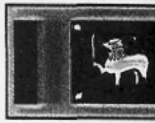




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Gender differences in perceived health related quality of life among persons living with HIV

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Abstract

In the era of HIV/AIDS and in the context of the developing world HIV/AIDS has led to a pandemic. HIV antiretroviral drugs are inaccessible and unaffordable and the only choice that health care providers have is to work towards improving the quality of life of individuals as long as they live with this dreaded disease. This study on 203 seropositive individuals, 102 women and 101 men, was undertaken to find out the differences in the quality of life perceived by women and men living with HIV/AIDS. The WHOQOL-BREF scale was used to assess the quality of life.

The findings from this study reveal that men report a poor quality of life in the psychological domain ($p < 0.01$) while women in the sociological domain ($p = 0.03$). The stage of illness does not seem to influence quality of life among women and men. The findings emphasize the need for health providers to assess the QOL among people living with HIV/AIDS. This information would be helpful in planning effective intervention strategies for men and women living with HIV/AIDS in order to be ensured of a quality of life.

Key words: Quality of life, HIV/AIDS, Gender, and Domains.

Introduction

The scourge of HIV/AIDS in the developing world has led to a pandemic. On the one hand the numbers of those infected are on the rise, families are being wiped away, the psychosocial factors that accompany the disease are many and the impact of this diseases is felt not only by the individual, but his family and in the larger context, society. On the other hand is the inaccessibility and unaffordability

of antiretroviral drugs. Although the virus and its concurrent maladies drain physical resources from individuals, a psychological and social cost is also incurred. The only choice therefore that health providers have is to concentrate on improving the quality of life of infected persons for as long as they live with the dreaded disease. This could have a positive ripple effect on their families and others who are affected by this disease. Research on the association of HIV and QOL, is still in its infancy. The concept of health related quality of life (HRQOL) can be traced to 1947 and the World Health Organization's definition of health as a "state of complete physical and mental and social well being and not merely the absence of infirmity"¹. Health care professionals therefore are encouraged to

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become familiar with the predictors of HRQOL, which may eventually contribute to the development of multiple entry points for interventions in promoting QOL. The term QOL is used synonymously with HRQOL.

There have been studies on QOL which have outlined the major aspects of QOL which include physical, social, emotional and cognitive functioning: mobility and selfcare: patient perception of health: and symptoms^{2,3,4}. It has also been found that an assessment of HRQOL has found to enhance communication between patients and providers⁵. In the developed world given the longevity achievable with current prophylactic and therapeutic strategies for persons with HIV infection, quality of life (QOL) has emerged as a significant medical outcome measure and its enhancement an important goal. There have been a few studies that have examined the construct of QOL within a HIV population most of which have focused on gay and bisexual men^{6,7}. There are other studies that have examined QOL in diverse samples of people living with HIV/AIDS^{8,9} (PLWHA). However a negligible number of females were represented in the samples in these studies. There is dearth of information from India in this regard. Since the importance of QOL has found to be important in the management of HIV it is important to understand the quality of life among PLWHA. It is also important to view it from a gender perspective in order to evolve gender sensitive strategies in order to improve QOL. It is with this objective that this study has been planned.

Methods

This study was carried out in Chennai the capital of Tamilnadu State, in south India. Chennai is the fourth largest metropolitan city in India and is located on the Eastcoast, and spreads over an area of 216 sq. kms¹⁰. The study site was the Tuberculosis Research Centre

(TRC) and the sexually transmitted diseases (STD) outpatient clinic attached to the Government General Hospital (GH).

The design used is a period cohort design, on a cohort of patients attending the out patient clinic of the TRC and the STD clinic of the GH, Chennai during March 2000 to July 2003.

Study population

The study population consisted of 203 of 220 HIV-positive patients enrolled in a clinical trial on tuberculosis chemoprophylaxis during the period March 2000 to July 2003. There were 102 women and 101 men. The study respondents were referred for the clinical trial from the STD clinic of the Government General Hospital, antenatal clinics and Non-Governmental Organizations (NGOs). The respondents were from the lower socio-economic strata of society.

Inclusion criteria for the present study included:

- (1) Documented evidence of HIV seropositive status,
- (2) Ability and willingness to provide informed consent and
- (3) Willingness to spare the time for the interview.

Tools for data collection

A semi structured interview schedule was used to collect basic demographic information from the respondents. Quality of life was measured using the WHOQOL-BREF¹¹ (WHOQOLBREF, 1996) This is a 26- item scale, which is a brief version of the original WHOQOL-100, a 100- item scale and has four domains. The main domains studied were a) physical b) psychological c) sociological d) and environmental. The domain scores are scaled in a positive direction (higher scores denote higher quality of life). The mean scores are then used to calculate the domain score. The **reliability in this study** was 0.89 (coefficient alpha).

The scores were classified as poor, moderate and good. For the purpose of the analysis, moderate and good was combined, as the number of those who reported good was negligible. This tool has been used in India^{12,13}.

The scale was translated to Tamil and given to two professional social workers with sound knowledge of Tamil, to assess if the items retained the essence of the original items and based on their feedback the items were modified. The questionnaire and scales were pilot tested on HIV positive respondents attending the STD clinic of the GH before the commencement of the study.

The questionnaire and scale were administered after getting informed consent from the participant and after explaining the time required for the interview. The interview was done in Tamil at the clinic both at the Government Hospital and the TRC. Care was taken to assure privacy and confidentiality. Each interview lasted for 45 minutes to one hour.

Data was collected over a 6-month period from July 2003 to December 2003.

Data analysis

The data was checked for accuracy and computerized. All the statistical analysis was carried out using SPSS 10.5 and Epi Info 6.0. Univariate and multivariate analysis were done by gender. Chi Square analysis was carried out to test the differences in proportions of genders and association in contingency tables.

Results

Base line characteristics of the respondents (102 women, 101 men):

The base line profile of the respondents is presented in Table I.

Sixty seven percent of the women were in the age group of 15-29 years compared to 26% of the men. Twenty-two percent of the women were illiterates as compared to 12% of the men. Eighty percent of the women had an income of less than Rupees 1000 per month as compared to 24% of the men. More than half the women respondents were housewives and not employed outside the home. Thirty one percent of the men were truckers. Forty four percent of the women and 7% of the men were widowed.

Seventy nine percent of the women and 50% of the men had CD4 counts above 200/mm³. CD₄ was reported as the absolute number (per cubic millimeter of peripheral blood) of CD₄T Lymphocytes.

Quality of life of 203 respondents

Quality of life was measured under four domains: physical, psychological, sociological and environmental. While there were no significant differences between the women and men respondents in the physical and environmental domains, a significantly higher proportion of men (26%) compared to women (12%) had a 'poor' quality of life in the psychological domain ($p < 0.01$). A significantly higher proportion of women (57%) compared to men (40%) had a 'poor' quality of life in the sociological domain ($p = 0.03$). (Table II)

Twenty-one (21%) of women and 51 (50%) men had CD₄ counts less than 200. Twenty (95%) of these women had a moderate or above moderate quality of life and 44 (86%) of the men had a moderate or above moderate quality of life. The difference is not statistically significant. (Table III).

A multivariate analysis of the baseline characteristics revealed that family type, age, income, marital status did not seem to influence QOL. (Data not tabulated).

**Table I: Baseline characteristics of the HIV positive respondents
(102 women, 101 men)**

Baseline characteristics	Women		Men	
	Number	%	Number	%
Age*				
15–29	68	67	26	26
30–44	33	32	67	66
>45	1	1	8	8
Education				
Nil	22	22	12	12
Primary	21	21	17	17
Middle	36	35	42	42
Secondary	14	14	24	24
University	9	9	6	6
Income* (Rupees per month):				
≤1000	82	80	24	24
≥1000	20	20	77	76
Marital status				
Married	50	49	68	67
Widow/Widower	45	44	7	7
Single	2	2	24	24
Separated/Divorced	5	5	2	2
Occupation				
Housewife/Unemployed	53	52	9	9
Drivers	0	0	31	31
Skilled	25	25	28	28
Unskilled	24	23	33	33
Religion				
Hindu	85	83	83	82
Muslim	4	4	4	4
Christian	13	13	14	14
Stage of the disease				
CD ₄ <200	21	21	51	50
CD ₄ ≥200	81	79	50	50
Type of family				
Joint	47	46	45	45
Nuclear	55	54	56	55

* p <0.001

Table II: Quality of life in four domains (102 women, 101 men)

Quality of life Domains	Women		Men		P value
	Number	%	Number	%	
Physical domain					
Moderate	94	92	88	87	
Poor	8	8	13	13	0.34
Psychological domain					
Moderate	90	88	75	74	
Poor	12	12	26	26	<0.01
Sociological domain					
Moderate	44	43	60	59	
Poor	58	57	41	41	0.03
Environmental domain					
Moderate	73	72	78	77	
Poor	29	28	23	23	0.45

Table III: CD₄ and QOL (102 women, 101 men)

CD ₄ count	Quality of life			
	Women		Men	
	Moderate or good	Poor	Moderate or good	Poor
<200/cmm	20 (95%)	1 (5%)	44 (86%)	7 (14%)
>200/cmm	75 (93%)	6 (7%)	49 (98%)	1 (2%)

Discussion

This study has brought out the differences in the quality of life experienced among women and men living with HIV. An examination of gender differences revealed a difference in two domains of the quality of life, the psychological and sociological domain. Psychological domain addressed issues such as lack of concentration, negative feelings of depression, anxiety and despair. Sociological domain dealt with issues related to satisfaction in personal relationships and social support. Men significantly reported poor QOL in their psychological functioning as compared to women. This seems contradictory to what is generally believed that HIV positive women report more psychological distress than men¹⁴⁻¹⁶. A survey in a group of largely poor, black and Hispanic women showed that they were affected more by anxiety and depression and both correlated with poorer quality of life¹⁷.

The reasons for this poor quality of life in their psychological functioning among HIV positive men could be many and need to be explored further. Chronic illness and disease are sources of tremendous amounts of stress that tend to fluctuate over the course of time such that people living with chronic illness experience distress along a number of dimensions that impact quality of life¹⁸⁻²¹. The effects of depression have also been reported in other studies, which have documented the impact of depression on quality of life for both men and women²²⁻²⁴. Men infected with HIV, because of their inability to work and support the family, their guilt, their feelings of insecurity and dependence on others, could experience psychological distress leading to depression contributing to poor psychological functioning. However more studies are required to come to broad based conclusions.

Women on the other hand significantly reported poor functioning in the sociological domain. The reason why women have reported a worse social functioning could be a reflection of the stigma they face, whether actual or perceived. This could prevent them from socially networking with others, which is important in getting the social support in handling the disease. An earlier study from Mumbai, that reported that there was a gender disparity in social support received from families for those infected with HIV with men receiving more positive support²⁵. The importance of social support networks in maintaining overall psychological and physical health has been brought out by several studies²⁶⁻³⁵. Social support also acts as a resource providing encouragement to the recipient and promotes health protection and feelings of personal efficacy³⁶⁻³⁷. Another study from India¹³ has revealed that individuals who felt a stronger need to disclose had a better QOL particularly in the social domain reflecting good social relationships in this group. However gender differences were not studied. The importance of social networking leading to social support seems to be an important factor influencing QOL among women living with HIV/AIDS.

Another interesting finding of this study is that the stage of illness measured by CD₄ did not seem to influence QOL. Among those who had CD₄ counts less than 200 cells/mm³ the majority of the women and men had a moderate or good QOL. This has not been a focus of study in the management of HIV/AIDS and needs to be explored further. It is not only important to concentrate on the clinical management for those living with HIV/AIDS but it is of crucial importance to address psychosocial factors as well in order to ensure a better QOL for PLWHA.

Conclusions

There are gender differences in the perceived health related quality of life among people living with HIV/AIDS. This difference is seen in two areas, the psychological and sociological domain. Another

interesting finding is that the stage of illness does not influence the quality of life.

These findings reiterate the fact that QOL of PLWHA needs to be focused by all health providers irrespective of the stage of illness. This calls for a proper team functioning with clinicians, social workers, psychologists, nurses and other paramedical workers. QOL needs to be assessed at different time points in order to assure that proper intervention strategies are adopted at the right time, whether it be clinical or psychosocial management of the infected individual. This is important for PLWHA can be assured of a fairly good quality of life despite HIV.

Limitations

This study presents only an outline of the QOL among women and men living with HIV/AIDS. Interpretations of the results of this study are limited as it is a one-point interview and this furthermore limits the ability to make direct causality of the relationship of various psychosocial factors to QOL. Future studies in this area need to use a longitudinal research design to suggest possible causal relationships of various psychosocial factors influencing QOL. Another limitation is restricting the study sample to those individuals who volunteered to be a part of a larger research study. Therefore this sample is not likely to be representative of all persons living with HIV and AIDS.

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inhibitions reflecting their trust in us. The various insights that they provided have helped in making the study possible for which we are deeply grateful. For their sake and for the millions who suffer like them we hope this world would be a better place for them to live in.

References

1. WHO. (1948). The constitution of WHO. Geneva, Switzerland
2. Shumaker, S.A., and Waughton, M.J. (1995). *The international assessment of health-related quality of life: a theoretical perspective*. In: Shumaker Oxford, England: Rapid Communications.
3. Vanhems, P., Toma, E., and Pineault, R. (1996). Quality of life assessment and HIV infection: a review. *Eur J Epidemiol*, 12,221-228
4. Wu, A.W., and Rubin, H.R. (1992). Measuring health status and quality of life in HIV and AIDS. *Psych Health*, 6,251-264
5. Detmar, S.B., Muller, M.J., Schomaged, J.H., Wever, LD., Aaronson, N.K. (2002). Role of health-related quality of life in palliative chemotherapy treatment decisions, *Journal of Clinical Oncology*, 15; 20(4), 1056-62
6. Burgess, A., Deyer, M., Catalan, J., Hawkins, D., and Gazzard, B. (1993). The reliability and validity of two HIV-specific health-related quality of life measures. *AIDS*, 7,1001-1008
7. Cunningham, W.E., Hays, R.D., Williams, K.W., Beck, K.C., Dixon, W.J., & Shapiro, M.F. (1995). Access to medical care and health-related quality of life or low-income persons with symptomatic human immunodeficiency virus. *Medical care*, 33,739-754
8. Hays, R.D., Cunningham, W.E., Sherbourne, C.D., Wilson, I.B., Wu, A.W., Cleary, P.D., McCaffrey DF., Fleishman J.A., Crystal S., Collins R., Eggan F., Shapiro M.F., Bozzette SA. (2000). Health-related quality of life in patients with human immunodeficiency virus infection in the United States: Results from the HIV Cost and Services Utilization Study. *American Journal of Medicine*, 108,714-722
9. Lorenz, K.A., Shapiro, M.F., Asch, S.M., Bozzette, S.A., & Hays, R.D. (2001). Associations of symptoms and health-related quality of life: Findings from a national study of persons with HIV infection. *Annals of Internal Medicine*, 134, 854-860
10. Census of India. (2001). Registrar general and census commissioner, India. <http://www.censusindia.net>
11. WHO QOL BREF. (1996). Introduction, Administrative Scoring & Generic version of the Assessment. Field trial version, Dec 1996. Programme on mental health WHO, Geneva
12. Chandra, P.S. (1999). Quality of life in HIV/AIDS In: Chaturvedi SK, Chandra P, editors. *Proceedings of the first symposium and workshop on quality of life in health and disease*. India: Bangalore, 36-44
13. Chandra, P.S., Subbarathna, A.R., Sudha, M.B., Deepthivarma, S., Krishna, V.A.S., Manjula, V. (2002). *Psychosocial and Sexual adjustment among persons Living with HIV*. A study conducted at the HIV counseling clinic at NIMHANS, Bangalore, India
14. Franke, G.H., Jaeger, H., Thomann, B., & Beyer, B. (1992): Assessment and evaluation of psychological distress in HIV-infected women. *Psychology and Health*, 6,29-312
15. Kennedy, C.A., Skunick, J.H., Foley, M., & Louria, D.B. (1995). Gender differences in HIV-related psychological distress in heterosexual couples. *AIDS Care*, 7, S33-S38.
16. Rabkin, J.G., Johnson, J., Lin, S., & Lipsitz, J.D. (1997). Psychotherapy in male and female HIV-positive and negative injecting drug users: Longitudinal course over 3 years. *AIDS*, 11,507-51 5
17. Van Servellen G, Sama L, Nyamathi A, et al. (1997). *Symptom management, symptom distress and emotional well being in women with AIDS*. In: Program and abstracts of the National conference on Women and HIV: May 4-7, Pasadena, Calif, Abstract 216.3
18. Antoni, M.H., Goodkin, K., Goldstein, D., LaPerriere, A., Ironson, G., & Fletcher, M.A. (1991). Coping responses to HIV-1 serostatus notification Predict

- short-term and long-term affective distress and one-year immunologic status in HIV-1 seronegative and seropositive gay men. *Psychosomatic Medicine*, 53, 227(Abstract).
19. Bloom, D.E., and Carliner, G. (1988). The economic impact of AIDS in the United States. *Science*, 239, 604-610
 20. Martin, S.L. (1988). Psychological consequences of AIDS-related bereavement among gay men. *Journal of Consulting and Clinical Psychology*, 56, 856-862.
 21. Redfield, R.R., and Burke, D.S. (1988). HIV infection: The clinical picture. *Scientific American*, 259, 90-98
 22. Holmes, W.C., Bix, B., Meritz, M., Turner, J., & Hutelmyer, C. (1997). Human immunodeficiency virus (HIV) infection and quality of life in persons with HIV psychiatric disorders in a sample of 95 HIV seropositive men. *Psychosomatic Medicine*, 59:187-192
 23. Sherbourne, C.D., Hays, R.D., Fleishman JA, Vitiello B., Magruder K.M., Bing, E.G., & McCaffrey, D., & Burnam, A., & Longshore, D., & Eggan, F., Bouette, S.A., & Shapiro, M.F. (2000). Impact of Psychiatric Conditions on Health-Related Quality of Life in Persons With HIV Infection. *American Journal of Psychiatry*, 157,248-254
 24. Ling, S.U., Moore, R.D., Keruly, J.C., et al. (1998). *Depression, social support, and quality of life in HIV patients*. In: Program and abstracts of the 12th World AIDS Conference; June 28-July 3, Geneva. Abstract, 14343.
 25. Bharat, S., and Aggleton, P. (1999). Facing the challenge: household responses to AIDS in Mumbai, India. *AIDS Care*, 11,31-44
 26. Broadhead, WE., Kaplan, B., James, S., Wagner, E., Schoenbach, U., Grimson, R., & Heydon, S., & Tibblin, G., & Gehlbach, S. (1983). The epidemiological evidence for relationship between social support and health. *American Journal of Epidemiology*, 117,521-537
 27. Cohen, S. (1998). Psychological models of the role of social support in the etiology of physical disease. *Health Psychology*, 7,269-297
 28. Cohen, S.C., & McKay, G: (1984). Social support stress and the buffering hypothesis:: A theoretical analysis. In A. Baum, S.E. Taylor, and J.E. Singer (Eds), *Handbook of Psychology and Health*, 4,253-267. Hillsdale, NJ; Erlbaum
 29. Cohen, S., and Syme, S.L. (Eds). (1985). *Social Support and Health*. Orlando: Academic press.
 30. Cohen, S., and Willis, T.A. (1985). Stress, social support and the buffering hypotheses. *Psychological Bulletin*, 98, 310-357
 31. Dixon, D., Antoni, M., Kilbourn, K., Wagner, S., Schneiderman, N., Klimas, N., & Fletcher, M.A. (1998), Social support buffers PTSD symptoms and HHV-6 antibody tiers in HIV+ gay men following Hurricane Andrew. *NeuroImmuno Modulation*, 6,214
 32. Leserman, J., Jackson, E., Pettitto, J., Golden, R., Silva, S., Perkins, D., & Cai, J., & Folds, J., & Evans, D.L. (1999). Progression to AIDS; The effects of stress, depressive symptoms and social support. *Psychosomatic Medicine*, 60,204-214
 33. Penninx, BWJH., Tilburg T van., Boeke, A.J.P., Deeg, D.J.H., Kriegsman, D.M.W., & Eijk, JTM van. (1998). Effects of social support and personal coping resources on depressive symptoms; Different for various chronic diseases? *Health Psychology*, 17, 551-558
 34. Wortman, C.B. (1984). Social support and the cancer patient; Conceptual and methodological issues. *Cancer*, 53, 2339-2362
 35. Northhuse, L. (1988). Social support in patients and husbands' adjustment to breast Cancer. *Nursing Research*, 37, 91-95
 36. Muhlenkamp, A.F., and Sayles, J.A. (1986). Self esteem, social support and positive health practices. *Nursing Research*, 35, 334-338
 37. Kobasa, S.C., Maddi, S.R., Pucetti, M.C., & Zola, M. (1985). Effectiveness of hardiness, exercise and social support as resources against illness. *Journal of Psychosomatic Research*, 29, 525-533.