



ANALYSIS OF THE APPLICATION OF «MY THERAPY APPLICATION» TO THE COMPLIANCE OF DRINKING (ARV) IN HIV/AIDS PEOPLE IN KOMPEDA, SURABAYA

Devy Vatma Rositasari, Erika Martining Wardani, Riska Rohmawati, Nur Hidaayah
Nahdlatul Ulama University in Surabaya, Indonesia

Анализ применения приложения «Моя терапия» для улучшения приверженности АРВ людей с ВИЧ/СПИДом в Компедэ, Сурабайя

Деви Ватма Роситасари, Эрика Мартининг Вардани, Риска Рохмавати, Нур Хидаяа
Университет Нахдлатул Улама в Сурабае, Индонезия

Abstract

HIV/AIDS sufferers are required to take antiretrovirals (ARVs), on time and with discipline, but many sufferers will forget to take their medication. In overcoming this problem by providing the my therapy application. The aim of this study was to analyze the effect of applying the my therapy application on adherence to taking ARV medication in HIV/AIDS people at Kompeda Surabaya.

The research design used the Pre-Experiment, with the one group pre-test and post-test design approaches. The study population consisted of 74 people with a sample size of 62 respondents using probability sampling technique. The variables of this study are the application of digital my therapy and adherence to taking ARV medication. Data analysis used the Wilcoxon Signed Rank Test.

The results of this study were obtained after being given the application of the my therapy application to people with HIV/AIDS with the results of the statistical wilcoxon test obtained a p -value of 0.000, it can be concluded that H_1 is accepted meaning that there is an effect of the application of my therapy on adherence to taking ARV medication in people with HIV/AIDS at Kompeda Surabaya.

The conclusion in this study was that before the intervention was given, most patients did not adhere to taking medication. Therefore, it is hoped that HIV/AIDS patients can maintain adherence to taking ARV medication, so that it can inhibit the growth of the HIV/AIDS virus. It is hoped that Komeda Surabaya will be able to overcome the importance of special treatment with education for adherence to taking ARV medication for people with HIV/AIDS at Kompeda Surabaya.

Key words: My Therapy Application, Adherence to Taking ARV Medication.

Introduction

HIV is a health problem that threatens Indonesia and even other countries. HIV (Human Immunodeficiency Virus) is a virus that attacks the human im-

Резюме

Большим ВИЧ/СПИД необходимо своевременно и дисциплинированно принимать антиретровирусные препараты, но многие больные забывают про прием лекарств. Чтобы преодолеть эту проблему, пациентам предоставлялось приложение «Моя терапия».

Цель: проанализировать влияние приложения «Моя терапия» на приверженность к приему антиретровирусных препаратов у людей с ВИЧ/СПИД в Компедэ, Сурабайя.

Дизайн исследования включал до- и послетестовое исследование одной группы пациентов. Исследуемая популяция состояла из 74 человек, размер выборки составил 62 респондента, отобранных с использованием метода вероятностной выборки. В исследовании оценивалось применение приложения «Моя терапия» и соблюдение режима приема антиретровирусных препаратов. Для статистического анализа данных использовался ранговый тест Вилоксона.

Результаты: были получены после применения приложения «Моя терапия» у людей, живущих с ВИЧ/СПИД, при этом достоверность статистического теста Вилоксона составила $p=0,000$, что позволяет сделать вывод об эффективном влиянии приложения «Моя терапия» на приверженность к приему антиретровирусных препаратов у людей с ВИЧ/СПИД в Компедэ, Сурабайя.

Выводы: до вмешательства большинство пациентов не придерживались режима приема лекарств. Приложение «Моя терапия» позволяет пациентам с ВИЧ/СПИД контролировать своевременный прием антиретровирусных препаратов для успешного подавления репликации ВИЧ. Надеемся, что в Компедэ, Сурабайя будет решена проблема приверженности антиретровирусной терапии с помощью обучения и использования приложения «Моя терапия».

Ключевые слова: приложение «Моя терапия», приверженность приему АРВ-препаратов.

mune system and then causes AIDS. AIDS (Acquired Immuno Deficiency Syndrome) is a collection of disease symptoms caused by the HIV virus (Takaingan et al., 2016). HIV/AIDS sufferers need treatment with

Antiretroviral (ARV) which must be consumed for life, on time and discipline, but sufferers sometimes forget to take it. Patients who do not adhere to taking medication, the virus can develop rapidly and the immune system in the body can weaken (Tae et al., 2019). There are still many patients who are not taking ARV drugs regularly. HIV/AIDS patients need a Medication Supervisor (PMO) because the role of PMO is so important for HIV/AIDS patients regarding the success of ARV treatment. Medication Supervisor (PMO) is someone who is entrusted with supervising and monitoring sufferers with the conditions given. Because the presence of PMO is expected to increase patient compliance to take medication regularly according to the recommendations given (Harahap et al., 2016). Based on data obtained from Kompeda, only 61 out of 275 HIV sufferers took ARV drugs regularly.

According to the World Health Organization (WHO) there were 12.9 million people receiving ARV treatment worldwide by the end of 2013. Then at the end of 2014 as many as 14.9 million people were receiving ARV treatment and WHO predicts that by 2015, as many as 15 million people will receive ARV treatment (WHO, 2014).

The incidence rate according to data from the World Health Organization data on people infected with HIV/AIDS around the world is 44 million (WHO, 2022). Then from the data (Ministry of Health, 2022) it was found that the number of PLHIV in the period January – March 2022 was 10,525 people out of 941,973 people who were tested for HIV, and as many as 8,784 people who received ARV treatment spread across various provinces. Then in 2022 there will be 137,960 cases of HIV/AIDS in East Java (RI Ministry of Health, 2022). According to data presented by the Surabaya City Health Office in 2019 there were 1,009 cases of HIV and there were 334 cases of AIDS (DINKES, 2019). In KOMPEDA itself, there have been 275 HIV positive cases and more than 20 respondents who did not comply with taking their medication.

According to Eddie (2020), explained that there are 9 factors that can affect patient adherence in drug use. Socio-demographic factors, socio-economic, patient characteristics, psycho-social, drug characteristics, disease characteristics, facilities and health workers characteristics, communication, and social capital. Most often what causes patient non-compliance in taking medication is forgetting when it's time to take medication and it's past the appointed hour. The impact of patient non-compliance in taking ARV drugs can affect the CD4 in the body. If CD4 decreases to 200 cells/ml the immune system cannot work optimally (Triani Banna, 2019).

The digital my therapy application is a reminder application for drug consumption in the form of an automatic reminder alarm (Alfian & Wardati, 2016). Services in the form of this application can be owned by companions/sufferers so that they can monitor or

monitor the level of adherence to taking medication for HIV/AIDS patients.

Research methods

This research uses Pre-Experimental research, namely the research design with a one-group pre-test and post-test design approach. This study had 74 respondents who were not compliant in taking medication.

This research uses probability sampling technique. The number obtained in this study was 62 respondents. The criteria for respondents were HIV/AIDS sufferers who carried out examinations at the XXX Surabaya NGO. The instrument used to measure adherence to medication is the Morisky Medication Adherence Scale. Based on the data normality test with Shapiro-Wilk, a p-value of 0.000 (<0.005) is obtained, the data is not normally distributed. The data is transformed and the data p-value is 0.000 (<0.005). Because the data is still not normally distributed, the data analysis uses an alternative test, namely the Wilcoxon test. This research was declared ethically feasible by the Health Research Ethics Commission at Nahdlatul Ulama University in Surabaya with a decision letter no. 0143/EC/KEPK/UNUSA/2023.

Research result

General data

This general data shows the results of the frequency distribution of respondents who were studied in patients at Kompeda Surabaya.

Table 1

Frequency Distribution of Respondent Characteristic Data

Characteristics	Frequency	Percentage(%)
<i>Age</i>		
18 – 25 years	7	11,3
26 – 35 years	21	33,9
36 – 45 years	18	29,0
46 – 55 years	16	25,8
Total	62	100,0
<i>Gender</i>		
Man	27	38,0
Woman	35	49,3
Total	62	100,0
<i>Education</i>		
Base	34	54,8
Intermediate	17	27,4
Tall	11	17,7
Total	63	100,0
<i>Work</i>		
Doesn't work	2	2,8
Private	21	29,6
Trader	16	22,5
Other	23	32,4
Total	62	100,0

Source: Primary Data, 2023

Based on table 1 data, it shows that as many as 62 respondents, almost half (33.9%) are aged around 26-35 years. That of the 62 respondents, almost half (49.3%) were female. that out of 62 respondents most (54.8%) had basic education (elementary and junior high). shows that of the 62 respondents almost half (32.4%) work in other fields.

Custom Data

Characteristics of Respondents Compliance with pre-intervention ARV medication Application of my therapy on HIV/AIDS in Xxx Surabaya

Obedience	Frequency	Percentage (%)
Low	0	0
Currently	41	66.1
Tall	21	33.9
Total	62	100.0

Source: Primary Data, 2023

Based on table 2, it shows that almost all (66.1%) adherence to taking ARV medication before the intervention of giving the my therapy application has a moderate level of adherence.

Characteristics Compliance with taking ARV medication after the intervention of giving the my therapy application to HIV/AIDS at Xxx Surabaya

Obedience	Frequency	Percentage (%)
Low	0	0
Currently	0	0
Tall	62	100.0
Total	62	100.0

Source: Primary Data, 2023

Based on table 3, it shows that adherence to taking ARV medication after the intervention of giving the my therapy application, all (100%) of respondents have a high level of adherence.

Table 4

Analysis of the Application of mytherapy on adherence to taking medication (ARV) in HIV/AIDS people in Xxx Surabaya

Compliance with taking ARV drugs	Pre		Post	
	f	(%)	f	(%)
Low	0	0	0	0
Currently	41	66,1	0	0
Tall	21	33.9	62	100.0
Total	62	100.0	62	100.0
Means	2.34		3.00	
Median	2.00		3.00	
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Source: Primary Data 2023

Based on table 4 above, it can be seen that there is an effect of the my therapy application. The results of the wilcoxon test for adherence to taking ARV medication obtained a p-value of 0.000 p-value less = 0.05, so it can be concluded that there is an influence from the application of my therapy application on adherence to taking ARV medication in HIV/AIDS people in Xxx Surabaya.

Discussion

Compliance with taking medication before being given the my therapy application to people with HIV/AIDS

Based on the research, almost all of the respondents (66.1%) had a moderate level of adherence to taking medication.

Patient compliance is the main factor determining the success of therapy. Good adherence in carrying out therapy can affect blood pressure and can gradually prevent complications. Patient non-compliance is a serious problem faced by health workers (Al Rashid et al., 2022). Compliance is the degree to which the patient follows clinical recommendations from the treating doctor to the extent that the patient's behavior is in accordance with the provisions given by health professionals. Compliance means using the drug exactly according to the rules, namely the right drug, the right time and the right way to treat HIV infection with drugs. ARVs do not kill the HIV virus, but can slow down the growth of the virus, the time for the growth of the virus is slowed down, so is HIV disease (Triani Banna, 2019). Compliance (adherence) to therapy is a condition where the patient adheres to his medication on the basis of his own awareness, not just because he obeys the doctor's orders. Compliance should always be monitored and evaluated regularly at every visit. ARV therapy failure is often caused by patient non-compliance in taking ARV drugs (Triani Banna, 2019).

According to research conducted by (Fatimatuz-zahro, Bagoes Widjanarko, Zahroh Shaluhiah, 2023) before being given the IMUT (Remember Taking Medication) ARV application, it was shown that out of 30 respondents some respondents were quite compliant in ARV treatment, namely 19 respondents (63.3%), 6 respondents (20%) were good at ARV treatment and 5 respondents (16.7) less in the treatment of respondents. In this study, the researchers argued that before being given the IMUT (Remember to Take Medication) ARV application, the average respondent was quite compliant in treatment. This is because HIV/AIDS patients have boredom and boredom with HIV/AIDS treatment, which causes non-adherence in treatment, with table 5.5 showing that most (66.1%) respondents almost all have a moderate level of adherence. The other factors that can affect non-compliance in

taking medication according to Green are influenced by internal factors (predisposing factors) including patient factors, condition factors, disease and therapy factors, while external factors (enabling factors and reinforcing factors) include health service system factors and socio-economic factors. Based on previous studies conducted in Depok and Bangladesh, it showed that age, gender, ethnicity, education, occupation, duration of the disease and beliefs were internal factors that had a dominant relationship with the level of patient adherence. (Pujasari et al., 2015) China, was caused by a novel betacoronavirus, the 2019 novel coronavirus (2019-nCoV). Age is getting older, the memory will be reduced according to table 5.1, most of the respondents are aged 26-35 years. Then for gender also has an effect on non-adherence to taking medication, in accordance with the results of the study that almost half of the respondents were female. Whereas someone who has a low education will also affect non-adherence in taking medication which is in accordance with the results of the study that most have basic education (elementary and junior high school), and for work it also influences which is in line with the results of the research which almost all work in other fields.

Compliance with taking medication after being given the my therapy application to people with HIV/AIDS

Based on the research, it shows that the frequency distribution of the level of adherence to taking medication after being given the my therapy application to people with HIV/AIDS (100%) does not forget to take medication. Increasing the respondent's medication adherence can improve the patient's quality of life. ARV therapy is needed to help restore immunity so that it can reduce the possibility of OIs, improve quality of life, and reduce morbidity and mortality (Triani Banna, 2019). According to (Guo et al., 2018) cellular applications derived from cellular phones are very helpful in improving the quality of life for a person living with HIV/AIDS. The theory is supported in research (Nuraidah, 2019) said that the growing development of mobile application technology is driving innovation in psychosocial health research, behavior and interventions as part of a broader "mHealth" agenda. According to research conducted by (Hardani et al., 2023) In today's era, technology is very advanced so that people can easily obtain information related to HIV/AIDS via the internet.

Based on the research results and theory, the researchers argue that after being given the application of the my therapy application the adherence to taking ARV medication in HIV/AIDS patients has increased. This increased adherence to taking medication is due to the features in the application where if it is scheduled to take medication a notification will appear.

Analysis of the application of the my therapy application on medication adherence (ARV) among HIV/AIDS people in Xxx Surabaya

Based on the results, the researchers showed that of the 62 respondents before the intervention regarding the application of the my therapy application, almost all (66.1%) had a moderate level of adherence to taking medication and after the intervention was carried out the application of the my therapy application, all (100%) of the respondents had a high level of adherence to taking medication.

After being tested statistically using the Wilcoxon test, the results obtained were a p-value of 0.000, a p-value lacking $\alpha = 0.05$, it can be concluded that H-rejected and H-accepted, which means that there is an effect of the application of the my therapy application on adherence to taking ARV medication in HIV/AIDS people in Xxx Surabaya. This is in line with research (Galistiani & Mulyaningsih, 2013) There are many factors that can affect adherence to taking medication in HIV/AIDS patients, for example side effects, difficulty in getting medication, high prices for drugs, forgetting to take medication or being too busy, fear of their status being revealed, not understanding treatment, depression/despair, and distrust of drugs. Patient adherence to ARV therapy includes maximizing and long-lasting suppression of viral replication, reducing damage to CD4 cells, preventing viral resistance, reinforcing immunity, and slowing disease progression. The results of patient adherence to the use of ARV drugs was 77.0% and the factors that influenced patient adherence were gender, level of education, treatment for HIV and other infections, ability to consume ARVs and types of ARV drugs (Hidayati et al., 2018).

Closing

1. HIV/AIDS patients before being given the my therapy application intervention, almost all of them had a moderate level of adherence (66.1%).

2. All HIV/AIDS patients after being given the my therapy application intervention had a high level of adherence (100%).

3. There is an effect of the application of the my therapy application on adherence to taking ARV medication in HIV/AIDS people in Xxx Surabaya.

Statements of contracting interest

There are no potential conflicts to declare

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Confession

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The author's contribution

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Team of authors:

Devy Vatma Rositasari – Student of Bachelor of Nursing Study Program, Faculty of Nursing and Midwifery Nahdlatul Ulama University in Surabaya, Indonesia, E-mail: devyvatma053.ns19@student.ac.id

Erika Martining Wardani – Bachelor of Nursing Study Program, Faculty of Nursing and Midwifery Nahdlatul Ulama University in Surabaya, Indonesia, E-mail: erika@unusa.ac.id

Riska Rohmawati – Bachelor of Nursing Study Program, Faculty of Nursing and Midwifery Nahdlatul Ulama University in Surabaya, Indonesia, E-mail: riskarohmawati@unusa.ac.id

Nur Hidayah – Bachelor of Nursing Study Program, Faculty of Nursing and Midwifery Nahdlatul Ulama University in Surabaya, Indonesia, E-mail: nurhidayah@unusa.ac.id

Авторский коллектив:

Девы Ватма Роситасари – студентка программы бакалавриата по сестринскому делу факультета сестринского дела и акушерства Университета Нахдлатул Улама в Сурабае, Индонезия, e-mail: devyvatma053.ns19@student.ac.id

Эрика Мартининг Вардани – бакалавр программы обучения сестринскому делу факультета сестринского дела и акушерства Университета Нахдлатул Улама в Сурабае, Индонезия, e-mail: erika@unusa.ac.id

Риска Рохмавати – бакалавр программы обучения сестринскому делу факультета сестринского дела и акушерства Университета Нахдлатул Улама в Сурабае, Индонезия, e-mail: Riskarohmawati@unusa.ac.id

Нур Хидаяа – бакалавр программы обучения по сестринскому делу факультета сестринского дела и акушерства Университета Нахдлатул Улама в Сурабае, Индонезия, e-mail: nurhidayah@unusa.ac.id