

Hope and Quality of the Life of People Living with HIV: A Cross-Sectional Study at ART Center, Bagalkot, Karnataka

Kavita Patil¹, Shriharsha C^{2*}, Deelip S Natekar³

¹M.Sc Nursing, Department of Psychiatric Nursing, BVVS Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot, Karnataka, India

²Professor & HOD, Department of Psychiatric Nursing, BVVS Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot, Karnataka, India

³Principal, BVVS Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot, Karnataka, India

***Address for Correspondence:** Dr. Shriharsha C, Professor & Head, Department of Psychiatric Nursing, BVVS Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot, Karnataka- 587102, India

E-mail: kavita.kp47@gmail.com

Received: 12 Nov 2021/ Revised: 15 Feb 2022/ Accepted: 19 Apr 2022

ABSTRACT

Background: HIV/AIDS emerged as the most important public health issue of the late twentieth and early twenty-first centuries. Hope & Quality of life (QoL) of People living with HIV/AIDS are affected by multiple socio-demographic variables as a major predictor of Hope & QoL.

Methods: This cross-sectional descriptive survey research design included a sample of 430 PLHIV attending the ART centre, District Government Hospital, Bagalkot. Data were collected using the self-report method and Hospital records by socio-demographic questionnaire, Herths Hope Scale and WHO QOLHIV-BREF scale. Pearson's Correlations, chi-square test and multiple linear regression analysis were used.

Results: A significant positive association was found between Hope and QoL among PLHIV ($r= 0.483, p<0.001$). A significant regression equation ($F_{429, 42}= 1.842, R^2=0.167, p<0.01$). Married status i.e. married, Occupation i.e. doing Labor work has positively and 3rd and 4th clinical-stage have negatively predicted Hope of PLHIV. A Non significant regression equation ($F_{429, 42}=1.37, R^2=0.13, p<0.05$). Being a private employee had positively and Heterosexual had negatively predicted and remained determinants have not predicted QoL among PLHIV and there was a significant association found between marital status and remained variables are not associated with Hope. There was a significant negative relationship found between Family monthly income and a positive relationship found between the duration of HIV and QoL. Marital status is significantly associated with QoL.

Conclusions: The overall findings reveals that a significant positive correlation between Hope and QoL among PLHIV. There was a significant association found between marital status with Hope. There was a significant negative relationship found between Family monthly income and positive relationship found Duration of HIV and QoL.

Key-words: ART Centre, Hope, Heterosexual, PLHIV, Predictors and Quality of life

INTRODUCTION

Human immunodeficiency virus (HIV) infection /Acquired immunodeficiency syndrome (AIDS) is one of the serious public health problems with a severe impact on various facets of human life.^[1] At present, in the world, around 36.9 million people are suffering from HIV/AIDS.^[2] Every

year around 2 million people are infected by this virus.^[2] With an HIV prevalence of 0.3% in the adult population, India has an estimated 2.1 million people living with HIV.^[3] In Karnataka 2.5 lakh people are living with HIV. Out of which 65,053 are undergoing antiretroviral therapy (ART) at 47 ART centres in the State.^[4]

An estimated 38.6 million people living with HIV-1 worldwide, while about 25 million have died already.^[5] Most of the studies from the country have found that HIV is prevalent at about 2% in prisoners which is much higher than the prevalence in the general population.^[6,7] These estimates mask the dynamic nature of this evolving epidemic about temporal changes, geographic distribution, magnitude, viral diversity, and mode of

How to cite this article

Patil K, Shriharsha C, Natekar DS. Hope and Quality of the life of People living with HIV: A Cross-Sectional Study at ART Center, Bagalkot, Karnataka. SSR Inst. Int. J. Life Sci., 2022; 8(3): 3010-3016.



Access this article online

<https://ijls.com/>

transmission. Today, there is no region of the world untouched by this pandemic.^[8]

Since the availability of antiretroviral treatments (ART), HIV has been turned from a fatal disease to a manageable chronic disease. Hence, People Living with HIV (PLHIV) have longer life spans, which creates new challenges for health care systems.^[9] A person living with HIV has to cope with a range of HIV-related symptoms for their entire life. Symptoms may be related to the infection itself, co-morbid illnesses or iatrogenic effects from HIV-related medications.^[10,11] Many HIV patients struggle with numerous social problems such as stigma, discrimination, poverty, depression, substance abuse, and cultural beliefs which can affect their QOL.^[12] Depression is most prevalent in people living with HIV. Stressful life events experienced by PLHIV again increase the risk of development of depression by three to five times more. Hence HIV/AIDS infection compromises the quality of life in PLHIV.^[13]

Assessing hope and quality of life (QOL) and its predictors are useful for documenting the patients' perceived burden of chronic disease, tracking changes in health over time, and assessing the effects of treatment. Because many socio-demographic and clinical variables influence the Hope & QOL of People with HIV/AIDS, the present study aims at assessing the Hope & Quality of life of people living with HIV/AIDS at the ART centre, Bagalkot.

MATERIALS AND METHODS

Study Design and Participants- It is a descriptive cross-sectional study that was conducted between 07 February 2019 to 20 February 2019. A convenient sample of 430 people living with HIV (PLHIV) coming for follow up counseling at ART Centre, District Government Hospital, Bagalkot were selected for the study. PLHIV, who meet inclusion criteria were included in the study. PLHIV, who were not on ART within the last 3 months were excluded because the information from them was asked based on their last 1-2 months of experience. PLHIV with severe opportunistic infection were also excluded from the study.

Instruments

Herth's Hope Scale- The level of hope was measured by using the Herth's Hope Scale. This is a 30- item scale and it is 4 point scale. Response options range from 0 to 3 for each item (0= Never applies to me, 1= Seldom

applies to me, 2= Sometimes applies to me, and 3= Often applies to me.

Note following items need to be reverse scored; 6, 10, 13, 17, 22 & 26. Overall scores range between 0 (min) and 90 (max), hence higher the score better the level of hope. The scale was translated to Kannada and then back-translated to English. Cronbach's α of 0.792 was obtained by administering the scale to 30 PLHIV.

Quality of Life (WHO Quality of Life–HIV BREF)- Quality of life was measured using the World Health Organization (WHO) Quality of Life (QOL) HIV short version (WHOQOL-HIV BREF)^[9], a 31-item scale that assesses the quality of life of PLHIV in six domains: physical quality of life, psychological quality of life, independence, social relationships, environment quality of life, and spirituality/religion/personal beliefs. Overall scores range between 31 (min) and 155 (max), hence higher the score, better the quality of life. The scale was validated in various settings across the globe including in India^[10,11]. The scale was translated to Kannada and then back-translated to English. Cronbach's α of 0.891 was obtained by administering the scale to 30 PLHIV.

Socio-demographic Variables and Clinical characteristics- Socio-demographic and clinical variables included age, gender (male/female/transgender), religion, occupation, educational status, no. of children, monthly income of the family, current marital status, type of family, family history of HIV, area of Residence, CD4 count, HIV status of spouse, duration of time with HIV infection, duration of time on ART, history of suicidal attempts, history of alcohol abuse.

Data collection procedures- Prior permissions were taken from relevant institutions before the beginning of the data collection procedure. The study participants were identified during the study period at the ART centre, District Government Hospital, Bagalkot. Every HIV infected person who fulfilled the inclusion criteria was approached for data collection. Consent was obtained by the interviewers before participants underwent the structured interview, which lasted approximately 20 to 30 minutes. All the information collected was based on the patient's self-report, but the information related to CD4 count and clinical staging were obtained from the medical records.

Inclusion Criteria- The study includes the People living with HIV/AIDS:

- ✓ Who is with a current diagnosis of HIV/AIDS
- ✓ Who is aged between 18- 50 years and who can read and write Kannada/ English
- ✓ Who is on ART and whose CD4 count has been done during the last month

Exclusion criteria- The study excludes the People living with HIV/AIDS:

- ✓ Who is suffering from severe illness and unable to provide data
- ✓ Who is not on ART within the last 3 months and who is not willing to give written consent

Statistical Analysis- Data analyses were performed using SPSS v25. Descriptive univariate statistics such as frequencies and percentages were used for categorical variables and means (M) and standard deviations (SD) were used for continuous variables. Associations between Hope and QOL were assessed using Pearson’s correlation coefficients. Multiple regression models were used to find the significant predictors of Hope and QOL. All significance levels reported are two-sided.

Ethical consideration- The study was approved by the Institutional Ethical Clearance Committee and permission was taken from the Karnataka State AIDS Prevention Society, Bangalore. Informed consent was obtained from each participant.

RESULTS

Description of Sample in terms of their socio-demographic and clinical characteristics- Table 1 depicts that the maximum score of Hope among PLHIV is 90, and the minimum score is 34. The mean and SD of Hope score is 67.01 (SD= 14.044). The result shows that the maximum score of QoL among PLHIV is 144, and the minimum score is 52. The mean and SD of the QoL score is 109.68 (SD= 14.11).

Table 1: Socio-demographic and clinical characteristics of PLHIV (N=430)

S.No.	Variables	Mean	SD
1	Age (Years)	40.42	11.228
2	Family monthly income	8081.63	6594.52
3	CD4 count	564.90	308.46

4	Duration of HIV infection (Yrs)	7.09	4.263
5	Duration of ART treatment (Yrs)	6.18	3.736
6	Sex		
	Male	137	31.8
	Female	293	68.0
7	Religion		
	Hindu	401	93.0
	Muslim	27	6.3
	Christian	2	0.5
8	Educational status		
	Up to 7 th standard	348	80.93
	Secondary education	56	13.02
	Pre-university education	18	4.18
	Graduation	7	1.62
	Post graduation& above	1	0.2
9	Marital Status		
	Married	347	80.5
	Unmarried	36	8.4
	Widow/Widower	38	8.8
	Separated	9	2.1
10	Having children		
	Yes	363	84.4
	No	67	15.6
11	Occupation		
	Unemployed	13	3.0
	Housewife	77	17.9
	Labour work	251	58.2
	Agriculture	28	6.5
	Driver	11	2.6
	Business	16	3.7
	Private employee	22	5.1
	Govt. Employee	9	2.1
12	Type of family		
	Joint	166	38.5
	Nuclear	264	61.3
13	Area of residence		
	Rural	353	81.9
	Urban	77	17.9
14	Family history of HIV*		
	Husband HIV positive	184	42.7
	Wife HIV positive	22	5.1
	Parents HIV positive	10	2.3
	Child/children HIV positive	4	0.9
	No family history	209	48.5

15	Mode of Transmission		
	Heterosexual	209	48.5
	Blood transfusion/	8	1.9
	Needle prick		
	Homosexual	2	0.5
	Unknown	208	48.3
16	Clinical Staging		
	Stage I	273	63.3
	Stage II	143	33.2
	Stage III	13	3.0
	Stage IV	1	0.2
17	History of suicidal attempts		
	Yes	34	7.9
	No	396	91.9
18	History of alcohol abuse		
	Yes	28	6.5
	No	402	93.3

M= Mean, SD= Standard deviation, N= Number of PLHIV, %= Percentage of PLHIV, ART= Antiretroviral treatment, PLHIV= People living with HIV/AIDS

Since the population was not normally distributed with respect to both Hope score (Shapiro- Wilk value= 0.96, $p < 0.05$) and Quality of life score (Shapiro-Wilk value= 0.98, $p < 0.05$). Non-parametric test i.e. Spearman's Rank order test was used to find the correlation between Hope and Quality of life. Findings reveal that there exists a significant positive correlation between Hope and Quality of life scores ($r = 0.0483$, $p < 0.01$) (Table 2).

Table 2: Correlation between Hope and Quality of life Scores of PLHIV (N=430)

Correlation between Hope and Quality of life	
Spearman's Rho	0.483**

** $p < 0.01$

Multiple linear regression analysis- Socio-demographic and clinical characteristics of PLHIV were entered into the multiple linear regression models as independent variables with Hope and Quality of Life as dependent variables.

The multiple linear regression carried out to find the determinants (Predictors) of hope among PLHIV revealed a significant regression equation ($F_{429, 42} = 1.842$, $R^2 = 0.167$, $p < 0.01$). Married status i.e. married ($t = 2.113$, $p < 0.05$) and Occupation i.e. being Coolie or doing Labour work ($t = 2.310$, $p < 0.05$) has positively predicted the hope of PLHIV. Third clinical stage ($t = -2.433$, $p < 0.05$) and Fourth

clinical stage ($t = -2.211$, $p < 0.05$) have negatively predicted Hope of PLHIV (Table 3).

Table 3: Multiple linear regression model of Hope of PLHIV (N=430)

S.No	Determinants (Predictors)	Standardized Coefficients (β)	t-value	p-value
1	Married	0.336	2.113	0.035*
2	Cooli	0.238	2.310	0.021*
3	HIV Stage 3	-0.122	-2.433	0.015*
4	HIV Stage 4	-0.108	-2.211	0.028*

The Multiple Linear Regression carried out to find the determinants (predictors) of Quality of life among PLHIV revealed a Non-significant regression equation ($F_{429, 42} = 1.37$, $R^2 = 0.13$, $p < 0.05$). Being private Employee, ($t = 2.099$, $p < 0.05$) had positively predicted Quality of life among PLHIV. Heterosexual ($t = -1.985$, $p < 0.05$) had a negatively predicted Quality of life among PLHIV (Table 4).

Table 4: Multiple linear regression model of quality of life of PLHIV (N=430)

S.No	Determinants (Predictors)	Standardized Coefficients (β)	T-value	P-value
1	Private Employee	0.138	2.099	0.036*
2	Heterosexual	-0.457	-1.985	0.048*

* $p < 0.05$

DISCUSSION

This cross-sectional study included a sample of 430 PLHIV attending the ART centre, District Government Hospital, Bagalkot to assess the Hope & QoL of PLHIV and its predictors. Most of the PLHIV (68.0%) were females. This study is consistent and supported by Huang et al. [14] in China. Similar findings were observed where most of the PLHIV (65%) were Females. This study was supported by Shriharsha and Rentela [15] at Bagalkot, where most of the PLHIV (64.7%) were females. This study is supported by Jonas et al. [16] in South Africa, where most of the PLHIV (74%) were females. The majority (93.0%) of PLHIV was belonging to the Hindu religion. This study is consistent and supported by Shriharsha and Rentela [17] at Bagalkot, where the majority of PLHIV (76%) were

Hindu.^[17] Most (80.93%) of PLHIV were educated Up to 7th standard. Results revealed that most of them (80.5%) PLHIV were married. This study is consistent and supported by Charles *et al.* ^[18] at Chennai, where most of the PLHIV (69%) were married. Findings revealed that the majority of the PLHIV (81.9%) were from rural areas. This study is consistent and supported with the study conducted by Somashekar and Vijaykumar ^[19] Results show that 36% of people are from rural areas.

This study is consistent and supported with the study conducted by Weldsilase *et al.* ^[20] in Southwest Ethiopia. Results show that 54.7% of people are from rural areas findings revealed that the mean and SD of Hope score is 67.01±14.04. This is consistent with that found in many other Indian studies. Findings revealed that the majority of the PLHIV 73.1% had Good Quality of life. This is consistent and supported with the study conducted by Nyamathi *et al.* ^[21]. The results showed that low QOL score; on a scale from 0 to 3, the mean QOL score was 0.38 (SD=0.30).

Findings revealed that there exists a significant positive correlation between Hope and Quality of life scores ($r=0.0483$, $p<0.01$). The findings are consistent and supported with the study conducted by Fang *et al.* ^[22]. The results showed that resilience mediating the associations between life stress and physical, emotional, and functional/global well-being among PLHIV. Assessment of levels of QoL among PLHIV reveals that the majority of PLHIV (73.1%) had good QoL. The findings of the present study are consistent and supported with the study conducted by Ossei-Yeboah *et al.* ^[23]. The result showed that 79.75% of PLHIV had good QoL.

The findings of the present study are consistent with the study conducted by Yadav ^[24] in Nepal. The results showed that a positive correlation exists between hope and quality of life. A significant regression equation ($F_{429,42}= 1.842$, $R^2=0.167$, $p<0.01$). Married status i.e. married, Occupation i.e. doing Labor work has positively and 3rd and 4th clinical-stage have negatively predicted Hope of PLHIV. A Non significant regression equation ($F_{429,42}=1.37$, $R^2=0.13$, $p<0.05$).

A Non significant regression equation ($F_{429,42}=1.37$, $R^2=0.13$, $p<0.05$). Being private Employee had positively and Heterosexual had negatively predicted and remained determinants have not predicted QoL among PLHIV. There was a significant association found between marital status and remained variables that are not

associated with Hope. There was a significant negative relationship found between Family monthly income and a positive relationship found between duration of HIV and QoL. Marital status is significantly associated with QoL.

The findings of the present study are consistent with the study conducted by Wani and Sankar ^[25] in Jammu and Kashmir, India. The results showed that two demographical variables gender and marital status are negatively significant correlated with social support and quality of life. There was a significant association found between marital status and remained variables that are not associated with Hope. There was a significant negative relationship found between Family monthly income and a positive relationship found between the duration of HIV and QoL. Marital status is significantly associated with QoL.

CONCLUSIONS

Hope and QoL of People living with HIV/AIDS have been affected by several variables. Efforts should be made for comprehensive treatment of PLHIV to enhance their Hope quality of life, especially by primary care providers. Intervention can be provided to improve the Hope and Quality of life among PLHIV. As the Hope improves the Quality of life strategies can be implemented to inculcate hope in PLHIV that in turn improves the Quality of life among PLHIV and presents a study basis for future experimental studies.

CONTRIBUTION OF AUTHORS

Research concept- Kavita Patil, Dr. Shriharsha C

Research design- Kavita Patil, Dr. Shriharsha C

Supervision- Dr. Shriharsha C, Dr. Deelip S Natekar.

Materials- Kavita Patil

Data collection- Kavita Patil

Data analysis and interpretation- Kavita Patil, Dr. Shriharsha C

Literature search- Kavita Patil

Writing article- Kavita Patil

Critical review- Dr. Shriharsha C, Dr. Deelip S Natekar

Article editing- Kavita Patil, Dr. Shriharsha C

Final approval- Dr. Shriharsha C, Dr. Deelip S Natekar

REFERENCES

- [1] Mweemba P. Quality of life among rural and urban Zambian men and women with hiv/aids. Kent state university. Available from: <https://etd.ohiolink.edu/>

- rws_etd/document/get/kent1216832245/inline, 2018.
- [2] HIV/AIDS. World Health Organization. Available at: <http://www.who.int/hiv/en/>, 2018.
- [3] HIV Data. Department of AIDS Control & National AIDS control Organization. Available at: URL: http://www.naco.gov.in/NACO/Quick_Links/HIV_Data/, 2018.
- [4] Chinnappa J, state as 2.5 lakh of people living with HIV, The HINDU: July 2016. Available at: <https://www.google.co.on/amp/www.thehindu.com/todays-paper/tp-national/tp-karnataka/state-has-25-lakh-people-living-with-hiv/article3375481.ece/amp/>.
- [5] UNAIDS. Report on the global AIDS epidemic, 2006. Available at: http://www.unaids.org/en/HIV_data/2006GlobalReport/default.asp.
- [6] Kazi AM, Shah SA, Jenkins CA, et al. Risk factors and prevalence of tuberculosis, human immune deficiency virus, syphilis, hepatitis B virus, and hepatitis C virus among prisoners in Pakistan? *Int J Infect Dis.*, 2010; 14(S3): e60–66.
- [7] Ikram N, Firdus R, Tariq Baig PA. Screening of Jail Inmates for Hepatitis B, C and HIV Infections. *J Rawalpindi Med Coll.*, 2011; 15(2): 79–81.
- [8] Inciardi JA, Williams ML. Editor's introduction: the global epidemiology of HIV and AIDS. *AIDS care*, 2005; 17(1): 1-8.
- [9] Garrido-Hernansaiz H, Heylen E, Bharat S, Ramakrishna J, Ekstrand ML. Stigmas, symptom severity and perceived social support predict quality of life for PLHIV in urban Indian context. *Health Quality Life Outcomes*, 2016; 14: 152. doi: 10.1186/s12955-016-0556-x.
- [10] Halloran J. Increasing survival with HIV: Impact on nursing care. *AACN Clin Issues*, 2006; 17: 8-17.
- [11] Kassutto S, Maghsoudi K, Johnston MN, Robbins GK, Burgett NC, et al. Longitudinal analysis of clinical markers following antiretroviral therapy initiated during acute or early HIV Type I infection. *Clin Infect Dis.*, 2006; 42: 1024-31.
- [12] Aranda-Naranjo B. Quality of life in HIV-positive patient. *J Assoc Nurses AIDS Care*, 2004; 15: 20-27.
- [13] Evans DL, Leserman J, Perkins DO, Stern RA, Murphy C, et al. Severe life stress as a predictor of early disease progression in HIV infection. *Am J Psych.*, 1997; 154(5): 630-34.
- [14] Huang J, Zhang J, Xiaonan N. Close relationships, individual resilience resources, and well-being among people living with HIV/AIDS in rural China, 2019: S49-S57.
- [15] Shriharsha C, Rentala S. Quality of life among people living with HIV/AIDS and its predictors at Bagalkot. *Journal of Family Medicine and Primary Care*, 2019; 8: doi: 10.4103/jfmpc.jfmpc_411_18.
- [16] Jonas K, Naidoo P, Roman NV, et al. Predictors of quality of life enjoyment and satisfaction in individuals living with HIV and AIDS in a resource-constrained setting in South Africa. *Psychol in Africa*, 2015; pp. 95-99. doi: 10.1080/14330237.2015.1021507.
- [17] Shriharsha C, Rentala S. Resilience and Quality of Life of People living with HIV/AIDS at Bagalkot. *Indian J Public Health Res Dev.*, 2020; 11(7): 1016–22.
- [18] Charles B, Jeyaseelan L, Pandian AK, Sam AE. Association between stigma, depression and quality of life of people living with HIV/AIDS at South India. *BMC Public Health*, 2012; 12: 463. doi: 10.1186/1471-2458-12-463.
- [19] Kapoor P, Yadav R, Manohar RK, Shamra M. A cross-sectional study of practices regarding HIV/AIDS among attendees of integrated counseling and testing center at the SMS Medical College, Jaipur. *J Fam Med Prim Care*, 2018; 7(6): 1379–84.
- [20] Weldsilase YA, Likka MH, Wakayo T, Gerbaba M. Health-Related Quality of Life and Associated Factors among Women on Antiretroviral Therapy in Health Facilities of Jimma Town, Southwest Ethiopia, 2018.
- [21] Nyamathi AM, Ekstrand M, Yadav K, Ramakrishna P, Heylen E, et al. Quality of Life Among Women Living With HIV in Rural India. *J Assoc Nurses AIDS Care*, 2017; 28(4): 575-86.
- [22] Fang X, Vincent W, Calabrese SK, Heckman TG, Sikkema KJ, et al. Resilience, stress, and life quality in older adults living with HIV/AIDS India. *Aging Ment Health*, 2015; 19(11): 1015-21.
- [23] Ossei-Yeboah J, William K, Owiredu B, Kwame G, et al. Quality of Life of People Living with HIV/AIDS in the Ho Municipality, Ghana., 2017; 2017: 6806951. doi: 10.1155/2017/6806951.



[24]Yadav S. Perceived social support, hope, and quality of life of persons living with HIV/AIDS: a case study from Nepal. *Quality Life Res.*, 2010; 19(2): 157-66. doi: 10.1007/s11136-009-9574-z.

[25]Wani MA, Sankar R. Impact of Social Support on Quality of Life among AIDS Patients in Kashmir Province of Jammu and Kashmir, India. *J AIDS Clin Res.*, 2017; 8: 729. doi: 10.4172/2155-6113.1000729.

Open Access Policy:

Authors/Contributors are responsible for originality, contents, correct references, and ethical issues. SSR-IJLS publishes all articles under Creative Commons Attribution- Non-Commercial 4.0 International License (CC BY-NC). <https://creativecommons.org/licenses/by-nc/4.0/legalcode>

