



# Trials in Public Policy

## 1) Second Annual Conference

### Randomised Controlled Trials in the Social Sciences: The Way Forward 13<sup>th</sup>—14<sup>th</sup> September 2007

We have decided to hold the kind of workshop originally scheduled for the Wednesday preceding the conference within the two day conference itself.

#### Inside this issue:

##### 1) *Second Annual*

Early registration attend all (payment received up to and including 7th September 2007) - £125  
Standard registration attend all (payment received 8th September 2007 onwards) - £135

Further details can be obtained from the website: <http://www.trials-pp.co.uk/> or from the conference administrator via email: [educ-trials-pp@york.ac.uk](mailto:educ-trials-pp@york.ac.uk)

##### 2) *Trials in Public Policy Event*

#### This conference aims to:

- Promote and develop knowledge of Randomised Controlled Trials (RCTs) in the Social Sciences
- Facilitate sharing and collaboration between academic disciplines in this area
- Contribute to the understanding and conduct of evidence-informed policy and practice

##### 3) *David Torgerson's argument about what is a randomised controlled trial*

##### 4) *Stephen Gorard's response*

### 2) RDI Trials in Public Policy Event for New Researchers and PhD Students, Held at The University of Birmingham, 18th July 2007

#### Contact Details

#### RCT Helpline

A free career development opportunity for early-career researchers, research students, and others, over 50 delegates attended.

The day consisted of a mixture of presentations by experts currently involved in randomised controlled trials (RCTs) in criminal justice, health promotion, education, and other areas of public policy, with workshops, discussions, and resources to take home.

Professor Stephen Gorard - Presentation: Why use an experimental design for public policy research?

Workshop: Fostering scepticism

Professor Laurence Moore - Presentation: Rigorous designs for mature interventions, planning complex interventions, and the MRC model.

Workshop: Analysing complex interventions

Dr Carole Torgerson – Presentation and workshop: Rigour of evaluation, examples of what can go wrong in trials. Participants were encouraged to evaluate past research. Discussion of possible solutions.

Professor Peter Tymms - Doing policy research, including an example of a mature intervention and real life problems of evaluating it using a RCT design, leading in to the problems that can arise in well-designed trials.

(please see the website for all slides)

Workshop topics include:

- Why use an experimental design for public policy research?
- How to plan a study
- How to analyse the results
- What to do when things go wrong
- Top tips to prevent things going wrong



What follows is an ongoing exploratory discussion between Paul Marchant, Stephen Gorard and David Torgerson, about the meaning of the some of the terminology used in trials, please see issue 5.

### 3) David Torgerson's Response to the ongoing debate about What is a Randomised controlled Trial:

In response to the debate there are a couple of issues here. You are quite right to state that unless a randomised trial is generalisable there is little point in doing one. However, virtually all RCTs do not take random samples of participants from the underlying population usually because we need volunteers and once we get some refusal this will obviously have the potential to introduce bias. Consequently the 'population' that forms the basis for statistical inference is a population of volunteers and we take one random sample, intervene and then compare the results with another random sample, usually the remainder of the 'volunteer' population. We hope that any results generated from trial are then applicable to the wider, including the non-volunteer, population. I am pretty confident that the results of most trials will be generalisable to the wider population as within trials it is rare to see qualitative interactions between subgroups with large differences in observable characteristics. I agree with you on sample size issues. Stephen's point about going for as large a trial as possible within available resources is flawed in terms of its practicality and takes no account of resource limitations.

Sample size calculation is a good discipline in that it makes the trialists think through the numbers they are likely to need for a study and the corresponding amount of resources. In the real world we send grants to funding agencies who have a limited budget. I could easily send, and have sent, proposals that might look for an effect size of 0.25 for differences in musculoskeletal pain, for which I would need 512 participants for 80% power etc. I might also send a proposal where I want to look for a 30% relative risk reduction in fractures among osteoporotic women, where I would need 3-4,000 participants followed up for 2 years or more to give me 80% power. The first trial will cost around £750,000, whilst the second could easily cost 2-3 times that. If the funding agency has only £800,000 it would be better to fund the first trial where we would have sufficient power to show a reasonable difference rather than funding a cut down version of the second trial where we would not really have any chance of finding a difference that we know from previous work is the likely effect that is achievable.

At the moment it seems to me that many people pluck a sample size figure out of the air, which often has insufficient power to detect quite large differences and then do a trial if significant they report the results if not they don't. Even if one adopted the method of working backwards (e.g., we think we can get 150 people, what power does this give us), which is usually frowned upon even this must be better than not making any priori sample size estimation because at least this gives the researchers a chance to think through the issues and state what effect size this sample would observe.

### 4) Stephen Gorard's response to David Torgerson's argument:

David Torgerson seems so keen to defend the idea of sample size calculations from the circularity that I identify in my response to Paul Marchant that he has missed, what appears to me to be, the circularity in his own disagreement with me! David says 'Stephen's point about going for as large a trial as possible within available resources is flawed in terms of its practicality and takes no account of resource limitations.' My point was that the ultimate limit on sample size lay in resource limitations, but that within these limitations we should aim for as large a sample size as possible. Even the circular power calculations proposed by Paul and David only yield probabilities. So the larger the sample the higher is the probability we find what we are looking for above the noise generated by error and volatility. I do not understand at all how David can say that my point that the availability of resources are paramount is flawed because it 'takes no account of resource limitations'. Perhaps he will explain this argument further in the next issue.

Further contributions are welcome with a view to carry this discussion forward in further issues. For more information please contact: [educ-trials-pp@york.ac.uk](mailto:educ-trials-pp@york.ac.uk)

#### RCT Help Line

If you have a query or would like help or advice on any aspect of designing, running or evaluating randomised controlled trials, please contact us. Where appropriate, a member of the project will be happy to visit the site to provide personal assistance.

Contact Us:  
Tel: 01904 433466 or  
Email: [educ-trials-pp@york.ac.uk](mailto:educ-trials-pp@york.ac.uk)

We want to encourage more people to be involved in face-to-face events, and in virtual participation, from all areas of public policy. In particular, we want to hear from national, regional and local policy-makers and practitioners who do or could use evidence from rigorous evaluations in their fields. And from research methods trainers, struggling with the place of trials methods in their courses. The first two events were in York, but we are happy to hold or help organise events wherever they are wanted. Please contact us with your comments and suggestions.

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