

Efficacy and Acceptability of Telecounseling for Smoking Cessation: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Introduction:

It remains unclear whether telemedicine is justified for smoking cessation in clinical application.

Objective:

This systematic review and meta-analysis aimed to compare smoking cessation and dropout rates between telecounseling (TC) provided by health professionals and control interventions in active smokers.

Methods:

The inclusion criteria were randomized controlled trials (RCTs) of TC in healthy and unhealthy smokers. If TC alone provided to the experimental groups, the control groups would receive no intervention or health education. If TC was an add-on, the control groups would receive the same care programs as the experimental groups, except for TC. The primary outcome was the smoking cessation rates during 1-4 months (short-term) and > 4 months (long-term) determined by 7 to 30-day smoking abstinence. Dropout rates were the secondary outcome. PubMed, EMBASE, and CINAHL were searched on April 20, 2022. The revised tool for assessing the risk of bias in randomized trials (RoB2) was utilized. The cessation rates were compared and pooled between groups using risk ratios (RRs) based on a random-effects model.

Results:

Of 192 records retrieved from database searches, this meta-analysis included 7 RCTs (N = 3,939) of TC in active smokers. Participants in 5 of 7 RCTs were general people. Five and 2 RCTs were conducted in adults only and a mixed group of adolescents and adults, respectively. While 5 RCTs provided TC add-

on, the other 2 RCTs gave TC alone. The most common type of TC was telephone counseling. TC group had significantly higher cessation rates both in short- (5 RCTs, RR = 3.32, 95% CI = 2.54-4.33, I² = 15%) and long-term outcomes (4 RCTs, RR = 1.49, 95% CI = 1.11-1.99, I² = 64%). Dropout rates were not significantly different.

Conclusion:

Limited evidence suggests that TC is well accepted and potentially effective. TC should be utilized in smoking cessation programs.

Keywords:

Smoking cessation, telemedicine, video counseling, quitline, nicotine dependence, randomized control trial, meta-analysis, systematic review