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Resilience and Quality of Life of People living with HIV/AIDS. A Cross Sectional Study at ART centre, Bagalkot, Karnataka

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Abstract

Background: Resilience can be viewed as a defense mechanism that enables one to thrive amid distress. Therefore, improving resilience HIV infected people may be an important target for improving their quality of life.

Aims: The aim of the study was to assess the resilience and quality of life of People living with HIV/AIDS and find the relationship between them.

Methodology: The resilience and quality of life were measured using Brief Resilient Coping scale and WHOQOL-BREF scale respectively from a convenient sample of 100 People living with HIV/AIDS (PLHIV) attending ART centre, Bagalkot in a cross sectional survey. Data were analyzed using descriptive and inferential statistics.

Findings: Majority (66%) of PLHIV had moderate resilience, 53% of PLHIV had moderate overall quality of life. A statistically significant positive correlation was found between the resilience and environmental domain scores of QoL ((r_s=0.18, P<0.05) and total QoL scores ((r_s=0.23, P<0.05). A significant association was found between the resilience scores and clinical variable duration of treatment with ART (χ^2=10.56, p<0.05) and there was a significant association between total quality of life scores and duration of HIV illness (χ^2=11.32, p<0.05) and duration of treatment with ART (χ^2=11.38, p<0.05).

Conclusion: Resilience has unconditional positive effect on all aspect of quality of life. PLHIV may benefit from intervention addressing their resilience.

Keywords: *Resilience, Quality of Life, People Living with HIV/AIDS*

Introduction

Human immunodeficiency virus (HIV) infection / Acquired immunodeficiency syndrome (AIDS) is one of the serious public health problems with 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 0.26% in the adult population, India has an estimated 2.1 million people living with HIV.[3]

In essence, being resilient means being able to adapt and bounce back when something difficult happens in our lives. It is the ability to once again pick ourselves up after a trauma or painful experience. Our levels of resiliency will change and develop throughout our live, and at points we will find that we do not cope as well as others, as well as surprising ourselves when we manage a difficult situation. In another sense, resilience is just one of many psychological tools we implement to get us

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back to feeling normal again.[4]

Resilience is important for a number of reasons; it enables us to develop mechanisms for protection against experiences which could be overwhelming, it helps us to maintain balance in our lives during difficult or stressful periods of time, and can also protect us from the development of some mental health difficulties and issues.[4]

Quality of life (QOL) is a term that is popularly used to convey an overall sense of well-being and includes aspects such as happiness and satisfaction with life as a whole.[5] HIV and its treatments can affect many areas of health-related quality of life. Assessing the impact of HIV and its treatments on quality of life is complex. It takes a lot of effort to untangle the physical effects of the virus, and the drugs we take to make the virus less lethal, from the wider emotional and social impact that HIV can have on our lives.[6]

Better resilience in an individual may lead to improved coping, resulting in better quality of life of the sufferer. [7]Although resilience has a positive impact on the Quality of life of adults; few published studies examine resilience among adults, particularly those living with HIV [8]. There is a need for a greater understanding of resilience in the context of HIV infection and its relation to quality of life of HIV infected people, which can help in the conceptualization of interventions to enhance the quality of life (QoL) in People living with HIV/AIDS. To address this gap, this research was undertaken to examine the relationship between the Resilience and Quality of Life of People living with HIV/AIDS at ART Centre, Bagalkot.

Material and Methods

Study Design and Participants

Present study was a descriptive cross sectional study conducted between Aug 2017 to Sep 2017. A convenient sample of 100 people living with HIV (PLHIV) coming for follow up counseling at ART Centre, District Government Hospital, Bagalkot were selected for the study. PLHIV who were between 18 to 50 years of age and willing to participate were included in the study. PLHIV who were positive for less than 2 weeks were excluded because the information from them was asked based on their last two weeks experience. PLHIV with severe opportunistic infection were also excluded from the study. Permission to conduct study was obtained from Project Director, Karnataka State AIDS Prevention Society, Bangalore.

Instruments

Brief Resilient Coping Scale (BRCS)

Resilience among the PLHIV was measured using the Brief Resilient Coping Scale (BRCS) [9], a 4 item 5 point Likert type of scale. Response options range from 1 to 5 for each item (1 = Does not describe me at all, 2 = Does not describe me, 3 = Neutral, 4 = Describes me, 5 = Describes me very well). Scores range from 4 to 20, with high scores indicating high resilience interpreted as; Low resilient copers (4-13 points), Medium resilient copers (14- 16 points) and High resilient copers (17- 20). Scale was translated to Kannada and then back translated to English. High internal consistency has been reported with Cronbach's alpha coefficients ranging from 0.81 to 0.82 across studies[10]. For the present study reliability was calculated by administering BRCS to 10 PLHIV and Cronbach's alpha coefficient obtained was 0.80.

Quality of Life (WHO Quality of Life – HIV BREF)

Quality of life was measured using the World Health Organization (WHO) Quality of Life (QOL) short version (WHOQOL- BREF)[11], a 26-item scale that assesses the quality of life of PLHIV in four domains: physical health, psychological, social relationships, environment. Apart from the items included in four domains, two items (Q1 and Q2) were examined separately, one is about the individual's overall perception of QOL and the other is about the individual's overall perception of his or her health. All items are answered on a 1 to 5 response scale. Negatively worded items were reverse coded. The mean score of items within each domain is used to calculate the domain scores. Mean scores are then multiplied by 4 in order to make domain scores comparable with the scores used in the WHOQOL-100.[11] Overall scores range between 26 (minimum) and 130 (maximum), hence higher the score, better the quality of life. Scale was translated to Kannada and then back translated to English. Cronbach's α of 0 .88 was obtained by administering the scale to 10 PLHIV.

Socio-demographic Variables and Clinical characteristics

Socio-demographic and clinical variables included Age, Sex, Religion, Educational Status, Occupational

Status, Marital Status, Income, Type of Family, Area of residence, Social support, Duration of time with HIV/ AIDS, Duration of time on ART, CD4 count, HIV status of spouse, Mode of HIV transmission, adherence to ART.

Data Collection Procedures

Prior permissions were taken from relevant institutions before the beginning of data collection procedure. The study participants were indentified during the study period at 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 for 15 to 20 minutes. Purpose of the study was explained to the participants and they were interviewed in Kannada or in the language understandable to them. All the information collected was based on patient's self report, but the information related to CD4 count was obtained from the medical records.

Data Analysis

Descriptive univariate statistics such as frequencies and percentages were used for categorical variables. Correlation between resilience and QoL was assed using Spearman's Rank Order correlation coefficient. Association between the socio-demographic and clinical characteristics with resilience and QoL was found using Chi-Square test.

Results

A: Sample characteristics

PLHIV were equally distributed in all the age groups with highest being in 35-40 years (19%). 51% of the PLHIV were males and majority of them were Hindus (76%). Most of the PLHIV had no formal education (61%). PLHIV were spread out in variety of occupations with highest being laborers (27%). 27% of the PLHIV were separated from their spouses. Majority of the PLHIV (67%) had monthly family income less than Rs.5000/-. Most of the PLHIV (67%) were belonging to nuclear family. 54% of the PLHIV were residing in the urban areas. High number of PLHIV (35 %) have been suffering from HIV for 5 years or more than 5 years and 35% of them have been receiving ART for 5 years or more than 5 years. High percentage of PLHIV's CD4 count range between 401-550 cells and 72% of the PLHIV had HIV positive spouse. Majority of the PLHIV (71%) infected with HIV through heterosexual contact. Most of the PLHIV (76%) were taking ART regularly.

B: Assessment of Resilience of PLHIV

Findings reveal that majority of the PLHIV (66%) had medium resilience, 30 % of the PLHIV had low resilience and only 4% of the PLHIV had high resilience (Table 1)

Table 1: Levels of resilience of PLHIV

Levels of resilience	Range of score	Frequency	Percentage (%)
Low Resilient	4-13	30	30
Medium Resilient	14-16	66	66
High Resilient	17-20	4	4

C: Assessment of Resilience Quality of Life of PLHIV

Results of the study show that majority (82%) of the PLHIV had poor quality of life and remaining 18% of the PLHIV had good quality of life (Table 2).

Table 2: Levels of Quality of Life

Levels of Quality of Life	Range of score	Frequency	Percentage (%)
Good Quality of Life	>65	18	18
Poor Quality of Life	<65	82	82

D: Correlation between Resilience and Quality of life of PLHIV

Correlation analysis shows that there was a significant positive correlation between and resilience and total quality of life and environmental domain of quality of life (Table 3).

Table 3: Correlation between Resilience and Quality of Life of PLHIV

Domains of QoL	**Correlation Coefficient (r)**
Over all QoL	0.0144
Physical Health	0.19
Psychological	0.16
Social relationship	0.17
Environmental	0.18*
Total	0.23*

*P<0.05

E: Association between Resilience and Socio-demographic and clinical variables of PLHIV

Finding related to association between the resilience and socio-demographic and clinical characteristics of PLHIV reveal that there was a significant association between the resilience and variable duration of time on ART (Table 4).

Table 4: Association between Resilience and Socio-demographic and clinical variables of PLHIV

Sl. No.	**Socio demographic & clinical variables**	**Df**	**Chi-square value**
1	Age	4	6.67
2	Sex	1	0.03
3	Religion	2	0.68
4	Educational Status	3	3.21
5	Occupational Status	3	2.21
6	Marital Status	3	7.43
7	Monthly Income of Family	2	2.84
8	Type of Family	2	0.41
9	Area of residence	1	0.13
10	Support system	2	0.92
11	Duration of time with HIV/AIDS	3	6.04
12	Duration of time on ART	3	10.56 *
13	CD4 count	2	2.23
14	HIV status of spouse	2	4.24
15	Mode of HIV transmission	3	4.44
16	ART adherence	2	3.33

*P<0.05

F: Association between QoL and Socio-demographic and clinical variables of PLHIV

Finding related to association between the QoL and socio-demographic and clinical characteristics of PLHIV reveal that there was a significant association between QoL and variables duration of time with HIV/AIDS and duration of time on ART (Table 5).

Table 5: Association between QoL and Socio-demographic and clinical variables of PLHIV

Sl. No.	Socio demographic & clinical variables	Df	Chi-square value
1	Age	4	5.88
2	Sex	1	0.01
3	Religion	2	0.86
4	Educational Status	3	5.18
5	Occupational Status	3	3.43
6	Marital Status	3	6.62
7	Monthly Income of Family	2	5.42
8	Type of Family	2	0.23
9	Area of residence	1	0.08
10	Support system	2	0.13
11	Duration of time with HIV/AIDS	3	11.32*
12	Duration of time on ART	3	11.38 *
13	CD4 count	2	2.86
14	HIV status of spouse	2	3.94
15	Mode of HIV transmission	3	4.12
16	ART adherence	2	3.89

*P<0.05

Discussion

The main objective of the present study was to find the relationship between the resilience and quality of life people living with HIV/AIDS. This cross sectional study included a sample of 100 PLHIV attending the ART centre, District Government Hospital, Bagalkot. Findings revealed that, Majority (66%) of PLHIV had moderate resilience and 53% of PLHIV had moderate overall quality of life. Despite of having stressful life the people with HIV/AIDS had managed to show the better resilience that has contributed to their quality of life.[12]

A statistically significant positive correlation was found between the resilience and environmental domain scores of QoL ((r_s=0.18, P<0.05) and total QoL scores ((r_s=0.23, P<0.05). Similar findings were found in the study conducted by Yadav S (2010) to assess the relationship between Hope and QOL of PLHIV in Nepal. A positive correlation was found between hope and all domains of quality of life but hope was a stronger predictor for the environmental functioning (r=.445,p=.000) than the other domains of the quality of life.[13]

A significant association was found between the resilience scores and clinical variable duration of treatment with ART (χ^2=10.56, p<0.05) and there was a significant association between total quality of life scores and duration of HIV illness (χ^2=11.32, p<0.05) and duration of treatment with ART (χ^2=11.38, p<0.05). Similar findings were found in the studies conducted to assess the resilience and quality of life in people living with HIV and their associated factors, where a longer time since diagnosis of HIV illness was significantly associated with resilience and quality of life of PLHIV.[14,15]

Limitations

Although present study has able to explain to some extent the relationship between resilience and quality of life of PLHIV, some limitations need to be taken into account. Sample size was limited to 100 PLHIV, hence the results cannot be generalized to wider population. Limited variables were included in this, as other aspects like co morbidity, medication adherence, viral load, anxiety and other psychosocial correlates like stigma, social support system could be also associated with resilience and QoL of PLHIV. Hence further researches may consider these limitations to update the knowledge on resilience and QoL.

Recommendations

Interventions should be aimed at improving the resilience among PLHIV at ART centers as it has been shown that higher the resilience and better will be the QoL. Community-based workers and health professionals should provide education to PLHIV regarding techniques of improving their resilience so that their quality of life could be improved.

Conclusions

The study is helpful to find the relationship between the resilience and quality of life people living with HIV/AIDS. A positive correlation between the resilience and quality of life of PLHIV suggests that interventions focusing to enhance the resilience of PLHIV would contribute to the improvement of their quality of life. Future researches can investigate the effect of various psychological measures to improve the resilience in PLHIV with the aim of improving their overall quality of life.

Ethical Clearance: Ethical clearance was obtained from the institutional ethical committee of BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot.

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Conflict of Interest: Nil

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