

# Jurnal Keperawatan Komprehensif

(Comprehensive Nursing Journal)



*A Journal of Nursing Values, Innovation, Collaboration,  
and Global Impact*

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Volume 11, Issue 4, October 2025

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Published by STIKep PPNI Jawa Barat

ISSN 2354-8428, e-ISSN 2598-8727



# Effect of Leaflet-Based Health Education on Spiritual Well-Being and Quality of Life Among Patients Living with HIV/AIDS at Immanuel Hospital, Bandung

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Jurnal Keperawatan Komprehensif  
(Comprehensive Nursing Journal)

Volume 11 (4), 624-629  
<https://doi.org/10.33755/jkk.v11i3>

## Article info

Received : April 28, 2025  
Revised : October 21, 2025  
Accepted : October 26, 2025  
Published : October 31, 2025

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## Citation

Sinaga, S. M. (2025). Effect of leaflet-based health education on spiritual well-being and quality of life among patients living with HIV/AIDS at Immanuel Hospital, Bandung. *Jurnal Keperawatan Komprehensif (Comprehensive Nursing Journal)*, 11(4), 624–629.

## Website

<https://journal.stikep-ppnijabar.ac.id/jkk>

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p-ISSN : [2354 8428](#)  
e-ISSN: [2598 8727](#)

## Abstract

**Background:** Human Immunodeficiency Virus (HIV) is a chronic sexually transmitted infection that progressively weakens the immune system. If untreated, HIV can develop into Acquired Immunodeficiency Syndrome (AIDS), a condition characterized by severe immune suppression and increased vulnerability to life-threatening infections. Beyond physical complications, people living with HIV/AIDS often experience unmet spiritual needs that negatively affect their overall quality of life. Health education interventions using simple and accessible media, such as leaflets, may support spiritual well-being and improve quality of life.

**Objective:** This study aimed to examine the effect of leaflet-based health education on spiritual needs fulfillment and quality of life among patients with HIV/AIDS at Immanuel Hospital, Bandung.

**Methods:** A quasi-experimental study design with a pretest-posttest approach was conducted in August 2022. A total of 63 patients with HIV/AIDS were recruited using purposive sampling. The intervention consisted of structured health education delivered through leaflets focusing on spiritual support and coping strategies. Data were collected through validated questionnaires measuring spiritual needs and quality of life before and after the intervention. Statistical analysis was performed to assess changes following the educational intervention.

**Results:** The findings demonstrated a significant improvement in spiritual needs fulfillment and overall quality of life after the leaflet-based health education intervention. Participants showed increased spiritual well-being and better perceived quality of life following the intervention.

**Conclusion:** Leaflet-based health education is an effective intervention to enhance spiritual needs fulfillment and improve quality of life among patients with HIV/AIDS. Incorporating spiritual-focused educational materials into routine nursing care may contribute to holistic patient management.

**Keywords:** Health education, HIV/AIDS, leaflet, quality of life, spiritual needs

## INTRODUCTION

Human Immunodeficiency Virus (HIV) is a long-term infectious condition that compromises the body's immune defenses and may develop into Acquired Immunodeficiency Syndrome (AIDS) if not appropriately treated. Advances in antiretroviral therapy (ART) have transformed HIV from a fatal illness into a manageable chronic disease that requires sustained and comprehensive care. Consequently, HIV management has shifted from an exclusive emphasis on controlling viral load to a broader approach that also prioritizes the overall well-being and life satisfaction of people living with HIV (PLHIV) (1,2).

Beyond its physical implications, HIV imposes persistent psychosocial challenges. Individuals living with HIV frequently encounter social stigma, emotional strain, fear regarding long-term health outcomes, and the demands of lifelong treatment adherence. These factors can negatively influence mental health and daily life functioning. Within this context, spirituality has emerged as an important dimension of holistic care. Spiritual well-being may assist individuals in finding purpose, sustaining hope, and developing resilience while coping with chronic illness. Empirical evidence indicates that stronger spiritual resources are associated with improved emotional adaptation, better adherence to treatment, and enhanced quality of life among PLHIV (3–5).

However, spiritual aspects of care are often insufficiently integrated into routine HIV services. In many outpatient clinics, clinical interactions tend to focus on pharmacological management and physical complaints, leaving little time to address spiritual or psychosocial concerns. As a result, some patients continue to report limited spiritual fulfillment and diminished quality of life despite consistent engagement with medical care (6–8).

This gap was evident in a preliminary assessment conducted on June 8, 2022, at the Voluntary Counseling and Testing (VCT) Polyclinic of Immanuel Hospital Bandung. Records from the previous three months showed that 169 patients with HIV/AIDS had accessed services, primarily within the age range of 25–55 years. Most patients attended the clinic monthly to obtain antiretroviral medications, with physician consultations occurring mainly when additional health issues arose. A short survey involving 10

patients indicated that several participants experienced moderate to low levels of spirituality and quality of life. These findings highlight the presence of unmet spiritual and psychosocial needs and suggest a disconnect between standard clinical services and holistic patient-centered care.

Addressing this issue requires interventions that are practical, cost-effective, and feasible within existing healthcare systems. Leaflet-based health education was chosen as a suitable strategy because printed materials are inexpensive, widely accessible, and easy to integrate into routine services. Leaflets also enable patients to engage with information independently and repeatedly, supporting reflection and self-management. Previous research has demonstrated that printed educational materials can be effective in chronic disease education and patient empowerment (9,10).

This study aims to evaluate the impact of leaflet-based health education on spiritual needs and quality of life among patients with HIV/AIDS at Immanuel Hospital Bandung. The purpose of this research is to contribute to the development of more holistic HIV care by providing evidence on the role of simple educational interventions in enhancing spiritual well-being and improving overall quality of life for people living with HIV.

## METHODS

### Study Design

This study employed a quantitative pre-experimental design using a one-group pretest-posttest approach. The design was selected to evaluate changes in spiritual needs and quality of life among patients with HIV/AIDS before and after the implementation of leaflet-based health education. By comparing measurements taken prior to and following the intervention within the same group, this design allows assessment of the intervention's effectiveness without involving a comparison group.

### Study Setting and Timeframe

The research was conducted at the Voluntary Counseling and Testing (VCT) Polyclinic of Immanuel Hospital Bandung, Indonesia. Data collection took place in August 2022, following completion of preparatory procedures and ethical approval.

### Population and Sample

The study population consisted of patients diagnosed with HIV/AIDS who were receiving

outpatient care at the VCT Polyclinic of Immanuel Hospital Bandung. A total of 63 respondents were included in the study. Participants were selected based on predefined inclusion criteria, which included confirmed HIV/AIDS diagnosis, active attendance at the VCT clinic, ability to communicate effectively, and willingness to participate. Patients with severe physical or psychological conditions that could interfere with questionnaire completion were excluded.

### Sampling Technique

A purposive sampling method was used to recruit participants. This technique was chosen to ensure that respondents met the specific criteria relevant to the study objectives and were capable of providing reliable information related to spiritual needs and quality of life.

### Research Instruments

Data in this study were collected using structured self-administered questionnaires designed to measure spiritual needs and quality of life among patients living with HIV/AIDS. The instruments consisted of three sections. The first section gathered demographic information, including age, level of education, religious affiliation, and perceived family support, to provide contextual background for the respondents.

The second section focused on spiritual needs, assessing respondents' perceptions of meaning in life, inner peace, hope, and spiritual coping in the context of living with a chronic illness. The third section measured quality of life, covering physical, psychological, and social aspects of daily functioning. The same set of questionnaires was administered during both the pre-intervention and post-intervention phases to ensure consistency in measurement and allow accurate comparison of changes over time. All instruments were presented in clear and simple language to ensure they were easily understood by participants.

### Data Collection Procedure

Data collection was conducted in three stages. First, during the preparation stage, researchers coordinated with clinic staff, prepared research instruments, and provided explanations to potential participants.

Second, during the intervention preparation stage, respondents completed the pretest questionnaires measuring spiritual needs and quality of life.

Third, during the intervention stage, participants received leaflet-based health education containing information related to spiritual coping, self-acceptance, and strategies to enhance quality of life while living with HIV/AIDS. After the intervention period, respondents completed the posttest questionnaires using the same instruments as the pretest.

### Data Analysis

Data analysis was carried out using statistical software. Descriptive (univariate) analysis was applied to summarize respondent characteristics and study variables, including age, education, religious background, and family support. The results of this analysis were presented in the form of frequency distributions and percentages to provide a clear overview of the sample profile. To evaluate the effect of leaflet-based health education, inferential (bivariate) analysis was conducted by comparing pretest and posttest scores of spiritual needs and quality of life. A paired t-test was used to determine whether there were statistically significant differences in mean scores before and after the intervention. The level of statistical significance was set at  $\alpha = 0.05$ . This analytical approach enabled the researchers to assess the effectiveness of the educational intervention in improving spiritual well-being and quality of life among patients with HIV/AIDS.

### Ethical Considerations

Ethical approval was obtained prior to data collection from the relevant institutional authority. All participants received clear verbal and written explanations regarding the study objectives, procedures, potential benefits, and their rights as participants. Written informed consent was obtained from all respondents. Participation was voluntary, and respondents were informed of their right to withdraw at any time without consequences. Confidentiality was strictly maintained by anonymizing data and securely storing research documents.

## RESULTS

### Changes in Spiritual Needs and Quality of Life Before and After the Intervention

Table 1 presents the descriptive statistics and inferential analysis of spiritual needs and quality of life scores among 63 patients with HIV/AIDS before and after receiving leaflet-based health education.

**Table 1. Pre- and Post-Intervention Scores of Spiritual Needs and Quality of Life (n = 63)**

Variable	Measurement	Min-Max	Mean $\pm$ SD	<i>p-value*</i>
Spiritual Needs	Pre-test	1-5	3.51 $\pm$ 0.813	< 0.001
	Post-test	1-5	4.04 $\pm$ 0.718	
Quality of Life	Pre-test	1-5	3.23 $\pm$ 0.774	< 0.001
	Post-test	1-5	3.74 $\pm$ 0.835	

\*Wilcoxon signed-rank test

As shown in Table 1, there was a statistically significant improvement in both spiritual needs and quality of life following the health education intervention. The mean spiritual needs score increased from 3.51 before the intervention to 4.04 after the intervention, indicating enhanced spiritual well-being among participants. Similarly, the mean quality of life score increased from 3.23 to 3.74 after the intervention.

Normality testing indicated that the data were not normally distributed; therefore, the Wilcoxon signed-rank test was applied. The analysis confirmed that the differences between pre-test and post-test scores for both spiritual needs and quality of life were statistically significant ( $p < 0.001$ ).

These findings suggest that leaflet-based health education had a positive and meaningful impact on addressing spiritual needs and improving overall quality of life among patients living with HIV/AIDS.

## DISCUSSION

This study demonstrates that leaflet-based health education has a meaningful impact on both spiritual needs and quality of life among patients living with HIV/AIDS. The findings indicate a significant improvement in spiritual well-being, reflected by an increase in the mean spiritual score from 3.5 before the intervention to 4.0 afterward. This result is particularly relevant given that many people living with HIV/AIDS experience spiritual distress, which has been widely reported in previous studies. Low levels of spirituality are often associated with difficulty accepting the diagnosis, feelings of guilt or punishment related to religious beliefs, and limited family support due to stigma and discrimination (11,12).

The observed improvement suggests that leaflet-based education can serve as an effective medium for addressing spiritual concerns in a simple and non-intrusive manner. By delivering messages

that encourage reflection, acceptance, and hope, the educational materials may have motivated participants to reconnect with spiritual practices such as prayer and reading sacred texts. These activities are recognized as important sources of spiritual strength that help individuals cope with chronic illness, foster self-acceptance, and find meaning in life despite ongoing health challenges (13,14). This finding supports earlier research by Prasojo (15), which emphasizes the role of spirituality in helping patients reframe their illness experience and maintain hope for the future.

In addition to spiritual outcomes, this study also found a significant improvement in overall quality of life, with mean scores increasing from 3.2 to 3.7 following the intervention. Quality of life among people living with HIV/AIDS is a multidimensional construct influenced by physical health, psychological well-being, social relationships, and economic stability. Previous studies have highlighted that depression, lack of social support, and persistent stigma are strongly associated with poorer quality of life in this population (16,17). Social stigma, in particular, continues to be a major burden, as HIV is often misperceived as a consequence of morally judged behaviors, leading to social isolation and reduced self-worth (11).

The improvement in quality of life observed in this study may be closely linked to the enhancement of spiritual well-being. Strengthened spirituality can promote inner peace, emotional stability, and a sense of being valued, which may help individuals better manage stress and social pressure. As spiritual resilience increases, patients may feel more confident in engaging in daily activities, maintaining employment, and sustaining relationships with family and community members key elements of quality of life (18,19). These findings reinforce the interconnectedness of spiritual and psychosocial dimensions in chronic disease management.



Statistical analysis using the Wilcoxon test confirmed that leaflet-based health education had a significant effect on both spiritual needs and quality of life ( $p < 0.001$ ). The leaflet functioned as an educational stimulus that conveyed structured information in a format that was easily accessible and understandable. Through sensory engagement and repeated exposure, the information provided may have contributed to knowledge formation, attitude change, and positive behavioral responses. This mechanism aligns with previous studies showing that spirituality-focused education is associated with improved well-being and quality of life among people living with HIV (20,21).

The findings of this study have important implications for clinical practice. They demonstrate that low-cost and easily implemented educational tools, such as leaflets, can play a meaningful role in promoting holistic care. Integrating spiritual health education into routine HIV services may help bridge the gap between biomedical treatment and patients' psychosocial and spiritual needs. Such an approach not only supports patient empowerment but also contributes to more comprehensive and person-centered HIV care.

## CONCLUSION

This study demonstrates that leaflet-based health education is an effective intervention for improving both spiritual well-being and quality of life among patients living with HIV/AIDS at Immanuel Hospital Bandung. Following the intervention, participants showed a meaningful increase in average spiritual scores as well as an improvement in overall quality of life. The findings indicate that educational support delivered through simple printed materials can positively influence patients' psychosocial and spiritual dimensions of health.

Statistical analysis confirmed that the intervention had a significant effect on spiritual needs and quality of life, highlighting the value of incorporating non-pharmacological, patient-centered strategies alongside routine medical treatment. These results suggest that addressing spiritual and psychosocial aspects of care can enhance patients' coping capacity and overall well-being.

Based on these findings, integrating leaflet-based health education into routine HIV care is recommended as a practical and low-cost

approach to support holistic care. Such interventions may help bridge the gap between clinical treatment and patients' broader needs, contributing to improved quality of life for people living with HIV/AIDS.

## Acknowledgements

The author would like to express sincere appreciation to Institut Kesehatan Immanuel for the institutional support provided during the conduct of this study. Special thanks are extended to Immanuel Hospital Bandung for granting permission and facilitating the research process. The author also gratefully acknowledges all participants for their voluntary involvement and cooperation.

## Funding Statement

This study was funded by Institut Kesehatan Immanuel under Grant No. 106/STIKI/WK.1/LP2M/IV/2022.

## Author Contributions

Saur Mian Sinaga was responsible for the study conception and design, data collection, data analysis and interpretation, manuscript preparation, and critical revision of the article.

## Conflict of Interest

The author declares no conflict of interest related to the conduct, analysis, or publication of this study.

## Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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