



RELATIONSHIPS BETWEEN DEMOGRAPHIC CHARACTERISTICS, SOCIAL SUPPORT, AND QUALITY OF LIFE OF HIV INFECTED WOMEN

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ABSTRACT

The prevalence of Human Immunodeficiency Virus (HIV) infected women in Indonesia is increasing dramatically. HIV is a potentially life-threatening condition and impact to the quality of life of patients, particularly women. The aim of this study was to examine the relationship between demographic characteristics, social support and quality of life of HIV infected women. A descriptive cross sectional study was employed with 111 HIV infected women whose age were 18 to 45 years old from community HIV clinic Medan, Indonesia. Questionnaires composed of the demographic characteristics, Multidimensional Perceived Social Support Scale, and World Health Organization Quality of Life-BREF (WHOQOL-BREF). Data were analyzed using descriptive statistic, Pearson correlation coefficient and Spearman correlation coefficient. Results found that 55 % HIV infected women had quality of life in a good level and better quality of life in physical domain ($M=14.12$, $SD=2.40$). However, the poorest quality of life in social relationship domain ($M=11.50$, $SD=2.51$). 59.5 % of participants perceived social support had a moderate level, they were perceived higher support from significant other (69.4%) than from family or friends. Social support was statistically positive relationship with quality of life ($r = 0.46$, $p < .01$). Employment status was statistically negative relationship with quality of life. However, age, marital status, educational level, and family income were not significantly relationships with quality of life. In conclusions, social support and employment status could influence the quality of life of HIV infected women. Therefore, this study can be as a reference for nurses to provide the information and promote the social support to enhance the quality of life of HIV infected women.

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KEYWORDS: Quality of life, HIV infected women, Demographic, Social support.

INTRODUCTION

The prevalence of HIV has led to serious health and socioeconomic challenges for developing country including Indonesia. This phenomenon has also led to the re-emergence of disease such as physical and psychological problem and related to the quality of life (Brooks *et al.*, 2009). The World Health Organization (WHO) has reported that the number of people living with HIV in the world has increased from 29.4 million in 2001 to 34 million in 2011 (World Health Organization, 2011). Half of those infected were women (World Health Organization, 2011). In Indonesia as developing country, the growing spread of HIV infected women is more apparent in Medan, North Sumatera. The number of HIV infected women in Medan had increased from 25.9% in 2009 to 32 % in 2012. Therefore, this number indicates women are increasingly vulnerable to HIV. Some of those women were infected by sexual transmission with their husband or spouse. Living with HIV has devastating effect on all aspects of the lives of women from physical health, psychological health, economic and social (Wan Zaidi *et al.*, 2012). Consequently, that can be a negative factor to decrease quality of life of infected women (Haroen *et al.*, 2008).

Quality of life was related to an individual's health disease status. The HIV status of women had influenced their quality of life (Sun *et al.*, 2007). Several studies found that the quality of life

experienced between women and men living with HIV were different (Haroen *et al.*, 2008; Nojomi *et al.*, 2008). Study by Ichikawa and Natpratan (2006) found that the HIV infected women had lower quality of life than men who lived with HIV.

Solomom *et al.* (2008) found that in male-dominated cultures, women were more vulnerable to HIV infection and had lower quality of life. The patriarchal system or male-dominated cultures such as in Medan, Indonesia is more likely to cause in women a sense of powerlessness and inability to refuse sexual relations regarding condom usage from their sexual partner. Monika (2012) explained that patriarchal system in Medan puts men in a higher position than women in all aspects social, cultural, and status economic. This condition contributes to the growing number of HIV infected women in Indonesia (Haroen *et al.*, 2008).

Many factors related to the quality of life in people living with HIV. Previous studies were examined age, marital status, education level, and employment status, family income associated with quality of life. However, the results are still inconsistent (Subramanian *et al.*, 2009; Pereira and Canavaro, 2011; Xiaoyan, 2011; Khumsaen *et al.*, 2012). On the other hand, social support had been interesting in previous studies because of its potential to influence health outcomes, including the quality of life (Li *et al.*, 2006). Several studies found that perceived social support of people living with HIV had better quality of life (Hasanah *et al.*, 2011; Imam *et al.*, 2011; Wan Zaidi *et al.*, 2012). According to study of Khumsaen *et al.* (2012), people living with HIV perceived greater support from family than friends and there was strong relationship with quality of life. Therefore, the study needs to explore this phenomenon related to quality of life.

The purpose of the study was to examine relationship between demographic characteristics; social support and quality of life of HIV infected women. The revised Wilson and Clearly model for Health Related Quality of Life (HRQOL) provided understanding for indentifying the that related to quality of life. Therefore, The revised Wilson and Clearly model for Health Related Quality of Life (HRQOL) was employed to guide for selecting variables (Ferrans *et al.*, 2005).

METHOD

1. Design

The current study was cross sectional design.

2. Sample

There were 111 HIV infected women recruited from community HIV clinic in Medan, North Sumatera, Indonesia during 2 months (July to September 2014). The sampling method in this study was employed purposive sampling through inclusion criteria were an adult HIV infected women aged 18 to 45 years old, diagnosed with HIV at least three month (Hasanah *et al.*, 2011), attending routine clinical care visit such as the regular appointment with a doctor, or to meet peer group at a community HIV clinic, Adam Malik Hospital, Medan, North Sumatera, Indonesia, and willing to participate in this study. Exclusion criteria is HIV infected women who should be hospitalized after meeting physicians.

3. Data Collection

The study was approved by Committee and Ethics Review Board (ERB) Committee for Research Involving Human Research Subjects, Boromarajonani College of Nopparat Vajira, Bangkok, Thailand. The permissions for data collection were obtained from Director of Adam Malik Hospital, Medan, Indonesia and the Head of community HIV clinic, Adam Malik Hospital, Medan, Indonesia. Data collection was conducted through blind collecting data method due to HIV is a sensitive issue. Participants were given opportunities to determine whether they would like to participate in the study. The participants were assured that their rights and confidentiality during the study were protected. They were informed about the objectives, procedures, and benefits of the study through information sheet. After the fully understood and willing to participate, they took and filled the questionnaire 45-60 minutes.

4. Measurement Tools

The questionnaires used of data collection consisted of demographic characteristics questioner, Multidimensional Perceived Social Support Scale (MPSS) and WHOQOL-Bref. Three experts in the Health Science and HIV employed the validity test of questionnaires. The validity test revealed that relevant and clarity were 91 % - 100%.

Reliability test was employed in 22 HIV infected women who were similar characteristics to the target population. The reliability test of questionnaires was showed that acceptable.

a. Demographic Characteristics

The demographic information questionnaire was developed by the researcher. This questionnaire consisted of age, marital status, education level, employment status, and family income.

b. Social Support

The Multidimensional Perceived Social Support Scale (MPSS) questionnaire by [Zimet et al. \(1988\)](#) was used to measure social support. It consisted of 12 items that has 3 subscales including perceived social support from family (4 items), friends (4 items), and significant others (4 items). All items were in positive questions with 7 Likert-type scale from “very strongly disagree” = 1 to “very agree” = 7. Interpretation by using the mean scale score ranging from 1 to 2.9 could be considered low support; a score of 3 to 5 could be considered moderate support; a score from 5.1 to 7 could be considered high support. In this study, the content validity was examined. The internal consistency reliability was high, with a Cronbach’s alpha 0.87.

c. Quality of Life

WHOQOL- Bref was used to measure people's perceptions on their own quality of life in the context of their culture and their personal standards and purposes. It contained 26-item into 4 domains; 1) physical (7 items), 2) psychological (6 items), 3) social (3 items), and 4) environment (8 items), and 2 items which measure overall quality of life and individual’s health satisfaction. There are 23 positive items and 3 negative items (number 3, 4, and 26). The participants were asked to rate on a 5 Likert-type scale according to their health in the last 4 weeks, ranging from “very bad (extremely unsatisfied)” = 1, “bad (not satisfied)”= 2, “moderate good (moderate satisfied)” = 3, “good (satisfied)”=4, and “very good (very satisfied)”= 5”. For 3 negative items were reversed negatively phrased, 1=“very good”, 2=“good”, 3=“moderate”, 4=“bad”, 5=“very bad”. The score were calculated according to the WHOQOL administration of scoring and the scores were transformed from 4-20 ([Wan Zaidi et al., 2012](#)). Higher scores indicated better quality of life. WHOQOL-Bref. The internal consistency obtained Cronbach’s alpha coefficients were physical domain = 0.89, psychological domain = 0.90, social domain= 0 .79, and environment domain= 0.83.

5. Ethical Approval

The study was approved by Kasetsart University and granted from the Ethical Review Committee for Research Involving Human Research Subjects, and Director of Adam Malik Hospital, Medan, Indonesia. The participant’s Information sheet and questionnaires was translated into Bahasa Indonesia by an accurate translation before given to the participants. Confidentiality was maintained on all data collection forms by assigning a code number. The participants have the right to decline to answer the questions that they do not want to answer.

6. Data Analysis

Descriptive analyses included the frequencies and percentage of demographic variables, social support and quality of life.

Bivariate analyses were used to find the relationship between variables by using Pearson Product-Moment correlation, Spearman correlation coefficient, and Point-biserial correlation coefficient. For statistical analysis, the study used Statistical Package for the Social Sciences (SPSS) version 15.0 for windows (SPSS Inc., Kasetsart University, Thailand).

RESULT

The results of the study are presented in tables divided into three sections consisting of demographic characteristics, description of social support and quality of life, and relationship among variables.

All of the participants (111 HIV infected women) completed the questionnaire. The majority age of participants was range 26-35 years old (64%) with average age 31.41 years old. The minimum of age of participants is 20 years old and 44 years old as a maximum age. Most of participants were married (65.8 %). The majority of the participants had a moderate level of education (61.3 %), were graduated from senior high school, 64.9 % did not work (unemployed), and 65.8 % had monthly family income in moderate level (Rp. 1,000,000 – Rp. 2,999,900), as shown in table 1.

Table-1. Frequency and percentage of demographic characteristic among HIV infected women (N=111)

Individual characteristics	Frequency (N)	Percent (%)
Age		
20 – 25 years	14	12.6
26 – 35 years	71	64.0
36 – 44 years	26	23.4
M = 31.41, SD = 5.38, Range = 20 - 44		
Education level		
Junior high school	20	18.0
Senior high school	68	61.3
College	23	20.7
Marital status		
Married	73	65.8
Unmarried (Single, Divorced, Widowed)	38	34.2
Employment status		
Employed	39	35.1
Unemployed	72	64.9
Family income		
Low (< Rp.1,000,000)	12	10.8
Moderate (Rp.1,000,000 – Rp. 2,999,900)	73	65.8
High (≥ Rp. 3,000,000)	26	23.4

In this study perceived social support was divided into three categories according to the range of the score (low support, moderate support, and high support). More than half (59.5 %) of the participants perceived moderate level of overall social support. On the other hand, most of participants perceived higher support from significant other (69.4 %), followed by perceived support from family (65.8 %). However, only 25.2 % participants were perceived high support from friends, as shown in table 2.

Table-2. Percentage of social support among HIV infected women (N = 111)

Perceived social support	Low %	Moderate %	High %	M	SD
Overall	3.6	59.5	36.9	4.80	0.93
From family	6.3	27.9	65.8	5.31	1.13
From friends	36.1	38.7	25.2	3.63	1.51
From significant other	3.6	27.0	69.4	5.49	1.02

Note: M= Mean, SD= Standard deviation

According to table 3, more than half of participants (55 %) considered their overall quality of life was good with mean scores 12.25 (SD = 3.45) of total score, and the ranged 8 to 20. The majority of participants (75.7 %) had a good quality of life in physical domain, followed by environment (68.5 %), and then psychological domain (65.8%). However, 55 % of participants reported had a poor quality of life in social relationship domain.

Table 3. Frequency and percentage of quality of life among HIV infected women (N = 111)

Quality of Life (QoL)	Poor		Good	
	N	%	N	%
Overall QoL	50	45	61	55
M = 12.25 (3.45), Range = 8-20				
Physical domain	27	24.3	84	75.7
M =14.12 (2.40), Range = 9-19				
Psychological domain	38	34.2	73	65.8
M = 13.16 (2.55), Range = 2-18				
Social domain	61	55	50	45
M = 11.50 (2.51), Range = 8-17				
Environmental domain	35	31.5	76	68.5
M = 13.57 (1.87), Range = 8-17				

M = Mean, in bracket () = Standard deviation

Table-4. Relationship between demographic characteristics, social support, and quality of life (N = 111)

Variables	Quality of Life	
	r	p
Age ^a	.14	.12
Marital status ^b	-.01	.90
Employment status ^b	-.13	.00
Educational Level ^c	.00	.99
Family income ^c	.01	.86
Social support ^a	.46	.00

(^a)=Pearson product-moment correlation coefficient; (^b)=Point-biserial correlation coefficient; (^c)=Spearman Correlation coefficient p < .01

As shown in table 4, age, marital status, educational level, and family income were not statistically significant relationship with quality of life. However, employment status was mild but statistically negative significant relationship with quality of life. Its meant that those women who were employed had a poor quality of life than HIV infected women who an unemployed. Furthermore, social support had statistically positive significant relationship with quality of life at moderate level ($r = .46$, $p < .01$). This indicated the HIV infected women those who perceived higher level of social support had a good quality of life.

DISCUSSION

1. Demographic Characteristic

In this study, 64 % HIV infected women are 26 - 35 years old, which is the most productive age group, and most of participants in this study were married (65.8 %). These findings are similar to Directorate General CDC & EH Ministry of Health Republic of Indonesia (2008) reported that most HIV infected women are productive age and married status. Married women had been shown to be at a high risk for infection with HIV (Solomom *et al.*, 2008). The women were more likely to acquire HIV infection from their husbands or partners. In patriarchy societies as in Medan, put women lower position than men. Therefore, women had a lack of power to negotiate or decide for

safer sexual behaviours with their husbands or partners. On the other hand, the most educational level of participants were moderate level (61.3 %), they were graduated from senior high school. This indicate they were educated enough. Previous study support this findings that who were educated can better understand the disease and the instruction given on drug usage (Bello *et al.*, 2013). 64.9 % HIV infected women were unemployed. They faced difficulties for accessibility to economic and social resources.. The employment status status of women will related to their family income. If the women employed, the economic status will be increasing too. In this study, 65.8 % of participants are moderate level.

2. Social Support

In this study, the results indicated that participants perceived moderate social support (59.5 %), then the highest perceived support from significant other (69.4 %). Incongruent with the findings of previous studies that demonstrated the members of family provided the most support for HIV infected women (Xiaoyan, 2011; Khumsaen *et al.*, 2012). Social support refers to the perceived comfort, care, esteem, or help from other people such as the spouse or husband, friends, family, and health care provider (Ahmed and Lemkau, 2007). However, in this study, the majority of participants were perceived higher support from significant others than family or friends. HIV infected women were commonly discriminated against and rejected by their families and friends (Burgoyne and Renwick, 2004). Then, they were labelled as being sexually promiscuous or drug users (Subramanian *et al.*, 2009)

3. Relationship between Demographic Characteristic, Social Support, and Quality of Life of HIV Infected Women

The findings of relationship between variables showed that demographic characteristics such as age, marital status, educational level, and family income were not significant relationship with quality of life. Inconsistent with previous studies (Perez *et al.*, 2009; Khumsaen *et al.*, 2012; Reis *et al.*, 2012; Bello *et al.*, 2013) that found the characteristic of participants were significant relationship with quality of life of HIV infected women. This differences finding could be explained by the impacts of HIV. HIV has devastating physical, psychological, and social effect of people living with HIV and their families. The most of HIV infected women were shocked when they found out their HIV status. Furthermore, HIV infected women were often disrupted their interpersonal relationships due to HIV related to stigma. In Indonesia, since women infected with HIV, they were perceived rejected from community (Haroen *et al.*, 2008). Older or younger people are risky of experiencing the impacts of HIV. Therefore, in this study age of HIV infected women was not indicated the quality of life. This finding was supported by previous studies, which found that age was not related to quality of life in HIV infected women (Nojomi *et al.*, 2008; Xiaoyan, 2011).

Difference culture and demographics could be affect the difference findings. Therefore, marital status, educational level, and family income of HIV infected women does not necessarily indicated a level of quality of life.

Employment status was statistically negative relationship with quality of life. This finding was supported by previous studies which found that employment status was significant associated with quality of life of people living with HIV (Nojomi *et al.*, 2008; Khumsaen *et al.*, 2012; Reis *et al.*, 2012). In this study, the majority of HIV infected women were unemployed. The chronic nature of the HIV disease brought new challenges in employment status that related to HIV issues. HIV infected women feared and worried about stigma and discrimination against them in the workplace and also that they would lose their employment. Therefore, in this respect, HIV infected women who were unemployed were more likely to have a good quality of life.

In this study, social support was strong statistically positive significant relationship with quality of life at the moderate level. Its means that, HIV infected women who higher perceived social support, more likely had a good quality of life than lower perceived social support. This study in line with previous studies that people living with HIV were perceived greater social support had better quality of life (Jia *et al.*, 2007; Sun *et al.*, 2007; Khumsaen *et al.*, 2012). HIV infected women had more difficulties in receiving support from their family or friends. Therefore,

HIV infected women preferred to get support from significant other, which could refer to health care provider or volunteers from NGOs (Chandra *et al.*, 2009). Study Haroen *et al.* (2008) found that HIV infected women were satisfied perceived support from nurses and volunteers of NGOs. A possible reason might be the Ministry of Health of Republic Indonesia (2009) has established policies to support the services in health care system such as enhancing quality of Voluntary Counselling and Testing (VCT). In the VCT services, health care providers could play a role to support people living with HIV.

CONCLUSION

The purpose of this study was to examine the relationship between age, marital status, education level, employment status, family income, social support, and quality of life of HIV infected women. There was a statistically significant relationship between social support and quality of life. HIV infected women who higher perceived social support had higher quality of life than lower perceived social support. However, age, marital status, educational level, and family income were not statistically significant relationships with quality of life. Only employment status was statistically negative relationship with quality of life of HIV infected women. This finding can be as a reference to implement new strategies to help HIV infected women and generate awareness about the quality of life issues. Nurses should be able to promote the social support to improve their quality of life.

Nursing Implications

This study is the first study that investigated the quality of life of HIV infected women in Medan. The findings can be as references to develop nursing intervention and involve the family or community to provide support for HIV infected women.

Limitation

There were some limitations of this study. Firstly, the findings of the study may be limited to generalize to other HIV infected women in other geographical areas because the study was conducted in North Sumatera, Indonesia which is a patriarchy system is occurred. Secondly, the current study used at only one place in collecting data at one point in time. The cross sectional nature of this study does not allow for causal interpretations of the findings.

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