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Exercise intervention

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Abstract

Depression is a major cause of hardship in the U.S., both in terms of individual mental health and cost of treatment. Exercise and physical activity presents a low-cost alternative to achieve the same positive alleviation of depressive symptoms as medications and psychotherapy. There is a large body of research linking exercise to an increase in positive emotions, as well as a range of other benefits.

This paper will discuss some reasons counselors may consider exercise intervention for clients suffering from clinical depression, describe the use of this intervention, as well as leading theories explaining the mechanics behind the emotionally lifting effects of exercise. Also discussed will be the other potential benefits of physical fitness, as well as strategies counselors can use when prescribing an exercise program to diverse clients.

EXERCISE INTERVENTION

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Abstract

Depression is a major cause of hardship in the U.S., both in terms of individual mental health and cost of treatment. Exercise and physical activity presents a low-cost alternative to achieve the same positive alleviation of depressive symptoms as medications and psychotherapy. There is a large body of research linking exercise to an increase in positive emotions, as well as a range of other benefits.

This paper will discuss some reasons counselors may consider exercise intervention for clients suffering from clinical depression, describe the use of this intervention, as well as leading theories explaining the mechanics behind the emotionally lifting effects of exercise. Also discussed will be the other potential benefits of physical fitness, as well as strategies counselors can use when prescribing an exercise program to diverse clients.

Exercise Intervention

Rationale for Using Intervention

Depression is a serious mental illness which affects millions of Americans every year, and is among the leading causes of disability in the U.S. It is estimated that 9.5% of Americans adults suffer from some form of depression each year (Craft & Perna, 2003). Additionally, an estimated 6-8% of patients seeking treatment from primary care physicians suffer from clinical depression (Craft & Landers, 1998).

In addition to having a negative affect on ones quality of living, there are negative economic costs to living with depression. Individuals with clinical depression face a health care cost 150% higher than that of non-depressed individuals, and pharmacy costs 300% higher for those receiving pharmaceutical treatments. Further, individuals receiving drugs for depression may bear uncertainties in effectiveness, several detrimental side effects, and many have to take different kinds of anti-depressants before finding one that works effectively (Craft & Landers, 1998). Fortunately, exercise presents an effective and more economical alternative to medication and psychotherapy for the treatment of depression.

Cognitive-behavioral interventions for depression, consisting of the performance of physical exercise including aerobic or non-aerobic activities, have been shown to have a positive effect in the treatment of depression, as well as other mental disorders, such as anxiety, low self-efficacy, and low self-concept across a diverse range of individuals (Craft & Perna, 2003).

Physical activity has also been attributed to positive changes in levels of self-esteem, mood, stability, stamina (Chung & Baird, 1999), and a sense of pleasure or proficiency (Clabby, 2005).

Exercise has been shown to have the same benefits as traditional depression treatments, such as anti-depressants, cognitive therapy, and other behavioral interventions (Craft & Perna,

2004). Exercise should be matched with individual psychotherapy and drug treatments for the greatest improvement in depression symptoms, especially for those experiencing severe depression. However the effect of adding drug therapy or psychotherapy to exercise is not significant (Craft & Landers, 1998).

Despite the economic and psychological benefits of frequent exercise, it is rarely recommended to clients, or even discussed during counseling sessions. Additionally, exercise interventions are not typically a part of counselor training programs. However, counselors who have experience with physical activity, or who exercise themselves are more likely to recommend it to their clients (Chung & Baird, 1999).

Description of intervention

According to Chung and Baird (1999), “physical fitness refers to the physiological condition of a person in relation to optimal physiological and body-movement functioning of the person” (p.125). In simpler terms, it refers to how optimally one is functioning physically, measured using such variables as heart rate, oxygen utilization of the lungs, flexibility of joints, and muscle strength and endurance. Exercise is an important means of maintaining or increasing one’s level of physical fitness.

Physical exercises are placed on one of two broad categories, based on their effects on the body’s systems. Aerobic exercises included running, and brisk walking (Craft & Perna, 2004), and increase the efficiency of the cardio-respiratory system by placing a high level of strain on the heart and lungs. Additional aerobic exercises include hiking, biking, cross-country skiing, dancing, rope jumping, rowing, swimming, stair climbing, skating, and performing any other high endurance activity (Chung & Baird, 1999).

Strength training, relaxation, coordination, and flexibility training constitute the non-aerobic exercises (Craft & Perna, 2004). Non-aerobic exercises do not increase the strength of the cardio-respiratory system significantly, but may increase the strength and endurance of certain muscle groups (Chung & Baird, 1999).

Exercise intervention programs can include either aerobic or non-aerobic activities, however variation in exercise attributes, such as duration of sessions, intensity, frequency, and types (aerobic or non-aerobic) did not significantly alter the effect on depression. The only characteristic which increased the reduction in depression was the length of the exercise regimen, with the most reduction associated with programs over 9 weeks in length (Craft & Perna, 2004).

Even though there is a clear correlation between level of physical activity and depression, there is no clear consensus on the process through which exercise reduces an individual's level of depression. There are several prominent hypotheses, but no clear line of evidence supporting one theory over the others (Craft & Perna, 2004).

Thermogenic hypothesis. This hypothesis suggests that an overall rise in body temperatures due to exercise affecting specific areas of the brain, such as the brain stem, results in feelings of serenity and relaxation of muscles (Craft & Perna, 2004).

Endorphin hypothesis. According to this hypothesis, increased activity results in an elevated release of β -endorphins. Endorphins are known to lift mood and increase one's sense of comfort and well-being (Craft & Perna, 2004).

Monoamine hypothesis. This hypothesis states that an increase in the release of brain neurotransmitters (e.g., dopamine, norepinephrine, serotonin), which are inhibited during depressive states, is achieved during exercise (Craft & Perna, 2004).

Distraction hypothesis. This theory suggests that the performance of physical activity serves as a diversion from an individual's woes and negative thoughts (Craft & Perna, 2004).

Self-efficacy hypothesis. According to this hypothesis, exercise increases one's level of self-mastery and self-competence, which has a negating effect on symptoms of depression (Craft & Perna, 2004).

While these hypotheses present several logical and probable means through which exercise reduces depression, more research is necessary. It is likely that a combination of biological, psychological, and sociological mechanisms are responsible. A less invasive means of studying brain chemistry is necessary before the link between exercise and depression can be fully explored (Craft & Perna, 2004).

Chung & Baird (1999) state, "when using exercise as a counseling intervention, it is important to consider ethical, technical, and clinical issues" (p. 127). It is suggested that a physical examination and consultation is performed prior to the selection of exercises and design of an exercise program (Chung & Baird, 1999). Client participation in deciding on the purpose and goals of an exercise program is essential. Input from the client is likely to result in a program that is realistic and satisfying, reducing the risk of the client dropping out or giving up (Chung & Baird, 1999).

A physical examination, conducted by a physician to determine the client's physical condition is important to tailor the exercise program to the client's needs, and to reduce the risk of client injury during exercise. Consultation with a physician or exercise specialist is important to consider when the counselor does not possess appropriate training or expertise (Chung & Baird, 1999).

Aerobic exercise should be performed three to five times per week, for anywhere from 15 to 60 minutes per session. Additionally, a warm-up of 15 minutes should precede each session, and a cool down of 5-10 minutes should end each session. Anaerobic exercises should be performed two to three times per week while breathing freely, and exhaling during the exertion phase of the movement (Chung & Baird, 1999).

There are a number of techniques therapist can employ to increase the client's dedication to the exercise program. Clients should be taught effective self-monitoring techniques, such as exercise logs, which will allow clients to visualize the immediate benefits of exercise, as well as increasing client adherence to the exercise program. In addition, counselors are encouraged to consistently address client issues, such as attitude, social support for exercise, and perceived barriers to activity, as well as maintain contact with client's healthcare provider (Craft & Perna, 2004).

Benefits of Exercise

While this paper concentrates on the benefits exercise has on the treatment of clinical depression, there are many other mental and physical benefits to physical exercise. For example, exercise has been shown to assist in the treatment of anxiety, low self-efficacy, low self-concept, and sleep disorders (Craft & Perna, 2003). There has also been proven positive effects on levels of self-esteem, mood, stability, and stamina (Chung & Baird, 1999).

Other psychological benefits of exercise are decreased levels of anxiety, neuroticism, and stress (Chung & Baird, 1999). Regular exercise has also been shown to have a slight increase in mental performance, possibly due to an increase in blood flow to the brain, or an elevated release of neurotransmitters (Etnier, Salazar, Landers, Petruzello, Han, & Nowell, 1997).

Another possible benefit of a healthy level of physical activity includes the prevention or management of eating disorders. Aerobic and strength-circuit fitness training has been shown to have a significantly positive effect on a person's physical fitness and body image (Henry, Anshel, & Michael, 2006). A correlation has been shown between a person's lack of positive body image and risk of eating disorders, such as anorexia nervosa, or bulimia nervosa (Jansen, Smeets, Martijin, & Nederkoorn, 2006). Positive increases in body image and self-esteem due to exercise has also been shown to be helpful with clients in overcoming issues due to physical and sexual abuse (Chung & Baird, 1999).

Exercise has potential benefits to an individual's work life as well as personal life. Work-site physical activity has recently become a topic of interest to employers, who understand that employee levels of physical and mental well-being have an impact on work productivity, positive affect at work, job satisfaction, and absenteeism (Thøgersen-Ntoumani & Fox, 2005).

It should be noted that the studies linking exercise to depression are conducted on clients with clinical depression. There is little known about the relationship between exercise and more extreme forms of depression, such as psychotic or bipolar depression (Chung & Baird, 1999).

Use with Diverse Populations

The positive effects of exercise in the treatment of depression have been shown to be effective across a range of patient groups. Distinctions such as age, gender, and depression severity did not alter the positive benefits (Craft & Perna, 2004). However, research indicates that overall physical fitness is lower among racial/ethnic minorities, and those of lower socioeconomic status (Stewart et al., 2006).

Receiving input from minority or elderly clients during planning of an exercise program is essential for success. Community support and social connections also seem to help encourage

participation in an exercise program. One effective means of modifying an exercise program to fit the needs of diverse populations consisted of an active participation style in which counselor and client work together to tailor a program to fit the client's level of health, preferences, motivational level, abilities, and resources (Stewart et al., 2006).

Other useful means of promoting exercise include social groups and social exercise programs for minorities. Community-based programs such as the Women's Walking Program effectively used various methods of recruitment and information dissemination, such as newspaper ads, to encourage African American women to participate in a home-based walking program (Wilbur et al., 2006).

Obstacles to participation in exercise among the lesbian population were distinct to that particular group. For example, concern about being seen exercising in public with a partner, rejection of the cultural ideal of thinness, and a lack of lesbian exercise groups (Brittain, Baillurgeon, McElroy, Aaron, & Gyurcsik, 2006). Exercise programs for clients who are lesbian, as well as those from other sexual minorities should be modified to suit the individual's level of comfort and acceptance.

Conclusion

Exercise intervention is a low-cost, effective alternative to pharmaceuticals and psychotherapy in the treatment of depression. While the mechanics of how depression is alleviated by regular exercise is under debate, there is a clear consensus among experts that exercise has a positive impact on clinical depression of any level of severity, as well as several other potential benefits, no matter the age, gender, race, or fitness level of the individual.

Self-monitoring techniques may raise client awareness of the immediate benefits of exercise, as well as increasing motivation. Also, counselors can modify exercise programs to suit

the needs of diverse clients by incorporating social support, and keeping the program within the client's range of security and level of fitness.

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