Reviewer's report

Title: Training the next generation of clinical researchers: Evaluation of a graduate AHP Research Internship in Rheumatology

Version: 1 Date: 11 December 2012

Reviewer: Gordon Hendry

Reviewer's report:

This is an interesting article which aims to report on the evaluation of a new 'AHP' research internship in rheumatology. The authors make an admirable attempt to report on the effectiveness of the scheme by reporting the quantity of research outputs, post-internship career progressions, and qualitative information on interns and mentors experiences throughout the scheme. The content is generally well-written and some new and novel information does arise from this work. However there are some issues in terms of sound justification for this study, and some problems in terms of the conclusions drawn from a study of this particular design. I have outlined my point-by-point responses below.

Major compulsory revisions:

Title. The title is misleading in that it appears AHPs were eligible for the study when in fact the competitive process was only conducted across UK schools of podiatry.

Abstract, Objectives. The aim should also include 'to explore the experiences of interns and mentors'.

Abstract, Methods. What approach was adopted for the coding of transcripts?

Background, paragraph 3, final sentence. This study aims to look at effectiveness of an internship through examining quantity of research output, however the 'need for new and better evidence' statement used as justification for this study suggests that the main gap in the literature is research quality. Should impact factors or independent appraisal of quality of the research articles arising from the interns be presented or taken into account? If not, a statement in the limitations section needs to be made about the focus of this study on quantity not quality.

Background, paragraph 4, 2nd sentence. Would it be fair to add that the internship was also to increase the research output of the mentors and their respective institutions?

Background, paragraph 4, 3rd sentence. Was the internship coordinated and advertised equally across all UK podiatry schools? A more detailed account of how this internship was promoted would be beneficial to the reader to determine equity.
Methods, study design. The design was not stated here, more a description. This was not a conventional design and would be considered to be mixed methods with triangulation to achieve the same goal (effectiveness measured in quantitative and qualitative outcomes).

Methods, participant sample. An indications of clinicians previous undergraduate institutions and nationalities would be beneficial. Clinicians were excluded on the basis of not completing the internship? This appears to be a bit biased as you may be losing valuable information about how or why someone did not complete the scheme. This should be discussed in the limitations.

Methods, methods of data collection. The outcome measure of effectiveness is research quantity measured by publications and presentations. Further clarity is required as to whether these arose as a direct result of the research conducted during the internship, or could they have been the result of subsequent academic appointments such as PhD studentships or fellowships? Either way, this requires more discussion in the limitations. In addition, the interview script was not attached for appraisal.

Methods, methods of data collection. Why was email interviewing selected over telephone or face-to-face? This requires discussion in the methods plus acknowledgement of the limitations of this method in the discussion.

Data analysis. There is an error in the sentence as mean and range were not reported graphically, as it was frequencies of achievements that were reported graphically.

Findings: Did each intern publish, giving an average or approximately 1 publication each? Or did 1 or 2 interns publish >1 paper and skew the distribution of mean publications per intern?

Limitations. With only 6 participants did the qualitative data reach saturation?

Limitations. What are the limitations of email interviews? Why was the qualitative data not verified by a 3rd party who was not involved in the internship scheme?

Conclusion. Without having a suitable control group with which to compare it is difficult to draw any meaningful conclusions from the quantitative survey component of this study. Have there been any similar studies of other post-graduate research training programs including measurement of the quantity of subsequent research outputs?

Conclusion. It is difficult/impossible to separate the potential benefits of the program to interns from the potential benefits to mentors and their institutions since there was the production of many co-authored papers which may contribute to Research Excellence Framework 2014 submissions. A statement outlining the purpose of the Internship from the mentors’ perspectives would be beneficial.

Minor essential revisions:
Abstract, Conclusions. The language is a bit strong here in terms of assuming cause and effect. 'proven' and 'contributed significantly' are strong standpoints and could perhaps read as 'appears to be' and 'may have contributed to'.

Background, paragraph 3, 1st sentence. Is there any evidence from other disciplines that research training directly improves quantities (and/or qualities) both individual and institutional research output?

Background, paragraph 4, 4th sentence. This study considers the 8 week intensive placement to be an intervention with a subsequent outcome in the forms of research output etc. It would be beneficial to the reader to have a more detailed account of what format and quantity of education etc was delivered.

Findings, p14, 3rd paragraph. Did the internship directly lead to new career opportunities or did some participants have post-graduate jobs lined up that were not conditional upon the completion of the scheme?

Discretionary revisions:

Background, paragraph 1, final sentence. Is there any contemporary evidence of a shortage of researchers now? From experience there is a lot of competition for research posts currently. Do you think this is a true reflection of the current podiatry/AHP workforce?

Background, paragraph 2, final sentence. Are there any statistical figures to support the statement that progression from pre-reg study to research is uncommon?

Findings, p14,discussion p17 and conclusion p18. The use of language such as 'bright', and 'high flyers' may could be replaced with better adjectives.

Discussion, final sentence starting 'Already, the findings...' is a bit too long and 'wordy'. This could be 2 succinct sentences that could aid the reader.

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 was funded by Arthritis Research UK from October 2007 until October 2010.

I declare that I have no other competing interests.