Psychosocial outcomes of telephone-based counseling for adults with an acquired physical disability: a meta-analysis

Dorstyn DS, Mathias JL, Denson LA

CRD summary
This review concluded that the results supported the effectiveness of telephone counselling for improving coping, community integration skills and the management of depression for adults with a physical disability, despite limitations in the evidence. Limitations in the review methods and evidence mean the reliability of the authors’ conclusions is unclear.

Authors’ objectives
To evaluate the impact of telephone-administered psychological interventions on the psychosocial functioning of adults with an acquired physical disability.

Searching
Eight databases (including PubMed, PsycINFO, CINAHL and The Cochrane Library) were searched for articles published in English from January 1970 up to October 2010; search terms were reported. Reference lists of retrieved studies and the Journal of Tele-medicine and e-health were handsearched for additional articles. Requests for published data were also made through the American Psychological Association's Division 22 and the Australian Psychological Society's Rehabilitation Psychology Interest Group.

Study selection
Controlled studies of interventions with telephone counselling as a therapeutic component aimed at facilitating psychosocial recovery following diagnosis and targeting of adult participants (18 years or over) with an acquired disability (spinal cord injury, amputation, severe burn injury, stroke or multiple sclerosis) were eligible for inclusion. Eligible studies also had to include at least four sessions by telephone, use standardised psychological measures to assess outcomes, and provide sufficient data to enable statistical analysis.

In the included studies, therapy interventions included psycho-education and cognitive behaviour therapy, with or without supportive counselling or motivational interviewing. Counselling sessions averaged eight over a 12 week period. Individual sessions ranged from 30 to 90 minutes duration. Control groups received usual care, waiting list, no treatment, information or supportive counselling. The participants in the studies had long-term disabilities (mean 8.7 years) and 74% were not working. Most participants were white (65%), and a small percentage were African American or Hispanic (where reported). Over half of the programmes were tailored to the needs of individuals with relapse-remitting or advanced multiple sclerosis, a spinal cord injury, or central nervous system disease or stroke. Most studies assessed outcomes by self-report (details reported in review); some used assessments were completed by a family member or friend or a clinician-based interview.

The authors did not state how many authors selected studies for inclusion.

Assessment of study quality
Data were assessed on randomisation, blinding of assessors, and reporting of withdrawals and drop-outs. Studies were assessed for use of standardised treatments based on a written protocol. The groups were also compared for comparability at baseline.

It appeared that one reviewer assessed quality.

Data extraction
Data were grouped into the following psychosocial domains: coping, disability, impairment, community integration, depression, health care, fatigue, quality of life, and social support. Data were extracted on the changes from baseline to post-treatment and maintenance of treatment gains for each domain (immediate post-treatment to follow-up) for psychosocial functioning; these were used to calculate effect sizes (Cohen's d) with 95% confidence intervals (CIs).
Where a study reported more than one outcome for each domain, effect sizes were calculated for each individual measure and averaged to provide a single pooled effect size for that study. Treatment effects were classified as small ($d=0.2$), medium ($d=0.5$) and large ($d=0.8$).

Data were extracted by one author.

**Methods of synthesis**

Data for each outcome were pooled using methods by Lipsey and Wilson. Where there were data from two or more studies, each effect size ($d$) was weighted by sample size. Effect size calculations were based on data from participants who had completed treatment.

Publication bias was assessed using the fail-safe N statistic.

**Results of the review**

Eight studies (658 participants) were included in the review. All studies the reported random assignment. Seven studies reported number of withdrawals. Three studies reported using independent assessors blinded to group assignment when administering self-report measures to participants. Attrition rates ranged from zero to 58.2%.

Significant improvements were observed immediately after telecounselling for coping skills and strategies ($d=0.57$, 95% CI 0.22 to 0.92; two studies), community integration (overall $d=0.45$, 95% CI 0.19 to 0.71; three studies) and depression (overall $d=0.44$, 95% CI 0.20 to 0.70; three studies). However, effects on health care varied between studies and there were no significant differences reported for quality of life or social support.

There were modest improvements in quality of life measures maintained post-intervention (overall $d=0.37$, 95% CI 0.09 to 0.65; three studies), but there were small negative effects; the control group reported greater levels of improvement at follow-up than intervention groups for health care, coping, social support and depression.

There was evidence of publication bias for a number of outcomes.

**Authors’ conclusions**

The results of the review supported the effectiveness of telephone counselling for optimising coping and community integration skills and the management of depression for adults with a newly acquired or long-term physical disability, despite limitations in the evidence.

**CRD commentary**

The review question was clear. Inclusion criteria were reported. Several relevant sources were searched. However, limitation to inclusion of only studies in English meant some studies may have been missed; formal assessment found some evidence of publication bias. It was unclear whether appropriate methods to reduce reviewer error and bias were used throughout the review process.

Study quality was assessed and some results were reported. Studies were combined in a meta-analysis; some reasons for heterogeneity were explored in the text. The authors noted a number of limitations with the evidence including the small number of studies contributing to outcomes, small sample sizes and high attrition rates for some studies.

Limitations in the review methods and evidence mean that the reliability of the authors' conclusions is unclear.

**Implications of the review for practice and research**

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that further research was needed on clinical feasibility, acceptability and cost-effectiveness of telephone counselling for adults with an acquired physical disability. Future studies should: include a non-treatment or waiting-list control group to rule out any possible placebo effect; include early and extended treatment intervals and follow-up both immediately and long term to establish benefit; and include intention to treat analysis.

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