Can mind-body exercises help to manage obesity?

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Introduction

Obesity is a major public health challenge: more than one-third of U.S. adults are obese (1). Obese individuals have an increased risk for developing heart disease, stroke, type 2 diabetes and certain types of cancer.

The management of obesity includes lifestyle modifications such as increased physical activity. However, more than 80% of adults do not meet the physical activity recommendations (2). Thus, there is a need to identify options that can attract those who are not inclined to follow conventional exercise strategies.

In recent years mind-body exercises gained popularity. Although more than 18 million perform yoga and/or Tai Chi, and more than 10 million use Pilates in the U.S., we know little about the potential benefits of these exercises related to obesity (3).

The review will report on design, frequency and duration of interventions, outcomes, attendance, and characteristics of participants. The results will indicate potential knowledge gaps and will have an impact on future research directions.

Methods

Included Mind-Body Exercises:
The Alexander Technique (AT) helps individuals to become aware and correct unconscious habits of their posture. The Feldenkrais Method (FM) has two techniques: Awareness Through Movement (ATM) and Functional Integration (FI). Teachers guide individuals verbal (ATM) or non-verbal (FI) through sequences of gentle movements designed to improve the nervous system. Gyrokinesis (GK) is a contemporary method inspired by yoga, swimming, dance, tai chi and gymnastics. Although GK uses a wide range of movements for the whole body, there is a focus on core muscles groups (spine, pelvis and abdomen).

Neuromuscular Integrative action (NIA) is one of the contemporary mind body exercises. NIA movements are inspired by aikido, Alexander Technique, Feldenkrais, tai chi, yoga and jazz dance. Pilates is a system of slow, controlled exercises that require an internal focus. The movements are designed to improve physical strength, flexibility, and posture, and enhance mental awareness.

Qigong is one approach of the Traditional Chinese Medicine. Qigong uses simply choreographed movements. The technique is designed to integrate mind and body, balance the unobstructed flow of energy through the body’s pathways (meridians), and thereby improve health.

Tai chi chuan is a martial art practiced for self-defense and health. Many forms of the tai chi exist, simplified forms may include only 24 choreographed movements while others include 108 movement routines.

Yoga is a physical, mental, and spiritual practice with the goal to alter body and mind, and widely practiced for health and relaxation. Different styles (e.g., restorative, hatha, yoga and yoga are a vast repertoire of poses (asanas) exist.

Results

Searches generated 4868 hits; after eliminating duplicates, non-intervention studies, and studies using a mind-body exercise in combination with other intervention types, 22 studies (4-20) fulfilled the selection criteria. No study used the AT, FM, GK or NIA to examine obesity related outcomes.

Discussion

The findings of this review suggest that mind-body exercises are unlikely to alter the waist-to-hip ratio, levels of cholesterol or fasting plasma glucose, and the effects on BMI are inconclusive. For reducing blood pressure, body fat percentage and waist circumference the results are more promising. Our results cannot support the health benefits (lowering cholesterol & fasting plasma glucose) of yoga reported by an earlier review that included intervention and observational studies (25).

Conclusions

Large scale studies are needed employing more rigorous methods to examine effects of mind-body exercises on outcomes associated with obesity and related chronic health issues (hypertension, type 2 diabetes).

References

References are provided in the handout.