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Review

Does collaborative care improve social functioning in adults with depression? The application of the WHO ICF framework and meta-analysis of outcomes

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ABSTRACT

Background: Collaborative care has proven efficacy in improving symptoms of depression, yet patients value improvements in their social function also. We used the World Health Organisation's International classification of functioning, disability, and health (WHO ICF) to robustly identify measures of social function and explored whether collaborative care interventions improve social functioning using meta-analysis.

Methods: We performed a secondary data analysis on studies identified from our previous Cochrane review of collaborative care interventions for depression and search update (December 2013). The WHO ICF framework was applied to identify studies that included self-report measures of social functioning. Outcomes were extracted at short-term (6 months) and medium-term (≥ 7 months) and analysed using random-effects meta-analysis. The relationship between improvements in depression outcomes and improvements in social functioning was also explored using bivarable meta-regression.

Results: Eighteen trials were identified that measured social functioning and met our remaining inclusion criteria. Collaborative care was associated with small improvements in social functioning in the short (Standardised Mean Difference, SMD=0.23, 95% confidence interval 0.12 to 0.34) and medium term (SMD=0.19, 95% confidence interval 0.09 to 0.29). Improvements in depressive symptoms were associated with moderate improvements in social function ($ß=-0.55$, 95% confidence interval -0.82 to -0.28) but cross-sectionally only.

Limitations: The small number of studies ($N=18$) prevented more complex analyses to explore moderators of social functioning outcomes.

Conclusions: Collaborative care improves social functioning but the mechanisms through which this occurs are unknown. Future depression interventions need to consider a person's degree of social function equally alongside their depressive symptoms.

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1. Introduction

1.1. Depression and functioning

Depression is the second most common cause of disability globally (Ferrari et al., 2013), and is associated with substantial losses in economic productivity (Simon, 2003). These impacts have led to calls for health service re-organisation to better manage depression. The chronic care model is a health service delivery framework outlined by Wagner et al. (1996), designed to facilitate improvements in the quality and effectiveness of care provided to people with long-term conditions. In the context of depression, the chronic care model is typically referred to as *collaborative care*, which includes the provision of a multi-professional approach to depression management, structured treatment plans, regular scheduled patient follow-ups, and continual supervision of health care workers (Gunn et al., 2006). A Cochrane review of 79 randomised controlled trials (RCTs) of collaborative care interventions for the management of depression and anxiety found that collaborative care substantially improves depressive symptoms both in the short (SMD −0.34, 95% CI −0.41 to −0.27; 6 months) and long term (SMD −0.35, 95% CI −0.46 to −0.24; up to 24 months) (Archer et al., 2012). Over and above improvements in mood, people with depression prioritise returning to their normal levels of social function (e.g. participating in work and leisure activities) as a key treatment goal (Abrantes et al., 2011; Zimmerman et al., 2006). While there is robust evidence that collaborative care models improve depressive symptoms, it is less clear if these benefits translate to improvements in social function also. To robustly explore the effectiveness of depression treatment interventions on social functioning, we need a standardised approach of conceptualising what social functioning is.

1.2. A framework for conceptualising and identifying measures of social function

The World Health Organisation's (WHO) international classification of functioning, disability, and health (ICF) (World Health Organisation, 2001) provides a useful framework for defining the component parts of disability. Disability as a concept is the opposite of functioning. In brief, the ICF defines disability as a concept that has the potential to impair the following components:

i. body functions and structures (physiological systems or anatomical structures)
ii. activities (implementation of a task or action by a person)
iii. participation (engagement in a life situation) which can be viewed as “participative social function”

Each of the three components of disability is further divided into a number of sub-domains (see Fig. 1). The WHO encourages a flexible conceptual mapping approach when applying its pre-determined subdomains to the three component parts of disability.

We conceptually distinguished between the ‘activities’ and ‘participation’ components by mapping subdomains exclusively onto one component. The following five domains were mapped onto ‘activities’:

i. self-care (e.g. caring for physical body parts)
ii. mobility (ability to move body and objects)
iii. communication (comprehension of verbal and written information)
iv. general tasks and demands (e.g. initiating and organising single or multiple tasks)
v. learning and applying knowledge (e.g. cognitive tasks: problem solving, decision making).