The Effect of Face-to-Face Interventions in Promoting Physical Activity

REVIEW QUESTION
What is the effectiveness of face-to-face interventions for the promotion of physical activity in adults?

TYPE OF REVIEW
This is a summary of a systematic review of 10 randomized controlled trials (RCTs) comparing face-to-face interventions for the promotion of physical activity with a placebo, or with no or minimal intervention.

RELEVANCE FOR NURSING
The health benefits of physical activity are well documented. The World Health Organization recommends at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity activity for adults per week. Available data suggest that 31% of the world's adults are not meeting minimum recommendations for physical activity. While it's known that the behavior of individuals can be influenced by physical activity interventions, the most effective delivery method is still unknown. Thus, there is a need to evaluate the effectiveness of face-to-face interventions in promoting physical activity. This information will be of use to nurses in advising patients on effective strategies to increase physical activity, thereby optimizing health outcomes.

CHARACTERISTICS OF THE EVIDENCE
The review contained 10 RCTs involving 7,265 participants ranging in age from 18 to 90. Eight studies included both sexes; one included only women and one included only men. All studies took place in high-income countries. Interventions were delivered to individuals (five studies) or to a combination of individuals and groups (five studies). Follow-up periods were from 12 to 24 months. The primary outcomes of this review were changes in cardiorespiratory fitness and self-reported physical activity levels; secondary outcomes included quality of life, cost, and adverse events.

Two RCTs reported the effect of interventions on cardiorespiratory fitness, measured as maximal oxygen uptake; a pooled positive effect was reported at 12 months. Three studies reported the effect of the intervention on physical activity as a dichotomous measure, and the pooled effect of the interventions at 12 months was positive but not statistically significant. Eight studies reported on physical activity using one of several continuous measures, including energy expenditure, total time of the activity, and number of occasions of activity. Meta-analysis showed a moderate increase in self-reported physical activity at 12 months in intervention groups compared with controls; however, there was significant heterogeneity between the studies.

Only one study reported on quality of life outcomes and showed no difference between intervention and control groups. One study reported data on adverse effects, which included mild muscular fatigue, strain, and soreness during the initial three to four months of the interventions. No studies reported on cost effectiveness.

In four studies, individual delivery of interventions had a nonsignificant effect; however, a combination of individual and group delivery was found to increase physical activity levels.

BEST PRACTICE RECOMMENDATIONS
There is some evidence to support the impact of face-to-face intervention in promoting physical activity; however, it is limited by the heterogeneity of the studies. Only limited conclusions can be made regarding the effectiveness of individual components of the interventions, with a combination of individual and group delivery perhaps more effective than only individual delivery.

RESEARCH RECOMMENDATIONS
Well-designed, high-quality RCTs are needed to demonstrate the long-term impact of face-to-face physical activity interventions. Studies should investigate the effects of the interventions in different socioeconomic and ethnic groups, and provide data on quality of life, cost effectiveness, and adverse events.

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