PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	INTERNET-DELIVERED COGNITIVE-BEHAVIORAL THERAPY FOR CONCERNED SIGNIFICANT OTHERS OF PEOPLE WITH PROBLEM GAMBLING: STUDY PROTOCOL FOR A RANDOMIZED WAIT-LIST CONTROLLED TRIAL
AUTHORS	Magnusson, Kristoffer; Nilsson, Anders; Hellner Gumpert, Clara; Andersson, Gerhard; Carlbring, Per

VERSION 1 - REVIEW

REVIEWER	David C Hodgins University of Calgary Canada
REVIEW RETURNED	04-Aug-2015

GENERAL COMMENTS	This is a well written protocol for a well designed trial of an online intervention to support concerned significant others of problem gamblers. The project builds upon a small body of existing literature where a similar intervention has shown promise in North America. The use of an online therapist supported delivery format is innovative, but is supported by outcome trials in other areas of mental health treatment. My comments serve to improve the clarity of the document. My major comment concerns the description of the rationale for the treatment model, which is described as integrating CBT, MI, CRAFT and IBCT. The rationale provided, “CRAFT was not developed with CSOs of problem gamblers in mind. Consequently, our approach will incorporate a greater focus on communication training and relationship functioning” needs clarification and expansion. I would also suggest that the authors describe the recruitment approach more fully. This is likely to evolve over the course of the study as recruitment is notoriously challenging, but some indication of how the study will be publicized and to whom is important (i.e., the recruitment advertisement), and the procedure (how are volunteers contacted and screened, etc.). Will participants assigned to the waitlist know that they are in the control group? We they participate in weekly assessments during this time? It appears that no contact will occur with the gamblers. If so, this should be clarified. I believe that the Rycharik study that used communication training involved both the gamblers and the CSOs. The protocol describes three aims and four hypotheses. The four hypotheses relate to aims 1 and 3, but none refer to aim 2.

	Clarification is required and it should be made clear whether some aims yield hypotheses and some are simply exploratory. Table 3 which describes the approach to missingness needs to be modified for clarity. The definitions included as footnotes do not seem to refer to the Table, which generally is unclear. The Xs and Os need to be defined. The paper fails to identify limitations of the design. These include the challenge of attrition, getting accurate reports from CSOs, and the relapsing nature of gambling disorders. The references need to be reviewed for consistency of style, including upper and lower case. P 7 , line 42- change times to time. Is the intent to measure time or number of visits? P 7, line 51 live to lives p.9, line 5, sentence starting with Meaning is incomplete and should be part of preceding sentence.

REVIEWER	Simone Rodda Auckland University of Technology (AUT) New Zealand
REVIEW RETURNED	03-Sep-2015

GENERAL COMMENTS	This paper describes the study protocol for a randomised wait-list controlled trial for an internet-delivered CBT program for concerned significant others of people with problem gambling. The paper is important in that it describes the first online self-directed intervention for family and friends of people with problem gambling. Furthermore, in gambling research there have been very few trials that have specifically targeted family and friends of gamblers and this trial would make a significant contribution to our knowledge in this area. The authors are to be congratulated for their ground breaking work. The introduction is comprehensive, but does not really provide a picture of the limited amount of research in this area (the authors do state this in the discussion). For example, there's no mention of whether CSO's want this type of treatment – it might be useful to draw on research in other areas such as carers and the uptake/acceptance of other online programs and/or detail the number of CSO's that seek treatment from the helpline in Sweden (or indeed from other online services such as Dowling et al mentioned above). Furthermore it might be helpful to detail the limitations of previous studies – for example the Rychtarik research involved just 23 participants and participants were partners (indeed few studies have included other family members). Page 3, line 47, the statement that "problem gamblers report that they rely on informal help provided by their CSO's" it is unclear what this is in relation to. Would the authors clarify whether this is in relation to help seeking (which is the focus of the paragraph) or informal help to self-manage the gambling problem? The background provides a good overview of the literature in this area, up until 2013 (with the exception of the authors own work). It would be good to include a couple of recent studies involving

	concerned significant others of gamblers and online help seeking. First Dowling, N. A., Rodda, S. N., Lubman, D. I., & Jackson, A. C. (2014). The impacts of problem gambling on concerned significant others accessing web-based counselling. Addictive Behaviors, 39(8), 1253-1257 describe impacts of problem gambling on CSO's that seek help online. Second the study by Rodda, S. N., Lubman, D. I., Dowling, N., & McCann, T. (2013). Reasons for using web-based counselling among family and friends impacted by problem gambling. Asian Journal of Gambling Issues and Public Health, 3(11) identified the reasons CSOs sought help online and may be especially helpful for your rationale for providing treatment online. Methodology The participant flow in the study is not clear in explaining how participants proceed from the helpline/advertising into the study and when randomisation occurs (perhaps a diagram would help). Given the study appears to be entirely online, it would be helpful to described expected administration contact (e.g., how do participants know which group they have been assigned to). The study protocol states that telephone calls will be a maximum of 15 minutes per week but there appears no time limit allocated to email. Will email contact also be scheduled once per week as per the telephone? Do people receive one contact per week or email and telephone (not one or the other)? What if the client is not responsive – does the email continue? There is only limited data describing the intervention. It would be helpful to describe how the intervention is delivered (i.e., do participants have to complete the modules in an assigned order, is a set time for completing all of the modules, how long will the program be available for)? In addition, the intervention does not appear to have been tested before with CSO's of people with problem gambling. It would be helpful if the intervention were described more fully including the therapeutic techniques applied in each module. A more detailed description of the intervention would also assist with explaining the hypothesis that the program will impact on CSO levels of anxiety and depression (it is currently unclear both in the background literature and also intervention description why we would expect changes in anxiety and depression). The primary outcome measure is not a frequently used tool in gambling research. It would be good to provide more detail on its psychometric properties, how it is scored and previous use. Minor issues Ethics and consent refers to 'written' consent being sought – not clear from the protocols as these seemed to indicate all assessment was conducted online. Discussion, line 32, should this say no empirically supported ONLINE assistance? Discussion, lines 38-45 a long and confusing sentence Discussion, line 38 – the article has not stated an inclusion criteria is that the gambler has refused treatment – just that it has not been sought. Suggests the term "treatment refusing gamblers" is not correct. Title of table on page 15 quite brief. Descriptors at bottom of the table do not match notation in table (i.e., table notation is X, O but explanation under the table refers to A, B).

	Page 6, line 57 maybe reconsider the statement that the Swedish "helpline use motivational interviewing and research has shown that such brief interventions can reduce gambling problems". The source for this statement was an efficacy study using doctoral counsellors – not a helpline. Maybe a better source is Abbott, M., Bellringer, M., Hodgins, D., Du Preez, K. P., Landon, J., Sullivan, S., & Feigin, V. (2012). Effectiveness of problem gambling brief telephone interventions: a randomised controlled trial. Prepared for the Ministry of Health, New Zealand). Keywords should perhaps include internet-delivered (or some word indicating internet/online) Overall the paper is well written a clear, although there are multiple typos throughout the paper (e.g., page 10 (Mars should presumably be March, page 17 "missingess") Language is at times derogatory towards people with problem gambling (e.g., "2.3% of the adult population are problem gamblers", "helpline CSO's deal with their problem gambler" etc). It might be better to revise the language so that it is similar to research with other populations. For example, other work by Carlbring referred to "social phobia could hypothetically be suitable for internet based treatment" or "people suffering from social phobia" and "individuals with generalised social phobia may not seek therapy".

VERSION 1 – AUTHOR RESPONSE

Reviewer 1

1. "My major comment concerns the description of the rationale for the treatment model, which is described as integrating CBT, MI, CRAFT and IBCT. The rationale provided, "CRAFT was not developed with CSOs of problem gamblers in mind. Consequently, our approach will incorporate a greater focus on communication training and relationship functioning" needs clarification and expansion."

We absolutely agree with this. We have expanded this section ("Trail arms", p 6) and tried to provide a better rationale for the treatment model, by trying to highlight some of the unique challenges with problem gambling.

2. "I would also suggest that the authors describe the recruitment approach more fully. This is likely to evolve over the course of the study as recruitment is notoriously challenging, but some indication of how the study will be publicized and to whom is important (i.e., the recruitment advertisement), and the procedure (how are volunteers contacted and screened, etc.). "

The recruitment and advertisement process has been described in more detail under "Study population and recruitment" on page 5.

3. "Will participants assigned to the waitlist know that they are in the control group? We they participate in weekly assessments during this time? "

Participants will know that they are in the control group, and participate in the weekly assessments during this time. We have added a sentence about this on page 7.

4. "It appears that no contact will occur with the gamblers. If so, this should be clarified. I believe that the Rycharik study that used communication training involved both the gamblers and the CSOs."

We have made it clearer that we will have no contact with gambler, when we describe the intervention

on page 8. “Both methods are also targeted specifically at CSOs alone, where the person with the drinking or gambling problem does not participate in the treatment.”

5. “The protocol describes three aims and four hypotheses. The four hypotheses relate to aims 1 and 3, but none refer to aim 2. Clarification is required and it should be made clear whether some aims yield hypotheses and some are simply exploratory.”

We thank the reviewer for brining this to our attention. We have added that we hypothesize that treatment-engagement will be higher in the intervention group.

6. “Table 3 which describes the approach to missingness needs to be modified for clarity. The definitions included as footnotes do not seem to refer to the Table, which generally is unclear. The Xs and Os need to be defined.”

We apologize for this mistake. The definition of Xs and Os has been updated, and we have also updated the table’s title and the preceding paragraph.

7. “The paper fails to identify limitations of the design. These include the challenge of attrition, getting accurate reports from CSOs, and the relapsing nature of gambling disorders.”

We have added a section about limitations on p 11.

8. “The references need to be reviewed for consistency of style, including upper and lower case.”

We thank the reviewer for spotting this mistake. We have reviewed the references for consistency of style.

9. “P 7 , line 42- change times to time. Is the intent to measure time or number of visits?"”

We have changed “times” to “time”

10. “P 7, line 51 live to lives”

This has been corrected.

11. “p.9, line 5, sentence starting with Meaning is incomplete and should be part of preceding sentence.”

We have completed this sentence.

Reviewer: 2

1. “The introduction is comprehensive, but does not really provide a picture of the limited amount of research in this area (the authors do state this in the discussion). For example, there’s no mention of whether CSO’s want this type of treatment – it might be useful to draw on research in other areas such as carers and the uptake/acceptance of other online programs and/or detail the number of CSO’s that seek treatment from the helpline in Sweden (or indeed from other online services such as Dowling et al mentioned above). “

We have expanded the background on web-based counseling and added the findings from Rodda et al and Dowling. We believe these additions strengthen the rationale for the study. We also added the number of calls from CSOs to the Swedish gambling helpline.

2. “Furthermore it might be helpful to detail the limitations of previous studies – for example the Rychtarik research involved just 23 participants and participants were partners (indeed few studies have included other family members).”

We agree and have added a sentence about the small sample size and clarified that participants were partners.

3. “Page 3, line 47, the statement that “problem gamblers report that they rely on informal help provided by their CSO’s” it is unclear what this is in relation to. Would the authors clarify whether this is in relation to help seeking (which is the focus of the paragraph) or informal help to self-manage the gambling problem?”

It has been clarified that this is in regard to self-managing the gambling problem.

4. “The background provides a good overview of the literature in this area, up until 2013 (with the exception of the authors own work). It would be good to include a couple of recent studies involving concerned significant others of gamblers and online help seeking. First Dowling, N. A., Rodda, S. N., Lubman, D. I., & Jackson, A. C. (2014). The impacts of problem gambling on concerned significant others accessing web-based counselling. Addictive Behaviors, 39(8), 1253-1257 describe impacts of problem gambling on CSO’s that seek help online. Second the study by Rodda, S. N., Lubman, D. I., Dowling, N., & McCann, T. (2013). Reasons for using web-based counselling among family and friends impacted by problem gambling. Asian Journal of Gambling Issues and Public Health, 3(11) identified the reasons CSOs sought help online and may be especially helpful for your rationale for providing treatment online.”

We agree with the reviewer and thank for the suggested references. They have been added to page 4, as noted above we believe their findings strengthen the rationale for this study.

Methodology

5. “The participant flow in the study is not clear in explaining how participants proceed from the helpline/advertising into the study and when randomisation occurs (perhaps a diagram would help).”

We have clarified how the participants proceed into the study on page 5 under “study population and recruitment”.

6. “Given the study appears to be entirely online, it would be helpful to described expected administration contact (e.g., how do participants know which group they have been assigned to). “

This has been clarified on page 5: “After the consent is received treatment allocation is performed, and the participant is contacted within the treatment platform.”

7. “The study protocol states that telephone calls will be a maximum of 15 minutes per week but there appears no time limit allocated to email. Will email contact also be scheduled once per week as per the telephone? Do people receive one contact per week or email and telephone (not one or the other)? What if the client is not responsive – does the email continue?”

We have further described the counselors’ role on page 6. Emails are limited to 15 minutes per week as well. So each counselor is allowed to spend at most 30 minutes per participant. This is quite a lot, but we hope it will help with adherence to the program.

8. “There is only limited data describing the intervention. It would be helpful to describe how the

intervention is delivered (i.e., do participants have to complete the modules in an assigned order, is a set time for completing all of the modules, how long will the program be available for)?"

This has been added to the section about the trail arms on page 6 and 7.

9. "In addition, the intervention does not appear to have been tested before with CSO's of people with problem gambling. It would be helpful if the intervention were described more fully including the therapeutic techniques applied in each module."

The intervention has been described more fully both under "Trial arms" on p6 and in Table 1.

10. "A more detailed description of the intervention would also assist with explaining the hypothesis that the program will impact on CSO levels of anxiety and depression (it is currently unclear both in the background literature and also intervention description why we would expect changes in anxiety and depression)."

We have added more information about our rationale for this. "There are also several concepts and exercises that focus on CSOs in their own right. The rationale is that the problem gambling has lead to the CSOs loosing important positive reinforcers in their lifes. Therefore there are reoccurring exercises to engage the CSO in reinforcing activities. The CSOs are prompted to schedule and log these activities. A short summary of the individual modules is provided in Table 1."

11. "The primary outcome measure is not a frequently used tool in gambling research. It would be good to provide more detail on its psychometric properties, how it is scored and previous use."

We agree with this, and have added more information regarding the tool's psychometric properties. It has also been noted as a limitation that the psychometric properties are relatively unknown. However, we know of no other similar scale with more published validation studies.

Minor issues
12. "Ethics and consent refers to 'written' consent being sought – not clear from the protocols as these seemed to indicate all assessment was conducted online."
The written informed consent will be sent via mail. We have made this clearer in protocol

13. "Discussion, line 32, should this say no empirically supported ONLINE assistance?"

We mean regardless of mode of delivery. It has been made clearer that we refer to Chambless et al classification "well-established"treatments. To our knowledge no of the current interventions aimed at CSOs would meet these criteria.

14. "Discussion, lines 38-45 a long and confusing sentence"
This sentence has been shortened and hopefully made less confusing.

15. "Discussion, line 38 – the article has not stated an inclusion criteria is that the gambler has refused treatment – just that it has not been sought. Suggests the term "treatment refusing gamblers" is not correct."

The inclusion criteria have been clarified. The intended population is CSOs to people who are not motivated to enter treatment.

16. "Title of table on page 15 quite brief. Descriptors at bottom of the table do not match notation in

table (i.e., table notation is X, O but explanation under the table refers to A, B)."

We thank the reviewer for spotting this mistake and have updated the notation. The title has also been extended.

17. "Page 6, line 57 maybe reconsider the statement that the Swedish "helpline use motivational interviewing and research has shown that such brief interventions can reduce gambling problems". The source for this statement was an efficacy study using doctoral counsellors – not a "helpline. Maybe a better source is Abbott, M., Bellringer, M., Hodgins, D., Du Preez, K. P., Landon, J., Sullivan, S., & Feigin, V. (2012). Effectiveness of problem gambling brief telephone interventions: a randomised controlled trial. Prepared for the Ministry of Health, New Zealand)."

Abbott et al is more relevant to our statement. We thank the reviewer for this suggestion, and have added it.

18. "Keywords should perhaps include internet-delivered (or some word indicating internet/online)"

We agree, "internet-delivered" has been added as a keyword.

19. "Overall the paper is well written a clear, although there are multiple typos throughout the paper (e.g., page 10 (Mars should presumably be March, page 17 "missingess")"

We apologize for the typos and have corrected the ones we could find.

20. "Language is at times derogatory towards people with problem gambling (e.g., "2.3% of the adult population are problem gamblers", "helpline CSO's deal with their problem gambler" etc). It might be better to revise the language so that it is similar to research with other populations. For example, other work by Carlbring referred to "social phobia could hypothetically be suitable for internet based treatment" or "people suffering from social phobia" and "individuals with generalised social phobia may not seek therapy".

We apologized for the unintended derogatory language, and have revised the usage of "problem gambler" throughout the manuscript

VERSION 2 – REVIEW

REVIEWER	David C Hodgins University of Calgary Canada
REVIEW RETURNED	13-Oct-2015

GENERAL COMMENTS	The reviewer completed the checklist but made no further comments.

REVIEWER	Simone Rodda Auckland University of Technology New Zealand
REVIEW RETURNED	29-Oct-2015

GENERAL COMMENTS	The reviewer completed the checklist but made no further comments.