Reviewer’s report

Title: DIAMOND (DIdigital Alcohol Management ON Demand): a mixed methods feasibility RCT and embedded process evaluation of a digital health intervention to reduce hazardous and harmful alcohol use

Version: 0 Date: 14 Jun 2017

Reviewer: Gareth McCray

Reviewer's report:

Thank you for giving me the opportunity to review the paper. I am sure you know that as a reviewer it is always nice to receive a high-quality well-written paper to review. I enjoyed the narrative flow of the paper, 1) you set up a well thought out study, 2) you administer it, 3) for unforeseen reasons it fails to recruit, 4) you reflect extensively on this failure thereby providing lessons for other researchers. Nevertheless, I have quite a few comments and suggestions of how I feel your paper might be improved.

Bigger issues/suggestions

L319-355: Please could you tell the readers what measures were actually collected, the lengths of the measures (i.e. number of items) and when? A diagram might be a good way to get this across clearly and would act as a clarification to the text. If would also be good for readers to be able to ascertain an impression of the amount of time participation takes for both the participants and the people collecting the data. This might feed into the reasons for the failure to recruit.

L562: I think that one real strength in this paper is in its lessons for other researchers conducting feasibility trials, generalisable beyond the specific context. I think you might want to consider writing your conclusion in the light of this. In other words, one main reason why this paper is interesting is because it may help other researchers designing studies in the future who may face similar problems, outside the context of alcohol use studies. If you could finish this paper off by writing in more general terms about the lessons you learned I think that this would really widen scope of the paper. You could also, perhaps, think about "upselling" these more general "lessons" in the abstract and introduction.

L563 & L569-570: Can you really claim that randomisation, retention and data collection methods were thoroughly tested, given the recruitment was so low? I am not sure that you can. For example, the small sample may mean that you were unable to see fundamental problems with the data collection instruments. I think you have to 1) convince me that I am wrong, or 2) accept that the small sample size meant that you could not really assess these factors fully. I do not think that situation 2 weakens your paper in any way.
Smaller issues/suggestions

Abstract: 579 + 548 = 1127. Where does 1189 come from? Oh, I see, the consort diagram. It might be worth clarifying those who are missing at this point in the text, somehow.

Abstract: You might think about incorporating the information which is in bullet point format at the end of the results into the main body of the text. It seems unnecessary to put it as bullet points in the abstract.

L166-167: I do not quite understand what you mean by "assessment only or information only". Please could you make this a little clearer?

L171: please could you very briefly reiterate the reasons people do not access treatment, it would just make the paper a bit easier to read.

L192: Recruitment is very likely possible and was possible in the study, it was just not anywhere near the numbers required for an RCT. Should you be asking something more like "To estimate recruitment rates to a full RCT"? So, ask a "to what extent" question rather than a "yes/no" question.

L196: This aim is a bit vague. Please can you specify what kinds of problems?

L218: I'm not sure what this "overall research question" is. Please could you clarify?

L347: please could you expand on where this figure of 2000 comes from? Is it not the case that one of the purposes of this study is to estimate the SS for a full trial? If this is the case where does the 2000 come from? Note: I'm not trying to trick you here, sample sizes like these are very difficult to estimate analytically and often it comes down to a judgement. The same size of 100 in each arm seems fine in my judgement, I just wondered if you could add in a bit more justification for these numbers, possibly a citation from somewhere.

L348: Please could you expand on where the 10% of the full sample size comes from?

L351: I am guessing this is a self-reported measure of alcohol consumption. Please could you make this clear and also add details about how exactly it was collected. So, was it collected face to face, over the phone, by filling in details on a website? Did the method of collection differ between the treatment and control (TAU) group? If so might this impact the validity of the measure? If not, you need to state that the measure was collected in the same way.

L506: "and one participant visited the website 159 times, on four separate days." This is highly unlikely. Alarm bells are ringing that there is something wrong with the way visits were measured. Please could you expand on this as it relates to the feasibility of the data collection? I think this figure needs explaining away somehow.
L563: Can you really claim that randomisation, retention and data collection methods were tested, given the recruitment was so low? I am not sure that you can.

Typos, Language and Grammar

Abstract: "attending participating", maybe say "attending the participating". It is difficult to parse as it is.

Abstract: "everyday" not "every day".

L132: You are missing a fullstop.

L149: Who does "they" refer to? (both times)

L164: You need to add "an" before the word effective.

L171: "Don't", replace with "do not"

L195: "the sample size calculation"

L195: remove the full stop

L205: please make this line into a sentence, or make it a heading.

L213: "one of the patient representatives" please add the word patient here.

L323-324: This sentence is clunky. Perhaps something like: "When clients declined to take part and offered a reason, alcohol counsellors recorded this reasons and included it in the recruitment log".

L238: "follow up measure" something wrong here. Add plural to "measure"?

L329: "with a £10 shopping voucher being offered for completion …".

L464: Please indent this quotation.

L557: "the main weakness of the qualitative study…", replace "for" with "of".

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published
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