

## Intervention to Reduce Stress Levels Among People with HIV/AIDS: Literature Review

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### Abstract

People living with HIV/AIDS experience a variety of complex problems included physical problems related to the condition of HIV disease, psychosocial issues related to HIV disclosure, stigma, social isolation and discrimination that can cause anxiety and high-stress levels. This literature review aims to identify several interventions to reduce stress levels in people with HIV/AIDS, included Jacobson's Progressive Muscle Relaxation, Mindfulness-Based Stress Reduction, and Reiki therapy. A literature search was carried out from databases such as PubMed, EBSCOhost, Scopus, Proquest, Science Direct, with limited years of an article published in the last ten years (2008-2018). Fifteen relevant articles were extracted in this study to gather information related to the interventions to reduce stress levels in people with HIV/AIDS. Based on the review, it was found that Jacobson's Progressive Muscle Relaxation; Mindfulness-Based Stress Reduction, and Reiki Therapy shows very significant results in decreasing stress levels in people with HIV/AIDS. **Conclusion:** Jacobson's Progressive Muscle Relaxation, Mindfulness-Based Stress Reduction, and Reiki therapy recommended as a therapy that can be applied to reduce stress levels in people with HIV/AIDS.

**Keyword:** HIV/AIDS, Jacobson's progressive muscle relaxation, mindfulness-based stress reduction, reiki therapy, stress intervention.

### 1. Introduction

Stress is an event of the life that occurs in everyday life that is seen as a threat, challenge or potentially as a hazard (1). Everyone in life will experience stress. Everyone will be different in accepting the stress process, positive or negative. Positive pressure is called eustress, and negative stress is called distress<sup>2</sup>. Stress can be positive (eustress) if the stress experienced is supported by a person's ability to cope with stress so that it will ultimately have a positive impact on one's performance and health. Stress can be harmful (distress) if stress is experienced or the pressure that comes in large quantities and is not supported by one's ability to cope with stress so that it will ultimately have a negative impact on one's performance and health (2,3).

Stress events in life never escape the existence of mental health disorders and also chronic physical health disorders, such as in HIV / AIDS (4). Remien et al. stated that stress is a component that cannot be separated from the incidence of depression in

people with HIV. If not in good handled, it can cause a negative impact on both physical and mental health (5). The stress of patients with HIV might lead to depression, worsen quality of life, bring about a lack of adherence to treatment, increase behaviors at risk for HIV transmission and faster disease progress (6,7,8,9). Stress in people with HIV/AIDS can be caused by physical disorders, concerns about the impact due to disclosure of HIV status and HIV-related stigma (10). Stress due to HIV/AIDS will worsen physical conditions, including reducing lymphocyte circulation, increasing the number of viral loads, decreasing CD4 counts, and increasing cortisol levels that cause deterioration in the direction of AIDS (11,12). Based on this, several interventions have been developed that can be used to reduce stress levels in people with HIV/AIDS. This intervention was designed to reduce overall pressure both physically and psychologically, increase adaptation and management related to diseases and inhibiting disease progression. This paper aimed to identify effective intervention to reduce stress among patients with HIV/AIDS.

## **2. Objective**

The study aimed at describing the intervention to reduce the stress level among people with HIV/AIDS

## **3. Method**

Several databases were used including Pubmed, EBSCOhost, Scopus, Proquest, Science Direct. The keywords including "stress-reducing interventions" and "stress in people with HIV." This review limits the number of documents from 2008 to 2018. We extracted 15 relevant articles after the cut off the paper duplication.

## **4. Results**

### **4.1 Description of studies**

One hundred sixty-one articles from databases were obtained. However, we excluded 146 articles because of the reasons including not relevant to the objectives. Finally, 15 most relevant articles were extracted in this study including two quasi-experiment articles, 12 randomized controlled trial articles, and one systematic review article.

### **4.2 Definition of stress**

Stress is an event of the life that occurs in everyday life that is seen as a threat, challenge or potentially as a hazard (1). Stress events in life never escape the existence of mental health disorders and chronic physical health disorders, such as in-patient with HIV / AIDS (4). Stress is a component that cannot be separated from the incidence of depression in HIV sufferers (5). If not in good handled, stress can cause a negative impact both physical and mental health. In people with HIV, stress can lead to depression, worsen quality of life, bring about a lack of adherence to treatment, increase behaviors at risk for HIV transmission and faster disease progress (6,7,8,9).

### **4.3 Management of stress**

#### **4.3.1 Jacobson's Progressive Muscle Relaxation (JPMR)**

Jacobson's Progressive Muscle Relaxation (JPMR) is a muscle relaxation technique that is simple and effective to reduce tension in the body (23). Doctors in

America, Edmund Jacobson (23), developed JPMR. According to Jacobson's theory, anxiety and stress refer to muscle tension can cause distress. If the body in relaxing condition, the pressure in the muscles will decrease, so the fear will decrease too. JPMR consists of physical and mental components. The physical part involves relaxation exercises in the muscles of the arms, legs, face, stomach, and chest. With your eyes closed, do muscle contractions on the arms, legs, face, stomach, and chest for 10 seconds and then relax for 20 seconds. Asking participants to concentrate on the movement of contractions and muscle relaxation does the mental component. The JPMR procedure is carried out with the supervision and guidance of a psychologist or expert person using a video and audio program at home twice a day for four weeks at comfortable room temperature, proper ventilation and it is not recommended to eat, drink coffee or drink alcohol during JPMR intervention.

The results of the study stated that the JPMR method was declared effective in reducing stress. This is indicated by there are significant differences between the average pretest and post-stress test scores (24). While the research of Jose & Almeida<sup>25</sup> showed that after JPMR the stress level was reduced.

#### **4.3.2 Mindfulness-Based Stress Reduction**

Mindfulness-Based Stress Reduction (MBSR) is an approach that is flexible and can be adapted to existing conditions to reduce stress (13,14). Jon Kabat-Zinn developed MBSR in the 1970s, which aimed to treat physical and mental patients<sup>15</sup>. MBSR consists of several main components, included meditation, patient education, and yoga and support groups. Zinn takes a modern scientific-based perspective on traditional Buddhist principles of meditation and develops a more flexible approach to reducing stress. In doing meditation, it can be done by sitting, standing, squatting, kneeling or in other positions (16). When doing meditation, it is responsible for mental states and learning to change our reactions to experiences the positive results (17,18,19,20). Ideally, MBSR is carried out during eight weeks consisting of group sessions to be led by the instructor (usually carried out for 2.5 hours by meditation, discussion and conducting some skills development activities), full day retreats and 45 minutes of training a day and at least six days a week. MBSR is effective for reducing anxiety, stress levels, depression, fatigue, sadness, and high blood pressure, sleep disorders and others (20).

The results of the study according to Duncan et al. stated that respondents who intervened in MBSR experienced has a decrease in the frequency of symptoms arising from side effects of ARV therapy within three months. Also, MBSR also reduced stress levels associated with symptoms at three months post-intervention (17).

#### **4.3.3. Reiki Therapy**

Reiki Therapy is a non-pharmacological therapy based on Tibetan Buddhist healing methods and was discovered and reused by Mikao Usui in the 1990s. Reiki comes from two words namely Rei, which means hidden or spiritual power, and Ki, which means life energy (21). Reiki Therapy is described as a holistic therapy that can bring changes at emotional, physical, mental and spiritual levels. Reiki Therapy will be done in 12 sessions for 20 minutes per week. When performed, the instructor acts as a universal healing energy channel by placing the instructor's hand in various positions on the patient's body for 3-5 minutes, and it is believed that positive energy will flow through the instructor's side. Both the instructor and patient may feel the energy in various forms (warmth, cold, tingling, vibration, pulse, and sensation of drifting) when

doing Reiki Therapy.

## 5. Discussion

Stress among people with HIV / AIDS causes physical problems, social and psychological factors such as stigma, social isolation, and discrimination (22). In this literature review, several stress management interventions among people with HIV / AIDS, namely Jacobson's Progressive Muscle Relaxation (JPMR), Mindfulness-Based Stress Reduction (MBSR) and Reiki Therapy are found to be effective in reducing the occurrence of emotional stress including anxiety, stress, and depression. Besides, this intervention can reduce fatigue and improve the quality of life of people living with HIV / AIDS. Those interventions are non-pharmacological interventions that have the same goals and benefits, such as reduce anxiety and stress levels in people with HIV.

The intervention used in the first study with the design of the pre-test and post-test (quasi-experiment) was using the Jacobson's Progressive Muscle Relaxation (JPMR) method. JPMR is an exercise that can induce short-term relaxation responses (23). JPMR has many health benefits because it is a practical relaxation technique that aims to release the tension in the body (24). JPMR routinely can reduce anxiety, reduce blood pressure, improve sleep quality, reduce pain and provide a feeling of comfort. JPMR is also a technique that is easy to do because it is done for 15-20 minutes every day. JPMR is a relaxation training technique that is taught to people with HIV to be able to control their bodies from accepting any stressors that come and prevent other physical disorders. Physical activity in JPMR is essential for reducing stress and avoiding some deterioration in physical conditions. The JPMR method will stimulate adrenaline and other hormones that will improve blood circulation and strengthen the heart's work so that it can reduce stress levels.

Another RCT study examined interventions to reduce stress in people with HIV / AIDS by using the Mindfulness-Based Stress Reduction method. MBSR is a form of meditation activity to reduce symptoms of stress and other psychological symptoms. MBSR is effective in improving psychological and physical well-being in various populations. MBSR is also a very flexible approach and can be adapted to the patient's condition to reduce stress. By doing MBSR regularly, it will facilitate awareness of the mindset, emotions and how one faces and response to the problems that come to avoid the occurrence of stress.

The next intervention is Reiki Therapy, which is described as a holistic therapy that can bring changes at the emotional, physical, mental and spiritual level. By doing Reiki Therapy can overcome stress, anxiety, and reduce pain. Also, regular Reiki Therapy can also be useful for improving well-being and improving quality of life.

The equation of the three interventions is in the objectives and the benefits of each intervention. The intervention is given, namely Jacobson's Progressive Muscle Relaxation (JPMR); Mindfulness-Based Stress (MBSR); Reiki Therapy, both of which have one common goal, is to reduce stress levels in people with HIV. JPMR, MBSR and Reiki Therapy are simple or effective intervention techniques to reduce the tension, anxiety, and stress experienced. Interventions given to people with HIV are also found to be able to reduce stress levels in people with HIV significantly. Also, the management of stress interventions can also affect the autonomic nervous system (sympathetic nerves) and reduce the secretion of cortisol and catecholamine to increase immune function (CD4 cell count increases) and result in the development of AIDS disease (12). Low-stress levels can also support adherence to treatment and a good quality of life.

The three studies conducted showed very significant results in decreasing stress levels in people with HIV. The evidence-based research results which will be referred to as evidence-based nursing will be the basis and guideline for each nurse to determine interventions to reduce stress levels that are appropriate for people with HIV according to their respective conditions.

## 6. Conclusions and Recommendation

People living with HIV/AIDS experiences the variety of complex problems included physical problems related to the condition of HIV disease, psychosocial issues related to HIV disclosure, stigma, social isolation and discrimination that can cause anxiety and high-stress levels. Several interventions have been developed that can be used to reduce stress levels in people with HIV/AIDS. Jacobson's Progressive Muscle Relaxation (JPMR) intervention, Mindfulness-Based Stress Reduction, and Reiki Therapy show very significant results in decreasing stress levels in people with HIV/AIDS.

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