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Mobile Health Treatment Support Intervention for HIV and Tuberculosis in Mozambique Perspectives of Patients and Healthcare Workers: A Literature Review

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ABSTRACT
Introduction: Tuberculosis (TB) and HIV / AIDS are two major diseases that are the focus of public health. TB and HIV can each cause death due to infection, if TB accompanies AIDS it can cause the death of one in three patients with AIDS, in Mozambique 1.5 million people were infected with HIV/AIDS and 223 new patients were infected and 108 died due to HIV per day.
Method: The critical appraisal tool used in the discussion of this journal is CASP (Critical Appraisal Skill Program). In this study, using RCTs involving 404 TB and HIV patients. However, the journal does not explain how to take it randomly.
Result: Most of the patients (HIV 82% [56/68], TB 97% [65/67]) reported that they did not skip their drug collection at any time. This is consistent with the medication collection rates recorded in the patient database (78% and 94%, respectively) The experimental and control groups received the same treatment. This is shown in the journal in the discussion chapter which states that this study found that retention of antiretroviral therapy was very good in the control and intervention groups (91% vs 94%).
Conclusion: Research results from this journal can be used as input and as material for reflection for health workers that currently the challenge faced by health workers is the creation of innovations related to interventions in the community.

Keywords: *Mobile Health Treatment; HIV; TB*

Introduction

Tuberculosis (TB) and HIV / AIDS are two major diseases that are the focus of public health. TB and HIV can each cause death due to infection, if TB accompanies AIDS it can cause the death of one in three patients with AIDS (World Health Organization). Interventions to improve adherence to antiretroviral therapy (ART) and TB treatment are actions that must be immediately implemented in HIV-infected patients, especially in developing countries (Desilva et al., 2013).

Mozambique is one of the countries in the world whose people are infected with HIV and TB. In 2015, in this country 1.5 million people were infected with HIV/AIDS and 223 new patients were infected and 108 died due to HIV per day. In Maputo Province and Maputo City, HIV prevalence in adults is 19.8% (Jose Antonio Nhavoto, Gronlund and Klein, 2017).

One strategy to improve patient adherence to therapy is through communication between health workers and patients using the short message service (SMS) because it is cheap and can be used by all groups (Nhavoto, Grönlund and Chaquilla, 2015). According to research (Pop-eleches et al., 2011). Communication can be used for several purposes, including facilitating health information, facilitating communication between doctors and patients, providing specific services, as reminders of medication, as well as education and motivational messages.

In fact, there are many types or variations of intervention in the form of SMS, it is not clear what promotion is the focus of intervention. Many studies have attempted to understand interventions via SMS. A study in India compared an intervention between automated voice responses and text messages sent every week.

Evidence of scientific research can be applied in community practice and as material for further research carried out through critical appraisal first to assess whether this research journal is good research and worthy of being used as a reference in Evidance Based Practice Nursing.

Method

The critical appraisal tool used in the discussion of this journal is CASP (Critical Appraisal Skill Program). This tool was chosen because it was in accordance with the research design, namely randomization experiment research. CASP developed

recommendations in the form of a checklist on what should be included in an accurate and complete randomized experimental study consisting of three aspects, namely the validity of the research results, how the results of the study were, and whether this research could be applied (Critical Appraisal Skills Programme (CASP), 2013).

1. Population

The population in this journal is focused and clear, namely an explanation of the study sample, namely 156 patients with TB and 248 HIV patients (J A Nhavoto, Gronlund and Klein, 2017). This journal also describes the interventions given to patients, namely the patient receives short messages. TB treatment patients receive motivational messages, while HIV patients with TB receive educational messages. Messages were sent seven and two days before the scheduled drug collection. The expected results in this study have also been described, namely the existence of a useful and reliable SMS system between health workers and patients.

2. Sampling

In this study, using RCTs involving 404 TB and HIV patients. However, the journal does not explain how to take it randomly. In the journal, it is explained that the actions that patients must take in this study are responding to SMS. This requires consideration of how the patients in this study should respond and in what manner. This has also been explained and shown in Table 2 regarding the conclusions of the patient's statement regarding the SMS application used in this study. The eligibility of the patient or sample for the study is indicated by the conclusions in the study.

This research was conducted until the research process was completed and there was no stopping the research in the middle of the research process because the samples in this study met the requirements. In addition, the patients in each group were also analyzed respectively. So that the conclusions obtained in this study can be justified. Research data are presented in numbers and percentages.

Blinding action between patients, health workers, and other respondents. Experimental research with randomization techniques will be of greater quality if the measurement is done incognito. In this study, a single blinding was carried out where the research subject did not know the status of the respondent whether it was included in the intervention group or the control group, this study did not allow double blinding

because it allowed for bias if the respondent or health worker knew about the treatment. The consistency of the initial study group with the end of the study.

Result

Most of the patients (HIV 82% [56/68], TB 97% [65/67]) reported that they did not skip their drug collection at any time. This is consistent with the medication collection rates recorded in the patient database (78% and 94%, respectively) (J A Nhavoto, Gronlund and Klein, 2017). This shows that the group at the beginning of the study until the end of the study was still the same. Fairness of giving intervention between experimental and control groups.

The experimental and control groups received the same treatment. This is shown in the journal in the discussion chapter which states that this study found that retention of antiretroviral therapy was very good in the control and intervention groups (91% vs 94%). There was significantly increased retention among urban patients (94% in the intervention group vs 90% in the control group) (J A Nhavoto, Gronlund and Klein, 2017).

Discussion

The extent of the impact of the intervention is indicated by the measurability of the results, the specific results, and the results found (Critical Appraisal Skills Programme (CASP), 2013). The results obtained in this study are measurable, indicated by numbers and percentages. In addition, it is also specified according to the sample group between patients with TB or HIV with the results found that only a small proportion (<20%) of respondents stated that the SMS system was risky while the majority (> 93%) stated that the SMS system was very useful (make patients not forget their appointments and taking medication, SMS content is very easy to read and understand, and is useful for patients in motivation and education).

The explanation of the effect of the intervention is here by considering its limitations (Critical Appraisal Skills Programme (CASP), 2013). Limitations to this journal include: first, a sample of patients was recruited into two RCTs in which the HIV trial was completed a year earlier at the time of the interview, which may have limited the reach of these patients. This may be an explanation for the higher number of

HIV patients dropping out of the study than TB patients (71% vs 56%). Second, because there were many patients who dropped out of the study for several reasons, including people changing their telephone numbers frequently and sometimes not having their own phone but using someone else; it was only possible to interview 35% of those who were eligible.

The results of the research in this journal are highly applicable in Indonesia because active mobile phone users in Indonesia have reached 281.9 million people. This figure illustrates that every person in Indonesia holds 1.13 mobile phones (DS Annual Startup Report, 2015). It can be concluded that the SMS system when applied in Indonesia does not experience many problems.

The research results of this journal have included all research variables, namely socio-demographic characteristics, socio-economic characteristics, information related to drugs, the SMS system and the social system (questions to find out participants' perceptions of the system, questions about the usefulness of the intervention, ease of use of the system, risks caused by the intervention, benefits, and participants' attention to reuse of the system.

The benefits of this study include: reducing errors in classifying drugs, preventing mistakes in making appointments between patients and health workers, increasing communication between patients and health workers, patients can always receive motivation and education. The drawbacks of this study included: first, a sample of patients was recruited into two RCTs where the HIV trial was completed a year earlier at the time of the interview, which may have limited the reach of these patients. This may be an explanation for the higher number of HIV patients dropping out of the study than TB patients (71% vs 56%). Second, because there were many patients who dropped out of the study for several reasons, including people changing their telephone numbers frequently and sometimes not having their own phone but using someone else; it was only possible to interview 35% of those who were eligible.

In general, the authors can conclude that the journal entitled "Mobile health treatment support intervention for HIV and tuberculosis in Mozambique: Perspective of patients and healthcare workers" has a good quality. The validity, research results, and application of the research results have been described quite clearly, although several weaknesses were identified.

Conclusion

Research results from this journal can be used as input and as material for reflection for health workers that currently the challenge faced by health workers is the creation of innovations related to interventions in the community. Therefore, health workers, especially community nurses, are expected to be able to create innovations by increasing their knowledge and skills both in the health sector and in the field of technology utilization.

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