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Review Article

Factors affecting psychosocial well-being and quality of life among women living with HIV/AIDS

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Abstract

Women who are infected with human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) represent a major public health priority due to the disease impact on health, family, and society. Despite the growing number of empirical studies in this area, particularly from developing countries, there are few review articles that explore the psychosocial challenges faced by women living with HIV/AIDS. This clinical review describes prominent factors that influence treatment and quality of life among this target group. Implications and recommendations highlight therapeutic interventions that provide immediate psychosocial and psychophysical support. The review also proposes a conceptual model that may serve as a psychosocial management tool for mental health practitioners in developing countries who counsel women living with HIV/AIDS.

Keywords : HIV/AIDS; Stress; Stigma; Coping; Social support

Introduction

Globally, the human immunodeficiency virus (HIV) pandemic has infected approximately 35.3 million persons, where women constitute nearly half of this population (1). When compared to their male counterparts, women living with HIV experience greater stigma (2), significant decline in quality of life (QOL) (3-5), and greater incidence of psychopathology and psychiatric co-morbidity (6-8). In the developed world, where HIV has changed from a sub-acute and fatal infection to a chronic illness, largely due to the initiation of highly active antiretroviral therapy (HAART), health priorities now emphasize early identification and management of psychosocial issues that ensure better treatment and QOL (9).

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In India, the National AIDS Control Organization (NACO) reported that 2.9 million people are living with HIV/AIDS (PLWHAs), where 39% are women (10). Although the rapid spread of infection among women has largely been attributed to heterosexual contact (10), overall awareness about unsafe sexual practices and HIV transmission is as low as 2.7% [3]. Without appropriate health promotional campaigns to increase knowledge about sexually transmitted infections (STIs), women may continue to be a high-risk group for STIs and related psychiatric co-morbidities (11).

This review aims to synthesize the literature related to psychosocial issues faced by women living with HIV and identify the factors influencing their treatment access and quality of life. Although social stigma and support among women living with HIV have been widely published, there is limited evidence about the role of coping mechanisms, quality of life and well-being. The review also proposes a conceptual model that may serve as a psychosocial management tool for mental health practitioners who counsel women living with HIV/AIDS.

Results

I. Stress

Unlike individuals afflicted with other chronic illnesses, PLWHAs experience multiple stressors. Psychologically, they experience distress that roots from concerns about disclosing their personal HIV/AIDS diagnosis, living with a chronic illness, complex medical treatments, and fear of infecting a friend or family member (12-14). Physiologically, they may endure diminished appetite, insomnia, weight loss (12), and weakened immunological resilience that hastens AIDS onset and progression (15-17). Both physical and psychological stress levels induce different complications in PLWHAs, such as substance abuse, risky sexual practices, suicide attempts, and reduced adherence to pharmacological treatment (15, 18, 19). However, the nature and causes of stress related to HIV/AIDS infection among women differ from those reported among men (13, 18).

Routine challenges in HIV-positive women include enduring systemic forms of oppression and marginalization, when compared to HIV-negative women (20). In a comparative study among urban and rural, HIV-positive (N=216) and HIV-negative women (N=243), Gupta et al (21) found that HIV-positive women were significantly more likely to report marital dissatisfaction, history of forced sexual intercourse, domestic violence, depressive symptoms and husband's extramarital sexual affairs, when compared to HIV-negative women. Various social, cultural and economic factors may play a significant role in contributing to HIV transmission among Indian women, such as power hierarchy in society, child marriage, lack of awareness about transmission (22), inability to freely communicate about sex and sexuality, pressures of bearing the family heir, implicit marriage threats for the infertile woman (23), and sexual victimization and coercion (24).

An extensive review by Jayarajan and Chandra (25) highlighted the higher HIV/AIDS prevalence among women who reported sexual coercion in comparison to those women who did not indicate sexual coercion. Abused women reported high risk sexual behavior and consequently had higher risk of HIV transmission. Socio-cultural norms and marriage subservience reinforced by violence and abuse can compromise the womans ability to protect herself from illness or seek medical care.

1.1. Stigma and discrimination

Herek et al (26) defined HIV stigma as "the prejudice, discounting, discrediting and discrimination directed at people perceived to have AIDS or HIV and at the individuals, groups, and communities with which they are associated" (p. 36). HIV stigma includes the perception of societal attitudes toward HIV as well as the personal experience of attached stigma (27), or *felt stigma* and *enacted stigma* (28). Felt stigma (perceived or internal stigma), is understood as the individual's real or imagined fear of persecution and sense of community disapproval, upon being labeled (29).

Women reported higher rates of both felt and enacted stigma, especially from intimate partners (30). In India, Newmann et al (31) reported that as high as nearly 90% of women under HIV care were monogamous, where sexual intercourse with their husbands was their primary risk factor for HIV/AIDS transmission. Once infected with HIV/AIDS, women have been reported to face severe abuse, discrimination and stigmatization within the home and in society, limiting their ability to access HIV/AIDS treatment and resume a life with dignity in the Indian society. Unlike developed countries, India practices abandonment of such women in cases of the husband's death due to HIV/AIDS infection (32).

Research highlights that women living with HIV/AIDS perceive maximum stigma and discrimination by the immediate family members and friends upon disclosure of their HIV status (2, 33-35). Lack of regard from staff in municipal places like hospitals, welfare offices and prisons has been identified as another factor for perceiving discrimination (36, 37). When health care providers display stigmatizing attitudes towards these patients, withdrawal often minimizes the scope of how this population seeks treatment (38).

An HIV-positive diagnosis has implications on a woman's moral life (39). A married woman who was infected by her husband could be regarded as being an innocent victim. However, a woman with multiple premarital sexual relations may be stigmatized with immorality (40).

One study examined stigma dynamics linked to HIV/AIDS infection, highlighting that those PLWHAs who were infected through sharing needles or through sexual intercourse with multiple partners were viewed more negatively than those who were infected through sexual intercourse with one partner (26). Other significant factors contributing to stigma towards women living with HIV are low education levels (41) and low income (42).

Compounding factors of illness and social discrimination may yield high risks of developing symptoms of depression and anxiety among women (19, 34, 43-46). Socially, this could prevent women from disclosing their HIV status (2, 47), which would further likely inhibit their ability to seek and adhere to treatment programs (48-50). More specifically, at an individual level, this may influence metastasis (51).

1.2. Intimate partner violence

Research highlights that violence and sexual coercion by intimate partners are major factors for HIV diagnoses among women (52-55). Independent of the reason underlying HIV/AIDS diagnosis, women have reported experiencing several forms of discrimination and violence from intimate partners. Several global studies have reported higher instances of domestic violence in women diagnosed with HIV/AIDS (56-59).

1.3. Sexuality and reproductive health

Sexuality is a fundamental aspect of every individual's life. The World Health Organization (WHO) estimates that 17.6 million women living with HIV/AIDS were reported to be in their childbearing age (1). Along with familial and societal discrimination, medical disclosure of HIV-positive status causes elevated stress because of its impact on their sexual and reproductive health, including pregnancy, sexual intercourse, contraception and breastfeeding (60). Both marriage and childbearing, which are considered to be the vital aspects to women's life, may be curtailed because of their HIV-positive status (61).

In one general survey conducted among PLWHAs in Argentina, women reported a heightened need to experience motherhood. Furthermore, it was revealed that 55% of women had children after their HIV/AIDS diagnosis (62). Despite knowledge about the risk of vertical transmission and the possibility of orphan hood, they desired sexual intercourse and motherhood (63, 64). Another study that targeted HIV-positive Brazilian women showed that they considered breastfeeding as an essential component in their role during the childbearing process (65).

II. Social support

Social support is broadly defined as 'assistance and protection provided to others' (66). Studies have indicated the necessity for social support among women living with HIV/AIDS (2). Research findings have depicted that women with social support from family members show higher levels of resilience towards the illness (36), which correlated with enhanced mental health (67-69) and treatment adherence (70, 71).

Greater emotional support has been associated with reduced negative and increased positive affect (72, 73), reduced psychological distress, and higher quality of life and self-esteem (74, 75). Those perceiving low levels of social support were reported to experience increased distress (76).

III. Coping

Lazarus and Folkman (77) defined coping as the “constantly changing cognitive and behavioral efforts to manage specific internal and/or external demands that are appraised as taxing or exceeding the resources of the person” (p.141). For many women, an adaptive coping strategy allows them to incorporate the HIV diagnosis into their identity (78) and results in better treatment adherence (70). A positive relationship between passive (or avoidance) coping strategies and negative mental

health outcomes has been reported (16, 79).

Studies have further identified factors that facilitate adaptive coping among PLWHAs (e g. physical ailments, feeling responsible for children, support group participation, forming supportive relationships) and reduce levels of perceived stigma and discrimination (80). Also, feeling forgiven and forgiving others have been highlighted as being an effective mode of coping with the HIV-positive status. Expressing forgiveness in the context of one's own HIV infection was associated with decreased likelihood of placing others at risk through unprotected sexual intercourse (81).

Individual resilience or psychological strength is another important factor for coping with negative situations. Taylor's (82) Cognitive Adaptation Model proposes that mastery and control over one's illness and self-esteem are instrumental in adapting to illness. Research among PLWHAs also substantiates this model, demonstrating that greater psychological strength and resourcefulness are associated with increased social support and decreased depression (71, 83, 84).

IV. Psychiatric co-morbidity

Studies have reported a greater incidence of psychiatric co-morbidity, including clinical depression, among women living with HIV/AIDS, when compared to their male counterparts living with HIV/AIDS (6, 85). Cross-cultural studies have highlighted that the frequency of major depressive episode among women living with HIV ranges from 4.5% to 61% (71, 86-89). Van Servellen et al (90) reported that fatigue was the most frequently reported depressive symptom for 98% of African-American women living with HIV. Depression indexes using Beck Depression Inventory (BDI) stressed that social interactions and physical symptoms affected women living with HIV(91) .

In addition, researchers noted that African-American women living with HIV/AIDS reported more psychiatric symptoms (92, 93) than their HIV-positive male counterparts. In an American cohort, HIV-infected women reported greater levels of generalized anxiety (4) and post-traumatic stress disorder (94). Studies from India showed that women living with HIV had a high risk of developing post-traumatic stress disorder, depression and anxiety spectrum disorders, when compared to men living with HIV (2, 95, 96).

High risk behaviors were also found prevalent among African-American women attending AIDS counseling centers (97). Luseno et al (98) reported high rates of substance abuse among South African women living with HIV. General psychological distress that failed to meet the criteria of a psychiatric diagnosis was commonly found among women living with HIV (68, 69, 99-102).

Empirical studies show that the high prevalence of psychiatric disorders among women is associated with various factors, namely, high levels of perceived stress (103), events of discrimination (44), low social support, and low income (94, 104). Psychiatric morbidity in women living with HIV resulted in reduced utilization of health services, poor adherence to anti-retroviral treatment (98, 105), high risk sexual behavior (106), poor quality of life (104), increased decline in CD4+ count, and faster metastasis (107, 108) .

From this review, it is evident that these factors are inter-related. These outcomes can be either positive (e.g. better quality of life, well-being, and treatment adherence) or negative (e.g. poor quality of life, well-being, and poor treatment adherence).

V. Barriers in seeking medical help

Despite universal and free access to antiretroviral treatment (ART), women infected with HIV have reported reduced treatment access (109, 110) and ART adherence (75), when compared to men. Studies reported that women have experienced enhanced ART side effects (111). Challenges encountered in accessing treatment may be due to lack of awareness regarding the illness and insight about HIV/AIDS status, transmission mode, and treatment access (98, 112-114).

Studies also show that HIV-positive women who had three or more stressful life events during the previous six months

were at least 2.5 times more likely to have missed a medication dose within the past two weeks, when compared with women without such events (115). Researchers also indicated that women with young children were more likely to delay seeking medical care due to caregiving responsibilities, when compared to men (116). In addition, one study conducted in South Africa reported that HIV-positive women who reported drug abuse had reduced likelihood of seeking health services (98).

QOL and well-being

The WHO (1995) (117) defines QOL as "individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (p. 1403). Researchers have suggested the need for empowering afflicted women as a strategy for improving health-related outcomes (118). Women were found to be more vulnerable towards increased HIV/AIDS symptoms, demonstrated poorer functioning and had greater disruptions in physical and psychosocial well-being (119). However, women living with HIV were further reported to be more accepting and forgiving when afflicted with the illness, when compared to men (120, 121).

Recent studies in different regions of India have examined QOL among HIV-infected men and women, and have documented gender-based differences (50, 122, 123). Women reported significantly lower QOL scores than men (122). Men reported better QOL in the environment domain, while women had higher scores on the spirituality, religion, and personal belief domains (81).

Among various socio-demographic variables, full-time employment had a positive relationship with QOL (4). European studies have highlighted challenges faced by a single parent or a new immigrant to the country as being significant predicators of lower mental health-related QOL among women living with HIV/AIDS (124). Age and marital discord were also found to be inversely related to health-related QOL (124, 125).

Women with HIV are known to experience frequent episodes of low self-worth, self-esteem and poor resilience, which subsequently results in QOL decline (126). Among women with HIV, better mental health-related QOL was predicted by practical coping style and increased social support (127).

Discussion

Women diagnosed with HIV/AIDS face multiple risk factors, such as the HIV/AIDS diagnosis, physical effects on QOL, stigma and discrimination, fear of rejection and violence from intimate partner, and concerns about sexuality and reproductive health. Various socio-economic factors, such as gender-specific roles related to motherhood, homemaking, socio-economic inequalities, and minority grouping, determine the degree to which stigma is faced by women living with HIV/AIDS. They perceive heightened discrimination in health care settings and intimate relationships. These factors may have personal and social implications, such as poor psychological well-being, lack of treatment adherence, and high risk sexual behaviors. Sexual and reproductive health care also greatly affected due to higher stress levels in women living with HIV/AIDS.

Empirical studies have shown that various mediating factors, such as social support, individual coping and resilience, are instrumental in reducing the impact of this stress. Women have been reported to experience a higher need for social support when compared to male counterparts. A positive relationship has been linked between social support and QOL among women living with HIV/AIDS. Effective coping strategies among women must accompany acceptance of the HIV diagnosis, so that they can develop higher resilience and enhance self-esteem toward increased QOL and general well-being.

Higher prevalence of psychiatric co-morbidities among women living with HIV/AIDS has also been reported. Although depression has been reported as the most prevalent condition among the afflicted group, anxiety spectrum disorders, psychological distress and substance dependence have been highlighted as other major diagnostic conditions. Social discrimination, poor social

support and inadequate coping mechanisms may be underlying factors that have influenced the high prevalence of these psychiatric diagnoses.

These factors are known to have lasting consequences on treatment adherence and QOL among women living with HIV/AIDS. Though ART is instrumental in improving life expectancy, overall functioning of women living with HIV may be disrupted because of poor physical and psychosocial QOL, which can lead to faster metastasis.

Research within the Indian culture elucidates the gender disparity with respect to psychosocial issues faced by PLWHAs. Within this socio-cultural scenario, women are left in a state of compulsion to conceal their illness due to fear of spousal and familial rejection. This has been reported as a major barrier in treatment access and intervention.

Psychosocial issues faced by women living with HIV/AIDS have emerged of significant and immediate concern among their health care providers. Based on the Transactional Model of Stress and Coping by Lazarus and Folkman (77), we propose a conceptual model for the psychosocial issues faced by women living with HIV/AIDS (Figure 1). This model will provide a comprehensive understanding about the various factors affecting psychosocial well-being and QOL among women living with HIV/AIDS.

Future directions

Until recently, health care providers working with people at risk or afflicted with HIV/ AIDS have mainly focused on various primary- and secondary-level psychosocial interventions. Women at risk for developing HIV were prompted to use condoms in primary prevention strategies (128), whereas counseling services were provided on

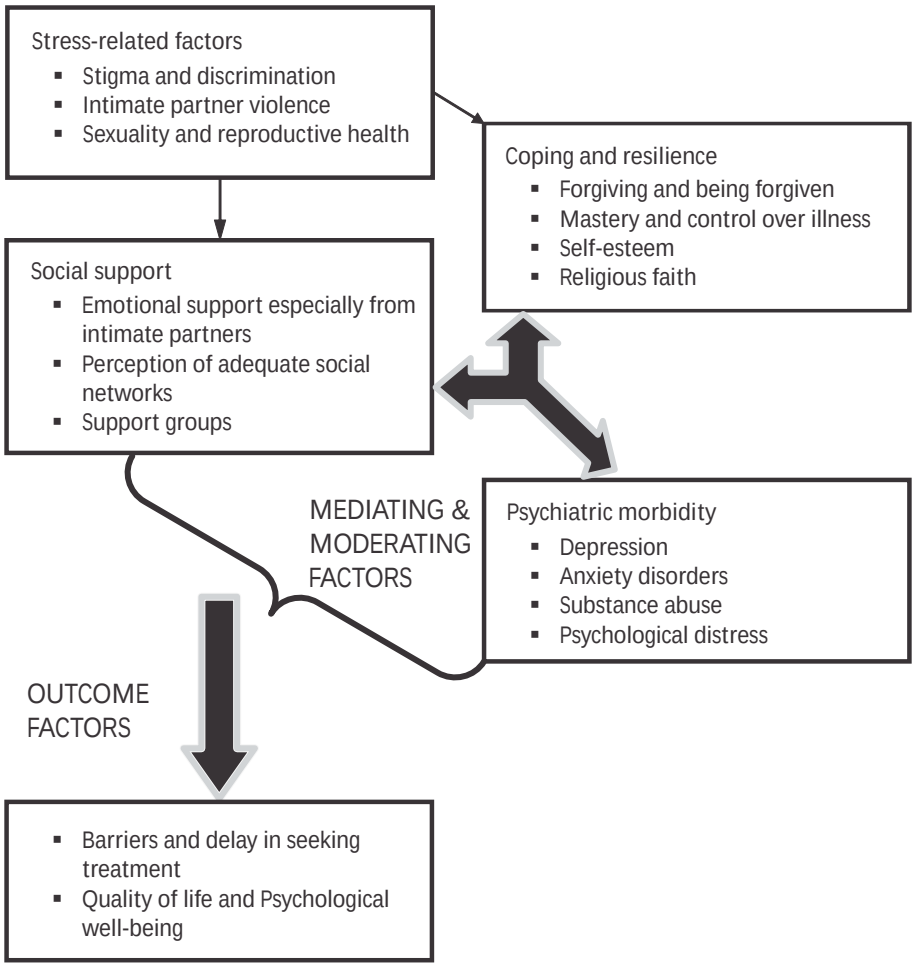

Figure 1 : Diagrammatic representation of the conceptual model

family planning and contraceptive methods to prevent HIV transmission from the target women to others in secondary prevention strategies (60, 129, 130). Although few studies have targeted tertiary-level psychosocial interventions, these strategies were more commonly found among men living with HIV than among women (131, 132). The lessened focus on tertiary-level interventions could be attributed to the lacunae in public health policies and intervention strategies addressing the mental health needs of PLWHAs (133).

A recent WHO report (134) suggests the need for a comprehensive psychosocial intervention among people living with HIV that can include individual and group counselling, peer support groups, family counselling and support, and home visits to reduce the risk of HIV transmission, promote adherence to prophylactic and therapeutic regimens, and minimize the socioeconomic impact of HIV on households. Literature clearly suggests that the high risk sexual behavior, psychological well-being, QOL and treatment adherence among women living with HIV are dependent on various psychosocial factors. The socio-cultural and economic scenario in which these women live determines the amount of gender disparity faced by them. In addition to aiding in educating about STI transmission, health care providers should be able to recognize and manage psychosocial conditions among women living with HIV, which will enhance overall QOL, well-being and treatment adherence. Future research should highlight culturally appropriate, effective psychotherapeutic interventions among women living with HIV. To achieve this target, mental health professionals in HIV clinics must sensitize and train other health professionals on psychosocial factors as well as provide appropriate psychotherapeutic interventions to women living with HIV.

References

1. WHO. Global Health Observatory (GHO) - Number of people (all ages) living with HIV. Geneva: 2012.
2. Bharat S, Aggleton P. Facing the challenge: household responses to HIV/AIDS in Mumbai, India. AIDS care. 1999;11(1):31-44. Epub 1999/08/06.
3. Atkins B, & Hancock, A. AIDS: A continuing challenge for rehabilitation professionals. American Rehabilitation. 1993;19:30-4.
4. Sowell RL, Seals BF, Moneyham L, Demi A, Cohen L, Brake S. Quality of life in HIV-infected women in the south-eastern United States. AIDS care. 1997;9(5):501-12. Epub 1997/12/24.
5. Reis RK, Santos CB, Gir E. Quality of life among Brazilian women living with HIV/AIDS. AIDS care. 2012;24(5):626-34. Epub 2011/11/17.
6. Mellers JDC, Marchand-Gonad, N., King, M., Laupa, V., Frankel, S., & Schmit, T. Mental health of women with HIV infection: A study in Paris and London. European Psychiatry. 1994;9:241-8
7. Vedhara K, Schifitto G, McDermott M. Disease progression in HIV-positive women with moderate to severe immunosuppression: the role of depression. Dana Consortium on Therapy for HIV Dementia and Related Cognitive Disorders. Behavioral medicine (Washington, DC). 1999;25(1):43-7. Epub 1999/04/21.
8. Machtinger EL, Wilson TC, Haberer JE, Weiss DS. Psychological trauma and PTSD in HIV-positive women: a meta-analysis. AIDS and behavior. 2012;16(8):2091-100. Epub 2012/01/18.
9. Klein J, Pena JE, Thornton MH, Sauer MV. Understanding the motivations, concerns, and desires of human immunodeficiency virus 1-serodiscordant couples wishing to have children through assisted reproduction. Obstetrics and gynecology. 2003;101(5 Pt 1):987-94. Epub 2003/05/10.
10. NACO. Technical Report India - HIV estimates- 2012. 2012.
11. Sogarwal R, Bachani D. Are persons living with HIV timely accessing ART services in India? Journal of the Indian Medical Association. 2009;107(5):288-90, 307. Epub 2009/11/06.
12. Leserman J, Whetten K, Lowe K, Stangl D, Swartz MS, Thielman NM. How trauma, recent stressful events, and PTSD affect functional health status and health utilization in HIV-infected patients in the south. Psychosomatic medicine. 2005;67(3):500-7. Epub 2005/05/25.
13. Murphy DA. HIV-positive mothers' disclosure of their serostatus to their young children: a review. Clinical child psychology and psychiatry. 2008;13(1):105-22. Epub 2008/04/17.
14. Thompson SC, Nanni C, Levine A. The stressors and stress of being HIV-positive. AIDS care. 1996;8(1):5-14. Epub 1996/02/01.
15. Ammassari A, Antinori, A., Aloisi, M., Trotta, M., Murri, R., Bartoli, L. Depressive symptoms, neurocognitive impairment, and adherence to highly active antiretroviral therapy among HIV infected persons. Psychosomatics. 2004;45:394–402.
16. Leserman J, Petitto JM, Perkins DO, Folds JD, Golden RN, Evans DL. Severe stress, depressive symptoms, and changes in lymphocyte subsets in human immunodeficiency virus-infected men. A 2-year follow-up study. Archives of general psychiatry. 1997;54(3):279-85. Epub 1997/03/01.
17. Zorrilla EP, McKay JR, Luborsky L, Schmidt K. Relation of stressors and depressive symptoms to clinical progression of viral illness. The American journal of psychiatry. 1996;153(5):626-35. Epub 1996/05/01.
18. Burns MJ, Feaster DJ, Mitrani VB, Ow C, Szapocznik J. Stress processes in HIV-positive African American mothers: moderating effects of drug abuse history. Anxiety, stress, and coping. 2008;21(1):95-116. Epub 2007/11/21.
19. Catz SL, Kelly JA, Bogart LM, Benotsch EG, McAuliffe TL. Patterns, correlates, and barriers to medication adherence among persons prescribed new treatments for HIV disease. Health psychology : official journal of the Division of Health Psychology, American Psychological Association. 2000;19(2):124-33. Epub 2000/04/13.
20. Larkin J, Flicker S, Koleszar-Green R, Mintz S, Dagnino M, Mitchell C. HIV risk, systemic inequities, and Aboriginal youth: widening the circle for HIV prevention programming. Canadian journal of public health = Revue canadienne de sante publique. 2007;98(3):179-82. Epub 2007/07/14.
21. Gupta RN, Wyatt GE, Swaminathan S, Rewari BB, Locke TF, Ranganath V, et al. Correlates of relationship, psychological, and sexual behavioral factors for HIV risk among Indian women. Cultural diversity & ethnic minority psychology. 2008;14(3):256-65. Epub 2008/07/16.

22. Mawar N, Saha S, Pandit A, Mahajan U. The third phase of HIV pandemic: social consequences of HIV/AIDS stigma & discrimination & future needs. The Indian journal of medical research. 2005;122(6):471-84. Epub 2006/03/07.
23. Solomon S, Chakraborty A, Yepthomi RD. A review of the HIV epidemic in India. AIDS education and prevention : official publication of the International Society for AIDS Education. 2004;16(3 Suppl A):155-69. Epub 2004/07/21.
24. Chandra PS, Carey MP, Carey KB, Shalinianant A, Thomas T. Sexual coercion and abuse among women with a severe mental illness in India: an exploratory investigation. Comprehensive psychiatry. 2003;44(3):205-12. Epub 2003/05/24.
25. Jayarajan N, Chandra PS. HIV and mental health: An overview of research from India. Indian journal of psychiatry. 2010;52(Suppl 1):S269-73. Epub 2010/01/01.
26. Herek GM, Mitnick L, Burris S, Chesney M, Devine P, Fullilove MT, et al. Workshop report: AIDS and stigma: a conceptual framework and research agenda. AIDS & public policy journal. 1998;13(1):36-47. Epub 2000/07/29.
27. Berger BE, Ferrans CE, Lashley FR. Measuring stigma in people with HIV: psychometric assessment of the HIV stigma scale. Research in nursing & health. 2001;24(6):518-29. Epub 2001/12/18.
28. Scrambler G, & Hopkins, A. Being epileptic, coming to terms with stigma. Sociology of Health and Illness. 1986;8:26-43.
29. Brown L, Macintyre K, Trujillo L. Interventions to reduce HIV/AIDS stigma: what have we learned? AIDS education and prevention : official publication of the International Society for AIDS Education. 2003;15(1):49-69. Epub 2003/03/12.
30. Wingood GM, Diclemente RJ, Mikhail I, McCree DH, Davies SL, Hardin JW, et al. HIV discrimination and the health of women living with HIV. Women & health. 2007;46(2-3):99-112. Epub 2007/12/28.
31. Newmann S, Sarin, P., Kumarasamy, N., Amalraj, E., Rogers, M., & Madhivanan, P. Marriage, monogamy and HIV: a profile of HIV-infected women in south India. International Journal of STD & AIDS. 2000;11:250-3.
32. Pallikadavath S, Garda L, Apte H, Freedman J, Stones RW. HIV/AIDS in rural India: context and health care needs. Journal of biosocial science. 2005;37(5):641-55. Epub 2005/09/22.
33. Blake BJ, Jones Taylor GA, Reid P, Kosowski M. Experiences of women in obtaining human immunodeficiency virus testing and healthcare services. Journal of the American Academy of Nurse Practitioners. 2008;20(1):40-6. Epub 2008/01/11.
34. Joseph EB, Bhatti RS. Psychosocial problems and coping patterns of HIV seropositive wives of men with HIV/AIDS. Social work in health care. 2004;39(1-2):29-47. Epub 2005/03/19.
35. Renesto HM, Falbo AR, Souza E, Vasconcelos MG. [Coping and perception of women with HIV infection]. Revista de saude publica. 2014;48(1):36-42. Epub 2014/05/03. Enfrentamento e percepcao da mulher em relacao a infeccao pelo HIV.
36. Buseh AG, Stevens PE. Constrained but not determined by stigma: resistance by African American women living with HIV. Women & health. 2006;44(3):1-18. Epub 2007/01/27.
37. Subramaniyan A, Sarkar S, Roy G, Lakshminarayanan S. Experiences of HIV Positive Mothers From Rural South India during Intra-Natal Period. Journal of clinical and diagnostic research : JCDR. 2013;7(10):2203-6. Epub 2013/12/04.
38. Kinsler JJ, Wong MD, Sayles JN, Davis C, Cunningham WE. The effect of perceived stigma from a health care provider on access to care among a low-income HIV-positive population. AIDS patient care and STDs. 2007;21(8):584-92. Epub 2007/08/23.
39. Scott A. Illness meanings of AIDS among women with HIV: merging immunology and life experience. Qualitative health research. 2009;19(4):454-65. Epub 2009/03/21.
40. Kasapoglu AK, E. . The role of gender in the stigmatization of people living with HIV/AIDS in Turkey. Journal of Gender Studies. 2008;17:359-68.
41. Wagner AC, Hart TA, Mohammed S, Ivanova E, Wong J, Loutfy MR. Correlates of HIV stigma in HIV-positive women. Archives of women's mental health. 2010;13(3):207-14. Epub 2010/04/08.
42. Ogilvie GS, Palepu A, Remple VP, Maan E, Heath K, MacDonald G, et al. Fertility intentions of women of reproductive age living with HIV in British Columbia, Canada. AIDS (London, England). 2007;21 Suppl 1:S83-8. Epub 2006/12/13.
43. Amuyunzu-Nyamongo M, Okeng'o L, Wagura A, Mwenzwa E. Putting on a brave face: the experiences of women living with HIV and AIDS in informal settlements of Nairobi, Kenya. AIDS care. 2007;19 Suppl 1:S25-34. Epub 2007/03/17.
44. Au A, Chan I, Li P, Chung R, Po LM, Yu P. Stress and health-related quality of life among HIV-infected persons in Hong Kong. AIDS and behavior. 2004;8(2):119-29. Epub 2004/06/10.
45. Simbayi LC, Kalichman S, Strebel A, Cloete A, Henda N, Mqeketo A. Internalized stigma, discrimination, and depression among men and women living with HIV/AIDS in Cape Town, South Africa. Social science & medicine (1982). 2007;64(9):1823-31. Epub 2007/03/06.
46. Stevens PE, Hildebrandt E. Life changing words: women's responses to being diagnosed with HIV infection. ANS Advances in nursing science. 2006;29(3):207-21. Epub 2006/12/02.
47. Derlega VJ, Winstead BA, Greene K, Serovich J, Elwood WN. Perceived HIV-related Stigma and HIV Disclosure to Relationship Partners after Finding Out about the Seropositive Diagnosis. Journal of health psychology. 2002;7(4):415-32. Epub 2002/07/01.
48. Medley A, Garcia-Moreno C, McGill S, Maman S. Rates, barriers and outcomes of HIV serostatus disclosure among women in developing countries: implications for prevention of mother-to-child transmission programmes. Bulletin of the World Health Organization. 2004;82(4):299-307. Epub 2004/07/21.
49. Antelman G, Smith Fawzi MC, Kaaya S, Mbwambo J, Msamanga GI, Hunter DJ, et al. Predictors of HIV-1 serostatus disclosure: a prospective study among HIV-infected pregnant women in Dar es Salaam, Tanzania. AIDS (London, England). 2001;15(14):1865-74. Epub 2001/10/02.
50. Chandra PS, Deepthivarma S, Manjula V. Disclosure of HIV infection in south India: patterns, reasons and reactions. AIDS care. 2003;15(2):207-15. Epub 2003/07/15.
51. Dickerson SS, Gruenewald TL, Kemeny ME. When the social self is threatened: shame, physiology, and health. Journal of personality. 2004;72(6):1191-216. Epub 2004/10/29.
52. El-Bassel N, Witte SS, Gilbert L, Wu E, Chang M, Hill J, et al. The efficacy of a relationship-based HIV/STD prevention program for heterosexual couples. American journal of public health. 2003;93(6):963-9. Epub 2003/05/30.
53. Silverman JG, Decker MR, Saggurti N, Balaiah D, Raj A. Intimate partner violence and HIV infection among married Indian women. JAMA : the journal of the American Medical Association. 2008;300(6):703-10. Epub 2008/08/14.
54. Sareen J, Pagura J, Grant B. Is intimate partner violence associated with HIV infection among women in the United States? General hospital psychiatry. 2009;31(3):274-8. Epub 2009/05/05.
55. Burgos-Soto J, Orne-Gliemann J, Encrenaz G, Patassi A, Woronowski A, Kariyiare B, et al. Intimate partner sexual and physical violence among women in Togo, West Africa: Prevalence, associated factors, and the specific role of HIV infection. Global health action. 2014;7:23456.
56. Ward J. If Not Now, When? Addressing GenderBased Violence in Refugee, Internally Displaced, and Post-conflict Settings: A Global Review. Retrieved June 21, 2008, from http://www.rhrc.org/resources/gbv/ifnotnow.html, 2002.
57. Dunkle KL, Jewkes RK, Brown HC, Gray GE, McIntryre JA, Harlow SD. Transactional sex among women in Soweto, South Africa: prevalence, risk factors and association with HIV infection. Social science & medicine (1982). 2004;59(8):1581-92. Epub 2004/07/29.
58. Chandrasekaran V, Krupp, K., George, R., & Madhivanan, P. Determinants of domestic violence among women attending a Human Immunode?ciency Virus voluntary counseling and testing

center in Bangalore, India. Indian Journal of Medical Sciences. 2007;61:253-62.
59. Pack AP, L'Engle K, Mwarogo P, Kingola N. Intimate partner violence against female sex workers in Mombasa, Kenya. Culture, health & sexuality. 2013. Epub 2013/12/18.
60. WHO. Defining sexual health. Report of a technical consultation on sexual health. Geneva: WHO Press: 2006 28-31 January 2002. Report No.
61. Cooper D, Harries J, Myer L, Orner P, Bracken H, Zweigenthal V. "Life is still going on": reproductive intentions among HIV-positive women and men in South Africa. Social science & medicine (1982). 2007;65(2):274-83. Epub 2007/04/25.
62. Gogna ML, Pecheny MM, Ibarlucia I, Manzelli H, Lopez SB. The reproductive needs and rights of people living with HIV in Argentina: health service users' and providers' perspectives. Social science & medicine (1982). 2009;69(6):813-20. Epub 2009/07/07.
63. Paiva V, Santos N, Franca-Junior I, Filipe E, Ayres JR, Segurado A. Desire to have children: gender and reproductive rights of men and women living with HIV: a challenge to health care in Brazil. AIDS patient care and STDs. 2007;21(4):268-77. Epub 2007/04/28.
64. Nduna M, Farlane L. Women living with HIV in South Africa and their concerns about fertility. AIDS and behavior. 2009;13 Suppl 1:62-5. Epub 2009/03/21.
65. Paiva V, Latorre ,M.R., Gravato, N.Paiva, V.,et al. Sexuality of women living with HIV in São Paulo. Cad Saúde Pública. 2002;18:109-18.
66. Langford CP, Bowsher J, Maloney JP, Lillis PP. Social support: a conceptual analysis. Journal of advanced nursing. 1997;25(1):95-100. Epub 1997/01/01.
67. Heckman TG, Anderson ES, Sikkema KJ, Kochman A, Kalichman SC, Anderson T. Emotional distress in nonmetropolitan persons living with HIV disease enrolled in a telephone-delivered, coping improvement group intervention. Health psychology : official journal of the Division of Health Psychology, American Psychological Association. 2004;23(1):94-100. Epub 2004/02/06.
68. Hudson AL, Lee KA, Miramontes H, Portillo CJ. Social interactions, perceived support, and level of distress in HIV-positive women. The Journal of the Association of Nurses in AIDS Care : JANAC. 2001;12(4):68-76. Epub 2001/08/07.
69. Moneyham L, Sowell R, Seals B, Demi A. Depressive symptoms among African American women with HIV disease. Scholarly inquiry for nursing practice. 2000;14(1):9-39; discussion 41-6. Epub 2000/07/08.
70. Vyavaharkar M, Moneyham L, Tavakoli A, Phillips KD, Murdaugh C, Jackson K, et al. Social support, coping, and medication adherence among HIV-positive women with depression living in rural areas of the southeastern United States. AIDS patient care and STDs. 2007;21(9):667-80. Epub 2007/10/09.
71. Simoni JM, Montoya HD, Huang B, Goodry E. Social support and depressive symptomatology among HIV-positive women: the mediating role of self-esteem and mastery. Women & health. 2005;42(4):1-15. Epub 2006/06/20.
72. Deichert NT, Fekete EM, Boarts JM, Druley JA, Delahanty DL. Emotional support and affect: associations with health behaviors and active coping efforts in men living with HIV. AIDS and behavior. 2008;12(1):139-45. Epub 2007/03/06.
73. Gonzalez JS, Penedo FJ, Antoni MH, Duran RE, McPherson-Baker S, Ironson G, et al. Social support, positive states of mind, and HIV treatment adherence in men and women living with HIV/AIDS. Health psychology : official journal of the Division of Health Psychology, American Psychological Association. 2004;23(4):413-8. Epub 2004/07/22.
74. Safren SA, Radomsky AS, Otto MW, Salomon E. Predictors of psychological well-being in a diverse sample of HIV-positive patients receiving highly active antiretroviral therapy. Psychosomatics. 2002;43(6):478-85. Epub 2002/11/22.
75. Turner-Cobb JM, Gore-Felton C, Marouf F, Koopman C, Kim P, Israelski D, et al. Coping, social support, and attachment style as psychosocial correlates of adjustment in men and women with HIV/AIDS. Journal of behavioral medicine. 2002;25(4):337-53. Epub 2002/07/26.
76. Catz SL, Gore-Felton C, McClure JB. Psychological distress among minority and low-income women living with HIV. Behavioral medicine (Washington, DC). 2002;28(2):53-60. Epub 2003/03/05.
77. Lazarus R, & Folkman, S. . Stress, appraisal and coping. New York: Springer Publishing Company; 1984.
78. Weaver KE, Antoni MH, Lechner SC, Duran RE, Penedo F, Fernandez MI, et al. Perceived stress mediates the effects of coping on the quality of life of HIV-positive women on highly active antiretroviral therapy. AIDS and behavior. 2004;8(2):175-83. Epub 2004/06/10.
79. Grassi L, Righi R, Sighinolfi L, Makoui S, Ghinelli F. Coping styles and psychosocial-related variables in HIV-infected patients. Psychosomatics. 1998;39(4):350-9. Epub 1998/08/06.
80. Medley AM, Kennedy CE, Lunyolo S, Sweat MD. Disclosure outcomes, coping strategies, and life changes among women living with HIV in Uganda. Qualitative health research. 2009;19(12):1744-54. Epub 2009/12/02.
81. Chandra PS, Satyanarayana VA, Satishchandra P, Satish KS, Kumar M. Do men and women with HIV differ in their quality of life? A study from South India. AIDS and behavior. 2009;13(1):110-7. Epub 2008/07/26.
82. Taylor SE. Adjustment to threatening events: A theory of cognitive adaptation. American Psychologist. 1983;38:1161-73.
83. Gray J, Cason CL. Mastery over stress among women with HIV/AIDS. The Journal of the Association of Nurses in AIDS Care : JANAC. 2002;13(4):43-51. Epub 2002/08/02.
84. Symister P, Friend R. The influence of social support and problematic support on optimism and depression in chronic illness: a prospective study evaluating self-esteem as a mediator. Health psychology : official journal of the Division of Health Psychology, American Psychological Association. 2003;22(2):123-9. Epub 2003/04/10.
85. Goggin K, Engelson ES, Rabkin JG, Kotler DP. The relationship of mood, endocrine, and sexual disorders in human immunodeficiency virus positive (HIV+) women: an exploratory study. Psychosomatic medicine. 1998;60(1):11-6. Epub 1998/03/10.
86. Brown GR, Rundell JR. A prospective study of psychiatric aspects of early HIV disease in women. General hospital psychiatry. 1993;15(3):139-47. Epub 1993/05/01.
87. McDaniel JS, Fowlie E, Summerville MB, Farber EW, Cohen-Cole SA. An assessment of rates of psychiatric morbidity and functioning in HIV disease. General hospital psychiatry. 1995;17(5):346-52. Epub 1995/09/01.
88. Stober S, Schwartz, E., McDaniel, M.,&Abrams, H. . Prevalence and nature of distress-AIDS and HIV. AIDS (London, England). 1997;8:25-9.
89. Mello VA, Segurado AA, Malbergier A. Depression in women living with HIV: clinical and psychosocial correlates. Archives of women's mental health. 2010;13(3):193-9. Epub 2009/09/18.
90. van Servellen G, Sarna L, Nyamathi A, Padilla G, Brecht ML, Jablonski KJ. Emotional distress in women with symptomatic HIV disease. Issues in mental health nursing. 1998;19(2):173-88. Epub 1998/05/28.
91. Fasce N. Depression and Social Support Among Men and Women Living With HIV. Journal of Applied Biobehavioral Research. 2008;12(3-4):221-36.
92. Bedimo AL, Bennett M, Kissinger P, Clark RA. Understanding barriers to condom usage among HIV-infected African American women. The Journal of the Association of Nurses in AIDS Care : JANAC. 1998;9(3):48-58. Epub 1998/05/20.
93. Kalichman SC, Williams EA, Cherry C, Belcher L, Nachimson D. Sexual coercion, domestic violence, and negotiating condom use among low-income African American women. Journal of women's health / the official publication of the Society for the Advancement of Women's Health Research. 1998;7(3):371-8. Epub 1998/05/15.

94. Myers HF, & Durvasula, R. M. Psychiatric Disorders in African American Men and Women Living With HIV/AIDS. Cultural Diversity and Ethnic Minority Psychology. 1999;5:249-62.
95. Chandra PS, Ravi V, Puttaram S, Desai A. HIV and mental illness. The British journal of psychiatry : the journal of mental science. 1996;168(5):654. Epub 1996/05/01.
96. Chandra PS, Desai G, Ranjan S. HIV & psychiatric disorders. The Indian journal of medical research. 2005;121(4):451-67. Epub 2005/04/09.
97. Bright PE, Arnett DK, Blair C, Bayona M. Gender and ethnic differences in survival in a cohort of HIV positive clients. Ethnicity & health. 1996;1(1):77-85. Epub 1996/03/01.
98. Luseno WK, Wechsberg WM, Kline TL, Ellerson RM. Health services utilization among South African women living with HIV and reporting sexual and substance-use risk behaviors. AIDS patient care and STDs. 2010;24(4):257-64. Epub 2010/04/10.
99. Ciesla JA, Roberts JE. Meta-analysis of the relationship between HIV infection and risk for depressive disorders. The American journal of psychiatry. 2001;158(5):725-30. Epub 2001/05/01.
100. Heckman TG. The chronic illness quality of life (CIQOL) model: explaining life satisfaction in people living with HIV disease. Health psychology : official journal of the Division of Health Psychology, American Psychological Association. 2003;22(2):140-7. Epub 2003/04/10.
101. Lee R, Kochman, A., & Sikkema, K. Internalized Stigma Among People Living with HIV/ AIDS. AIDS and Behaviour. 2002;6:309-19.
102. Rao D, Pryor JB, Gaddist BW, Mayer R. Stigma, secrecy, and discrimination: ethnic/racial differences in the concerns of people living with HIV/AIDS. AIDS and behavior. 2008;12(2):265-71. Epub 2007/06/26.
103. Remien RH, Exner T, Kertzner RM, Ehrhardt AA, Rotheram-Borus MJ, Johnson MO, et al. Depressive symptomatology among HIV-positive women in the era of HAART: a stress and coping model. American journal of community psychology. 2006;38(3-4):275-85. Epub 2006/09/13.
104. Tostes MA, Chalub M, Botega NJ. The quality of life of HIV-infected women is associated with psychiatric morbidity. AIDS care. 2004;16(2):177-86. Epub 2003/12/17.
105. Carrieri MP, Leport, C., Protopopescu, C. . Factors associated with no adherence to highly active antiretroviral therapy: 5 year follow-up analyses with correction for bias induced by missing data in the treatment maintenance phase. Journal of Acquired Immune Deficiency Syndrome. 2006;41:477-85.
106. Dixon DA, Antoni M, Peters M, Saul J. Employment, Social Support, and HIV Sexual-Risk Behavior in Puerto Rican Women. AIDS and behavior. 2001;5(4):331-42. Epub 2001/12/01.
107. Hewitt RG, Parsa N, Gugino L. Women's health. The role of gender in HIV progression. The AIDS reader. 2001;11(1):29-33. Epub 2001/02/24.
108. Anastos K, Gange SJ, Lau B, Weiser B, Detels R, Giorgi JV, et al. Association of race and gender with HIV-1 RNA levels and immunologic progression. Journal of acquired immune deficiency syndromes (1999). 2000;24(3):218-26. Epub 2000/09/02.
109. Mocroft A, Gill, M. J., Davidson, W., Philips, A. N. Are there gender differences in starting protease inhibitors, HAART, and disease progression despite equal access to care? . Journal of Acquired Immune Deficiency Syndrome. 2000; 24:475-82.
110. McDonald K, Bartos M, Rosenthal D. Australian women living with HIV/AIDS are more sceptical than men about antiretroviral treatment. AIDS care. 2001;13(1):15-26. Epub 2001/02/15.
111. Kremer H, Sonnenberg-Schwan U, Arendt G, Brockmeyer NH, Potthoff A, Ulmer A, et al. HIV or HIV-therapy? Causal attributions of symptoms and their impact on treatment decisions among women and men with HIV. European journal of medical research. 2009;14(4):139-46. Epub 2009/04/22.
112. Alarcon JO, Johnson KM, Courtois B, Rodriguez C, Sanchez J, Watts DM, et al. Determinants and prevalence of HIV infection in pregnant Peruvian women. AIDS (London, England). 2003;17(4):613-8. Epub 2003/02/25.
113. Johnson KM, Alarcon J, Watts DM, Rodriguez C, Velasquez C, Sanchez J, et al. Sexual networks of pregnant women with and without HIV infection. AIDS (London, England). 2003;17(4):605-12. Epub 2003/02/25.
114. Mill JE. Describing an explanatory model of HIV illness among aboriginal women. Holistic nursing practice. 2000;15(1):42-56. Epub 2002/07/18.
115. Leserman J, Ironson G, O'Cleirigh C, Fordiani JM, Balbin E. Stressful life events and adherence in HIV. AIDS patient care and STDs. 2008;22(5):403-11. Epub 2008/04/01.
116. Stein MD, Crystal S, Cunningham WE, Ananthanarayanan A, Andersen RM, Turner BJ, et al. Delays in seeking HIV care due to competing caregiver responsibilities. American journal of public health. 2000;90(7):1138-40. Epub 2000/07/18.
117. WHO. The World Health Organization Quality of Life assessment (WHOQOL): position paper from the World Health Organization. Social science & medicine (1982). 1995;41(10):1403-9. Epub 1995/11/01.
118. Zorrilla CD, Santiago LE. [Women and HIV/AIDS: barriers and new challenges]. Puerto Rico health sciences journal. 1999;18(4):397-400. Epub 2000/03/24. La mujer ante el VIH/SIDA: barreras y nuevos desafios.
119. van SG, Aguirre M, Sarna L, Brecht ML. Differential predictors of emotional distress in HIV-infected men and women. Western journal of nursing research. 2002;24(1):49-72. Epub 2002/02/07.
120. Cotton S, Tsevat J, Szaflarski M, Kudel I, Sherman SN, Feinberg J, et al. Changes in religiousness and spirituality attributed to HIV/AIDS: are there sex and race differences? Journal of general internal medicine. 2006;21 Suppl 5:S14-20. Epub 2006/11/07.
121. Gordon KC, Burton S, Porter L. Predicting the intentions of women in domestic violence shelters to return to partners: does forgiveness play a role? Journal of family psychology : JFP : journal of the Division of Family Psychology of the American Psychological Association (Division 43). 2004;18(2):331-8. Epub 2004/06/30.
122. Kohli RM, Sane S, Kumar K, Paranjape RS, Mehendale SM. Assessment of quality of life among HIV-infected persons in Pune, India. Quality of life research : an international journal of quality of life aspects of treatment, care and rehabilitation. 2005;14(6):1641-7. Epub 2005/08/23.
123. Wig N, Lekshmi R, Pal H, Ahuja V, Mittal CM, Agarwal SK. The impact of HIV/AIDS on the quality of life: a cross sectional study in north India. Indian J Med Sci. 2006;60(1):3-12. Epub 2006/01/31.
124. Lamping DL, Dooley, M. D., Murcott, A., & Renton, A. Health behaviours and beliefs of HIV positive women: an analysis of socio-cultural context and implications for health service provision. 1996.
125. Zimpel RR, Fleck MP. Quality of life in HIV-positive Brazilians: application and validation of the WHOQOL-HIV, Brazilian version. AIDS care. 2007;19(7):923-30. Epub 2007/08/23.
126. Lea A. Women with HIV and their burden of caring. Health care for women international. 1994;15(6):489-501. Epub 1994/11/01.
127. Onwumere J, Holttum, S & Hirst, F. Determinants of quality of life in black African women with HIV living in London. Psychology, Health & Medicine. 2002; 7:61-74.
128. Stark MJ, Tesselaar, H. M., O'Connell, A. A., Person, B., Galavotti, C., Cohen, A., Walls, C. Psychosocial factors associated with the stages of change for condom use among women at risk for HIV and STDs: Implications for intervention development Journal of Consulting and Clinical Psychology. 1998;66:967-78.
129. Wingood GM, Diclemente, T. R. J., Mikhail, I., Lang, D. L., McCree, D. H., Davies, S. L., et al. . A randomized controlled trial to reduce HIV transmission risk behaviors and sexually transmitted diseases among women living with HIV: The Willow Program. JAIDS: Journal of Acquired Immune Deficiency Syndromes. 2004;37:S58-S67.
130. WUUNPF. Sexual and reproductive health of women living with HIV/AIDS: Guidelines on care, treatment and support for women living with HIV/AIDS and their children in resource-constrained

settings. . Geneva,WHO2006.
131. Antoni MH, Carrico AW, Duran RE, Spitzer S, Penedo F, Ironson G, et al. Randomized clinical trial of cognitive behavioral stress management on human immunodeficiency virus viral load in gay men treated with highly active antiretroviral therapy. Psychosomatic medicine. 2006;68(1):143-51. Epub 2006/02/02.
132. Carrico AW, Antoni, M. H., Pereira, D. B., Fletcher, M. A., Klimas, N., Lechner, S. C. Cognitive behavioral stress management effects on mood, social support, and a marker of antiviral immunity are maintained up to 1 year in HIV-infected gay men. International Journal of Behavioral Medicine. 2005;12:218-26.
133. Das S, Leibowitz GS. Mental health needs of people living with HIV/AIDS in India: a literature review. AIDS care. 2011;23(4):417-25. Epub 2010/12/15.
134. WHO. Essesntials Prevention and Care Interventions for Adults and Adolescents Living with HIV in Resource-limited settings. WHO, 2008.