SWAT 151: Impact of a waitlist comparator design on recruitment, retention and outcomes in open-label parallel-group randomised trials

Objective of this SWAT
1. To assess whether a randomised trial with a waitlist comparator arm increases recruitment compared to a trial without a waitlist comparator arm.
2. To assess whether a randomised trial with a waitlist comparator arm increases retention compared to an trial without a waitlist comparator arm.
3. To assess whether participants in a randomised trial who are allocated to a comparator arm report different levels of activity comprising “usual care” depending on whether or not the comparator includes a waitlist.
4. To assess whether participants in a randomised trial who are allocated to a comparator arm report different outcomes depending on whether or not the comparator includes a waitlist.

Study area: Recruitment, Follow-up, Outcomes
Sample type: Participants
Estimated funding level needed: Low

Background
Optimising recruitment and retention are critical components for successful randomised trials.(1,2) Large funders, such as the UK’s National Institute for Health Research (NIHR), encourage the use of feasibility and pilot studies to test key design parameters which may influence the successful delivery of a subsequent large-scale trial.(3,4) Trial participation is thought to be influenced by a concept known a conditional altruism, whereby participation is driven by a willingness to help others as long as the participant may also stand to benefit.(5) In response, randomised trials are often designed to include a waitlist element, with participants who are not initially allocated to receive the intervention being allocated to receive it when study participation is complete. This is thought to improve the acceptability of the randomised design to participants and may be ethically superior in some situations (e.g. where other forms of evidence-based intervention are restricted in the comparator arm). However, for parallel-group randomised trials where the comparator is usual care, there is no ethical argument justifying the use of a waitlist comparator.

By providing a waitlist comparator, trial teams may inadvertently overstate the evidence around the benefit of the intervention being tested (which may in itself damage equipoise and limit participation in trials without a waitlist comparator). Conversely, with limited evidence of the benefits or harms of an intervention, a waitlist comparator exposes twice the number of participants to a potentially ineffective or harmful intervention. Furthermore, the design may result in participants limiting the uptake of activities otherwise engaged with as part of usual care while they wait to receive the new intervention, which may lead to an exaggeration of intervention effects and concerns around whether it provides an appropriate estimate for the counterfactual outcome.(6,7)

Therefore, this SWAT will seek to address the lack of strong evidence around the benefits and harms of using a waitlist comparator design in parallel-group randomised trials.

Interventions and comparators
Intervention 1: Study information leaflet provided to potential study participant* regarding a randomised trial where the comparator involves access to the intervention on completion of the study (i.e. a waitlist control design).
Intervention 2: Study information leaflet provided to potential study participant* regarding a randomised trial where the comparator does not involve access to the intervention on completion of the study.
*Individual providing a decision around study participation. The randomisation unit may be at a higher level than individual people. For example, schools could be randomised but the decision maker about taking part could be the head teacher.

Index Type: Participant Information, Design change

Method for allocating to intervention or comparator
Randomisation

Outcome measures
Primary: recruitment into the study
Secondary: i.) whether recruited participant remains in the host trial until completion; ii.) services received or accessed as part of usual care; iii.) outcome measures for the host trial.

Analysis plans
Primary analysis: the difference between intervention groups (waitlist comparator versus no waitlist comparator) in the proportion of participants recruited into the host trial from those approached will be calculated and presented alongside 95% confidence intervals (CI) using binomial regression with an identity link function (to yield absolute risk differences). The use of regression allows for the inclusion of balancing factors used in the randomisation process.
Secondary analyses:
i.) the difference between allocated comparators (waitlist versus no waitlist) in the proportion of individuals randomised into the host trial (i.e. that comparing intervention to the allocated comparator) who remain in the study until completion will be calculated and presented alongside 95% CI using binomial regression with an identity link function (to yield absolute risk differences).
ii.) the total number, type, and frequency of services received or accessed as part of usual care will be compared descriptively between comparators (waitlist versus no waitlist).
iii.) host trial outcomes will be compared between comparators (waitlist versus no waitlist). The analysis will depend on the type of data under consideration (e.g. continuous data will be compared via linear regression, binary data via logistic regression, etc.)

Possible problems in implementing this SWAT
Randomisation lists require preparing in advance in order to generate sequential information sheets containing randomly allocated comparators. In addition to this, the SWAT requires accurate screening logs which describe when a potentially eligible participant was approached, their eligibility, and the outcome of their approach. The screening log should also include a code corresponding to the information sheet which the potentially eligible participant received. Furthermore, there may be reluctance from investigators to a nested design – particularly in a definitive trial where the comparator group may exhibit considerable heterogeneity. This design may therefore lend itself more readily to a randomised feasibility study, where the statistical comparison of trial arms (with regards to the target primary outcome for the intervention) is inappropriate.(8)

References
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3.Eldridge SM, Lancaster GA, Campbell MJ, Thabane L, Hopewell S, Coleman CL, et al. Defining feasibility and pilot studies in preparation for randomised controlled trials: Development of a conceptual framework. PLoS One. 2016;11(3):e0150205.
4. National Institute for Health Research. Guidance on applying for feasibility studies. Available at https://www.nihr.ac.uk/documents/guidance-on-applying-for-feasibility-studies/20474 (accessed on 1 September 2021)
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7. Cunningham JA, Kypri K, McCambridge J. Exploratory randomized controlled trial evaluating the impact of a waiting list control design. BMC Medical Research Methodology 2013;13:150.
8. Arain M, Campbell MJ, Cooper CL, Lancaster GA. What is a pilot or feasibility study? A review of current practice and editorial policy. BMC Medical Research Methodology 2010;10:67.

Publications or presentations of this SWAT design

Examples of the implementation of this SWAT

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