

Factors Related to Quality of Life among Patients with HIV/AIDS in Vietnam*

Bui Minh Thu¹, Wimolrat Puwanawuttiapanit, RN, PhD¹, Orapan Thosing, RN, DNS¹

Abstract

Purpose: To determine the relationships among education level, medication adherence, social support, and quality of life in patients with HIV/AIDS in Vietnam.

Design: Descriptive correlational design.

Methods: Sample was 115 HIV/AIDS patients at outpatient center in Bach Mai Hospital, Hanoi, Vietnam. Data were collected using questionnaires: WHOQOL-HIV BREF, Medication Adherence scales, and the Multi-dimensional Scale of Perceived Social Support (MSPSS). Spearman's Rho was employed to examine the relationships among studied variables.

Main findings: The findings showed that there was a positive correlation between social support and overall score of QOL ($r_s = .38, p < .05$).

Conclusions and recommendations: The results imply that perceive social support from different sources are very important to promote quality of life. So, nurses should provide counseling to caregivers, family members, and friends to support patients with HIV/AIDS both physical and psychological aspects.

Keywords: quality of life, HIV/AIDS, social support, medication adherence

J Nurs Sci. 2017;35 Suppl 1:56-63

Corresponding Author: Associate Professor Wimolrat Puwanawuttiapanit, Faculty of Nursing, Mahidol University, Bangkok 10700, Thailand, e-mail: wimolrat.puw@mahidol.ac.th

* Master thesis, Master of Nursing Science in Adult Nursing, Faculty of Nursing and Faculty of Graduate Studies, Mahidol University, Bangkok, Thailand

¹ Faculty of Nursing, Mahidol University, Bangkok, Thailand

ปัจจัยที่มีความสัมพันธ์กับคุณภาพชีวิตในผู้ป่วยที่ติดเชื้อ เอช ไอ วี/เอดส์ในเวียดนาม*

Bui Minh Thu¹ วิมลรัตน์ ภู่วราวุฒินิช, PhD¹ อสพรรณ ไทสิงห์, พย.ก.¹

บทคัดย่อ

วัตถุประสงค์: เพื่อศึกษาความสัมพันธ์ระหว่างระดับการศึกษา ความสม่ำเสมอในการรับประทานยา การสนับสนุนทางสังคม และคุณภาพชีวิตในผู้ป่วยที่ติดเชื้อ เอช ไอ วี /เอดส์ในเวียดนาม

รูปแบบการวิจัย: การศึกษาเชิงสหสัมพันธ์

วิธีการดำเนินการวิจัย: กลุ่มตัวอย่าง คือ ผู้ป่วยที่ติดเชื้อ เอช ไอ วี /เอดส์ ที่มารับการรักษาที่ตึกผื่นอก โรงพยาบาล บาคมาย เมืองฮานอย ประเทศเวียดนาม จำนวน 115 ราย เก็บรวบรวมโดยใช้แบบสอบถามคุณภาพชีวิต (WHOQOL-HIV BREF) ความสม่ำเสมอในการรับประทานยา และการรับรู้สนับสนุนทางสังคม (MSPSS) วิเคราะห์ข้อมูลทั่วไป โดยใช้สถิติเชิงบรรยายและวิเคราะห์ความสัมพันธ์ โดยใช้สถิติ Spearman's Rho

ผลการศึกษา: การรับรู้การสนับสนุนทางสังคมมีความสัมพันธ์ทางบวกกับคุณภาพชีวิตของผู้ป่วยที่ติดเชื้อ เอช ไอ วี /เอดส์อย่างมีนัยสำคัญทางสถิติ ($r_s = .38, p < .05$)

สรุปและข้อเสนอแนะ: การรับรู้การสนับสนุนทางสังคมจากแหล่งต่างๆ มีความสำคัญมากในการส่งเสริมคุณภาพชีวิต พยาบาลควรให้คำปรึกษาแก่ผู้ดูแล สมาชิกในครอบครัวและกลุ่มเพื่อน เพื่อสนับสนุนผู้ป่วยที่ติดเชื้อ เอช ไอ วี /เอดส์ ทั้งด้านร่างกายและจิตใจ

คำสำคัญ: คุณภาพชีวิต เอชไอวี/เอดส์ การสนับสนุนทางสังคม ความสม่ำเสมอในการรับประทานยา

J Nurs Sci. 2017;35 Suppl 1:56-63

Corresponding Author: รองศาสตราจารย์วิมลรัตน์ ภู่วราวุฒินิช, คณะพยาบาลศาสตร์ มหาวิทยาลัย บางกอกน้อย กรุงเทพฯ 10700, e-mail: wimolrat.puw@mahidol.ac.th

* วิทยานิพนธ์หลักสูตรพยาบาลศาสตรมหาบัณฑิต สาขาการพยาบาลผู้ใหญ่ คณะพยาบาลศาสตร์ และบัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล

¹ คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล

Background and Significance

Human immunodeficiency virus (HIV) is a virus that attacks the immune system, which is the body's natural defense system, resulted in immunodeficiency syndrome. Without an adequate immune system, the human body is at risk for infection from various types of microorganisms.¹

According to the United Nations AIDS Agency²; by the end of 2010, 34 million of people were infected with HIV worldwide. Asia has approximately 4.9 million of people living with HIV (PLHIV). Following a report by WHO³; in South and South-East Asia, the number of PLHIV reached 270,000 in 2010. In addition, the biological and physical burden of HIV/AIDS is associated with many social consequences such as stigma and discrimination which have negative impacts on quality of life. Another report by WHO indicated that 25 million had died from a total of 58 million of people infected with HIV from 1981 to 2008.⁴ The HIV infection is a leading cause of mortality rate at 90% among persons with HIV in developing countries.³

Vietnam Ministry of Health reported that Vietnam's HIV epidemic is considered to be one of the fastest growing in Asia and has become one of the 10 leading causes of mortality in the country.⁵ Since the first case was detected in 1990, over 50,000 people have died of AIDS. At the end of 2010; there were 254,000 PLHIV in Vietnam, and 5,100 cases of these number were children. Bach Mai Hospital is the largest hospital in Vietnam, provide daily services to 4,000 in-patients and 6,000 out-patients. There are 1,125 HIV-positive patients visited the Out-Patient Clinic at Bach Mai Hospital monthly.

HIV/AIDS patients have to encountered many challenged factors such as adherence to antiretroviral therapy, immunological status, employment status, and social support. Evidence from previous research has revealed that those factors may affect quality of life (QOL) of patients with HIV.⁶ In addition, Hays et al.,⁷ found that educational level of HIV patients was

related to positive improvements in their QOL. HIV patients with low education, not only faced impact on their socio-economic status, but also had less understanding of the therapy regimens which finally affected their QOL.⁸

A review of recent studies showed that treatment adherence was related to QOL in HIV patients.⁸ HIV patients who have higher treatment adherence might be able to control virological and immunological outcomes better resulted in better QOL as well as physical and mental health.⁹⁻¹¹

Weiss described social support as an interpersonal interaction with others that potentially produces positive feelings such as love, attachment, security, and belonging to a group with availability of emotional, physical, and informational support.¹² Many previous studies asserted that there was positive correlations between social support and both physical and mental health.^{10,13}

Research related to QOL among patients with HIV/AIDS in Vietnam remains limited. Therefore, the researcher is interested in studying the relationship between education level, social support, and medication adherence to QOL among patients with HIV/AIDS. The findings from this study can be used to guide nursing care planning to improve QOL of HIV/AIDS patients in Vietnam.

Objective

To examine the relationships among education level, social support, medication adherence and quality of life in patients with HIV/AIDS in Vietnam.

Hypothesis

Education level, social support, medication adherence were related to quality of life in patients with HIV/AIDS in Vietnam.

Methodology

This study was a descriptive correlational design.

Population and Sample

Population of this study included HIV-positive patients both male and female who were treated at the Outpatient Center in Bach Mai Hospital, Hanoi, Vietnam.

Sample was selected from the population according to inclusion criteria: 1) aged 18 years and older, 2) was treated with antiretroviral drugs (ARV) over a 3-month period, 3) was able to verbally communicate in Vietnamese language.

Sample size was calculated using the G*power program to determine the minimum number of subjects needed for the correlational design.¹⁴ The level of significance was .05; the power of test was .80. There were three independent variables in the study and the medium effect size was used ($r = .30$, $f^2 = .099$). The total number of sample was 115 subjects.

Research Instruments

The instruments using to collect data were as follows:

1. Demographic Data Record Form included age, gender, education level, level of conscious at the time of admission, marital status, current address, medical payment method, duration of illness, and previous treatment information, etc.

2. The Multidimensional Scale of Perceived Social Support (MSPSS) was developed by Zimet et al.¹⁵ This scale contained three subscales: perceived social support from family, friends or significant others. It consisted of 12 items on a seven-point Likert scale 1-7 (1 = very strongly disagree, 7 = very strongly agree). The higher score suggested higher level of satisfaction with social support.¹⁶ Cronbach's alpha coefficient of MSSP was .88.

3. Medication Adherence Instrument contained two domains: Antiretroviral treatment adherence and dose adherence. Antiretroviral treatment adherence was self-reported over the 30 days before data collection using a visual analogue scale (VAS).¹⁷ The VAS score ranged from 0-100 points where higher score reflected higher antiretroviral treatment adherence. The researcher evaluated dose-

adherence using two questions: 1) whether the patients had missed taking any pills, 2) whether or not they had taken medication 2 hours later over the past 7 days. If the patients answered "no" for both questions, the dose-adherence would be considered optimal; if they answered "yes" for any question, the dose-adherence would be considered suboptimal.

4. The World Health Organization Quality of Life-HIV Brief (WHOQOL-HIV-BREF) scale was developed by O'Connell.^{16,18} It contained 6 domains: physical, psychological, level of independence, social relationships, environment, and spirituality. The mean score of each domain ranged from 4-20 points, higher score indicated higher QOL. The results were interpreted as low level (4-9.9), intermediate level (10-14.9), high level (15-20). This study used an HIV-specific QOL measured in Vietnamese people by Tran et al.^{19,20}

These instruments were back translated into Vietnamese and verified for content validity by 5 experts from Bach Mai Hospital. The internal consistency reliability of MSPSS (.88) and WHOQOL-HIV-BREF (.88) were obtained from 30 subjects who had similar characteristics to the studied subjects.

Protection Right of Human Subjects

This study obtained approval from the IRB of the Faculty of Nursing, Mahidol University (COA No.IRB-NS2016/344.0205), and the IRB of the School of Medicine and Pharmacy, Vietnam National University. Data collection was conducted according to the standard process of IRB in order to protect human right of research subjects.

Data Collection Process

After obtaining permission to collect data from Bach Mai Hospital, data were collected with the following process:

1. The research assistant announced and explained details of the research project to potential subjects in the study.

2. The volunteer subjects were asked to read the participant information sheet, and signed the consent form if they agreed to

participate in the study.

3. The researcher arranged a private room to interview the subjects or let them to complete questionnaires by themselves. The total time spent in completing the four questionnaires was approximately 30-40 minutes.

4. The demographic data were collected from medical records.

The data collection lasted from August to October 2016.

Data Analysis

The data were analyzed using the computer statistical package with the significant level of .05 as follows:

1. Descriptive statistics: frequency, percentage, range, mean, and standard deviation.

2. All studied variables were checked for normal distribution and found that they were not normal distributed. Therefore, the Spearman's Rho correlation was used to examine the relationships between studied variables.

Findings

The findings revealed that 58.26% of subjects were males and 41.74% were female, the average age was 37.09 years (SD = 6.5). There were 32.17% of subjects had unstable employment, and 6.09% unemployed. The educational level at under high school was 41.74%. For marital status, the highest percentage was couple (66.09%). Most of the subjects lived in urban areas (64.35).

For health information, 14.78% of subjects were in clinical stage one with underweight; 14.91% had CD4 cell counts < 200, 28.07% had CD4 cell counts > 500 (Mean = 412.19, SD = 211.9); 29.57% had been infected > 7-10 years (Mean = 4.3); 42.61% of males and 31.3% of females were infected from sexual transmission; and 20% were infected from injection.

Social support

The total score of perceived social support ranged from 3.67-7.00 with the mean of 5.8 (SD = .65) and median 5.92 which mean that the overall social support for patients with HIV/AIDS in this study was high level of satisfaction. (Table 1)

Table 1: Min, Max, Mean, SD, and Median of perceived social support score

Perceived social support score	Min	Max	Mean	SD	Median
Total score	3.67	7.00	5.80	.65	5.92
Significant others	4.00	7.00	5.90	.67	6.00
Family	3.50	7.00	5.96	.71	6.00
Friends	2.50	7.00	5.54	.80	5.59

Medication adherence

The findings revealed that 36.52% of subjects had the highest medication adherence; 35.65% moderate medication adherence; and 27.83% mild medication adherence. Hundred percent of subjects had not missed medication dose during the last four days; 99.13% no late doses more than 2 hours over the past week; 97.39% had never missed any doses.

Quality of Life (QOL)

The QOL addressed six domains of the WHOQOL-HIV-BREF: Physical, psychological,

level of Independence, social relationships, environment, and spirituality/ religion/ personal beliefs. The score of each domain ranged from 4-20 points, higher score indicated higher QOL. The results were interpreted as low level (4-9.9), intermediate level (10-14.9), and high level (15-20) of QOL.

The highest average score was found in "Environment" (Mean = 16.90, SD = 1.90), the lowest average score was "Spirituality/ Religion/Personal Beliefs" (Mean = 8.90, SD = 2.61). (Table 2)

Table 2: Mean, SD, Min and Max of WHOQOL-HIV-BREF

WHOQOL	Mean	SD	Min	Max
Physical	12.97	1.77	8.00	20.00
Psychological	14.64	1.43	11.20	18.40
Level of Independence	14.13	1.76	10.00	20.00
Social relationships	15.75	1.95	11.00	20.00
Environment	16.90	1.90	11.43	20.00
Spirituality/religion/ personal beliefs	8.90	2.61	6.00	17.00
Overall QOL	16.09	2.22	10.00	20.00

Correlation between education level, medication adherence, social support, and quality of life in patients with HIV/AIDS

The findings show that only social support was positively correlated to QOL ($r_s = .38$, $p < .05$).

Table 3: Correlations between education level, medication adherence, social support, and quality of life

Variable	1	2	3	4
1. Education	1			
2. Medication adherence	.2213*	1		
3. Social support	-.1899	-.0186	1	
4. QOL	-.1761	-.0448	.3800*	1

* $p < .05$, Spearman' Rho Correlation

Discussion

The findings revealed that 41.74% of subjects had not finished high school, 34.78% had completed K-12 education, and 23.48% continued their higher education. These findings were similar to the study of Tran et al.²¹ Patients with low education consequently resulted in low awareness of the disease and low cooperative in the treatment.

For medication adherence, the findings revealed that 36.52% of subjects had the highest medication adherence; 35.65% moderate medication adherence; and 27.83% mild medication adherence. There were many factors causing barriers to adhere to ARV treatment which need help from health care team otherwise it might affect their quality of life.

The total score of perceived social support ranged from 3.67-7.00 with the mean of 5.8 (SD = .65) and median 5.92 which mean that the overall social support for patients with HIV/AIDS in this study was high level of satisfaction.

The result showed that only social support was correlated to overall quality of life in patients with HIV/AIDS. These findings are similar a study by Mahalakshmy, Premarajan and Hamide which found that social support was the determinant of all six original domains of WHOQOL-HIV- BREF.²² HIV/AIDS patients in Vietnam may face many serious challenges such as physical and psychological health problems, stigma and discrimination, social isolation, inability to find employment and low income. Long-term anxiety, depression, discomfort, and self-isolation could have negative effects on quality of life. Social support from family, friends and community are essential to improve quality of life and maintaining a healthy state for people living with HIV/AIDS.²³

Conclusion including Implication for Practice and Further Study

The results of this study showed that only social support was correlated to quality of life

among patients with HIV/AIDS. Therefore, it is recommended that nurses should provide counseling for caregivers, family members, and friends to support patients with HIV/AIDS both physical and psychological aspects.

Further research should be conducted to confirm the relationships between education level and medication adherence to quality of life among patients with HIV/AIDS in Vietnam.

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