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Let's Move! Benefits of Exercise Compared to SSRIs (escitalopram) for the Management of Depression: Research from 2020 and Beyond

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Abstract

- Purpose: Determine the effectiveness of **exercise as either monotherapy or in combination with SSRIs** (selective serotonin reuptake inhibitors) for the management of major depressive disorder.
- Studies gathered for this review came from the following databases: PubMed, SpringerLink, Academic Search Ultimate, Academic Search Complete, and CINAHL.
- Review of current research that was completed between the **years 2020-2023** that consisted of either clinical trials, RCTs, or meta-analysis.
- Upon completion of the literature review: **exercise is equivocal to SSRIs as a treatment option**. While this is a significant finding, the benefits of exercises are more consistent in **those that adhere to a program** and are more effective if prescribed in combination with SSRIs.
- It would require providers to have the knowledge and awareness of appropriate exercise modalities and resources available to the patients. It is also vital that providers offer support to patients and encourage compliance with their programs.

Keywords: depression, depressive disorders, antidepressives, escitalopram, exercise, exercise movements/techniques, exercise therapy, running, at-home exercise, Pilates, application-based exercise, antidepressive agents, Lexapro

Introduction

- According to the World Health Organization (WHO), there are approximately **264 million people** in the world that are affected by major depressive disorder (Wang et al., 2021).
- Historically, many providers may have relied on pharmacological management, such **as selective serotonin reuptake inhibitors (SSRIs**), for their patients with depression. Other approaches should be considered, including **exercise and movement, either in addition to medication, or as monotherapy.**
- According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (2013), major depressive disorder is diagnosed based on the presence of **five or more of the following symptoms during the same 2-week time period:** depressed mood most of the day (nearly every day), diminished interest or pleasure in activities, significant unintentional weight loss or gain, insomnia or hypersomnia, fatigue or loss of energy, feelings of worthlessness or excessive guilt nearly every day, decreased ability to concentrate, or recurrent thoughts of death. The symptoms cause clinical distress and are not attributable to other medical conditions.

Research published in the year 2020 or after investigated the effects of using active modalities, such as exercise, Pilates, or running, compared to use of a SSRI, such as Escitalopram, for the management of subjects that had a diagnosis of major depressive disorder.

Statement of the Problem

Major depressive disorder remains a significant health care concern, and providers **should be equipped with multiple treatment strategies to assist in reducing this growing problem.** Aside from SSRIs, It would be beneficial to consider other options, such as exercise, for both the psychological **and** physiological benefits. **Exercise and physical activity should be considered as part of the treatment plan for individuals suffering from depression and concomitant comorbidities.**

Research Question

In patients with depression, does prescribed exercise or Escitalopram (Lexapro) reduce symptoms more effectively?

Literature Review

- **Benefits of escitalopram for management of depression**
  - Wang et al. (2021) determined with 10-20 mg of escitalopram patients reported a significant ($p<0.05$) reduction in symptoms and improvements of over 50% of self-reported depression scores.
  - Mandal et al. (2021) found subjects noted improvements in depressive symptoms by week four after initiation of 10-20 mg of escitalopram.
  - Side effect profile of escitalopram includes: insomnia, fatigue, nausea, headaches, sexual dysfunction; these tend to be mild in nature, compared to other SSRIs (Mandal et al., 2021)
- **Benefits of exercise for management of depression**
  - Bai et al. (2020) found incorporating higher intensity exercise was found to effectively reduce the symptoms of depression in teens.
  - The study by Serrander et al. (2021) found teens had a reduction in their depressive symptoms after engaging in three 60-minute sessions a week of exercise. Consistent comments included **"I have a better view of myself"** and **"Feeling better than I did before."**
  - Boucher et al. (2023) utilized an app-based exercise program to make exercise more attainable for healthcare workers at home. All participants had improved depressive symptoms, however benefits regarding other emotional components (cynicism, burnout) were greater in those that **participated in 80 minutes** compared to 20 minutes a week.
  - Ravari et al. (2021) addressed the aging population and avoiding the adverse effects of antidepressants. They concluded that a low-impact modality such as **Pilates can improve happiness and quality of life** ($p<0.05$) in women >60 years old, compared to a control group that did not participate.
- **Effectiveness of exercise VERSUS pharmacological management for depression**
  - Recognizing the adverse effects of antidepressants, Verhoeven et al. (2023) compared **running therapy to escitalopram and sertraline**. Mental health responses were not significantly ($p=0.88$) different between groups. Physical health, including reduced weight, blood pressure, and heart rate variability favored the running group ($p<0.05$).
  - SSRIs **were not superior to** exercise for depressive symptoms, and the effects of running outweighed the adverse effects of medications (weight gain, decreased heart rate variability (Verhoeven et al., 2023).
  - Participants aged 65+ that participated in two 1-hour sessions of physical activity for 6 months experienced **similar improvements in depressive symptoms compared to those taking antidepressants**, with less adverse side effects (Hidalgo, 2021).
- **Benefits of combined therapy for management of**

Discussion

Limitations of studies

- Use of different self-reported depression scales. Most used: Montgomery-Asberg Depression Rating Scale (MADRS) and Beck Depression Index
- Different exercise modalities were compared: running, Pilates, strengthening, balance, stretching.
- Adherence/compliance was significantly less in those participating in exercise programs compared to subjects in antidepressant groups.
- Small sample sizes in many of the studies

Benefits of studies

- Despite different scales used, all showed improved scores when compared to baseline measurements
- A **wide variety of exercise modalities = improved accessibility** and options for patients of all ages
- Although compliance was lower in exercise groups, this is a motivating factor for providers to support patients consistently.
- There were **significant improvements in the youth participants** when engaging in exercise = decreasing the likelihood of chronic conditions
- A combination of **BOTH** exercise and antidepressants (SSRIs) is an effective strategy. Increased chance of physiological and psychological improvements!
- Escitalopram was found to have a lower side effect profile compared to other SSRIs.

Applicability to Clinical Practice

- Providers can recommend other options that offer benefits to the patient as a **'whole-body' approach.**
- Medications have been a mainstay in the management of major depressive disorder, they are not without their side effects.
- Exercise has a decreased likelihood of these contributing to worsening depression **AND** improves physiological benefits
  - <u>**A combination of SSRIs with exercise has the potential to yield the most optimal results**</u>

When the next patient arrives for an evaluation regarding concerns of depression, it would be an excellent opportunity to discuss their current activity le preferred exercise, a benefits of engaging i red activity more consis ate in a new

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