

Effect of Collaborative Care vs Usual Care on Depressive Symptoms in Older Adults with Subthreshold Depression: The CASPER Randomized Clinical Trial

Take Away Points

- A Collaborative care intervention, compared with usual care, resulted in significantly reduced depressive symptoms among older adults with subthreshold depression.
- Behavioral activation is a simple and effective type of treatment that could be managed by a wide range of health care professionals.

The Issue

One in seven older people meet criteria for depression, but limited research exists on older adults who have mild depressive disorders which may not meet clinical diagnosis criteria (subthreshold), but can result in reduced quality of life and function, and is a risk factor for severe depression. Prescription of antidepressants is not recommended as a first-line treatment for subthreshold depression, and psychological therapies such as cognitive behavioral therapy are generally reserved for people with more severe disorders. Collaborative care, administered by a trained case manager under the principles of chronic disease management, has not been tested in its ability to prevent depression in high-risk populations.

Source

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The purpose of this study is to examine the effect of a collaborative care approach in older people with subthreshold depression in a primary care setting.

Study Methods and Design

The Collaborative Care Screen Positive Elders (CASPER) study recruited older adults (≥ 65 , with lower-severity depressive symptoms) from 32 primary care centers in the United Kingdom to participate in a pragmatic, 2-group, parallel randomized control trial. Patients were eligible if they met study requirements for subthreshold depression. Patients with known alcohol dependency, psychosis, recent suicidal risk, significant cognitive impairment, recent bereavement, or terminal illness. Patients receiving psychological therapy were also excluded; those taking antidepressants remained eligible for the study. Between March 2011-July 2013, 705 eligible patients were recruited, with 344 in collaborative care and 361 in usual care.

The intervention group included 8 weekly sessions (in-person, then over telephone) of telephone support and symptom monitoring conducted by a case manager with a background in mental health nursing or graduate psychologist.

The primary outcome was self-reported severity and symptoms of depression (assessed by the 9-item Patient Health Questionnaire, PHQ-9) at 4 months. Secondary outcomes include PHQ-9 depression severity at 12 months, and a dichotomized depression according to "depression diagnosis" at both 4 and 12 months (defined by a PHQ-9 score ≥ 10). The study also assessed health-related quality of life (SF-12), anxiety (GAD), and self-reported prescribed mental health medication.

The analysis used an intent-to-treat approach. Severity of depression was analyzed by linear mixed model. The dichotomous outcome of depression diagnosis was analyzed by logistic regression with Poisson regression models to calculate adjusted relative risks (RRs). The analysis group included 274 patients in collaborative care and 327 patients in usual care.

Key Findings

- The two groups were comparable at baseline, and the median depression severity score in both groups was 7 (PHQ-9). Prescription rates of antidepressants were low at baseline (collaborative care, 10%; usual care, 14%).

Primary Outcome (depression severity at 4 months)

- There was a between-group difference of -1.31 in PHQ-9 score points (95% CI $[-1.95, -0.67]$; p -value < 0.001), showing a standard effect size of 0.3 for treatment group (collaborative care).

Secondary Outcomes

- At 12-month follow-up, a between-group difference remained in favor of lower depression severity in collaborative care group (-1.33 PHQ-9 score points; 95% CI, $[-2.10, -0.55]$; p -value = 0.001).
- The proportion of participants with new depression diagnosis was lower in the collaborative care group at 12-month follow-up (15.7% vs 27.8%; RR 0.65; p -value = 0.01), but not at the 4-month follow-up (17.2% vs 23.5%; RR 0.83; p -value = 0.25).
- No difference in RR of antidepressants prescription between two groups at the 4-month (0.73; 95% CI $[0.51, 1.04]$; p -value = 0.08) or 12-months (RR, 0.84; 95% CI $[0.60, 1.19]$; p -value = 0.33).
- The physical health (PH) and mental health (MH) of patients (SF-12) was better for collaborative care group at 4 and 12-month follow-ups than the usual care group.
 - PH, 4 months: mean score difference, -2.83 ; 95% CI $[-4.03, -1.62]$; $d = 0.2$; p -value < 0.001 ;
 - PH, 12 months: mean score difference, -1.67 ; 95% CI $[-3.06, -0.27]$; $d = 0.1$; p -value = 0.02
 - MH, 4 months: mean score difference, -1.88 ; 95% CI $[-3.29, -0.47]$; $d = 0.2$; p -value = 0.009;
 - MH, 12 months: mean score difference, -2.15 ; 95% CI $[-3.70, -0.59]$; $d = 0.2$; p -value = 0.007
- Mean score between-group difference in anxiety symptoms (GAD-7) favored collaborative care group at both 4-month follow-up (-1.08 ; 95% CI $[-1.64, -0.52]$; $d = 0.3$; p -value < 0.001) and 12-month follow-up (-1.01 ; 95% CI $[-1.61, -0.42]$; $d = 0.2$); p -value = 0.001).
- Collaborative care group experienced significantly reduced mortality compared to usual care group (1.5% vs. 5%, p -value = 0.008), but independent case-by-case review of deaths did not support the linkage to the intervention.

Limitations

- There were discrepancies in retention between the groups, with more members of the treatment group withdrawing. It is possible that those withdrawing experienced different outcomes than those who were retained.

Final Thoughts

A collaborative care intervention reduced patient depressive severity (PHQ-9) at 4-month and 12-month follow-up compared with usual care. However, the mean score differences are considered as a small to medium effect size. The findings are also limited by attrition, so further research is needed to assess longer-term effectiveness.