Iranian J Publ Health, Vol. 43, No. 1, Jan 2014, pp. 100-106

Original Article

Relationship between Health-Related Quality of Life and Social Support in HIV-Infected People in Tehran, Iran

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(Received 11 Jul 2013; accepted 20 Oct 2013)

Abstract

Background: The present study was conducted to determine the association between social support and health-related QOL (HRQL) for a sample of 120 patients living with HIV/AIDS in Tehran.

Methods: Eighty male and 40 female living with HIV referred to Iranian AIDS Research Center at Imam Khomini Hospital in Tehran, Iran in 2011 were randomly selected for assessment. Data was collected by means of Vaux's Social Support questionnaire and Medical Outcomes Short-Form-36 (SF-36) QOL questionnaires. Pearson (P) Correlation Coefficient and Fisher z-test were used for statistical analysis.

Results: In general, social support was significantly associated with overall QOL in men ($P = 0.001$) and women ($P = 0.009$) living with HIV/AIDS. In men, social support was significantly associated with mental and physical domains of QOL ($P = 0.001$) while in women it simply associated with mental domain of QOL ($P = 0.003$).

Conclusion: Our findings indicate that increasing social support for HIV/AIDS persons increases their QOL. This can help those physicians who are involved in care of HIV-infected persons and it maintains QOL across the spectrum of HIV disease.

Keywords: HIV, Social support, Health, Quality of Life, Iran

Introduction

With advances in medical treatment and an increase in the life expectancy of HIV patients, quality of life (QOL) has been considered an important indicator of the health assessment and treatment in this group of patients (1). It can be said that QOL assessment in patients with acquired immunodeficiency syndrome (AIDS) is a way to get closer to their experience of the different treatments they undergo, and understanding the psychosocial aspects of an illness that needs long-term treatment (2).

QOL is defined as physical, social, and psychological domains of health that are affected by experiences, beliefs, expectations, and individual perceptions (3). Thus, QOL should be evaluated from different physical, mental, and social angles and dimensions. Nowadays, it has been recognized that in addition to medical therapy, different psychosocial factors such as social support can also be effective in the treatment process of AIDS (1). Various studies have shown that social support, as a critical factor, may have an important role in

treatment and health outcomes, and consequently, in the QOL of people with chronic diseases, including HIV patients (4, 5). Though social support theories emphasize the role of actual and perceived support, evidence has shown that the positive effects of social support on one's health have been based on scales that have examined people's perceptions, and their satisfaction with the available or perceived support they have received (6). Individual cognitive evaluation (7) of family support and perceived support is the most important dimension of social support that causes a person to connect to another.

Individuals who were more satisfied with social support were likelier to report lower HIV-related health symptoms, suggesting that social support is a robust predictor of health outcomes over time, independent of coping styles and baseline medical status (7, 8). AIDS and HIV infection can cause stress in a person's social network structure, which results in dissolution of social relations, thus reducing social support for HIV patients (9). People with HIV experience adverse social and physical consequences when others learn they are infected. These conditions have been found to dampen social support and lead to psychological distress, and deterioration of their QOL and life satisfaction (10-12).

Some investigations have showed the importance of the relationship between social support and QOL in men and women living with HIV (7, 13-15). Although social support and QOL are important factors that affect the health of HIV patients, few studies have been done in these fields (14). Since most of the research has been conducted in developed countries, there is no guarantee that these results can be generalized to the populations of developing countries. Social support and QOL of people in these countries can vary from what people in developed countries are facing (14). Two studies about QOL have been conducted among HIV patients in Iran (16, 17).

The research is aimed at investigating the relationship between social support and health-related quality of life (HRQL) in Iranians with HIV/AIDS.

Methods

Participants

This cross-sectional study was conducted in the first half of 2010 using a random sampling method on 120 patients living with HIV or suffering from AIDS. The sample consisted of data on 80 men and 40 women living with HIV, whose medical records from 2010 were obtained from the Iranian AIDS research center of the Imam Khomeini Hospital. Information regarding each patient's age, gender, marital status, work status, and education was analyzed.

Measurements

For data collection, Vaux Social Support and Medical Outcomes Study Short-Form 36 (SF-36) QOL questionnaires were used.

A) Social support questionnaire: A patient's social support was assessed with the Social Support Appraisals Scale (SS-A). The SS-A is a twenty-three-item questionnaire that includes three areas: family, friends, and others (18). A Persian translation of the SS-A was used in this study (19). The correlation of subscales scores with the total score was used to calculate the reliability of this questionnaire. Correlation coefficients were obtained for the total social support score with family, friends and other subscales, which were, respectively, 0.76, 0.55, and 0.74, with all of them being significantly at the 0.0001 level. The reliability (or internal consistency) of 0.77 was calculated with Cronbach's alpha.

B) QOL questionnaire: This questionnaire (SF-36) consists of thirty-six items representing eight dimensions of QOL. The eight dimensions are physical functioning, body pain, role limitations due to physical problems, general health perception, vitality/energy, social functioning, mental health, and role limitations due to emotional problems (14). The validity and reliability of the SF-36 questionnaire was assessed on a random sample of 4,163 healthy individuals aged fifteen and over (20). The mean age of the respondents was 35.1 (SD = 16.0); 52% of the patients surveyed were female, 58% of whom were married, and the

mean years of their formal education was 10.0 (SD = 4.5). Most of them were married for the first time. Internal consistency showed that all eight SF-36 scales met the minimum reliability standard, the Cronbach's alpha coefficients ranging from 0.77-0.90 with the exception of the vitality scale (alpha = 0.65). Convergent validity (to test scaling assumptions), using each item's correlation with its hypothesized scale, showed satisfactory results (all correlation above 0.40, ranging from 0.58-0.95). The Iranian version of the SF-36 performed well, and the findings suggested that it is a reliable and valid measure of HRQL among the general population. The reliability of 0.87 was calculated by Cronbach's alpha.

Ethical notes

The study was approved by the Imam Khomeini Hospital's local Ethical Committee. The study protocol was also ratified by the Ethics Committee of the Tehran University of Medical Sciences (TUMS), and written informed consent was obtained from the volunteers who participated in the study.

Statistical Analysis

The Pearson correlation coefficient was used in conjunction with the Fisher z-test to examine the relationship between data and for correlation coefficients comparison in both men and women.

Results

The demographic characteristics of the samples are indicated in Table 1. There was a significant positive relationship between social support with the mental component of QOL in the groups comprising men and women (Table 2). In comparison with social support subscales and the mental component of QOL, there was a significant positive relationship between only two friends and family subscales. When evaluating the social support subscales and mental component of QOL in men, it was observed that there is a significant positive relationship between friends' support with mental health and vitality subscales of QOL. In women, friends and family support subscales only had significant positive relationship with the mental health subscale.

Table 1: Demographic data of the HIV-infected subjects (n = 120)

Characteristics	Mean (SD) or percentage
Age (yr)	
Mean (SD)	33.85 (7.52)
Sex	
Male	66.6%
Female	33.4%
Education	
Illiterate	3.3%
Elementary	62.5%
High school	27.5%
College	6.7%
Marital status	
Single	40%
Married	39.1%
Divorced	14.1%
Abandonment	3.4%
Widowed	3.4%
Occupation	
Employed	35.8%
Unemployed	64.2%

There was significant positive relationship between social support and the physical component of QOL in men (Table 3). In addition, when social support subscales were compared to the physical component of QOL, there was a significant positive relationship between all three social support subscales (friends, family, and others) with the role-physical dimension subscale of QOL. Comparison between social support subscales and the physical component of QOL showed that there was only significant positive relationship between family support and physical functioning subscales, and between friends support and role-physical subscales.

Table 2: Correlation between social support domains with mental component of QOL and its subscales in men and women living with HIV

Variables	Overall Social support		Friends support		Family support		Others support	
	Men	Women	Men	Women	Men	Women	Men	Women
Mental component of QOL	0.35[a]	0.45[a]	0.33a	0.38[b]	0.18	0.27	0.25[b]	0.36[b]
Mental Health	0.35[a]	0.31[b]	0.34a	0.31[b]	0.17	0.17	0.23[b]	0.31[b]
Vitality	0.32[a]	0.24	0.25b	0.20	0.22[b]	0.17	0.30[a]	0.29
Social functioning	0.28[b]	0.22	0.29[a]	0.09	0.07	0.22	0.21	0.22
Role-emotional	0.12	0.30	0.14	0.25	0.07	0.14	0.05	0.21

[a]$P< 0.01$, [b]$P< 0.05$

There was a positive significant correlation between overall social support and QOL in men (Table 4). Also, there was significant positive relationship between all social support subscales (family, friends, and others) and overall QOL, and between social support and QOL in women (Table 4). There were no significant differences in the correlation between social support and overall QOL and mental domain of QOL in men and women living with HIV ($P> 0.05$) (table 5). Additionally, the statistical correlation between two variables subscales was not significant ($P> 0.05$).

Table 3: Correlation between social support domains with physical component of QOL and its subscales in men and women living with HIV

Variables	Overall Social support		Friends support		Family support		Others support	
	Men	Women	Men	Women	Men	Women	Men	Women
Physical component of QOL	0.38[a]	0.28	0.32[a]	0.27	0.28[b]	0.20	0.30[a]	0.26
Physical functioning	0.24[b]	0.29	0.19	0.26	0.18	0.24	0.20	0.33[b]
General Health	0.20	0.17	0.20	0.11	0.18	0.22	0.11	0.11
Bodily pain	0.19	0.22	0.14	0.25	0.19	0.16	0.13	0.24
Role-functional	0.39[b]	0.24	0.33[a]	0.36b	0.24[b]	0.06	0.36[a]	0.25

[a]$P< 0.01$, [b]$P< 0.05$

Table 4: Correlation between social support domains with overall QOL in men and women living with HIV

Variable		Overall QOL	
		Men	Women
Social support	Correlation coefficient	0.409	0.47
	P-Value	0.001	0.009
Family support	Correlation coefficient	0.277	0.36
	P-Value	0.013	0.022
Friends support	Correlation coefficient	0.367	0.37
	P-Value	0.001	0.016
Others support	Correlation coefficient	0.276	0.26
	P-Value	0.013	0.096

Table 5: Comparison the relationship of social support with QOL between two groups (men and women) by Fisher z-test

Relationship	Women		Men		λ	*P*-Value
	Correlation coefficient	Z-value	Correlation coefficient	Z-value		
Social support & overall QOL	0.47	0.51	0.40	0.42	0.45	0.65
Social support & mental domain of QOL	0.45	0.48	0.35	0.36	0.60	0.54
Friends support & mental domain of QOL	0.38	0.40	0.33	0.34	0.30	0.76
Friends support & mental health	0.31	0.32	0.34	0.35	-0.15	0.11
Family support & mental domain of QOL	0.36	0.37	0.25	0.25	0.60	0.54
Family support & mental health	0.31	0.32	0.23	0.23	0.45	0.65
Family support & overall QOL	0.36	0.37	0.27	0.27	0.50	0.61
Friends support & overall QOL	0.37	0.38	0.36	0.37	0.05	0.96

Discussion

This study showed significant positive association between social support and QOL in HIV-infected men and women. These findings were in agreement with the previous study (5). Scientists believed that social support had a beneficial impact on physical and mental health, efficiency, creativity, and competence of patients, and it protected them from adverse effects of life crises (10). Social support, by playing an intermediary role between stressors and mental-physical problems, strengthened their understanding and caused stress reduction and longevity, ultimately improving the patients' QOL (14).

In this study, we showed that social support positively related to the mental component of QOL in men and women with HIV. These results are consistent with previous findings (14, 21, 22). To further explain this effect, one can say that these distressing and depressive symptoms in patients are alleviated by various factors, such as the amount and adequacy of available social support and the size of the social network structure; this, in turn, affects health outcomes and improves the mental health of patients. The psychological benefits of social support can be seen in its effect on subjective evaluation of stressful factors, choice of effective methods of coping, sense of self-esteem, and interpersonal skills. Previous studies have shown that people who had high social support are persistent when encountering stressful life events, are able to effectively cope, and show fewer symptoms of depression or mental disorder (7).

Furthermore, this study revealed that social support was positively related to the physical component of QOL in men. These findings were consistent with other studies (14, 15). It can be concluded that social support through soothing fight-or-flight reactions created due to stressful events within one strengthened the immune system function and protected humans against crisis (23). Various studies have shown that physiological reactions to stress will change under the influence of social support; this means that the intensity of physiological reactions in the presence of friends and others is less than when one is faced with stress alone (8). Catherine L.

Hough and her colleagues found in their 2005 study that as social support in patients with HIV decreases, symptoms and signs of disease increase (4). This seems to suggest that having social support causes patients facing a stressful and devastating illness to feel that they have someone supporting them during these hard and critical times; this helps them cope better with the disease. Hence, they will have increased life expectancy and follow up their treatments with anti-HIV drugs, and maintain their physical health.

Reviewing the relationship between social support and the physical component of QOL in women with HIV, the conclusion is that there is no connection between these two variables. This result differs from previous findings (14, 15), and could perhaps represent cultural and gender factors related to Iranian populations. The results of investigations on social support and QOL in people with HIV may differ according to cultures around the world (14). Gender also affects the outcomes of social support on QOL (24-26). Therefore, in women, the impact of social support on the mental component of QOL will be more than on the physical component. However, the fact that fewer women than men patients were included in this study may also be a reason for the obtained results. Concurrently, various studies regarding the psychological aspects of the disease show that HIV detection in patients is often stressful and affects their mental health and their QOL (27).

In the end, one can infer that social support causes patients to cope easier with the psychological stress that follows the diagnosis of HIV infection, due to the sense of support it provides from those around. This effectively causes the patients, in turn, to enjoy better mental health and improves their QOL. In addition, better compatibility with the disease makes patients face their treatment process more hopefully and encourages regular visits to the doctor; it also makes them more agreeable to medical experiments and leads to consistent use of anti-AIDS drugs, and, in general, promotes better physical health. All these factors suggest that HIV patients with social support have a decent QOL.

Conclusion

It can be said that HIV affects patients' QOL because it creates varying physical problems for them.

Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgements

This project was financially supported by University of Social Welfare and Rehabilitation Sciences. The authors declare that there is no conflict of interest.

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