Reviewer's report

Title: "Did the trial kill the intervention?" Experiences from the development, implementation and evaluation of a complex intervention.

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Reviewer: Morag Farquhar

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Review 1828130146418739 re-submission (November 2010)

“Did the trial kill the intervention?” Experiences from the development, implementation and evaluation of a complex intervention.

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BMC Medical Research Methodology, Research article

Reviewer's report

This is an improved paper describing the views of health care professionals and patients who participated in a randomised controlled trial (RCT) of a complex intervention of a rehabilitation programme for patients recovering after haematological malignancy and stem cell transplantation. The revised paper remains a useful addition to the literature on the design and evaluation of complex interventions.

It would benefit from the following final revisions and clarifications:

1) Major Compulsory Revisions:

1.1) The overall tenor of the paper (in both the title and the background section and elements of the discussion) is better, and most of the points raised in my earlier review have been addressed (it was good to see that the authors agreed with the majority of these), but I continue to assert that the paper implicitly (rather than explicitly) highlights the need for the thorough development of complex interventions and the development and piloting of RCTs of their evaluation prior to a definitive trial: in other words, the following of phases I and II in particular of the MRC framework. This revised manuscript now makes it clear why this did not happen: the independent research team were invited in after the intervention had been developed, and after it had been piloted by the developers and providers themselves. The potential for bias in latter has to be considered (and should be mentioned), and one wonders whether independent assessment of the pilot intervention (Phase I of the MRC framework), as well as the conduct of a pilot RCT (Phase II of the MRC framework) would have resolved, or at least identified sooner, the difficulties encountered in both the intervention (e.g. the group setting) and the trial design (e.g. a preference or fast track trial). Some of this is latter debated in the discussion section, but not explicitly in relation to the MRC
framework phases. The MRC framework is not just about evaluation by means of RCTs, it is about developing complex interventions and developing the RCT methodology to evaluate them. The take home message of this paper for me (and from my own research) is that I would not want to conduct a fully powered RCT without a pilot trial first, and that independent Phase I intervention piloting is important.

1.2) Half-way down p10, two sentences seem to contradict one another:

“However a proportion of the participants did report difficulties in being able to relax. These participants reported finding the relaxation sessions useful and some requested assistance with repeating the exercises at home.” The first sentence suggests difficulties, the second usefulness. In addition the latter sentence and the following it refer to ‘exercises’ – were these exercises part of the relaxation or the physical exercise programme referred to earlier? Can this be clarified.

1.3) Who conducted the randomisation and who informed the patients of the outcome of the randomisation (their allocation)? If it was the health care professionals providing the intervention then this is a cause for concern given the views they expressed about lack of equipoise (p.13). Please clarify.

1.4) The layout of the text at the end of p13 - top of p14 suggests that:

“P318 (SM): It was fair as you did, you know, being picked out I suppose it is fair. It’s just that I were picked out for the wrong one.”

is meant to support the statement:

“In contrast another HPL participant suggested that in hindsight they wished they had consented to take part on the condition that they were allocated to the SM programme.”

But it doesn’t.

1.5) Could the patients access the intervention outside of the trial? If so, those who wanted to access it would be less motivated to consent to participate if there was a 50-50 chance of not getting it due to randomisation.

1.6) There is a suggestion that the trial failed (end of para 1, p18). Did the trial fail or did it just have lower than hoped for recruitment? Was it still powered? Was it rather that the intervention failed?

2) Minor Essential Revisions:

2.1.) “nothings was easy” – should be “nothing was easy”?

3) Discretionary Revisions:

3.1.) It would be good to know if the programme of rehabilitation was evidence- or theory-based.

3.2.) The relatively low trial response rate (58/144 over 14 months), and the trial
attrition were related to the distance from the hospital, lack of relevance of the programme, disease relapse and death: it could be noted that these all relate to the intervention, not the trial.

3.3) In relation to the statement on p16...

“In our own study, a trial could have evaluated whether having access to a patient centred rehabilitation service improved patient outcomes as opposed to testing whether a defined set of rehabilitation interventions improved patient outcomes.”

I would add (in brackets) that the service could have included a core set of interventions which were selected and delivered in response to individual patient need.

What next?:
Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions – but I am happy for the Editor to make this decision.

Level of interest:
An article whose findings are important to those with closely related research interests.

Quality of written English:
Acceptable.

Statistical review:
No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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