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STUDY PROTOCOL

REVISED Development of a framework for the implementation of synchronous e-mental health: a protocol for a realist synthesis of systematic reviews [version 2; peer review: 2 approved]

Previously titled: Development of a framework for the implementation of electronic interventions in mental health: a protocol for a meta-synthesis of systematic reviews

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Abstract

Background: During the COVID-19 pandemic, it has been necessary to deliver mental health care using technologies (e-mental health). But there have been difficulties in its application. Quantitative systematic reviews such as meta-analysis doesn't allow us to fully identify and properly describe this subject. Thus, our study has two main objectives: a) "to determine what evidence is available for synchronous e-mental health implementation"; and b) "to develop a framework informed by a realist analysis for the implementation of synchronous e-mental health".

Methods: We will search MEDLINE, EBM Reviews, PsycINFO, EMBASE, SCOPUS, CINAHL Complete, and Web of Science databases from 1st January 2015 to September 2020, with no language restriction. A systematic review with a narrative description and a realist synthesis will be conducted. Primary studies relating to adults with common

Open Peer Review

Reviewer Status ✓ ✓

	Invited Reviewers	
	1	**2**
version 2 (revision) 03 Aug 2021	✓ report	✓ report
	↑	↑
version 1 29 Oct 2020	? report	? report

1. **Amy Grove** [iD] , University of Warwick, Coventry, UK

mental health problems using any type of mobile mental health intervention that includes a synchronic component and communication with a mental health professional will be included. For the analysis, we will make a realist synthesis of the systematic reviews, using a grounded theory approach with an emergent approach to synthesize the information, prioritizing the systematic reviews with a lower risk of bias in the AMSTAR-2 tool. The realist synthesis will be based on the interpretation, integration, and inference of the evaluated elements and the generation of hypotheses to better understand the implementation process of synchronous e-mental health. Finally, we will present the overall assessment in a Summary of Qualitative Findings table.

Conclusion: Our results will allow a better understanding of the facilitator and limitations in implementing e-mental health.

Keywords
Telemedicine, Remote Consultation, Online Systems, Internet-Based Intervention, Mental Health, Mental Disorders, Systematic Reviews as Topic, Qualitative Research

2. **Roger Hilfiker** iD , University of Applied Sciences and Arts Western Switzerland, Valais, Switzerland

Any reports and responses or comments on the article can be found at the end of the article.

> **REVISED** **Amendments from Version 1**
>
> This new version of the protocol has changed its title, detailing its analysis *"a realist synthesis of systematic reviews"*. Also, we updated several sections of the protocol to describe better the research question and specifies the realist synthesis using a grounded theory approach with an emergent approach to synthesize the information, prioritizing the systematic reviews with a low risk of bias. Additionally, we updated the reference section according to this new version. Finally, we have reviewed and corrected typographical errors and the adequate use of English.
>
> **Any further responses from the reviewers can be found at the end of the article**

Introduction

In the wake of the COVID-19 pandemic and after the actions taken by governments (such as social isolation), many mental health problems have increased in patients with COVID-19, patients with psychiatric symptoms, health personnel, and the general population[1,2]. As a result, greater interest has been taken in addressing mental health issues during the pandemic[2,3]. Studies have identified anxiety disorders, depression, post-traumatic stress disorder, and stress as the most frequent health problems[2-4]. As a result, it has been necessary to deliver mental health care through technology (e-mental health) such as internet and mobile devices[5,6] These kind of health care have been very well received and have served to complement or improve the effectiveness of treatments for various chronic diseases, reducing gaps in access to care and providing specialized care in inaccessible places[7] and it shows great promise in the care of mental health problems[8-10], highlighting the possibilities of care in health systems where resources are limited[11].

With the undeniable contribution of e-mental health, it has been important to document the aspects related to its application because, despite its effectiveness, it is known that there have been difficulties in its application[12]. Aspects such as adaptability, cost, complexity, external policies and incentives, compatibility or general fit between the e-mental health intervention and the organization[13] are important to consider to be clear about how and what works in synchronous and electronic interventions in mental health (synchronous e-mental health), and considering its complexity as well. To address this, systematic reviews and meta-analyses have given us knowledge about the effectiveness of e-mental health[14,15]. However, qualitative studies are necessary because of their methodology (approach to answer questions about experience, meaning, and perspective) which is useful to address issues of implementation[16]. Thus, our study has two main objectives: a) "to determine what evidence is available for synchronous e-mental health implementation"; and b) "to develop a framework informed by a realist analysis for the implementation of synchronous e-mental health".

Methods
Research question

This protocol adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P)

guidelines[17] A completed PRISMA-P checklist can be found in the *Reporting guidelines* section[18]. The SPIDER framework was used to develop the review question, which is based on describing the Sample (S), Phenomenon of Interest (PI), Design (D), Evaluation (E), and Research type (R)[16]:

- *Sample:* Adults with depression (or major depressive disorder), anxiety (or generalized anxiety disorder), stress (or trauma-related disorders), and/or general mental health problems (unspecified). Participants may be diagnosed through clinical interviews or categorized based on screening assessments (self-reported scales).

- *Phenomenon of interest:* Any type of e-mental health intervention that includes a synchronous component, communication with a mental health professional (psychiatrist, psychologist, etc.) or a health professional trained in mental health. These interventions include, among others, remote consultation, interactive application, video chats, calls, etc.

- *Design:* Systematic review.

- *Evaluation:* All types of outcomes of interest assessed by implementation, economic, qualitative, quantitative, and other studies will be included. For example, a) Health effectiveness outcomes: Depression, anxiety and/or stress symptoms, adherence to treatment, etc; b) Patient outcomes: Quality of life, satisfaction, etc; c) Economic outcomes; d) Damage or adverse effects. Our study seeks to perform a realist synthesis of the evidence, so we focused on different outcomes to use them as input that allows us to evaluate the implementation of synchronous e-mental health. Therefore, we do not perform a quantitative synthesis in any case (i.e., a meta-analysis of effectiveness).

- *Research type:* Quantitative studies, qualitative studies, mixed methods.

Eligibility criteria

Inclusion criteria: Systematic reviews using at least two databases that synthesized, assessed the quality, and presented sufficient detail of the primary included studies; and reports on inclusion/exclusion criteria[19]. Systematic reviews that included primary studies as a unit of analysis focused on a research question. Systematic reviews published in the last five years (since January 1, 2015) without language restrictions. We include this time frame to include only the latest systematic reviews, since in the field of e-health the launch of new technologies makes scientific development dynamic. Reviews must include primary studies relating to adults with common mental health problems: a) Adults with depression (or major depressive disorder), anxiety (or generalized anxiety disorder), stress (or trauma-related disorders) and/or general mental health problems (unspecified); b) Adults attending an outpatient mental health consultation. Reviews must include at least 90% of their primary studies that assess synchronous e-mental health or presenting its results independently only for synchronous e-mental health.

Exclusion criteria: Narrative reviews, scoping reviews, primary studies, opinion/editorial manuscripts, letters to the editor, and reviews of mobile health interventions repositories (i.e., apps stores). Studies in which some of these subjects has participated will also be excluded: a) Adults with some other mental health problem; b) Healthy adults without mental health problems; c) Adults receiving emergency/crisis psychiatric care; d) Interventions that lack a synchronous component (real time information exchange between the user and mental health professional using technologies) or are not sufficiently clear that had a synchronous component.

Information sources
Included databases will be MEDLINE, EBM Reviews, PsycINFO (these three through Ovid), EMBASE (Elsevier), SCOPUS, CINAHL Complete (EBSCOhost), and Web of Science databases, including Science Citation Index Expanded, Social Sciences Citation Index and Conference Proceedings Citation Index (Clarivate Analytics). Articles published in the last five years (after January 1st, 2015) will be included and no language restrictions will be imposed. We will include systematic reviews that report a review of literature using a research strategy in at least two different databases. Later, all references of included studies will be reviewed, and they will be evaluated looking for any additional systematic review that meets the inclusion criteria.

Search strategy
Main search terms to be used are "telemedicine" AND "mental health, anxiety, depression or stress" AND "systematic reviews". The full search strategy for each database is available in the *Extended data* section (https://osf.io/c4jua/)[18].

Study records
Data management: The results of the database search will be managed using the Rayyan QCRI free online application to manage the references (eliminate duplicates, and review titles and summaries)[20]. Full-text review and data extraction will be done using an Excel template (https://osf.io/c4jua/[18]).

Selection process: There will be two distinct selection stages. First, a review of the title and abstract and the second a review of the full text. The reviews will be carried out based on pairs of reviewers, who will divide the total number of records. At each stage, there will be a first part where the reviewers will calibrate the accuracy of their reviews and a second part where the actual review will take place. To complete the calibration part, they will make calibration rounds until the discrepancy is less than or equal to 5% of the assigned records. If the percentage of the discrepancy is exceeded, a new round will be performed. Subsequently pairs of reviewers will divide the total of the records identified, and records will be screened independently and in duplicate. Discrepancies will be discussed within pairs with a third reviewer if needed.

In the review by title and abstract, calibration will be done first, 50 records were selected from the total number of records

found because of the search strategy. In the full-text review, calibration will first be performed on 10 records that will be selected in the previous stage. The articles excluded in the full-text review stage will be listed and a reason for exclusion will be given for each of them.

Data collection process: For each eligible study, data will be extracted independently and in duplicate on pre-designed data extraction forms. In the event of discrepancies, the reviewers will discuss whether the extracted data should be retained and decide to resolve the discrepancy. If the discrepancy remains, a third reviewer will evaluate any unresolved disagreement between the reviewers on the data extraction and will decide on the value extracted that is in dispute.

Data items
An extraction form was created in an Excel template for the included systematic reviews (https://osf.io/7esgz/). Information will be collected on the author and date of the study, characteristics of the participants, main objective, research questions, inclusion criteria for the systematic review, search date, study selection process, quality assessment (if any), main findings and limitations. Also, the full text of the included article will be extracted along with the tables and supplementary material, to perform the qualitative analysis of the text.

Outcomes and prioritization
Our study aims to develop a framework informed by a realist analysis for the implementation of synchronous e-mental health, using a qualitative strategy to synthesize the information and answer our research question. Therefore, we do not look for specific results such as effectiveness, cost-effectiveness, or other similar ones. Instead, we are interested in identifying the full text of all the studies that answer our research question, so that we can make a realistic synthesis using a grounded theory model with an emergent approach. The develop a framework informed by a realist analysis will be based on the interpretation, integration, and inference of the evaluated elements and the generation of hypotheses to better understand the studied phenomenon (implementation of synchronous e-mental health)[21,22]. Priority will be given in the analysis of those studies with the lowest risk of bias assessed. If possible, a realist synthesis will be performed only with those systematic reviews with high quality, to assess whether the results change by selecting only those studies with high quality (low risk of bias).

Risk of bias in individual studies
To assess the quality of the included systematic reviews we will use the "A Measurement Tool to Assess Systematic Reviews-2" (AMSTAR 2), which has sixteen domains. Seven of these domains are considered critical: 1) protocol registered before the start of the review, 2) adequacy of the literature search, 3) justification for the exclusion of individual studies, 4) risk of bias of individual studies included in the review, 5) adequacy of meta-analytic methods, 6) consideration of the risk of bias in interpreting the results of the review, and 7) assessment of the presence and likely impact of publication bias[23].

AMSTAR-2 classifies the quality of systematic reviews into four different categories: high (none or one non-critical weakness), moderate (more than one non-critical weakness), low (one critical weakness with or without non-critical weaknesses), and very low (more than one critical weakness with or without non-critical weaknesses). The quality assessment of each systematic review will be rated by two researchers independently. In case of difference in the overall quality of the systematic reviews, the AMSTAR-2 criteria will be discussed among the researchers to reach a consensus.

Data synthesis

The develop a framework informed by a realist analysis for the implementation of synchronous e-mental health will be carried out using a grounded theory approach with an emergent approach[24]. The realist synthesis will be based on interpreting, integrating and, inferring the evaluation elements that would allow a better understanding of the synchronous e-mental health implementation process from all the studies included[24]. To answer the question "what makes the implementation of these interventions work", hypotheses supported by the results of the included studies will be developed and generated through discussion and consensus among researchers[24]. Two reviewers will follow the three steps established by Thomas and Harden for qualitative syntheses will be followed[25,26]. First, the extracted data are freely coded. The reviewers read the full texts of the included articles and code each text fragment that provides information to answer the research question. Second, the codified data are organized and grouped based on the descriptive aspects. The reviewers will review the codes generated in the previous step and group them into codes that are like each other and that allow the description of a part of the research question. Thirdly, the analytical concepts generated in the previous step will be grouped in a way that they are related to each other. The elements that are related to each other will be assumed to be part of a hypothesis that would help to answer the research aim. The sum of all these hypotheses will be referred to as a framework which will attempt to explain the results using a context-linked causality approach represented as context + mechanism = outcome[26].

When included studies had been selected, they will be ranked based on the AMSTAR-2 score, with the highest quality studies being assessed first. We will assess all included studies, down to the criterion of theoretical saturation. All qualitative analyses will be performed with NVIVO v.1 software.

Confidence in cumulative evidence

It will be evaluated the approach of Confidence in the Evidence from Reviews of Qualitative research (CERQual) which has four components (Methodological Limitations, Relevance, Coherence and Adequacy data), will be evaluated to contribute to an overall assessment for each hypothesis resulting from the realist synthesis to determine the level of confidence (high, moderate, low, or very low) and present the overall assessment in a Summary of Qualitative Findings (SoQF) table[27,28].

Dissemination plan

We will present the systematic review findings and submit the manuscript to a relevant peer-reviewed journal.

Study status

This systematic review is currently in the data analysis process. The protocol of this systematic review was submitted to PROSPERO registry on 18th August, 2020 (CRD42020203811).

Data availability

Underlying data

No data are associated with this article.

Extended data

Open Science Framework: PRISMA-P checklist for 'Development of a framework for the implementation of electronic interventions in mental health: A protocol for a meta-synthesis of systematic reviews', https://doi.org/10.17605/OSF.IO/3UH4N[18]. (Registered on 20th October 2020: osf.io/tf4b6.)

This project contains the following extended data:

- Full text protocol

- Full search strategy for MEDLINE, EBM Reviews, PsycINFO, EMBASE, SCOPUS, CINAHL Complete, and Web of Science databases

- Excel template for data extraction

Reporting guidelines

Open Science Framework: PRISMA-P checklist for 'Development of a framework for the implementation of electronic interventions in mental health: A protocol for a meta-synthesis of systematic reviews', https://doi.org/10.17605/OSF.IO/3UH4N[18]. (Registered on 20th October 2020: osf.io/tf4b6.)

Data are available under the terms of the Creative Commons Zero "No rights reserved" data waiver (CC0 1.0 Public domain dedication).

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Current Peer Review Status: ✔ ✔

Version 2

Reviewer Report 07 September 2021

https://doi.org/10.5256/f1000research.58449.r91140

✔ **Roger Hilfiker** (iD)

Valais-Wallis School of Health Sciences, HES-SO, University of Applied Sciences and Arts Western Switzerland, Valais, Switzerland

Thank you very much for the changes made.

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Systematic Reviews

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Reviewer Report 17 August 2021

https://doi.org/10.5256/f1000research.58449.r91141

✔ **Amy Grove** (iD)

Health Technology Assessment and Implementation Science, Warwick Medical School, University of Warwick, Coventry, UK

I am satisfied with the revisions.

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: HTA and implementation science

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

- -

Version 1

Reviewer Report 18 June 2021

https://doi.org/10.5256/f1000research.29992.r85471

?

Roger Hilfiker [iD]

Valais-Wallis School of Health Sciences, HES-SO, University of Applied Sciences and Arts Western Switzerland, Valais, Switzerland

The manuscript reports on a protocol for a systematic review with a meta-synthesis of systematic reviews.

The authors describe a qualitative approach for the analysis of the data with three steps, i.e. coding of each text fragment that provides answers to the research questions, organizing and grouping the codified data, and grouping the aspects.

I have some specific comments:

Research question: Please clarify how you will use the data to answer the question on "what makes the application of any of these interventions work".

Data synthesis: The sentence "In addition to generate hypotheses supported by the results of the included studies, which will be generated through discussion and consensus among the reviewers" is not clear to me.

The authors described the extraction of quantitative data on effectiveness. Please clarify whether these quantitative data are analyzed with the qualitative method or whether quantitative methods are used.

Please describe how the research question on the "what makes the application work" will be answered.

Confidence in cumulative evidence: Wouldn't the research question "what makes the application of any of these interventions work" require a different evaluation of the confidence of the evidence, for example an approach such as GRADE?

Is the rationale for, and objectives of, the study clearly described?

Yes

Is the study design appropriate for the research question?
Yes

Are sufficient details of the methods provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Systematic Reviews

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 06 Jul 2021

Christoper A. Alarcon-Ruiz, Universidad Científica del Sur, Lima, Peru

1. Research question: Please clarify how you will use the data to answer the question on "what makes the application of any of these interventions work".
Reply: It was specified in the subsection of Data synthesis
"The develop a framework informed by a realist analysis for the implementation of synchronous e-mental health will be carried out using a grounded theory approach with an emergent approach (23). The realist synthesis will be based on interpreting, integrating and, inferring the evaluation elements that would allow a better understanding of the synchronous e-mental health implementation process from all the studies included (24). To answer the question "what makes the implementation of these interventions work", hypotheses supported by the results of the included studies will be developed and generated through discussion and consensus among researchers (24). Two reviewers will follow the three steps established by Thomas and Harden for qualitative syntheses will be followed (25). First, the extracted data are freely coded. The reviewers read the full-texts of the included articles and code each text fragment that provides information to answer the research question. Second, the codified data are organized and grouped based on the descriptive aspects. The reviewers will review the codes generated in the previous step and group them into codes that are like each other and that allow the description of a part of the research question. Thirdly, the analytical concepts generated in the previous step will be grouped in a way that they are related to each other. The elements that are related to each other will be assumed to be part of a hypothesis that would help to answer the research aim. The sum of all these hypotheses will be referred to as a framework which will attempt to explain the results using a context-linked causality approach represented as context + mechanism = outcome (26)."

2. Data synthesis: The sentence "In addition to generate hypotheses supported by the

results of the included studies, which will be generated through discussion and consensus among the reviewers" is not clear to me.
Reply: We agree with the reviewer, this has been modified in the previous comment.

3. The authors described the extraction of quantitative data on effectiveness. Please clarify whether these quantitative data are analyzed with the qualitative method or whether quantitative methods are used.
Reply: The collection of quantitative data was eliminated, as specified in the method section:
"Our study seeks to perform a realistic synthesis of the evidence, so we focused on different outcomes to use them as input. Therefore, we do not perform a quantitative synthesis in any case (i.e., a meta-analysis of effectiveness)."

4. Please describe how the research question on the "what makes the application work" will be answered.
Reply: A better description of the research objective was made based on the first reviewer.
"Thus, our study has two main objectives: a) "to determine what evidence is available for synchronous e-mental health implementation"; and b) "to develop a framework informed by a realist analysis for the implementation of synchronous e-mental health"."
The process of how to achieve these objectives was answered in the first comment.

5. Confidence in cumulative evidence: Wouldn't the research question "what makes the application of any of these interventions work" require a different evaluation of the confidence of the evidence, for example an approach such as GRADE?
Reply: we will evaluate each key finding using CERQual to assess the methodological limitations, coherence, adequacy, and relevance of findings.
"It will be evaluated the approach of Confidence in the Evidence from Reviews of Qualitative research (CERQual) which has four components (Methodological Limitations, Relevance, Coherence and Adequacy data), will be evaluated to contribute to an overall assessment for each hypothesis resulting from the realist synthesis to determine the level of confidence (high, moderate, low, or very low) and present the overall assessment in a Summary of Qualitative Findings (SoQF) table (27, 28)."

Competing Interests: None

Reviewer Report 11 February 2021

? **Amy Grove** (iD)

Health Technology Assessment and Implementation Science, Warwick Medical School, University of Warwick, Coventry, UK

Abstract:

- "*Some quantitative systematic*" can you indicate how many rather than using the generic some.

- Would the research question be better phrased as 2 questions? or a primary and secondary question? i) how question?; ii) what makes question?

- Please define what approach you will use *"We will follow a qualitative method approach".*

- Are *"incorporate technologies", "implementation of electronic care", "mobile mental health intervention that includes a synchronic component and communication with a mental health professional", "e-health implementation process"* and, *"synchronic component (that lack real time information exchange using technologies)."* all the same thing? I would suggest you select one terminology and use it consistently.

Introduction:

- Please remove *"To deal with these mental health problems".* This is not appropriate terminology.

- You talk about *"These technologies",* can you provide examples?

- You say *"(centered on quantitative studies) does not allow to identify".* Describe what it does not allow; what is missing from existing reviews?

Methods:

- The heading, "*SPIDER question",* needs to be replaced with *"research question".* The acronym may not be understood by all.

- Regarding the sample - do people have to have a certified diagnosis of the condition? What about undiagnosed groups?

Evaluation:

- Are you assessing effectiveness? or just implementation of a technology that has shown to be effective elsewhere?

- If you are following a *"qualitative method approach"* why are you including outcomes of *"all kinds of statistical measures of the effects"*? What will you do with this information?

- How do you define *"conducted an adequate search"?* If you are using a criteria then please list it.

- Please provided references for *"only the last updated systematic reviews".*

- The study selection process is overly detailed and repetitive.

- You say *"An extraction form will be created for the included systematic reviews.",* but above you imply it is already done and included in *"an Excel template (Extended data)".*

- ○ *"Therefore, we do not look for a specific result such as effectiveness, cost-effectiveness or other similar ones."* Then why are you searching for data?

- ○ *"perform a grounded theory analysis with an emergent approach"* - you said earlier *"using an emergent grounded theory approach",* what is the difference? If no difference, then please use consistent terms.

- ○ *"Priority will be given in the analysis of those studies with the lowest risk of bias assessed."* - Explain why this is the case
- ○ In data synthesis you do not state how many *"reviewers will follow the three steps".*

- ○ In the abstract you say you will *"develop a theoretical framework"* but you do not give detail of how this will be done in the manuscript.

- ○ Please also proof read for typographical errors and appropriate use of English.

Is the rationale for, and objectives of, the study clearly described?
Yes

Is the study design appropriate for the research question?
Yes

Are sufficient details of the methods provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: HTA and implementation science

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 06 Jul 2021
Christoper A. Alarcon-Ruiz, Universidad Científica del Sur, Lima, Peru

Abstract:
1. "Some quantitative systematic" can you indicate how many rather than using the generic some.
Reply: We specified this concern. Abstract: "Quantitative systematic reviews such as meta-analysis"

2. Would the research question be better phrased as 2 questions? or a primary and

secondary question? i) how question?; ii) what makes question?
Reply: It was modified in the abstract:
"Thus, our study has two main objectives: a) "to determine what evidence is available for synchronous e-mental health implementation"; and b) "to develop a framework informed by a realistic analysis for the implementation of synchronous e-mental health"."

3. Please define what approach you will use "We will follow a qualitative method approach".
Reply: It was modified in the abstract:
"A systematic review with narrative description and a realist synthesis will be conducted. Primary studies related to adults with common mental health problems using any type of mobile mental health intervention that includes a synchronous component and communication with a mental health professional will be included. For the analysis, we will make a realistic synthesis of the systematic reviews, using a grounded theory approach with an emergent approach to synthesize the information, prioritizing the systematic reviews with a lower risk of bias in the AMSTAR-2 tool. The realist synthesis will be based on the interpretation, integration, and inference of the evaluated elements and the generation of hypotheses to better understand the implementation process of synchronic e-mental health."

4. Are "incorporate technologies", "implementation of electronic care", "mobile mental health intervention that includes a synchronic component and communication with a mental health professional", "e-health implementation process" and, "synchronic component (that lack real-time information exchange using technologies)." all the same thing? I would suggest you select one terminology and use it consistently.
Reply: We'll use the term "e-mental health" to refer to mental health care delivery through technology. And we'll use "synchronous e-mental health" to refer to the delivery of mental health care through technology in real-time.

Introduction:
5. Please remove "To deal with these mental health problems". This is not appropriate terminology.
Reply: We changed it for "As a result, it has been…"

6. You talk about "These technologies", can you provide examples?
Reply: We specified some examples: "such as internet and mobile devices "

7. You say "(centered on quantitative studies) does not allow to identify". Describe what it does not allow; what is missing from existing reviews?
Reply: Does not provide information about experience, meaning, and perspective, which is important when addressing implementation issues.
"However, qualitative studies are necessary because of their methodology (approach to answer questions about experience, meaning, and perspective) which is useful to address issues of implementation."

Methods:

8. The heading, "SPIDER question", needs to be replaced with "research question". The

acronym may not be understood by all.
Reply: The heading has been modified.

9. Regarding the sample - do people have to have a certified diagnosis of the condition? What about undiagnosed groups?
Reply: It was modified in the methods:
"Sample: Adults with depression (or major depressive disorder), anxiety (or generalized anxiety disorder), stress (or trauma-related disorders), and/or general mental health problems (unspecified). Participants may be diagnosed through clinical interviews or categorized based on screening assessments (self-reported scales)."

Evaluation:
10. Are you assessing effectiveness? or just implementation of a technology that has shown to be effective elsewhere?
Reply: It was modified in the method:
"All types of outcomes of interest assessed by implementation, economic, qualitative, quantitative, and other studies will be included. For example, a) Health effectiveness outcomes: Depression, anxiety and/or stress symptoms, adherence to treatment, etc.; b) Patient outcomes: Quality of life, satisfaction, etc.; c) Economic outcomes; d) Damage or adverse effects. Our study seeks to perform a realist synthesis of the evidence, so we focused on different outcomes to use them as input that allow s us to evaluate the implementation of synchronous e-mental health. Therefore, we do not perform a quantitative synthesis in any case (i.e., a meta-analysis of effectiveness)."

11. If you are following a "qualitative method approach" why are you including outcomes of "all kinds of statistical measures of the effects"? What will you do with this information?
Reply: We agree with the reviewer. The quantitative information was eliminated. It was modified in the method:
"Our study seeks to perform a realist synthesis of the evidence, so we focused on different outcomes to use them as input. Therefore, we do not perform a quantitative synthesis in any case (i.e., a meta-analysis of effectiveness)."

12. How do you define "conducted an adequate search"? If you are using criteria then please list them.
Reply: We agree with your observation. We have specified and listed the criteria we consider to include a systematic review "Systematic reviews using at least two databases that synthesized, assessed the quality, and presented sufficient detail of the primary included studies; and reports on inclusion/exclusion criteria"

13. Please provided references for "only the last updated systematic reviews".
Reply: It was specified in the text:
"We include this time frame to include only the latest systematic reviews since in the field of e-health, the launch of new technologies makes scientific development dynamic. "

14. The study selection process is overly detailed and repetitive.
Reply: We synthesized the study selection:
"In the review by title and abstract, calibration will be done first, 50 records were selected

from the total number of records found as a result of the search strategy. In the full-text review, calibration will first be performed on 10 records that will be selected in the previous stage. The articles excluded in the full-text review stage will be listed, and a reason for exclusion will be given for each of them."

15. You say, "An extraction form will be created for the included systematic reviews.", but above, you imply it is already done and included in "an Excel template (Extended data)".
Reply: It was modified in the subsection of data items:
"An extraction form was created in an excel template for the included systematic reviews (https://osf.io/7esgz/)."

16. "Therefore, we do not look for a specific result such as effectiveness, cost-effectiveness or other similar ones." Then why are you searching for data?
Reply: It was modified in the method:
"Our study seeks to perform a realist synthesis of the evidence, so we focused on different outcomes to use them as input. Therefore, we do not perform a quantitative synthesis in any case (i.e., a meta-analysis of effectiveness)."
The section where we state that we will collect specific quantitative data, such as effect size, has been removed. Studies with efficacy, cost-effectiveness, or other similar outcomes are included because they will help answer our question.

17. "perform a grounded theory analysis with an emergent approach" - you said earlier, "using an emergent grounded theory approach", what is the difference? If no difference, then please use consistent terms.
Reply: It was specified:
"Our study aims to conduct a systematic review of systematic reviews and a realistic synthesis of systematic reviews, using a qualitative strategy to synthesize the information and answer our research question. Therefore, we do not look for specific results such as effectiveness, cost-effectiveness, or other similar ones. Instead, we are interested in identifying the full text of all the studies that answer our research question so that we can make a realistic synthesis using a grounded theory model with an emergent approach. The realistic synthesis will be based on the interpretation, integration, and inference of the evaluated elements and the generation of hypotheses to better understand the studied phenomenon (implementation of synchronous e-mental health) (20, 21)."

18. "Priority will be given in the analysis of those studies with the lowest risk of bias assessed." - Explain why this is the case
Reply: It was specified:
"Priority will be given in the analysis of those studies with the lowest risk of bias assessed. If possible, a realist synthesis will be performed only with those systematic reviews with high quality, to assess whether the results change by selecting only those studies with high quality (low risk of bias)."

19. In data synthesis, you do not state how many "reviewers will follow the three steps".
Reply: We agree with your observation. We have specified the number of reviewers involved in this process. "Two reviewers will follow the three steps established by Thomas and Harden for qualitative syntheses will be followed."

20. In the abstract, you say you will "develop a theoretical framework" but you do not give detail of how this will be done in the manuscript.

Reply: The authors have identified that the meta-synthesis analysis method was not the most appropriate for the review, as the description is more in line with a realistic synthesis analysis. It was specified in the section on data synthesis.

"The develop a framework informed by a realist analysis for the implementation of synchronous e-mental health will be carried out using a grounded theory approach with an emergent approach (23). The realist synthesis will be based on interpreting, integrating and, inferring the evaluation elements that would allow a better understanding of the synchronic e-mental health implementation process from all the studies included (24). To answer the question "what makes the implementation of these interventions work", hypotheses supported by the results of the included studies will be developed and generated through discussion and consensus among researchers (24). Two reviewers will follow the three steps established by Thomas and Harden for qualitative syntheses will be followed (25). First, the extracted data are freely coded. The reviewers read the full texts of the included articles and code each text fragment that provides information to answer the research question. Second, the codified data are organized and grouped based on the descriptive aspects. The reviewers will review the codes generated in the previous step and group them into codes that are like each other and that allow the description of a part of the research question. Thirdly, the analytical concepts generated in the previous step will be grouped in a way that they are related to each other. The elements that are related to each other will be assumed to be part of a hypothesis that would help to answer the research aim. The sum of all these hypotheses will be referred to as a framework that will attempt to explain the results using a context-linked causality approach represented as context + mechanism = outcome (26). "

21. Please also proofread for typographical errors and appropriate use of English.

Reply: We accept your observation. We have reviewed and corrected typographical errors and the adequate use of English.

Competing Interests: None

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