PROVIDING TRAINING DURING THE SARS-COV19 PANDEMIC, AN ONLINE PROTOCOL DEVELOPMENT WORKSHOP

Authors: Ameer Hohlfeld, Tamara Kredo, Joy Oliver, Solange Durão
Cochrane South Africa, South African Medical Research Council.

BACKGROUND

Cochrane is a global organisation, and its Geographic Centre's, such as Cochrane South Africa (CSA), support authors in sub-Saharan Africa (SSA) to conduct high-quality Cochrane reviews to inform healthcare decisions relevant to their context. We had planned a one-week face-to-face Protocol Development Workshop for 2020, but due to the COVID-19 pandemic, we had to change this to an online approach.

OBJECTIVES

To describe the implementation of an online protocol development course for authors in SSA who were completing protocols for systematic reviews of health care interventions.

METHODS

The course aimed to assist SSA-based researchers in completing a protocol for a systematic review of healthcare interventions, using resources available from Cochrane, including the RevMan software package and the Cochrane Handbook for Systematic Reviews of Interventions.

The course was advertised via email and social media. Eligible participants had to be based in SSA and have a working or registered systematic review title. It ran over nine weeks for three reasons. One is to give participants time to use the content they learned each week to assist them in writing or completing their proposals. Two, not all participants may have had fundamental training in research methods, epidemiology or biostatistics. Thus, giving them time during the week to go over the online modules from Cochrane Interactive Learning to learn the new concepts, followed by a weekly session with facilitators. Three, we intended to make the course less demanding on participants' schedules, considering the rapid increase of virtual meetings at the start of the pandemic.

Cochrane provided free access to the online modules for South African participants attending the course. Participants based in HINARI countries automatically gained free access.

The online modules address the chronological methods for conducting a systematic review. In the weekly sessions, volunteer participants presented the relevant section of their protocols in line with the topic covered in the online module that week.

Alongside this, participants were assigned a mentor to guide and assist with their protocol development. Mentors and participants met at least three times virtually during the course. Participants who attended 80% of the weekly sessions and completed all the online modules successfully were eligible for a course certificate.

Participants completed a pre-post course quiz to assess their knowledge, and the course delivery was evaluated in the final week.

Protocol development online course evaluation: Thoughts about this course

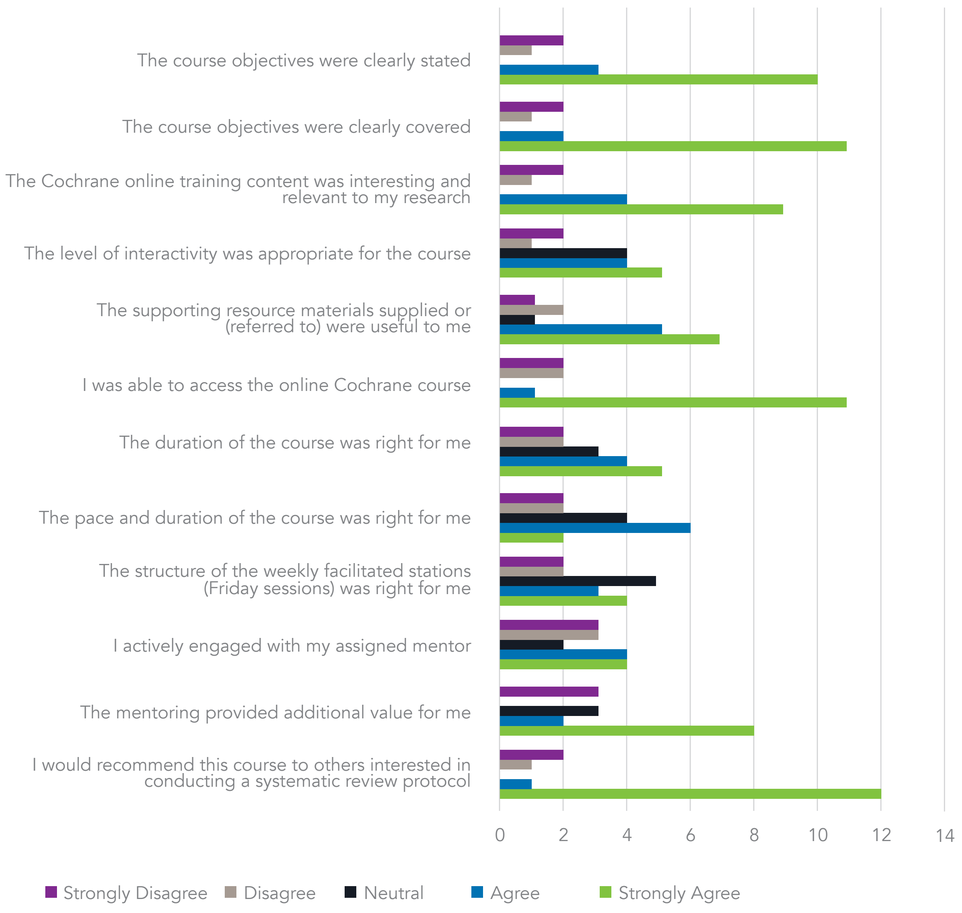

Figure 1. Protocol development online course evaluation: Thoughts about this course

RESULTS

Nineteen participants were enrolled from four SSA countries: South Africa (n=11), Malawi (n=3), Uganda (n=3), Ghana (n=1), and Cameroon (n=1). The course ran from 24 August to 23 October 2020.

Fourteen participants completed all the online learning modules, producing certificates for each, and nine attended all weekly facilitated sessions.

Pre-post quiz

Fifteen participants completed the pre-post course quiz at the start and eight at the end. The quiz comprised of 25 questions on basic systematic review methods. Results showed some improvement in knowledge (Table 1). Participants improved or remained the same on 21 questions. Yet, of the 21 improved questions, less than 40% correctly answered a question about risk of bias.

Participant course evaluation

Participants reported that the course objectives were clearly stated and covered; the online content was interesting and relevant, the level of interactivity was appropriate, the supporting resources were useful, the duration and pace were good (Figure 1). Participants reported that mentoring added value and they would recommend this course to their peers or those interested in conducting systematic reviews.

Facilitator and Mentor course feedback

There was enthusiasm in the first three weeks, which slowly dwindled. Facilitators noted that more interaction should be encouraged during the weekly facilitated sessions and that participants had trouble understanding specific modules. Lastly, mentors said that some participants did not respond to email invitations.

Table 1. Pre-post course quiz

Question	True/False	Pre-course answers correct (%)	Post-course answers correct (%)
1	A well-defined review question states clearly the participants, interventions, controls and outcomes that will be assessed in your review	100	100
2	A well-defined review question will determine your eligibility criteria - that is, which studies are included in the review and which are excluded	60	75
3	Authors of systematic reviews publish their protocols, but they can still adjust the methods of the review depending on the results they find	46.7	75
4	Protocols are plans for the methods you will use in your review, that are documented in advance, before you begin to search for included studies and they help minimise bias in the review process	93.3	100
5	Non-systematic reviews use robust methods to reduce bias in the gathering, summarising, presenting, interpreting, and reporting of the research evidence *	86.7	62.5
6	Searching PubMed will provide complete search results for your review	100	100
7	Most publications appear in English and it is best to limit your search to English language publications	80	100
8	Your review question is very important to guide your search strategy	93.3	100
9	Assessing study eligibility and extracting data can be performed by one author *	86.7	87.5
10	Inclusion and exclusion criteria for study eligibility is based on the pre-specified criteria in the protocol	100	100
11	To assess eligibility of a paper, the full text article may be needed to make a decision	80	100
12	Numerical data should never be converted when doing data extraction *	20	62.5
13	Data extraction can easily be done without the use of data collection forms	86.7	87.5
14	After a study is published, you may still contact authors for additional information	86.7	87.5
15	A bias is a systematic error or deviation from the truth, in results or inference	86.7	100
16	Bias generally leads to over-estimation of the result*	20	37.5
17	There are a number of tools and checklists that can be used to assess risk of bias in Cochrane Reviews *	93.3	87.5
18	Allocation concealment and blinding are similar concepts and the terms are used interchangeably	53.3	87.5
19	Selection bias can be addressed by ensuring proper random sequence generation and allocation concealment	100	100
20	Differential loss to follow up in the control or intervention group of a trial could indicate selective outcome reporting	73.3	75
21	Risk ratios are the appropriate measures of effect for continuous data	53.3	50
22	Assessment of heterogeneity is an integral component of conducting a meta-analysis	86.7	100
23	Subgroup analysis can be decided on when conducting the review	33.3	25
24	All systematic reviews must include a meta-analysis	73.3	75

CONCLUSION

Cochrane SA successfully implemented a novel online protocol development course using pre-existing learning material and weekly sessions with facilitators. This format allowed us to deliver the planned training and potentially reach a more comprehensive number of participants.

Future workshops will aim to improve feedback session attendance and quiz score for knowledge based on continuous evaluations.