Appendix 1 – Overview of qualitative mixed-methods design

Objectives

We conducted a mixed-methods study, using both quantitative and qualitative study designs, to evaluate the content, accessibility and usability of the online *Primer in Systematic Review* course in a cohort of enrolled participants.

The quantitative component of the study included semi-structured questionnaires to evaluate the *Primer*'s accessibility, usability and content.

Sampling

Participants were purposefully recruited to pilot the online *Primer in Systematic Reviews* course. The sampling frame aimed to ensure a balanced sample including those with and without systematic review conduct experience; those who had attended the face to face and those who had never been exposed to the training. We aimed to include participants from a variety of countries, the majority in sub-Saharan Africa, members of different regional or international networks, such as the Chronic Diseases Initiative of Africa (CDIA), the Cochrane Africa Network, Cochrane International, those working with the World Health Organization (WHO) or national or provincial governments. Participants were eligible if they were potential users of systematic reviews, such as clinicians, researchers or policymakers; had access to internet; and were proficient in English.

We aimed to sample 40 participants for the quantitative component and a purposeful subset of 5-10 participants for in-depth interviews. We recruited participants through email in which we introduced the planned study. Those that agreed to participate were invited to register for the online course to ensure they could access the materials. Participants were introduced to the study team and objectives through email, at the start of the online *Primer* and during informed consent for both the survey and interviews (for those who were interviewed).

Data collection and variables

For the quantitative component, data was collected using a voluntary semi-structured online questionnaire linked to the weekly sessions (Weeks 2-7, Table 1) of the *Primer.* The questionnaire was adapted from Oud (2015) to accommodate the *Primer in Systematic Review* content. Data was collected pertaining to access, usability and content with closed questions for each week and included Likert scales to describe overall performance per topic.

For the qualitative component we collected data using in-depth individual interviews (n=5) and facilitated one online focus group with four experienced researchers using a semi-structured interview schedule. The interview schedule included instructions to guide the facilitator, information to participants (e.g. discussion purpose, housekeeping and privacy), open-ended questions and probing questions. The interview schedule was divided into 3 sections: accessibility, usability and content. Individual in-depth interviews were conducted in boardrooms and online using Skype software, lasting approximately 45 min. The focus group discussion was held online (via Skype) as requested by the participants and lasted approximately an hour. Only the participant/s and the researcher (MM) were present during interviews.

Data management and analysis

Quantitative data was cleaned, coded and imported into STATA 14 for analysis. We analysed data using descriptive statistics. We checked for data normality qualitatively and reported it appropriately.

Free text data from the semi-structured quantitative questionnaires was merged with the in-depth interview data.

Qualitative interviews were transcribed verbatim and analysed using a thematic content approach in ATLAS.ti. Two authors first read the transcripts as a whole, to become familiar with the data and identify emerging themes. To provide an overview of emerging themes within accessibility, usability and content domains, and to guide analysis we then mapped them out graphically (mind-map). Based on this overview, one author coded individual transcripts with supporting quotes into themes within the three study objectives. A second author reviewed data and coding. Differences in interpretation between authors were discussed and resolved by consensus.

The research was approved by the Stellenbosch University Health Research Ethics Committee (N15/10/122) and all participants provided written (for in-depth interviews) and online consent (for semi-structured online questionnaires). Data collection was explained as voluntary, confidential and non-participation would not affect *Primer* participants in any way.