiretroviral therapy (ART) programs in rural areas of resource-poor countries remain largely unevaluated. Viral suppression was high, but counseling to include HIV disclosure to family and keeping scheduled clinic appointments may improve long-term adherence and treatment outcomes.

Carlucci et al (2008) studied antiretroviral therapy (ART) adherence levels of \( \geq 95\% \), which optimize outcomes and minimize HIV drug resistance. As such, identifying barriers to adherence is essential. They sought to assess travel to point-of-care for ART as a potential barrier to adherence in rural Zambia, within the context of patient demographics, perceived stigma, and selected clinical indices. Patients in rural Zambia can achieve adherence rates compatible with good clinical outcomes despite long travel distances. The MMH was able to provide quality HIV/AIDS care by implementing programmatic features selecting for a highly adherent population in this resource-limited setting.

Malawi et al (2007) opined that surveillance in the era of antiretroviral therapy (ART) require estimates of HIV prevalence as well as the proportion eligible for ART. They estimated HIV prevalence and assessed field staging of individuals to estimate the burden of HIV disease needing treatment in rural Malawi. The field checklist was not a suitable tool for individual staging. Criteria for ART eligibility based on clinical staging alone missed two-thirds of those eligible by clinical staging and CD4 cell count.

Forna et al (2007) evaluated clinical toxicity in HIV-infected persons receiving antiretroviral therapy (ART) in Uganda. Clinical toxicities were common, but no patients discontinued ART because of toxicity. The most common toxicities, peripheral neuropathy and rash, were managed with single-drug substitutions. In resource-limited settings, toxicity from ART regimens containing stavudine or nevirapine is manageable but more tolerable regimens are needed.

According to Rosen, Ketlhapile, Sanne, and DeSilva (2008) little is known about the characteristics of patients accessing antiretroviral therapy (ART) in South Africa. In a random sample of 1069 pre-ART and ART patients attending an urban public hospital, a periurban nongovernmental organization (NGO) clinic, and a rural
NGO clinic, 79% were female; average age was 34 for women and 37 for men. Two thirds reported having 1 long-term partner, but most did not live with their partner. Three fourths had completed some secondary school or higher; 47% were employed formally (26%) or informally (21%), and 40% lived in informal housing or shacks. Patients at the rural site were less likely to be employed and more likely to receive government grant support. Relative to the HIV-positive population as a whole, ART patients are older, more likely to be female and have 1 long-term partner, live in informal housing, have reached secondary school, and earn an income from formal or informal employment.

2.5.2: Studies related to HAART therapy

Anastos et al (2005) attempted to determine the association of race with clinical and laboratory outcomes after initiation of highly active antiretroviral therapy (HAART) in HIV-1-infected women in the United States. There were no significant differences, however, among racial groups in outcomes after adjustment for pre-HAART CD4+[sup]+[sup], HIV-1 RNA, history of AIDS-defining illness, age, antiretroviral therapy use, baseline HIV-1 exposure category, and post-HAART behavioral and clinical variables associated with poorer response (discontinuation of HAART, lower income, smoking, current drug use, and depression). Continuous HAART use and lack of depression differed by race and were the strongest predictors of favorable outcomes. No significant differences by race were found in virologic, immunologic, or clinical outcomes after adjustment for continued HAART use and depression. These findings suggest that strategies to enhance HAART continuation, including assessing pharmacogenetic influences that may result in greater toxicity and discontinuation rates, and treating depression can improve individual and population-based effects of treatment and potentially mitigate racial disparities in AIDS-related outcomes.

Stangl, Wamai, Mermin, Awor and Bunnell (2007) examined trends and predictors of quality of life (QOL) over 12 months among a prospective cohort of 947 HIV-1-infected adults initiating highly active antiretroviral therapy (HAART) between May 2003 and May 2004 in rural Uganda. Participants provided clinical, demographic and psychosocial data at baseline and every three months thereafter. Outcome measures included physical and mental health summary scores based on the
Medical Outcomes Study-HIV Health Survey (MOS-HIV). While several clinical, psychosocial and sociodemographic factors predicted QOL at HAART initiation, financial dependence on others was the only remaining predictor after controlling for time on HAART. Interventions to enhance the economic and employment opportunities of patients taking HAART in rural Africa may help maximise gains in QOL.

Jeannin et al (2006) worked on the recording of outcomes from large-scale, simplified HAART (highly active antiretroviral therapy) programmes in sub-Saharan Africa is critical. They aimed to assess the effectiveness of such a programme held by Médecins Sans Frontières (MSF) in the Chiradzulu district, Malawi. They analyzed survival indicators, CD4 count evolution, virological response, and adherence to treatment. They included adults who all started HAART 6 months or more before the analysis. HIV-1 RNA plasma viral load and self-reported adherence were assessed on a subsample of patients, and antiretroviral resistance mutations were analyzed in plasma with viral loads greater than 1000 copies per l. Analysis was by intention to treat. Results revealed that of the 1308 patients who were eligible, 827 (64%) were female, the median age was 34.9 years (IQR 29.9-41.0), and 1023 (78%) received d4T/3TC/NVP ( stavudine, lamivudine, and nevirapine) as a fixed-dose combination. At baseline, 1266 individuals (97%) were HAART-naive, 357 (27%) were at WHO stage IV, 311 (33%) had a body-mass index of less than 18.5 kg/m2, and 208 (21%) had a CD4 count lower than 50 cells per muL. At follow-up (median 8.3 months, IQR 5.5-13.1), 967 (74%) were still on HAART, 243 (19%) had died, 91 (7%) were lost to follow-up, and seven (0.5%) discontinued treatment. Low body-mass index, WHO stage IV, male sex, and baseline CD4 counts lower than 50 cells/muL were independent determinants of death in the first 6 months. At 12 months, the probability of individuals still in care was 0.76 (95% CI 0.73-0.78) and the median CD4 gain was 165 (IQR 67-259) cells per muL. In the cross-sectional survey (n=398), 334 (84%) had a viral load of less than 400 copies per mL. Of several indicators measuring adherence, self-reported poor adherence (<80%) in the past 4 days was the best predictor of detectable viral load (odds ratio 5.4, 95% CI 1.9-15.6). These data show that large numbers of people can rapidly benefit from antiretroviral therapy in rural resource-poor settings and strongly supports the implementation of such large-scale simplified programmes in Africa.
In industrialized countries, the initiation of antiretroviral therapy (ART) is based on virological, immunological and clinical markers. (Torpey et al, 2009). The objective of this study was to identify treatment gaps when ART initiation is based on clinical staging alone. The method employed was a retrospective study of 5784 patients enrolled in an HIV treatment programme in two urban and two rural sites in Ghana. Of the patients, 29.5% were in clinical Stages I and II and had a CD4+ T-lymphocyte count less than 200 cells/mm. Significantly more patients in clinical Stage I from urban sites (37.0%) had a CD4+ T-lymphocyte count less than 200 cells/mm as compared with patients from rural sites (23.8%) (P value <0.05). In addition, more men (39.9%) in clinical Stage I had a CD4+ T-lymphocyte count less than 200 cells/mm, when compared with women (27.4%) (P value <0.05). In conclusion, clinical staging cannot identify a relatively large number of patients who need ART. A wider availability of CD4+ T-lymphocyte count testing will optimize the identification of patients eligible for ART.

Study by Terzian (2008) revealed that since the introduction of highly active antiretroviral therapy (HAART) in 1996-7, HIV-infected individuals with access to HAART are surviving longer. Physical functioning in HIV-infected and co-infected adults with hepatitis C virus (HCV) on prolonged use of therapy have not been systematically investigated. This study assessed the role of HIV-related immune suppression and HAART-related reconstitution, longitudinal patterns of illicit drug use, and HCV status on physical functioning. We evaluated physical functioning in the Women's Interagency HIV Study (WIHS), a prospective cohort study initiated in 1994 across 6 US cities. In 2005, 1880 HIV-infected/HAART-experienced and 539 HIV-uninfected women participated in a sub-study on physical functioning. Women responded to a series of questions on physical functioning and performed the timed-gait and grip strength tests. Effects of markers of immuno-suppression, illicit drug use, and HCV on endpoints were analyzed using egression models. Compared to HIV- women, HIV+ women were older, less educated, more depressed, and had lower body mass index. After adjustment for confounding, HIV-infected women with the most severe immuno-suppression (e.g. those with the lowest current CD4+ T-cell counts) were at increased risk for slower walking speed, mobility-related task difficulty, and lower physical functioning QOL, relative to HIV-uninfected women. Among HIV+ women, women with a history of AIDS were at increased risk for
'poorer' physical functioning on all self-reported and performance-based measures. Likewise, HIV+ women reporting drug use and active HCV infection were at increased risk for 'poor' physical functioning on self-reported measures, compared to HIV+ women reporting never use or HIV+ who were HCV-, respectively. There study is one of the first to identify factors associated with frailty, walking speed, and grip strength in HIV+ women in the era of HAART. Differences in functioning were observed only in HIV+ women with the most severe immuno-suppression or who had a history of AIDS. HIV+ women who were not severely immuno-suppressed were not at increased risk, compared to HIV- women. Poor physical functioning was not uniformly associated with drug use or HCV co-infection. Because this sub-study was nested n a large representative cohort study, our results are generalizable to HIV+ women in the US. As HIV+ adults on HAART survive longer, quantifying the effect of HIV and treatment on broader measures of health is important for the prevention of disability.

According to Mary et al (2009), sub-Saharan Africa contains over 60% of the world's HIV infections and Zambia is among the most severely affected countries in the region. As antiretroviral programs have been rapidly expanding, the long-term success of these programs depends on a good understanding of the behavioral determinants of acceptance and adherence to antiretroviral therapy (ART). The study used qualitative methods to gain local insight into potentially important factors affecting HIV-infected women's decision to accept or continue with ART. Some of the barriers identified by this study are consistent with factors cited in the existing adherence literature from both developed and developing nations such as side effects, hunger and stigma; other factors have not been previously reported. One major theme was unfamiliarity with the implications of having a chronic, potentially deadly disease. Other emerging themes from this study include the complicated effect of ART on interpersonal relationship, particularly between husbands and wives, the presence of depression and hopelessness, and lack of accurate information. The results suggest that the reasons for non-uptake of treatment include issues related to local cultural frameworks (e.g., illness ideology), mental and behavioral health (e.g., depression and/or interpersonal challenges), stigma, and motivating factors (e.g., values of church or marriage) of different cultures that affect the ability and willingness to take life-saving medicine for a long period of time. Qualitative studies
are critical to better understand why ART eligible individuals are choosing not to initiate or continue treatment to achieve needed adherence levels. To understand the concerns and perceptions that promote or deter adherence to antiretroviral medication by HIV-positive African-American women, the authors conducted in-depth interviews with 15 African-American women taking high acting anti-retrovirals (HAART). The focus was on the discourse and narratives women use in talking about their adherence practice. Discourse analysis was utilized to identify and explore the sources of influence used by these women in describing their adherence practice. Roughly a third of the sample fell into each of the 3 self-assessed adherence categories: always adherent, mostly adherent and somewhat adherent. Among the 'always adherent', 80% of the sources of influence cited supported adherence, while only 48% and 47% of the authoritative sources cited by women in the ‘mostly’ and ‘somewhat’ categories supported adherence. Each self-assessed adherence group was characterized by its own distinctive discourse style. Findings suggest that adherence to HAART among African-American HIV-positive women would be improved by identifying those influences undermining adherence. Focused study of the 'always adherent' types is recommended.

2.6: OTHER RELATED STUDIES

In this section studies which are not related to any specific issues have been reviewed. Judith et al (2004) examined associations between depressive symptoms and AIDS-related mortality after controlling for antiretroviral therapy use, mental health treatment, medication adherence, substance abuse, clinical indicators, and demographic factors. One thousand seven hundred sixteen HIV-seropositive women completed semiannual visits from 1994 through 2001 to clinics at 6 sites. Multivariate Cox and logistic regression analyses estimated time to AIDS-related death and depressive symptom severity. After they controlled for all other factors, AIDS-related deaths were more likely among women with chronic depressive symptoms, and symptoms were more severe among women in the terminal phase of their illness. Mental health service use was associated with reduced mortality. Treatment for depression is a critically important component of comprehensive care for HIV-seropositive women, especially those with end-stage disease.
Oliva, Rienks, and McDermid (1999) focused their study on group discussions on barriers to health care and attitudes toward family planning, reproductive health services, and condom use were conducted with 63 women (aged 21–47 yrs) at high risk for HIV due to their own iv drug use, sex with iv drug users, sex industry work, or a history of multiple sexually transmitted diseases. Ss were recruited from drug treatment programs and social service and health care provider agencies. Barriers identified include the high cost of health care, perceived poor quality of care and experiences of discrimination and stigmatization, geographic accessibility, fear of legal or social services punitive actions, misperceptions about the efficacy of birth control methods and condom usage, lack of sterilization services, and lack of male involvement. Where possible, findings from the focus groups are supported with quantitative survey data from a sample of 723 high-risk women (aged 16–44 yrs) recruited on the street through community health outreach workers. Recommendations are made for improving the delivery of HIV prevention services for high-risk women.

Marcenko and Samost (1999) investigated the experiences of HIV-positive mothers with the system of services designed to help them, how they cope with the infection, particularly as it relates to parenting, and their concerns, preferences and plans for the future care of their children. A focus group method was selected because it is well suited for this type of exploratory research. A total of 40 HIV-positive mothers (aged 23–54 yrs) participated in six different focus groups. The issues that emerged from the data analysis revealed that, using systems theory, they could be logically classified by the type or level of system in which the issue was primarily located. The three system levels were (1) individual and family, (2) organizations and providers, and (3) policy and community. Within each of these categories, issues could be further delineated by whether they provided women with resources or presented them with additional stress. Conclusions and recommendations for providers are made based on the systems framework that gave structure to the results.

South Africa has an HIV-infection rate of 5 million people. Between 1995 and 2005, and is expected to have the highest number of AIDS-related deaths on the African continent, a total of 2.7 million. Many infected individuals are women. However, there is very little research conducted with South African women
examining the relationship between HIV-infection and psychological distress. Research conducted in the United States indicates that HIV-infection is associated with increased rates of depression and anxiety (Lindner, 2006). His research project aimed to explore the relationship between HIV-infection and psychological functioning in the unique socio-political context of South Africa. In addition, the aim is to begin identifying potential factors that moderate this relationship. HIV-infection was associated with higher rates of depression, but not anxiety. In addition, women with HIV-infection reported more malnutrition risk, emotion-focused coping, stressful life events, and powerlessness in relationships with male partners, HIV-stigma, and healthcare satisfaction, than the non-infected women. Variables that were directly associated with depression and anxiety included nutrition, stressful life events, powerlessness in relationships, family social support, and community agency access. HIV-stigma was also directly associated with depression. Furthermore, health-care access, emotion-focused coping, and family social support moderated the relationship between HIV-status and depression, and stressful life events moderated the relationship between HIV status and anxiety.

According to Schatz, (2005) in much of HIV/AIDS prevention literature, women are depicted as passive and ill-equipped to confront the epidemic without external support to enhance their status, autonomy, and negotiation skills. This paper critically evaluates this depiction, using data from in-depth interviews conducted with married couples in rural Malawi. It focuses on the extent to which married women perceive that they have the ability to protect themselves from infection and on the prevention strategies that they employ. Interview data suggest that women have identified a range of contextually appropriate ways to resist exposure to HIV. These strategies include sitting and discussing the dangers of HIV/AIDS with their husbands, utilizing social networks for advice and as advocates, publicly confronting husbands' girlfriends; and divorcing men who do not adopt safer practices. These locally-formulated strategies are not likely to be followed consistently, and they may not be the most effective strategies in preventing husbands from straying or protecting women from contracting HIV/AIDS. Their existence, however, demonstrates that rural Malawian women believe that they have some agency to protect themselves; and, they are in fact using locally appropriate strategies to do so.
Winningham et al (2004) indicates that African American women aged 50 and older are disproportionately affected by the HIV/AIDS epidemic. Despite African Americans making up 11% of all older women in the United States, in 2001, they accounted for more than 50% of AIDS cases among older women and more than 65% of HIV cases among older women. Using the AIDS Risk Reduction Model as a conceptual framework, this study investigated HIV risk behavior among older rural African American women (mean age = 58 years). A significant proportion of older African American women living in rural counties are at increased risk for HIV infection, suggesting an urgent need for HIV prevention efforts to target this population.

According to Crosby, Bonney, and Odenat, (2004), a central challenge of the AIDS epidemic among African American women is promoting acceptance of repeat HIV testing among those at risk of infection. They conducted an exploratory study designed to identify behavioral and psychosocial correlates of intent for repeat HIV testing among women disenfranchised from traditional health care delivery systems. Face-to-face interviews were conducted with 143 women attending an urgent care center in the urban South. In multivariate analyses, three psychosocial correlates were significantly associated with women's intent for repeat testing. Women who expressed less worry about HIV were substantially more likely, than those expressing greater worry, to report low intent for repeat testing (adjusted odds ratio (AOR) = 10.6, p = 0.001). Concern about having blood drawn was also robustly associated with intent (AOR = 7.3, p = 0.002). Finally, a one unit increase on the 5-point scale assessing less agreement that having HIV would make life complicated corresponded to 3.3 greater odds of indicating low intent (AOR = 3.3, p = 0.002). Study findings provide a potential focal point for efforts designed to promote repeat HIV testing among women from the study population.

Murphy, Marelich, Dello, Swendeman and Witkin (2002) studied the psychological condition of mothers living with HIV, their home life, and how these women function as caretakers with a chronic illness. In this study, interviews were conducted with 135 HIV symptomatic or AIDS diagnosed mothers (aged 23-52 yrs) of young, well children aged 6-11 yrs. White mothers were less likely to be severely ill than all other race or ethnic groups. The mean level of depression was elevated
among this sample, and was associated with poorer cohesion in the family, and with poorer family sociability. Depression also was associated with the mothers being less able to perform tasks that they typically do; children of more depressed mothers had increased responsibilities for household tasks.

Walker (2002), described women, particularly minority women, is becoming infected with HIV in increasing numbers. Women report feeling socially isolated and has a greater care giving burden than do men. Rural women in particular may face greater stigma and a more limited accessibility to health services. This study examined rural women with HIV and AIDS and the staff members who work with them, using a qualitative design. Interviews and observations were conducted with four women and eight staff members, and documents were collected as well. Results of the study revealed (a) barriers to these women regarding the accessibility of services, including mental health counseling; (b) a need to empower these women to be proactive in their health care; (c) a stronger social support system and sense of hope in women identified as doing well; (d) a better quality of life may be obtained with protease inhibitors, and (e) empowerment may accrue through support groups.

Cowdery, Joan and Pesa (2002) examined the impact of demographic, clinical and psychosocial variables on health-related quality of life (QOL) in women living with HIV. Ss were 82 women who were currently seeking treatment at an outpatient clinic. The Medical Outcomes Study-Short Form 20 assessment consisted of patient self-ratings on 20 items measuring 6 distinct health dimensions. Additional data were collected on age, ethnicity, education, employment status, and length of time since HIV diagnosis, CDC stage of disease, total CD4 count, and number of symptoms, Karnofsky Performance Scores, social support and discrimination. Multiple regression analyses were performed using each of the 6 health dimension scores as dependent variables and a combination of 10 demographic, clinical and psychosocial variables as independent variables. All of the 6 multiple regression equations were statistically significant. Age, Karnofsky Performance Score and social support were related to several scale scores. Results provide baseline data on clinical, demographic and psychosocial determinants of QOL in a female patient population. QOL information can assist programme planners in developing social and medical service delivery for
women in the community, thus facilitating the development of treatments, programs and interventions.

Dolcini, Catania, and Joseph (2000) showed that women represent one of the fastest growing groups of U.S. AIDS cases. Their study examined women with risky male sexual partners drawn from a national/urban probability telephone sample. Analyses of a matched control design to profile women with risky sexual partners and their male partners. The authors used the multifaceted model of HIV risk (MMOHR) as a framework for examining how women with risky partners differed from matched controls. Compared to match controls, 209 women (aged 18-49 yrs) with risky partners were young, poor, sexually unassertive, in troubled relationships, and were cognizant of their health risks. The authors found two distinct groups of women: women whose only risk was through their partner (single risk) and women who had additional risks of their own (multiple risk). Single-risk women were more conservative, guiltier about sex, and in traditional relationships. Interventions should build on women's recognition of their risk and focus on the relationships that support risky behavior.

Siehnhold and Susanne (1999) examined the psychosocial support of lesbian and heterosexual women who are diagnosed with Human Immunodeficiency Virus (HIV+). Theories from current literature on heterosexual and lesbian women with HIV/AIDS served as a foundation for the exploration of psychosocial support. Most of the psychological research on the epidemic of AIDS and its impact on patients’ psychosocial stressors have been conducted on the homosexual male population. According to the Center for Disease Control (CDC), the number of women reported to be infected from June 1996 to July 1997 was 92,242 (CDC Surveillance Report 1997). With the numbers of HIV+ women rising, it is crucial to investigate their support resources. Their study examined the psychosocial support of HIV+ women in seven areas: Friends, Family, Significant Other, Psychotherapy, Medical Personnel, Community, and Religion. The AIDS Psychosocial AIDS Questionnaire (AIDS/PSQ) was administered to a sample of 30 heterosexual and 30 lesbian women. The means of psychosocial support of the heterosexual and lesbian participants were compared, and no significant differences were found. However, there were significant differences among areas of psychosocial support within the entire sample. Highest support came
from medical personnel, and lowest support came from families. The results of this research can help to clarify the levels of psychosocial support among women who are diagnosed HIV+. They may also give clinicians an idea of where more support is needed and which areas of support can be improved through psychotherapeutic and community based interventions.

A study by Crossley (1998) aims to present an overview of some of the concrete interpersonal and social problems faced by a number of women who have been living with an HIV-positive diagnosis for at least 5 years. On the basis of previous research on the psychosocial impact of various forms of illness and traumatizing events, it is suggested that underpinning these specific problems are more 'existential' issues relating to the potential shattering of assumptions with regard to a person's basic conception of self and world. This sets the scene for an exploration of the different ways in which these women ascribe meaning to and make sense of the experience of being HIV positive. The paper addresses the utility of different ways of ascribing meaning in terms of their implications for the process of self-care, illness management, quality of life, and potentially, disease progression. It also examines the relationship between ways of ascribing meaning and the physical, interpersonal and social dimensions of the individual's life-world.

Sowell et al, (1997) evaluated the relative importance of social (social support, material resources, disclosure, and family functioning) and psychological factors (stigma, emotional distress, intrusion, avoidance, and fatalism) as predictors of the quality of life of women infected with HIV. The cross-sectional data were drawn from interviews with a sample of 264 women recruited from 8 HIV/AIDS treatment sites. Variance in quality of life variables, including limited daily functioning, general anxiety, and HIV symptoms, was analyzed using ANOVA, correlations, and hierarchical multiple regression analysis. Limited daily functioning was predicted by stigma, fatalism, employment status, and stage of disease. General anxiety was predicted by emotional distress, intrusion, and marital status. Reported HIV symptoms were predicted by material resources, disclosure, intrusion, age, employment status, and race. Results support the idea that social and psychological factors are important in their influence on quality of life in women with HIV infection and suggest the need for interventions which address such factors.
Hendrixson (1997) says that in the United States, almost 65,000 women have been diagnosed with AIDS (Acquired Immune Deficiency Syndrome caused by infection with HIV-human immunodeficiency virus), yet there is little research on their medical, psychological, and sexual concerns. In addition, investigators continue to focus on inner-cities; virtually no one is studying AIDS in rural areas. In this qualitative, naturalistic study, he identified significant psychosocial and psychosexual issues that affect women with HIV/AIDS who live in rural areas. A naturalistic research method balances the preponderance of quantitative, epidemiological research presently underway. The Ethnograph, a qualitative data analysis computer program, was a helpful tool during the analysis process. He conducted 36 open-ended, comprehensive interviews of 12 HIV-infected rural women over a one and one-half year period. Systematic, inductive analysis of interview data elicited six major themes which connect the HIV/AIDS experiences of the participants. The themes reflect six basic life domains: spiritual, physical, emotional, social, sexual, and maternal. (1) Spiritual: A search for meaning and purpose is underway, personal priorities are shifting, and a sense of mission has emerged for most women. The rural environment enhances the spiritual dimension. (2) Physical: Finding adequate, integrated, and accessible health care is problematic, especially for poor women. Not all health providers practice universal precautions, and some women must educate their rural doctors about HIV/AIDS. (3) Emotional: Feelings of loss and limitation, and multiple fears are prevalent. Some positive self-esteem changes are reported, however. Rural discrimination is noted. (4) Social: Two coping patterns and four stages of disclosure are identified. Rural support networks vary widely. Prejudice from other HIV+ women ("Stigma from Within") is reported. (5) Sexual: A sexual shutdown occurs in most women; libido re-emerges for some with new partners. Most who remains sexually active practice safer sex? (6) Maternal: A process of "anticipatory separation" begins as mothers slowly disengage emotionally from their children. Custody decisions and disclosure to children are particularly troubling. Mothers who have infected their children carry heavy burdens of guilt.

Strebel (1995) provides an overview of the current status of AIDS-related issues for women through an assessment of biomedical and psychosocial literature. Recent research has investigated the different ways in which psychosocial and economic variables mediate HIV infection for women, and has stressed the need to
explore women's position in society both in order to understand the complexity of the problem for women and in order to approach prevention and care initiatives realistically. The literature demonstrates the dilemma of AIDS being seen as women's responsibility, although they lack the power and means to implement safe sex. Gender imbalances in depictions of and responses to AIDS should be attended to if the epidemic is to be effectively addressed.

Goldschmidt, Temoshok, Brown, and George (1993) present a summary of the biological and clinical picture of HIV infection in women, discuss the psychosocial impact of HIV/AIDS on women's lives, and review the recent directions taken by the research community to focus attention on women and HIV.

Ickovics and Rodin, (1992) reviewed the literature on women with human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS), particularly women from the US, and discusses what differentiates these women from their male counterparts with the disease. An epidemiologic review and description of the natural history of the disease is presented to lay the foundation for a more complete understanding of the biological and psychosocial factors relevant to AIDS in women. Differences between women and men in genetic and endocrine variables, as well as sex roles, social conditions, and socioeconomic factors, are likely to influence both viral exposure and the disease process. The primary route of HIV transmission in women is needle sharing in injection drug use, although women are more likely than men to acquire HIV through heterosexual contact.

Latimer and Dawson (1998) indicates that psychosocial support is considered an essential element of palliative care, which is care that strives to relieve, improve, or control symptoms and maximize the quality of care. It includes a range of interventions that enable individuals and families to cope with adverse circumstances in their lives and with the sometimes overwhelming feelings caused by those circumstances. The adverse circumstances of HIV/AIDS include the shock of learning about a positive HIV test or a diagnosis of AIDS for one’s self, spouse, or relative the stigma and discrimination that often attend HIV or AIDS, the long periods of illness, the burden of caring for sick family members, the disability or death of a productive adult family member and the loss of income that can results and the powerful feelings of grief and mourning for the loss of one, and often many, family members.
Psychosocial support lays the groundwork for families hit with HIV/AIDS to engage in constructive problem-solving to manage and plan for these and other immediate and long-term needs.

Danziger, (1994) suggests that the type and intensity of psychosocial care and support that is needed varies with the circumstances faced by each family, but such support can encompass physical, emotional, and spiritual elements. In many cases, psychosocial care is provided alongside or grows out of other types of vital support. Mechanisms to provide this type of psychosocial support include support groups, volunteers who visit in the home and hospital, hospital outpatient clinics, pastoral counselors, and home care programs “in addition to providing medical and nursing care, most home care programmes offer information and counseling to individuals and sometimes their families to assist them in coming to terms with illness, death and bereavement”

Early in the epidemic, HIV infection and AIDS were diagnosed for relatively few women and female adolescents. Today, women account for more than one quarter of all the new HIV/AIDS diagnosis. In 2002, HIV infection was the fifth leading cause of death among all women aged between 35 and 44 years and sixth leading cause of death among all women aged 25 and 34 years (CDC, 2002). Risk factors associated with women being afflicted with HIV/AIDS include young age, lack of awareness of their male partner’s risk for HIV infection, unprotected sex with multiple partners, sexual inequality in relationships with men, biological vulnerability of female sex organs, socioeconomic issues, etc. Unlike developed countries, India lacks the scientific laboratories, research facilities, equipment and medical personnel to deal with an AIDS epidemic. In addition, factors such as cultural taboos against discussion of sexual practices, poor coordination between local health authorities and their communities, widespread poverty and malnutrition and a lack of capacity to test and store blood would severely hinder the ability of the Government to control AIDS if the disease did become widespread.

Under these circumstances, the plight of rural women in India is all the more distressing, while there are first hurdles in recognition or identification of HIV/AIDS, it may be followed by treatment. When this is done, there is no guarantee that they would continue to be on prophylaxis for the required period of time. Thus, even the
availability of the Anti Retro Viral Drug Therapy becomes in vain. There are hardly any studies in this direction in our country. Therefore, it would be apt to explore nature and extent of the problem of HIV/AIDS in rural women and especially their compliance to the prescribed regiment of therapy, difficulties thereof, attitudes, reasons for non-compliance, etc. Such information could be of immense use in counseling and guidance for better life style and quality of living in these persons.