

# Empathic love therapy for adolescents living with HIV in Surabaya, Indonesia

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## Abstract

**Introduction:** Adolescents with human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) do not only experience physical pain. They are also vulnerable to psychological stress. One of the emotional problems impacting adolescents is depression, as taking life-long medications makes teens depressed. One of non-pharmacological therapies that can be applied is empathic love therapy (ELT). This study was to determine the effectiveness of ELT for adolescents living with HIV in Surabaya, Indonesia.

**Material and methods:** A quasi-experimental study was conducted among 240 HIV-positive adolescents. A sample of 150 respondents was divided into 2 sub-groups, i.e., control and intervention groups, using simple random sampling technique. Data were collected by administering depression anxiety stress scales (DASS) questionnaire and medication adherence questionnaire.

**Results:** The results were analyzed using Wilcoxon test, and revealed a significant difference in depression, anxiety, and stress levels between pre-test and post-test results, with *p*-value of 0.000 (*p* < 0.05). Similarly, the results of Wilcoxon test showed that *p*-value for medication adherence was 0.000 (*p* < 0.05).

**Conclusions:** ELT is effective in adolescents with HIV in reducing depression and improving medication adherence.

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**Key words:** ELT, adolescents, depression, taking drug.

## Introduction

Adolescents with human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) do not only experience physical pain. They are also vulnerable to psychological stress. One of the emotional problems often faced by adolescents is depression. Additionally, they experience psychological, social, and biological problems [1]. According to UNICEF records in 2017, AIDS-related deaths among adolescents have increased over the last decade, and in 2018, 37.9 million people worldwide were living with

HIV/AIDS, including 1.7 million children [2]. The number of adolescents infected with HIV in Indonesia is increasing, with an annual prevalence rate of around 3.2-3.8%. Until April 2017, there were 7,329 teenagers infected with HIV, and 2,355 of them had AIDS [3]. Data recorded as many as 260 people, of whom 126 (48.5%) were teenagers [4]. According to Surabaya Health Office, the numbers of HIV-positive adolescents in the city of Surabaya in 2020 were: aged 12-15 years – 27.5%, aged 15-18 years – 72.3%, and aged 18-21 years – 80.7% [5].

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Depression in adolescents can be caused by biological, genetic, and psycho-social factors. Of these three factors psycho-social stressors are the causes of depression in adolescents, especially in teenagers with HIV/AIDS who must obtain treatment immediately [6]. The causes of depression in adolescents include initial diagnosis of HIV, family and friends reaction on the news they are HIV-positive, side effects of antiretroviral (ARV) drugs (some ARV drugs have a risk of developing psychiatric problems), death of a teenage peer, diagnosis of AIDS, re-socializing with surrounding community, such as return to work or school and major life changes (e.g., pregnancy, birth, relocation, job change, job loss, relationship ending, or divorce) [7, 8]. Psycho-social stress factors experienced by a teenager can come from the teenager himself, parents, friends, and environment. Lack of support from the surroundings (i.e., material, informational, emotional, social, or spiritual support) worsen quality of life of ODHA (people living with HIV/AIDS) [9]. ODHA can be treated with ARV therapy to reduce the virus in the body, so that it does not enter into AIDS stage, while people with AIDS require ARV treatment to reduce complications. Side effects of ARV drugs in adolescents impact they adherence to medications; they feel also bored because they have to take the drugs every 12 hours for life-time [10].

Non-pharmacological therapy, such as empathic love therapy (ELT), is a preventive measure to avoid emotional disorders often experienced, leading to self-acceptance among adolescents, and to prevent the emergence of more severe mental disorders. ELT sessions help to understand weaknesses and various traumatic events experienced, guiding patients to find strengths and positive aspects within themselves [11]. Several previous studies showed effectiveness of this therapy in reducing anxiety in stuttering patients [12]. Based on the above background, the current study was conducted to investigate the effectiveness of ELT for adolescents living with HIV in Surabaya, Indonesia.

## Material and methods

### General background of research

This study employed a quasi-experimental method with a pre-experimental design using pre- and post-tests.

### Sample of research

Population of this study included 240 adolescents living with HIV in the city of Surabaya from January to August, 2022, with a sample of 150 respondents chosen using simple random sampling technique.

### Instrument and procedures

Depression anxiety stress scales (DASS) questionnaire and medication adherence questionnaire were applied in the study. DASS is one of the most commonly used measurement tools. Is a self-assessment questionnaire consisting of 42 assessment items, which measure person's negative emotional

condition, such as depression, anxiety, and stress. Questionnaires were distributed to respondents who were willing to participate in the study. Collected data were analyzed and interpreted, so that the results of the analysis could be used as information for decision-making in future problems.

### Data analysis

After processing, statistical Wilcoxon test was employed to analyze data using SPSS 25 for Windows, with a statistically significant level of 0.05. This research obtained ethics approval issued by the Ethics Commission of Universitas Nahdlatul Ulama Surabaya, approval number of 178/EC/KEPK/UNUSA/2021.

## Results

### Demographic data

Based on Table 1, majority of participants in the intervention and control groups were males (more than 50%). Characteristics of the respondents in the intervention and control groups based on age showed almost the same distribution: most of them were in the age range of 18-21 years, with unmarried marital status. The duration of illness in the intervention group was mostly less than 5 years ( $n = 48, 46\%$ ), while majority of patients in the control group had more than 5 years of illness ( $n = 54, 72\%$ ). The depression levels in the intervention and control groups were medium (85.3% and 86.7%), anxiety levels were medium (82.7% and 77.3%), and stress levels were also medium (80% and 77.3%), respectively.

### Effect of ELT on depression, anxiety, and stress levels

Based on Table 2, using Wilcoxon signed rank tests, it can be concluded that there was a significant difference in the depression, anxiety, and stress levels between pre-test and post-test ( $p$ -value = 0.000,  $\leq 0.05$ ).

### Effect of ELT on ARV adherence

Table 3 shows a significant difference in taking ARV before and after receiving ELT in the intervention group, with a  $p$ -value of 0.000. There was an effect of ELT therapy on ARV adherence after ELT in the intervention group. However, no significant impact on medication adherence was observed in the control group after receiving ELT ( $p = 0.821$ ), which means that there was no effect of ELT on taking drugs by patients in the control group.

## Discussion

### Effect of ELT on depression, anxiety, and stress levels

Based on the results of the study, there was an effect of ELT on the levels of depression, anxiety, and stress. Hence,

**Table 1.** Demographic data of HIV-positive adolescents (N = 150)

Variable	Group, n (%)	
	Intervention	Control
<b>Gender</b>		
Male	46 (61.3)	47 (62.7)
Female	29 (38.7)	28 (37.3)
<b>Age (years)</b>		
12-15 (early adolescence)	6 (8.0)	9 (12.0)
15-18 (middle adolescence)	24 (32.0)	27 (36.0)
18-21 (late adolescence)	45 (60.0)	39 (52.0)
<b>Marital status</b>		
Single	45 (60.0)	55 (73.3)
Married	30 (40.0)	20 (26.7)
<b>Time of illness</b>		
Less than 5 years	48 (64.0)	21 (28.0)
More than 5 years	27 (36.0)	54 (72.0)
<b>Depression level</b>		
Normal	2 (2.7)	3 (4.0)
Mild	9 (12.0)	7 (9.3)
Medium	64 (85.3)	65 (86.7)
<b>Anxiety level</b>		
Normal	7 (9.3)	6 (8.0)
Mild	6 (8.0)	11 (14.7)
Medium	62 (82.7)	58 (77.3)
<b>Stress level</b>		
Normal	4 (5.3)	3 (4.0)
Mild	11 (14.7)	14 (18.7)
Medium	60 (80.0)	58 (77.3)

ELT was effective in increasing self-acceptance in HIV-positive adolescences. This is in line with results of research conducted by Sagala (2015) showing that ELT reduced depression in adolescents. People living with HIV are able to be at peace with themselves (i.e., feel calm and contended, and have no emotional conflicts within themselves), accept their current condition, and realize the wounds that exist within themselves and try to heal them with own potential [13]. The implementation was carried out in accordance with ELT module of Rosada's ELT flow framework (2020), where patients received treatment as per seven main concepts, such as self-exploration, knowing wounds, interaction of players, I love myself, the will, aspirations and action plans, and love of gratitude [14]. The implementation of ELT is effective in reducing symptoms of depression (psychological problems). This is in line with a research by Saragih and Yuniarti (2020), who examined the effect of ELT therapy on depression level of female victims of violence. The study's quantitative analysis showed that there were significant differences in participants based on BDI scores before and after ELT therapy, with reduced depression [15, 16]. Depressive symptoms occur because patients cannot develop love and acceptance of aspects of their personality [17, 18].

ELT is effectively applied to increase self-acceptance in HIV patients, especially in children and adolescents [19]. Transformation occurs because patients have the opportunity to recognize, accept, integrate, and synthesize all parts of themselves with empathy towards various traumatic events experienced, and find strength and positive aspects within themselves. Therefore, the patient is able to love own self deeply, accept own self as infected with HIV/AIDS, and taking full responsibility for personal health. Trans-personal psychotherapy through self-centeredness can help adolescents learn to recognize personal responsibility, with the intention of accepting HIV/ AIDS as their responsibility. This self-centeredness causes physical and behavioral changes in adolescents.

**Table 2.** Effect of empathic love therapy on depression, anxiety, and stress levels (N = 150)

Parameter	n	Mean	SD	Min.	Max.	p-value	
						Pre-test	Post-test
<b>Depression level</b>							
Pre-test	75	16.19	2.73	12.00	22.00	0.000	
Post-test	75	5.49	2.66				0.000
<b>Anxiety level</b>							
Pre-test	75	13.28	3.53	17.00	33.08	0.000	
Post-test	75	7.58	3.46				0.000
<b>Stress level</b>							
Pre-test	75	12.29	3.27	23.01	52.04	0.000	
Post-test	75	9.59	3.14				0.000

### Effect of ELT on drug adherence

The results of this study found that ELT can improve medication adherence, especially in adolescents. According to previous studies, ELT is effectively carried out to increase self-esteem and self-acceptance [12, 13, 15, 20].

This is in line with Carter's 2012 study in Framasari *et al.* [21], who concluded that adherence is the most important factor influencing the virological success of ARV therapy; therefore, high level of adherence to medications is required (> 95%). Adherence to treatment is needed to reduce viral replication, improve clinical and immunological conditions, and reduce the emergence of ARV resistance and HIV transmission, such as development of bacteria, fungi, viruses, and other micro-organisms [22].

The implementation was carried out according to ELT module, which includes 7 sessions with a duration of 60-90 minutes of each session. At the end of each session, observations were made to assess the success of ELT therapy, reinforcement, and positive feedback as a form of success of ELT therapy [23-26].

According to the researchers' assumption, the increase in adherence to medication among adolescents after ELT intervention is because they acquire a learning method about the skills and rules of drug-taking behavior, so that patients are able to apply the appropriate behavior to comply with ARV regimen.

### Limitations

The main limitation of the current study was the reluctance to participate at the beginning of the study due to concerns about disclosing personal problems of adolescents, especially those newly diagnosed with HIV; the researchers approached these adolescents. The lack of attention from HIV-positive adolescents' parents reminding them about timely administration of medications was another limitation of the research.

### Conclusions

ELT is effective for HIV-positive adolescents to reduce depression, anxiety, and stress levels. Additionally, ELT can improve medication adherence, as in the process of therapy, the patient obtain correct information and feels not alone. Therefore, psychological problems can be resolved, leading to improvement of adherence to ARV drugs.

### Disclosures

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**Table 3.** Effect of empathic love therapy on antiretroviral adherence (N = 150)

Group	Mean	Standard deviation	Standard error, mean	p-value
Intervention group				
Before	4.36	1.213	0.157	0.000
After	7.48	0.712	0.087	
Control group				
Before	5.33	1.185	0.162	0.821
After	5.32	1.032	0.132	

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