

SWAT 71: Effects of population compared to purposive sampling for consensus in an online Delphi study

Objective of this SWAT

To explore the effects of population compared to purposive sampling for consensus in an online Delphi.

Study area: Recruitment, Prioritization, Outcomes

Sample type: Participants

Estimated funding level needed: Moderate

Background

This SWAT will be nested as a randomized controlled trial within an online Delphi and will assess the effects of population compared to purposive sampling for consensus in an online Delphi. The Delphi method of engaging panels of experts from specific interest areas has been widely utilized in the for the development of research reporting guidelines, core outcome sets, clinical medicine, nursing practice, medical education and healthcare services. An assessment undertaken by Atkins and colleagues in 2005 report that a small panel of similarly trained experts can develop reliable criteria that inform judgment and support effective decision-making. [1] Despite the wide applicability of the Delphi methodology, it is not known how the number of participants or their similarity as a stakeholder group influences results in an online Delphi.

In this SWAT, the Delphi participants will be categorized into five stakeholder groups: (a) researchers [health science students, academics, and journal editors]; (b) clinicians [doctors and allied health professionals, medical students]; (d) community [patients, other students and other groups]; (d) industry [medical devices, commercial research, commercial funders, pharmaceutical companies, health media]; and (e) policy [Policy makers, health commissioners, and non-commercial funders].

Purposeful sampling will be used with a randomized sample taken from each stakeholder group for analysis and this analysis will be presented alongside the full analysis and the results compared.

The first implementation of this SWAT will be in the Protocol Lab for Online Trials-Delphi (PLOT-D), which will use an online Delphi [2] combined with participatory action research [3] to inform the development of a multi-use protocol template for writing protocols for self-recruited online trials of interventional self-management. The Protocol lab will use the Delphi findings, along with earlier research to redesign a series of protocols for online randomized trials with the aim of providing support for citizens to work alongside researchers to build participatory health trials online. [4,5,6,]

Interventions and comparators

Intervention 1: Full sample of Delphi participants

Intervention 2: Purposive sample of Delphi participants to provide similar numbers across stakeholder groups

Index Type: Method of recruitment

Method for allocating to intervention or comparator

Purposive sampling randomized by stakeholder group

Outcome measures

Primary: Sample size on Delphi response rates

Secondary: Agreement/differences of consensus between samples

Analysis plans

The Mann–Whitney U test will be used to analyse the values between samples for each consensus decision. This is a nonparametric test of the null hypothesis that it is equally likely that a randomly selected value from one sample will be less than or greater than a randomly selected value from a second sample. Within the Delphi the differences can be reported and then the responses combined across randomization groups to inform the final consensus.

Possible problems in implementing this SWAT

The stakeholder groups might vary in size (and in the proportion who do not provide complete data) making some of the stakeholder-intervention groups too small for a meaningful analysis. This might be mediated by collapsing groups or/and selecting a randomized sample from each to match the smallest stakeholder group and presenting this for comparison with the main analysis.

References

1. Brookes ST, Chalmers KA, Avery KNL, et al. Impact of question order on prioritisation of outcomes in the development of a core outcome set: A randomised controlled trial. *Trials* 2018;19:1–11.
2. Sinha IP, Smyth RL, Williamson PR. Using the Delphi technique to determine which outcomes to measure in clinical trials: recommendations for the future based on a systematic review of existing studies. *PLoS medicine* 2011;8:e1000393.
3. Fletcher AJ, Marchildon GP. Using the Delphi Method for Qualitative, Participatory Action Research in Health Leadership. *International Journal of Qualitative Methods* 2014;13:1-18.
4. Brice A, Price A, Burls A. Creating a database of internet-based clinical trials to support a public-led research programme: A descriptive analysis. *Digital Health* 2015;1:1-13.
5. Bagley HJ, Short H, Harman NL, et al. A patient and public involvement (PPI) toolkit for meaningful and flexible involvement in clinical trials – a work in progress. *Research Involvement and Engagement* 2016;2:15.
6. Price A, Albarqouni L, Kirkpatrick J, et al. Patient and public involvement in the design of clinical trials: An overview of systematic reviews. *Journal of Evaluation in Clinical Practice* 2017:1–14.

Publications or presentations of this SWAT design

Examples of the implementation of this SWAT

People to show as the source of this idea: Amy Price and Su May Liew

Contact email address: dr.amyprice@gmail.com

Date of idea: 5/MAR/2018

Revisions made by:

Date of revisions: