



## Quality Of Life and Its Related Factors in Patients with HIV/AIDS in Rural China

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### Dear Editor-in-Chief

According to the data published by the Chinese Ministry of Health, there are approximately 780,000 people living with HIV/AIDS in China at the end of 2011(1). The majority of HIV infection occurs in rural areas in China. These people have to suffer not only from physical discomfort associated with infection and therapy, but also from a series of psychological problems. Patient's well-being is not determined solely by his or her physical status but instead is determined by a series of comprehensive elements including social and psychological factors. It is critical to determine which factors contribute to a better quality of life.

The purpose of our study is to explore a recommended way to measure the QOL of PLWHA in China, and to evaluate the QOL of PLWHA, to determine how much influence the physical, mental and socio-demographic factors have on the QOL of PLWHA in rural China.

During June 23 and July 3 2013, 266 people from Queshan County, Shangcai County, and Shenqiu County, Henan Province, whose diagnosis of HIV infection had occurred at least 3 months prior to the study, and registered in these centers, participated in the study.

The Chinese version of WHOQOL-HIV BREF was used to assess the quality of life. Considering the most subjects of this study are farmers who

are self-employed, there is no reliable tool to measure their employment status. The "income/outcome" (household annual income/household annual expense) was used to assess the person's economical status instead of employment status. Depressive symptoms were assessed using Epidemiologic Studies Depression Scale (CES-D).  $\alpha=0.05$ .

The age of participants ranged from 18 to 66 (M=47 years, SD=7.7 years). As shown in Table 1, the total score of QOL was  $72.31 \pm 9.53$  (means  $\pm$ SD). The highest score was got from spiritual domain ( $13.53 \pm 3.04$ ) and the lowest score was from physical domain ( $10.49 \pm 2.90$ ). The mean score of the CES-D of the participants was 28.08 (range 8-49 scores).

The multivariate liner regression showed that depression, the number of clinical symptoms, supports from family, income/outcome, and gender had independent effects on the quality of life (Table 2). The most significant positive correlation was observed between depression and the QOL. While having support from family, high income/outcome predicted better QOL, and the female and more clinical symptoms indicated poorer QOL in this analysis.

**Table 1:** Mean and standard deviation (SD) scores of each domain

Scale	Mean	SD	Range
Physical	10.29	2.90	4-20
Psychological	11.49	1.93	6-18
Independence	12.06	2.49	5-20
Social relationship	13.20	1.99	6-19
Environment	11.74	1.72	6-16
Spiritual	13.53	3.04	6-20
Overall QoL and general health perceptions	10.11	3.18	4-20
Total	72.31	9.53	40-105

According to our study, the participants who had high income/outcome ratio had better general QOL than those low income/outcome ratio counterparts. Our studies were consistent with previous research, which has suggested that better economic status was associated with a better QOL among PLWHA(2, 3) in rural China, which indicated that the use of “income/outcome” to assess the relationship between persons’ economical status and QOL might be reliable and valid in rural China.

This study also showed that the quality of life of PLWHA was significantly correlated with depression. It was in accordance with another study where higher scores on depression scale were correlated with lower overall QOL scores(4). We observed that patients with no or less clinical symptoms reported had better QOL than those with more symptoms, suggesting that quality of life could be affected by the antiretroviral treatment(5).

In addition, family support was a major source of emotional support to the people living with HIV, which was coincident with the study of Friedland(6). The last but not least, female with HIV/AIDS had worse QOL than male in rural China, which indicated that gender was one of the most important factors that associated with the quality of life of PLWHA(7, 8).

According to this study, we can conclude that depression, clinical symptoms, support from family, income/outcome, and gender were the important factors influencing QOL of PLWHA in rural China. Therefore, a comprehensive care system including medical staff, psychological consultant and social workers is required for the better QOL of PLWHA in the rural areas of China. The Chinese version of the WHOQOL-HIVBREF especially the “income/outcome” to assess persons’ economical status is valid and reliable.

**Table 2:** Factors significantly associated with the quality of life of patients based on multiple linear regressions

Variable	<i>t</i>	<i>P</i> value
Depression	-12.608	0.000
Clinical symptoms	-3.843	0.000
Supports from family	4.063	0.000
Income/outcome	2.552	0.012
Female	-2.231	0.027

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