THE EFFECT OF PATIENT EMPOWERMENT PROGRAM ON MEDICINE ADHERENCE IN AIDS PATIENTS AT HANG CHAT HOSPITAL, LAMPANG PROVINCE, THAILAND

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Abstract

**Background:** Poor adherence of medication in people living with AIDS causes complications and drug resistance and leads to increased workload of health care personnel and healthcare costs.

**Aims:** This quasi-experimental study aimed to determine the effect of the Patient Empowerment Program on the adherence of medication and reported complications and to identify key success factors of patients’ participation in the empowerment program.

**Methods:** Participants were 30 people living with AIDS who did not adhere to anti-retroviral medicine. The empowerment program consisted of 4 main steps and 12 sub-steps. Research instruments were the patient empowerment program, patients self-recorded form, nurse recorded medication adherence form and medical diagnosis or clinical examination results form. Data were analyzed by frequency and percentage.

**Results:** After the completion of Patient Participation Program, the results revealed that 1) The patients adherence to medication rate is 100 percent. 2) Clinical results showed a decrease in the number of patients with complications. 3) Key success factors of patients’ participation in the empowerment program included healthcare personnel, relationship building activities and patient characteristics.

**Conclusion and Recommendations:** The Patient Participation Program can improve the adherence of medication rate and leads to decreasing complications among AIDS patients. Further research is needed to simplify the program to address time constraint and to apply the patient empowerment program for other patients with chronic diseases.

**Keywords:** Patient Empowerment Program, AIDS patients, Medicine adherence

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Introduction

Acquired immune deficiency syndrome (AIDS) is a spectrum of conditions caused by infection with the human immunodeficiency virus (HIV) that interfere the immune system. It increases the risk of common infection. The spread of AIDS in Thailand has been around for more than 30 years. Thailand has a national plan for prevention and solving the problem of AIDS. The first plan was established in 1992-1996 and revised every 5 years but the number of person living with HIV were the number of newer HIV infections, morbidity and mortality from HIV were not optimal target.

According to Hang Chat Hospital, the number of patients receiving antiretroviral treatment increased from 344 in 2014, to 364 in 2015, and 376 in 2016 respectively. Although the patients have cooperated in the treatment, the healthcare provider who worked in the clinic developed activities to motivate them to cooperate continuously. As a result, the rate of lost follow-up was 4.1% in 2014, 3.9% in 2015 and 1.20% in the six month period (October 2015 to March 2016), respectively (Medical records Hang Chat Hospital Lampang Province, 2016). However, the number of patients with viral suppression (VL Suppressed) was 73.30% in 2014, 87.50% and 91.70% in 2015 and 2016, respectively. In addition, patients with drug resistance increased from 2.15 percent in 2014 to 2.56 percent in 2015 and 2.60 percent in 2016, respectively. Therefore, the results of the performance did not meet the optimal goal. The hospital has also many problems and impacts, such as the increasing cost for treatment that affects the economic stability of patients and their families.

The researcher as a professional head nurse, who works at the antiretroviral clinic in the outpatient department was aware of the impact of the short-term and long-term patients, families, hospitals, and society. The researcher reviewed the literature and found that if the person has the knowledge to solve the problem and have the ability to care, will affect the treatment of chronic illness (AIDS office Tuberculosis and STIs, Department of Disease Control, Ministry of Public Health and TUC, 2008).

The concept that has already been applied positively to chronic disease patients is the empowerment (Gibson, 1991) which increases the ability of people to control their lifestyle. They also used their knowledge and ability to manage and use the resources to effectively achieve their goals. Therefore, the researcher wishes to use the empowerment program for patients living with AIDS and taking antiretroviral drugs also to determine the key success factors of AIDS-care to bring knowledge in improving the service of the antiretroviral clinic at Hang Chat Hospital, Lampang.

Objectives

1) To develop the empowerment programs on the adherence of medication in people living with AIDS at Hang Chat Hospital, Lampang.

2) To identify the key success factors of patients’ participation in the empowerment program.
Scope of the study

The population of this study was patients living with HIV who are receiving antiretroviral therapy in Antiviral clinic at Hang Chat Hospital, Lampang. The period of this study was February 2017 to July 2017.

Conceptual framework

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<th>Dependent Variables</th>
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**Empowerment program**

**Step 1: Discovering the real state**
1) Understanding their own problem
2) Recognizing and accepting their own problems
3) Assessment of the ability to care

**Step 2: Reflecting and Critical Thinking**
1) Comparison of the situation
2) Finding a positive guidance

**Step 3: Making a decision**
1) Review and evaluate the feasibility of their own behaviors
2) Setting the target outcome
3) Schedule calendars for action

**Step 4: Maintaining Effective Performance**
1) Review and evaluate the performance
2) Determining their own behaviors
3) Setting the target outcome
4) Schedule calendars

1. Adherence to medication rate
2. Incidence of complications

**Figure 1:** The study of the empowerment program

Objective

This research is a quasi-experimental research to determine the effect of empowerment program on adherence to medication with patients receiving antiretroviral to identify the key success factors of patients’ participation in this program.

Method

The population of this study was patients living with HIV who received anti-retroviral therapy in Antiviral clinic at Hang Chat Hospital, Lampang. The total number of them was 118.
The sample size was calculated by $G^*$-power. The power of test at .80, the level of significance at .05 ($\alpha = 0.5$) and the effect size at .50 were applied in this study. The sample size was 27 persons. The researcher planned for a dropout rate by adding 10% of estimated sample size, thus the minimum of 30 subjects was the sample size of this study.

The purposive sampling method was used to obtain the required sample. The patients living with AIDS who non-adherence to anti-retroviral therapy were the sample in this study. The inclusion criteria included 1) willing to participate in the study 2) taking antiretroviral drug and 3) no participating in the others empowerment program. The exclusion criteria included: 1) The subject was not able to participate until the end of the program 2) Have clinical failure 3) caused adverse drug reactions. The procedures used to collect the data were executed as follows: 1) collect the list of target sample from the medical records in antiviral clinic at Hang Chat Hospital, Lampang 2) select a list of eligible sample who discontinued the antiretroviral therapy 3) the researcher explained the purpose of the research and the eligible sample was asked to participate in the program.

**Research Instruments**

The research instruments used in this study includes 1) the patient empowerment program 2) Self-Care Behavior Scale which was Likert's scale asking about current symptoms, taking medication, meeting medical appointments, daily lifestyle, targeted treatment. The Indexes of Item-Objective Congruence (IOC) was 0.67-1.00 and 3) the clinical outcome consisted of the symptoms’ of opportunistic diseases such as Tuberculosis, Herpes Zoster, Fungus in the mouth, Diarrhea, Brain abcess etc.

**Implementation of the Empowerment program**

The implementation of the Empowerment program is consisted of 4 main steps and 12 sub-steps and was a group activity weekly for 8 weeks.

**Week 1**

To discover the real state including 2 sub-steps which aimed to enable the samples to find out about their current state of symptoms identifying current medications and their effects to visit the physician, the result of not attending the follow-up and the everyday lifestyle as described by the following 1) understanding the problems of their own included the activities aimed to know between the researcher and the sample then they made agreement to join activities. After that the researcher educated them about pathology, its treatments and required behaviors. The samples were asked to respond the questionnaire asking about current symptom, using of antiretroviral drugs, follow-up, and lifestyle behaviors 2) awareness and accepting their problems, in this sub-step the researcher provided the samples identified the problems related to their behaviors. The sharing of experiences between the samples was obtained and then the researcher summarized. After that, the sample was asked to respond the questionnaire about self-efficacy to perform required behaviors.

**Week 2**

The researcher provided the 3 sub-step of the first main step which the samples assessed ability to self-care and then share with in group of samples. Then, the sub-step 4, the comparison
the situation with others was applied to the samples in order to select the new behaviors from others to change lifestyles to achieve goal of treatments.

**Week 3**

The researcher used the main step 2, which is the reflective critical thinking, focusing on the sub-step 2, finding a positive guidance, in order to identify the positive guidance to achieve the target treatment. These step consisted of educating, sharing and identifying the plan for required behaviors. Then the possible plan was evaluated.

**Week 4**

The researchers used the main step 3, which is making decision. The sub-step 1, review and evaluate the feasibility of behaviors was applied. The sharing experience within the group of sample to find the new required behaviors was applied.

**Week 5**

The researcher used the sub-step 2, identify the target goals, in the main step 3, and sub-step 3, schedule plan for action, by reviewing the knowledge of pathology, treatment and positive thinking to the samples. The samples were also sharing their plan and then they scheduled dates to visit the physician.

**Week 6**

The researcher used the main step 4, maintaining effective performance, the sub-step 1, review and evaluation of operations, and sub-step 2, determining their own behaviors, were applied. The purpose of sub-step 2 was to allow the sample to review and evaluate the results of the follow-up visit which they scheduled and the effects of their treatment. Then, the samples changed their self-care guidance to perform better behaviors.

**Week 7**

The researcher processed the sub-step, setting the target outcome, and the sub-step 4, schedule calendars, in the main step 4. These step aimed the samples to set the target goals of the follow-up visit and adherence to medication. The researcher summarized the results of the 6 previous processes and the samples who were success to perform required behaviors shared how to perform and to meet the target behaviors. After that the samples changed their plan which is suitable for their situation in order to achieve the goals. The researcher gave encouraged to them to enhance their self-care. Then the sample reported the progress to the researcher in the next week.

**Week 8**

The last week, the researcher summarized and evaluated the empowerment program. Each samples presented the results of improvement in participating with this program. The researcher gave token of appreciation to the participants that were success to apply the plan into their daily practices.
Result

Part 1: Demographics of the Sample

The samples of this study were 66.66% male and 33.33% were females. The 85% percentage ages 35-59 years of age. 95% of them were factory workers.

Part 2: The results of continuing medication and complications disease

The patients who succeeded the empowerment program, including educating, and encouraging process build friendship that helps to one another who supports each other even in their families. The results show the number of patients who continued to receive antiretroviral treatment.

![Figure 1: Percentage of HIV-infected patients](image1)
From the figure, there was a three-fold increase in the incidence of drug-induced complications continuously, 0, 50 and 100 percent, respectively.

![Figure 2: Percentage of AIDS patients without complication classified by clinical examination.](image2)
Figure 2 showed clinical results of patients with complications in 7 times. The clinical manifestations of symptoms and signs include: Symptoms of opportunistic infections for example tuberculosis (TB) outside the lungs, Lung infections (PCP), herpes zoster, mouth fungus, PPE, diarrhea, Fungal cyst, brain abscess, and Cervical mesothelioma (CMV). The results showed that patients have no more complications increased by 10, 30, 41.78, 53.33, 76.67, 83.33 and 93.33 percent, respectively.

The key success factors include the knowledge and skills of the health workers have to conduct the procedures of empowerment, reinforcement, and encouragement of positive behaviors. Next, are the friendship activities which will focus on helping one another and their
family members. Lastly, are the characteristics of patients to have discipline and strong personality to believe in the program and their selves.

**Discussion**

The results were described by following the objectives of the study:

The effect of empowerment program for patient living with AIDS and non-adherence to antiretroviral therapy found that the adherence to antiretroviral therapy rate was increased. This is consistent with Gibson's empowerment concept stated that when the samples were encouraged their empowerment they will perceive their own power and have confidence to perform the required behaviors. Therefore they can evaluate, plan their own behaviors and improve their ability to self-care. This finding was consistent with the findings found that the youth with HIV / AIDS-infected who received the empowerment program increased their discipline in taking antiretroviral drugs when finished the program (Kaimook, 2011).

Moreover, the results in this study found that the complications in patients who are non-adherence to antiretroviral drugs resulting from enhancing empowerment and encouraging performing positive behaviors were decreased. Consistent with the study which found that perceived self-care needs positive correlations with self-care behaviors were statistically significant (Supattra, 2015). Particularly, the perception of self-care needs during illness and self-care behaviors during illness were due to the knowledge about pathology, treatment and required behaviors.

The study was also found that the key factors related to the success of empowerment in order to care with patients living with AIDS were described below.

1) Healthcare provider, knowledge, understanding and skills in the process of empowerment were needed to be competencies of them. Consistent with the study found that communication between healthcare providers and AIDS patients was a statistically significant relationship with the health behavior of AIDS patients at the 0.01 level (Chottisen, 2015).

2) Self-help group was also the key success in this study. According to the results of a study by Wathisakul et al. (2004) found that group discussion and in-depth interviews were the factors that affect self-care ability consisted of knowledge, experience, symptoms, emotional state, social support and environment.

Lastly, demographic characteristic of patient was one of key success factors. The results of the study of Burin 2007 as cited in Chottisen, 2015 found that the subjects who had discipline to perform required behaviors were high ability to self-care. Consistent with the study of Chottisen, 2015 found that to sustain the problems solving of patients living with AIDS, they had to find the way to solve the problems by themselves.

**Recommendations**

1) This activity planning process should be implemented continuously to patients in order to help them with the disease. The basic information of the patient should be gathered such as pathological issues to use in formulating activities that is suitable to the patients. It is because
there may be cases where additional medical advice is required for patients to understand and raise awareness to their case. Discipline and mental strength can assess the real situation and plan to develop self-care more effectively.

2) The health workers to facilitate this activity should study the details of it and understand the process to be able to carry out the activities and solve the problems that may occur curing the process. This may affect the empowerment of the patients more effectively and more effectively.

3) Further study should consider determining the duration of follow up evaluation to assess the sustainability of the empowerment outcomes of patients. Then, apply this empowerment process to other chronic communicable diseases and decrease workload of the health workers conducting this program and decrease the cost being paid by the patients who engage in this empowerment program.

Reference


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