

create workshop

CREATE 2011: Systematic review, meta-analysis and qualitative meta-synthesis

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This year's workshop saw us head to the beautiful Greek island of Crete to soak up some information on systematic review, meta-analysis, and qualitative meta-synthesis. Early career researchers ($n = 37$) came from America, Australia, Canada, England, Finland, Germany, Greece, Ireland, and the Netherlands to participate. We were situated in the municipality of Hersonissos on Crete for the workshop, which ran from 18th-20th September at the Albatros Hotel, and was followed by the conference from the 21st-24th September at Creta Maris Convention Centre.

The workshop was facilitated by Dr Wendy Hardeman from the University of Cambridge, UK, and Dr Richard Cooke and Dr Rachel Shaw from Aston University, also in the UK. All the facilitators did a great job of synthesising their presentations together, with Wendy taking systematic review, Richard taking meta-analysis, and Rachel taking qualitative meta-synthesis. The broad aims of the workshop were to understand the principles and steps involved in conducting each review and writing it up for publication. Martin Hagger from Curtin University in Australia contributed towards the latter aim by attending on the last day to offer some helpful advice on publishing in *Health Psychology Review*. The workshop was a mixture of lectures, group tasks, and presentations from participants. In groups and pairs, we practised the steps for each kind of review, learnt associated principles and protocols, and designed and ran search strategies on the much-loved Theory of Planned Behaviour (Ajzen, 1991; Ajzen

& Madden, 1985). The learning environment was informal and interactive, with plenty of opportunities for group discussion and sharing issues in our own work which were relevant to the review process. Wendy, Richard, and Rachel encouraged us to ask questions, and constantly checked that we were keeping pace with the slides and understood each aspect of the review process which was much appreciated.

We began our workshop with systematic review. Systematic review is an attempt to answer a research question by collating all empirical evidence available which fits pre-specified eligibility criteria (Higgins & Green, 2011). A clearly stated set of objectives is important in order to limit the scope of the included studies. Explicit and systematic methods are utilised in order to minimise bias, and consequently produce more reliable findings which inform conclusions and decisions (Antman 1992, Oxman 1993). Findings are presented systematically and synthesised together. One valuable exercise we conducted at the workshop was a 'compare and contrast' between a traditional and systematic review. In contrast to a systematic review, a traditional review often only examines a small part of available evidence, is not transparent about methods (and therefore not reproducible), contains no quantitative summary, does not eliminate certainty, and in this case, is written by one author, whose claims must be taken at face value.

Often, meta-analyses are embedded within systematic reviews. These analyses use statistical techniques to integrate the results of

independent studies (Glass 1976). Meta-analyses provide more precise estimates of the effects of health care by combining the information from all relevant studies, and also allow investigations into the similarities and differences between papers included in the review.

The qualitative meta-synthesis involves appraising qualitative studies for quality using quality criteria. A corpus of primary studies undergoes a thematic analysis to compare themes across cases (i.e., studies) and develop a hierarchical structure of these themes. Both data (participants' words) and findings (inferences made by researchers) (Sandelowski & Barroso, 2003) can be extracted for use in the synthesis. Although Cochrane resists including non-trial based evidence including qualitative syntheses, there is still a need to develop methods to systematically review this type of evidence. It's necessary to know the context of patients when considering their care, and the best way to understand this is to ask them. Although trials might have great internal validity, there might be problems with external validity which qualitative research might be able to solve.

One of the things that excited me most was the great resources we got to take away from the workshop. The reference list put together by the facilitators was excellent. The data extraction form will prove useful anytime I am undertaking a review of any sort of literature. The critical appraisal of qualitative research helped me to think about 'rigour' in my own qualitative study. The qualitative methods search terms we have been provided with are quite impressive and will certainly save a lot of time in the event that I need to conduct a meta-synthesis. I have sent the workshop slides around to my postgraduate colleagues since and two are just about to begin systematic reviews so the workshop was timely.

I'd also like to give a hearty thanks to the

CREATE executive committee who organised this years workshop. Jana Richert, Lena Fleig, Cécile Bazillier, Angela Rodrigues, and Gudrun Sprösser, are all early-career researchers and did a great job of organising the workshop and the social programme. The social programme was a great way to get to know others and ensured there were familiar faces at the conference throughout. The dinner the first night was great fun, so many of us came out that the restaurant ran out of knives and forks! Finally, no matter how systematic you were, you wouldn't be able to visit each small tourist shop selling olive oil products, swim on each section of the Mediterranean lining Crete, or eat out at the many restaurants along the shoreline self-proclaiming 'best food in Crete for 40 years'. Quality appraisal also necessary here then.

So what did we come away from this year's CREATE at Crete? Undoubtedly, the self-efficacy and resources to conduct each type of review, and more broadly the knowledge of how to best integrate evidence in order to inform decision-making about the care of individual patients and people. As scientists, this gives us a great opportunity to immerse ourselves in problems, and ultimately to work towards better outcomes for the voices in our research. Based on my experience this year, I would recommend future workshops to other early career researchers. See you in Prague! ■

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