



IDEAL Model Education to Increase Knowledge and Self-Care Practices for People with HIV/AIDS (PLWHA): Quasi-Experimental Study

Mentari Chrystiani Lasi¹, Kuswantoro Rusca Putra², Dina Dewi Sartika Lestari Ismail³

¹⁻³ Department of Nursing, Faculty of Health Sciences, Brawijaya University, Malang, Indonesia

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ABSTRACT

People with HIV/AIDS (PLWHA) often have problems with self-care processes due to a lack of knowledge and support from those around them. Education development is needed with the IDEAL model (Include, Discuss, Educate, Assess, Listen), which aims to ensure the continuity of the independent care process at home that PLHIVs carries out with their families. This study aims to determine the effect of providing IDEAL model education on increasing knowledge and self-care practices of people living with HIV/AIDS. The study used a quasi-experiment with a non-equivalent control group using a purposive sampling technique with a total sample of 46 respondents. The results of the t-test in the experimental group's level of knowledge were p-value = 0.000 and self-care p-value = 0.0001 (<0.005); the meaning was an effect before and after giving the intervention. The Manova test results obtained a p-value of 0.133 (> 0.005), meaning interventions. That there was no difference. Educational development using the IDEAL model has been proven to increase the knowledge, abilities, and self-care skills of PLWHA.

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*) corresponding author

Ns. Mentari Chrystiani Lasi, S.Kep

Departemen Keperawatan, Fakultas Ilmu Kesehatan, Universitas Brawijaya Malang

Email: mentarilasi31@gmail.com

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ABSTRAK

Orang Dengan HIV/AIDS (ODHA) sering memiliki masalah dengan proses perawatan diri akibat kurangnya pengetahuan dan dukungan dari orang-orang di sekitarnya. Diperlukan pengembangan Edukasi dengan model IDEAL (*Include, Discuss, Educate, Assess, Listen*) yang bertujuan untuk memastikan kesinambungan proses perawatan secara mandiri di rumah yang dilakukan ODHA bersama keluarga. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian edukasi model IDEAL terhadap peningkatan pengetahuan dan praktik perawatan diri orang dengan HIV/AIDS. Penelitian menggunakan *quasi-experiment* dengan *non-equivalent control group* menggunakan teknik *purposive sampling* dengan jumlah sampel 46 responden yang menjalani. Hasil uji t-test pada kelompok eksperimen tingkat pengetahuan p-value 0,000 dan perawatan diri p-value = 0.0001 (< 0.005), artinya ada pengaruh sebelum dan sesudah diberikan intervensi. Hasil uji Manova didapatkan hasil p-value = 0.133 (> 0.005), artinya tidak ada perbedaan tingkat pengetahuan dan praktik perawatan diri pada kedua kelompok. Pengembangan edukasi dengan model IDEAL terbukti dapat meningkatkan pengetahuan, kemampuan, dan keterampilan perawatan diri ODHA

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INTRODUCTION

HIV/AIDS is still a significant challenge for the health system in terms of prevention, treatment, care, and control of increasing cases (Oskouie et al., 2017; Sari et al., 2019). It is estimated that HIV/AIDS will be the third leading cause of death in middle-class countries by 2030 (Tafazoli & Larki, 2016). The United Nations Program on HIV/AIDS (UNAIDS) reported that in 2019 as many as 38.0 million people were living with HIV, 1.7 million new HIV infections, 690,000 AIDS cases, and 600,000 AIDS-related deaths (UNAIDS, 2020). The Data and Information Center of the Ministry of Health of the Republic of Indonesia informed that in 2019 HIV cases had increased by 50,282 cases compared to 2018 of 46,659 cases, while AIDS cases had decreased in 2018 by 10,190 cases to 7,036 cases in 2019 (Kemenkes RI, 2019). Data from the East Nusa Tenggara Province (NTT) AIDS Prevention Commission (KPA) from 1997 to August 2020 reached 7,234 cases spread across 22 districts. The highest number of death cases was in Belu Regency; 236 people living with HIV died (KPA NTT, 2016). The number of HIV/AIDS cases from April to May 2022 was 175 at the Mgr. Gabriel Manek, SVD Atambua.

HIV/AIDS still requires attention from various parties because of the high number of positive cases and deaths, which will affect the quality of life of people living with HIV/AIDS (PLWHA) (Lindayani et al., 2018; Ghiasvand et al., 2019). The quality of life of PLWHA is essential to assess as an evaluation of the success of providing medical intervention (Cooper et al., 2017). PLHIV also often experiences opportunistic infections such as hepatitis, tuberculosis, mental disorders, and other comorbidities (Priharwanti & Raharjo, 2018). These comorbidities provide additional challenges for PLHIV, such as managing symptoms of chronic illnesses that differ from HIV/AIDS. PLWHA experience complex health problems, requiring interventions to optimize their health conditions.

Self-care practices are the primary interventions that people living with HIV need to carry out to help prevent disease transmission and improve health status and quality of life (Kartono et al., 2019; Farzaneh et al., 2019). The study showed an increase in the quality of life for 57 people (8.7%) after being given self-care interventions (Fauzi et al., 2021). The results of other studies also found that self-care practices are essential and remain challenging for PLWHA to maintain their quality of life (Webel et al., 2012; Hassanpourdehkordi et al., 2019).

Self-care practice is the willingness and awareness of individuals, families, communities, and health workers to overcome disease, improve health status, and prevent complications with or without help from health workers (Oskouie et al., 2017; Kartono et al., 2019). Self-care practices that need to be carried out by PLWHA are adherence to medication regimens, routine control, managing stress, dietary habits, physical activity, exercise, engaging in spiritual activities, symptom management, and seeking information related to disease (Okoronkwo, 2015; Ibrahim et al., 2021). Factors that influence the self-care practices of PLWHA are knowledge, compliance, social support, health status, and economic status (Wang et al., 2019; Inriyana et al., 2021).

PLWHA are often not optimal in carrying out self-care practices due to several obstacles, namely based on the results of research PLWHA hide health status in as many as 97 people (71.8%), psychological problems such as loneliness, sadness, and depression as many as 69 people (51.1%), low level of knowledge as many as 43 people (31.9%) (Alencar et al., 2019). In addition, several studies have found obstacles,

namely negative stigma, drug addiction, psychological disorders (depression, anxiety, hopelessness, and disappointment), side effects of ART drugs, feeling cursed by God, and financial problems (Oskouie et al., 2017; Duggal et al., 2018; Alawiyah et al., 2021). The impact of poor self-care from PLWHA causes physical, psychological, social, and spiritual problems for PLWHA (Alawiyah et al., 2021).

The many health problems experienced by PLWHA require appropriate interventions to increase knowledge and practice of self-care (Fauzi et al., 2021). One of the interventions that can improve self-care for PLWHA is providing health education through education (Millard et al., 2013; Nhavoto et al., 2017). The development of an educational model with the IDEAL model approach was based on the IDEAL discharge planning model (Planning, 2013). IDEAL stands for Include, Discuss, Educate, Assess and Listen. This education model is appropriate for PLWHA because this model involves PLHA and families actively collaborating in implementing self-care practices with health workers (Luther et al., 2019). In addition, this model can establish two-way communication between health workers and PLWHA and their families regarding disease conditions. This not only PLWHA but the family is also actively involved in helping PLHIV carry out self-care. PLWHA and families can also be trained to recognize the symptoms felt by PLWHA to be informed to health workers. The results of the study show that health education using the IDEAL model can reduce hospitalization return visits, and burden of care costs for hospitals, patients, and families and improve patient self-care while at home (Luther et al., 2019).

Educating PLWHA and families with chronic illnesses such as HIV/AIDS about self-care is an essential function and role of nurses (Sinanaj et al., 2018). Information support can be the right strategy to increase knowledge and self-care practices for PLWHA. Management of PLWHA self-care behavior aims to reduce late complications, improve quality of life and increase PLWHA's satisfaction with services (Ibrahim et al., 2011). This study aims to determine the effect of the IDEAL education model on the knowledge and self-care practices of people living with HIV/AIDS (PLWHA).

METHOD

Research design

The research design used is quantitative. The type of research used was a quasi-experimental design with a pretest and posttest control group design. In this study, the experimental group and control group were formed to determine the effect that occurred as a result of the treatment. The control and experimental groups will be given a pretest and posttest. The independent variable in this study is IDEAL Model-based Education. The research was conducted in August 2022 to November 2022 in the VCT Love Poly Room at Mgr. Gabriel Manek, Atambua.

Respondent

The population in this study amounted to 103 people with a total sample of 46 people, every 23 people for each group. Selection of respondents using a sampling technique that is purposive sampling. The inclusion criteria in this study were PLWHA who live with their families (nuclear family and biological families who take care of PLWHA), are willing to be respondents, and families who are willing to

assist PLWHA. If the respondent has fulfilled the inclusion criteria, then the researcher will explain the intent, purpose, benefits, and research process to be carried out, as well as the rights and obligations of being a respondent.

For prospective respondents who are willing, the researcher then asks them to sign an informed consent form, then is randomly divided them into an experimental group and a control group. The independent variable in this study is the IDEAL model of education, which includes the process of including, discussing, educating, assessing, and listening.

Interventions

The intervention carried out in this study was providing education on the IDEAL model to PLWHA regarding HIV/AIDS and self-care practices. The intervention was given once a week for 14 weeks. The posttest was carried out after the intervention was given, namely at week 14. The duration of time required was 30 minutes for each session. The control group and the experimental group will be given a pretest and posttest. The control group will be given an intervention in the form of education using the lecture method without an approach using the IDEAL model before the posttest. Only PLWHA are involved in the educational process without actively involving the family. The experimental group will be given an intervention in the form of education using the lecture method.

The first session introduced the basic concepts of HIV/AIDS to PLWHA and their families. The second session introduced self-care practices related to medication adherence and medication control programs for PLWHA and their families. The third session introduced self-care practices related to a balanced nutritional diet, rest and sleep patterns, physical activity and sports, and healthy lifestyle behaviors such as avoiding cigarette smoke, alcohol, and excessive consumption of caffeine for PLWHA and their families. The fourth session introduced self-care practices related to symptom management and stress management for PLWHA and their families.

Data collection

Respondents who meet the inclusion criteria will be collected and given an explanation of the purpose, benefits, and research procedures. The experimental group will be given a pre-test by filling out a knowledge and self-care management questionnaire for 30 minutes; during and after completing the questionnaire, the researcher will check whether the respondent has difficulty filling out the questionnaire, such as unclear writing, data completeness, and completeness of the questionnaire sheet. If the questionnaire is incomplete, it will be given again, and if there is data that has not been filled in, the researcher will ask the respondent to complete it.

Instrument

Researchers will collect data using the HIV Knowledge Questionnaire (HIV-KQ-18), which was adopted by (Arifin et al., 2022), and the Self-care of Chronic Illness Inventory (SC-CII) reliability test used Cronbach's alpha with results of 0,74, which was adopted by (Riegel, 2018). The HIV Knowledge Questionnaire (HIV-KQ-18) reliability test used Cronbach's alpha with results of 0.75 and 0.71 which was adopted by (Arifin et al., 2022).

Data Analysis

Data analysis used univariate, bivariate, and multivariate tests. The univariate test uses demographic data, including age, gender, last education, occupation, knowledge and implementation of self-care. Bivariate test using repeated ANOVA test to see the effect and paired t test to see the difference ($\alpha = 0.05$).

Ethical Consideration

This research was conducted in Belu Regency, East Nusa Tenggara Province, from August to October 2022. This research has been carried out ethical review first and declared ethically feasible by the Health Research Ethics Commission, Faculty of Health Sciences, Brawijaya University with number 3967/UNI10.F17.10/TU/2020. Researchers will take care confidentiality by not disclosing the identity and all information obtained from respondent.

RESULTS

Table 1. Respondent characteristics (n = 46)

Characteristics of Respondent	Category	Experiment		Control	
		n	%	n	%
Age	Late Teens	3	13.0	7	30.4
	Early Adult	10	43.5	12	52.2
	Late Adult	9	39.1	2	8.7
	Early Seniors	1	4.3	2	8.7
Gender	Male	9	39.1	11	47.8
	Female	14	60.9	12	52.2
Education	Primary School	4	17.4	2	8.7
	Junior High School	7	30.4	6	26.1
	Senior High School	10	43.5	13	56.5
	College	2	8.7	2	8.7
Profession	Doesn't Work	2	8.7	3	13.0
	Private	3	13.0	6	17.4
	Entrepreneur			2	8.7
	Government Employees	2	8.7		47.8
Marital Status	Housewife	13	56.5	11	13.0
	Others	3	13.0		
	Single	6	26.1	8	34.8
Suspected Transmission	Married	17	73.9	15	65.2
	Sexual Intercourse	18	78.3	22	95.7
	Tattoo	4	17.4	1	4.3
Long Sick	Syringe	1	4.3		
	< 5 Year	11	47.8	16	69.6
	> 5 Year	12	52.2	7	30.4

Table 2. Analysis of Increasing in Levels of Knowledge and Self-Care Practices

Variable	Group	p-value
Knowledge	Experiment	0.000
	Control	0.000
Self-care Practice	Experiment	0.000
	Control	0.000

Table 3. Analysis of Differences in Levels of Knowledge and Self-Care Practices

Variable	Group	Mean±SD	p-value
Knowledge	Experiment	4.73±4.7	0.000
	Control	4.95±4.7	0.000
Self-care Practice	Experiment	13.4±17.1	0.001
	Control	12.9±13.5	0.000

Table 1. illustrates the gender of the respondents, mostly women, with as many as 14 people (60.9%) in the experimental group and 12 (52.2%) people in the control group. The education of the last respondents was primarily high school, with ten people (43.5%) in the experimental group and 13 people (56.5%) in the control group. Most of the respondent's occupations were 13 people (56.5%) in the experimental group and 11 people (13.0%) in the control group. Most of the respondent's marital status were married to as many as 17 people (73.3%) in the experimental group and as many as 15 people (65.2%) in the control group. Alleged transmission of respondents mostly from sexual contact, as many as 18 people (78.3%) in the experimental group and as many as 22 people (95.7%) in the control group.

Table 2. Table 2. illustrates the effect of increasing knowledge in the experimental group before and after providing education based on the IDEAL Model with a significant value of 0.000 ($p > 0.05$). There was an effect of increasing knowledge in the control group before and after giving education using leaflets with a significant value of 0.000 ($p > 0.05$).

Table 3. illustrates the effect of difference knowledge in the experimental group before and after providing education based on the IDEAL Model with a significant value of 0.000 ($p > 0.05$). There was an effect of increasing knowledge in the control group before and after giving education using leaflets with a significant value of 0.000 ($p > 0.05$). There was an effect of difference self-care practices in the experimental group before and after being given education based on the IDEAL Model with a significant value of 0.001 ($p > 0.05$). There was an effect of increasing self-care practices in the control group before and after providing education using leaflets with a significant value of 0.000 ($p > 0.05$).

DISCUSSION

The results of the repeated Anova test statistical analysis showed differences in the knowledge and practice of self-care for PLHIV before and after the intervention was given with a value of $p = 0.000$ ($p < 0.05$). This shows the effect of providing IDEAL Model-Based Education on increasing knowledge and implementing self-care. The results of previous research have never been developed in cases of HIV/AIDS in providing education. However, other studies say that providing education is very important for PLHIV and their families to improve their thinking and understanding of the information provided (Khawcharoenporn et al., 2020). Education involving PLHIV and families can also improve the ability to make decisions regarding the care and treatment process that has been programmed. Providing continuous education can change behavior, especially in utilizing health services optimally can improve the quality of life of PLHIV by seeking services medical staff for care and treatment (Youssef et al., 2021).

Knowledge is a collection of information obtained through experience or learning of objects through the senses they have (eyes, nose, ears, and so on) (Mohajan, 2016; Bolisani & Bratianu, 2018). Knowledge is a critical domain for forming one's actions through various things that a person gets through the five senses. Knowledge related to HIV/AIDS is essential to increase PLWHA, their families, and communities. Adequate knowledge can help PLHIV carry out self-care properly and reduce negative stigma from those around them. The knowledge that PLWHA must have is related to HIV disease, causes, modes of transmission, prevention, and treatment methods related to HIV care and types of services (Stoskopf & Kim, 2003; Najmah et al., 2020). PLWHA who have a good level of knowledge about HIV/AIDS make them more confident in carrying out self-care independently (Villa et al., 2020).

The IDEAL model is an intervention model that involves patients and families as health partners in implementing self-care programs in discharge planning (Luther et al., 2019). IDEAL model-based education provides health information to increase patient and family knowledge and confidence in implementing health programs at home (Friebe, 2018; Luther et al., 2019). The IDEAL model aims to involve patients and family members in moving the treatment process from hospital to home to reduce side effects and complications and train PLHIV to carry out self-care independently at home (Friebe, 2018). The implementation of education with this model consists of five components, namely include, discuss, educate, assess and listen (Planning, 2013; Luther et al., 2019).

Include, nurses involving PLWHA and families as partners to participate in the care process at home actively. In addition, treatment needs to identify who is involved in helping PLWHA carry out the treatment (Luther et al., 2019). Discuss, nurses provide explanations to PLWHA and families regarding the following five outcomes: a) nurses need to explain self-care that needs to be done at home, the support that people with HIV need, the diet that people with HIV need to do, and the activities that people with HIV can do to improve their health. b) The nurse needs to explain the treatment regimen, which includes the name of the drug, dosage, route, time to take the drug, possible side effects, and how to handle it. c) Nurses need to explain how to manage symptoms of the disease so that PLWHA and their families can recognize and know how to deal with the symptoms they are feeling. In addition, nurses can provide contact information for health workers so they can be contacted if there are problems that need to be handled with others. d) Nurses must explain the results of examinations related to health conditions to PLWHA and their families. If the examination results are unavailable, the nurse must convey when and where the results can be obtained. e) Nurses need to explain to PLWHA and their families the importance of re-control and what needs to be prepared (Luther et al., 2019).

Educate, nurses and provide information through therapeutic communication about the patient's disease condition, how to care for themselves at home, and the adverse effects of health conditions if you do not take good care of yourself (Luther et al., 2019). Information is provided briefly, concisely, and clearly using language that is easily understood and understood by PLWHA and their families. Nurses also need to provide motivation and encouragement for PLWHA and their families, so they are more confident in carrying out self-care at home. Assess, the nurse evaluates the patient's understanding of the information provided by re-validating (Luther et al., 2019). The information provided must be done in stages so that it is easy for PLHIV and their

families to remember it when re-validating. Listen, the nurse hears and respects the patient's and family's goals in self-care practices. Nurses need to ask about the problems PLWHA and their families face in carrying out self-care at home. This can help nurses find the cause of problems and train them to communicate well and recognize the disease problems faced by PLWHA.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on the results of this study, it was found that providing education increased the knowledge and implementation of self-care for PLHIV in both the experimental and the control groups. There is a difference in the level of knowledge between the experimental group and the control group. IDEAL Model-based education is a learning activity to provide knowledge, skills, beliefs, habits, values, morals, and character building. Based on the results of educational research based on the IDEAL Model useful for PLWHA and their families to make decisions for every problem they face, especially health problems. In addition, education based on the IDEAL Model is a means to socialize PLWHA and families to maintain smoothness and stability in routine care and treatment.

Suggestions

Further research can be carried out by comparing other educational models with the IDEAL model of education to see which education has a more significant influence in increasing the knowledge and implementation of self-care for PLWHA

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