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Abstract

Introduction: Rapid systematic reviews (RRs) have the potential to provide timely information to decision-makers and directly impacting healthcare. However, there is no consensus about the most efficient approaches to performing a RR, there are still a number of methodological issues which haven't been addressed. With such a large potential research agenda for RRs, it is unclear what should be prioritised.

Objective: To survey a group of RRs experts and related parties, using a modified eDelphi process, to identify meaningful research questions and gaps about the methods (from the generation of the question to the writing of the report) for conducting RRs in time-efficient ways.

Methods and analysis: An eDelphi study will be conducted. People with experience in evidence synthesis will be invited to participate, including knowledge users, researchers, policy makers, industry, journal editors, and healthcare providers. The following steps will be taken: 1) A core group of experts in evidence synthesis will generate the first list of items based on the available literature; 2) Using LimeSurvey, participants will be invited to rate and rank the importance of suggested RR methodological questions. Questions with open format responses will allow for modifications to the wording of items or the addition of new items; 3) Survey rounds will be performed asking participants to re-rate items, with items deemed of low importance being removed at each round; 4) A list of items will be generated with items believed to be of high importance by ≥75% of participants being included; and 5) This list will be discussed at an online consensus meeting that will generate a summary document containing the final priority list.

Ethics and dissemination: This study was approved by the Concordia University Human Research Ethics Committee under the Certification Number 30015229. Both traditional, e.g., scientific conference presentations and publication in scientific journals, and non-traditional, e.g., lay summaries and infographics, knowledge translation products will be created.

Strengths and limitations of this study:

- This research will generate a list of the most important questions regarding RRs' methods with a focus on the period between question finalisation and report writing, with the input of experts and other groups.
- Given the growing importance of rapid reviews in policy and decision-making, yet with still many methodological questions that need answering, this study will provide a 'road-map' for future RR methodological studies.
- The eDelphi process is a well-recognised and highly structured method for consensus building.
- Although this study is an important addition to the literature in the field, it is only the first step towards refining the conduction of RRs in a more time-efficient way.

1. BACKGROUND

Evidence syntheses (e.g., systematic reviews [SRs]) are a useful strategy for decision-makers (e.g., clinicians, health policy makers and managers) and the public to be able to answer a specific question.[1] Their results have been used to make decisions for: clinical practice, normally through clinical practice guidelines; improving health systems; and shaping policy.[1,2] However, conducting a full SR is time-consuming, sometimes taking up to two years to conduct, by which time the scientific literature may have already moved on,[3] and expensive, with an estimated cost of at least $100,000 needed for a high-quality SR.[4,5]

To address the challenges of SRs, rapid evidence products have been developed, including inventories, rapid response briefs, and rapid systematic reviews (RRs).[6] RRs are another evidence summary method that use streamlined approaches,[7] where certain elements of SR methods are simplified or omitted.[8] Currently, RRs are being conducted to answer urgent questions and/or to support decisions with limited time and resources,[9,10] i.e., in situations where time- and cost-efficiency are key. For example, RRs have been extensively used in addressing issues related to the COVID-19 pandemic.[11,12] RRs' conclusions are generally aligned to those of SRs.[9] When applied to health technology assessment reports for policy decisions, RRs have been shown to positively impact the healthcare system, resulting in reduction of resource consumption and cost savings.[13,14]

The use of high-quality evidence summary methods are essential to provide reliable results. There are relatively well defined, pre-specified methods for conducting full scale SRs, including searching, selecting, appraising, and synthesising the available evidence to answer the research question. SRs organise all empirical evidence that fits in pre-specified eligibility criteria and aim to reduce bias.[3] However, regarding RRs, the concept is still heterogeneous,[15] and there is no clear and standardised methodology on how to perform a RR for obtaining a representative and reliable result.[16] Methodological rigor and transparency, nevertheless, are necessary.[12] Different studies, reviews[15,17], and a Delphi study[16], found that within the RR field there were: heterogeneous nomenclature and terminology being used to describe the same things; and that a variety of approaches and methodologies were being used to conduct RRs, with no acknowledgment of the rationale behind the methods' choices. These studies ultimately found that there is no consensus on which approaches should be followed.

In 2017, the World Health Organization (WHO) commissioned a guide on how to perform RRs, exploring different approaches. It emphasised that methods can be

simplified at any stage of the review process and that decisions should also be made by considering the available resources and tailored according to the decision-makers' need.[6] The Cochrane Initiative has released guidance that provides recommendations on how to perform a RR,[18] but the impact and costs of each approach are not yet clear. In 2021, Evidence Synthesis Ireland conducted a priority setting study using the James Lind Alliance method to identify research priorities about how we plan, do, and share the results of RRs.[19] From the generated top 10 list of questions, three of them were focused on methodological issues (overlapping with the period on the current study), highlighting their importance but in relatively broader categories. For instance, one of the questions reflects on what simplified methods of SRs could be used in a RR, and what would be the impact of these choices in general. This contrasts with the current study, which will unpack this topic area to provide more specific questions around the specific methods that need to be explored.

The identification of more specific methodological questions is still required to tailor the design and development of methodological studies about the conduct of RRs. For example, questions around how many databases should be included, database search limitations, and if peer review is necessary for all steps have not yet been answered. Given the number of areas that still need to be explored, the small amount of current available evidence, the limited available resources to conducted methodological studies, and the lack of general consensus on where to start, the aim of this project is to survey RR experts and end-users to identify meaningful methodological questions to improve time-efficiency of RRs, and, ultimately, create a prioritised research agenda for the methodological aspects of RRs.

2. OBJECTIVES

- To identify and collate the key unanswered questions regarding the methods (i.e., after the generation of the research question to just before the report writing) for conducting time-efficiency RRs.
- To rank, in a priority list, the most important questions about RRs methods to be answered.

3. METHODS

The study will follow the general eDelphi process[20–22] and the Guidance on Conducting and REporting DElphi Studies (CREDES).[23] There will be an initial generation of potential research areas, followed by multiple rounds of an online survey for

ranking, and then a final consensus meeting. The eDelphi process is particularly useful in surveying areas of uncertainty and obtaining consensus.[20,24] This method has the advantage of enabling each participant to express views impersonally, it is low resource and flexible,[25] and it has been widely used in health research.[26]

The eDelphi will ask participants to answer: "how important would answering this question be to improve the time-efficiency (balance between the time taken and the quality of the final results) of a systematic RR in a particular field?".

3.1 Participants

The sample will consist of two key groups: international experts who have published RRs or undertaken methodological research in RRs and knowledge synthesis; and key end-users (i.e., key interested parties). To standardise the level of expertise, all experts will self-identify themselves, answering eligibility questions, on the basis of having: verifiable experience in designing or delivering evidence summary research; participation in at least one RR; having ≥5 years of research experience; and self-rating their knowledge on evidence synthesis as ≥7 on a 0 (no expertise) to 10 (expert) point Likert-like scale. We will also include interested parties (e.g., guideline and policy developers, end-users (public and patients), industry members, journal editors) who have had previous experiences in participating in any aspect of evidence synthesis.

A recruitment email will be distributed by our global partners through their contacts lists, e.g., the International Behavioural Trials Network (IBTN, https://www.ibtnetwork.org/), the Strategy for Patient-Oriented Research (SPOR) Evidence Alliance (https://sporevidencealliance.ca/), and COVID-END (https://www.mcmasterforum.org/networks/covid-end). In addition, as performed by Tricco et. al.,[16] organisations that produce RRs, identified through the International Network of Agencies for Health Technology Assessment's (INAHTA, https://www.inahta.org/) list, will be asked to distribute the study invitation to members of their group. The recruitment email will provide a link to access the information about the study and the consent form. There are no restrictions on the country of origin of the participants, but all study related information will be provided in English.

3.2 Providing Consent

The informed consent forms will explain the objective, procedures, and other details that are important to participants (Supplementary Material). After clicking a link sent by email, consent will be obtained through LimeSurvey. Participants will be asked to read the

ethics board-approved information/consent forms. Then, if they agree to participate, they will be asked to check a box confirming that they have "reviewed this information/consent form", and that they consent to participate in the survey, and understand that "their participation is voluntary and entirely confidential." In case they have questions, the contact information of research team members will be available in the Information and Consent Forms. Questions about study procedures may be answered by email. There will be two consent forms, one for the eDelphi rounds and one for the Consensus Meeting (if they are selected).

3.3 Initial topic generation

A core group of experts in evidence synthesis, mainly within the biomedical sciences, referred to as the Central Scientific Committee (CSC), and drawn from the leadership of the SPOR Evidence Alliance, IBTN, COVID-END, and notable published scholars, will generate a list of methodological questions that they think are relevant to RRs. The included topics will cover the period after the review question has been generated and before the creation of the final report, e.g., search strategy, studies selection (level one and two screening), data extraction, risk of bias appraisal, and synthesis. The item list will also be drawn from the WHO guide for RRs,[6] the Delphi process on RR methods,[16] and the Priority III study[19] to form the initial 'long-list' of items.

3.4 Online survey

For the main eDelphi process, we anticipate about 50 RRs experts and end-users will participate in the eDelphi process and will constitute the sample for this part of the project. At least three rounds of online questionnaires will be used (with around one month between rounds) to allow participants to revise their views and identify which aspects they find most important.[24,27] All rounds will be conducted using a system that can tag data to an individual to provide them with their scores on the previous rounds, whilst also providing reports of the summated data.

3.4.1 Prior to Round 1

The initial survey will include basic demographic information, including eligibility questions (i.e., years of experience, job title, country and province of residence, age group, and sex). Once they agree to participate in the study, participants will be provided with the 'long-list' of survey items from the previous phase.[27] We will only provide the survey to those agreeing to participate to prevent attrition biases.[28]

3.4.2 Round 1

As per our previous eDelphi projects (e.g., Dragomir et. al.[29]), participants will rate the importance of suggested items ("how important would answering this question be to improve the time-efficiency - balance between the time taken and the quality of the final results - of a systematic RR in a particular field?"), focusing on the concept, rather than on the wording. Importance can be rated as: low; medium; or high (Table 1). For all items that an individual rates as high or medium importance, they will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.) until all items are ranked. Specific questions with open format responses will allow for modifications to the concept of items. Participants will also be able to add new items that they believe were missing in the initial round. Responses will be collated and summarised.[26] Items rated as low by 50% or more of the participants will be excluded from the final list, a consensus threshold that is similar to those adopted in other Delphi studies.[24,29] Comments will be reviewed by the CSC and changes to items or the addition of new items will be made by the CSC.

Table 1 – Classification of the items

Importance Level	**Conceptualisation**
Low importance	Item is helpful to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a systematic RR
Medium importance	Item is desirable to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a systematic RR
High importance	Item is essential to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a systematic RR

3.4.3 Round 2

Participants will be provided with the percentage of respondents ranking each item as high priority, as well as their own ratings in the previous round. They will be able to re-rate the perceived importance of each item, as well as the importance of any new items. They will also be asked whether they agree with items excluded from Round 1 or if any essential items are still missing. The items for which ≥ 75% of people disagree with the exclusion of will remain on the main list for the next round.

For all items that an individual rates as high importance, they will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.) until all items are ranked. Items rated as low by 75% or more of the participants in Round 2 will be excluded.[29]

3.4.4 Round 3

Participants will re-rate and re-rank the remaining items. After Round 3, we will generate a final list of items for discussion at the consensus meeting (those believed to be of high importance by ≥75% of participants). Three rounds should allow us to reach stability and agreement about most items.[28,30] Information about deviant cases will be shared with the consensus group.[27]

3.5 Security of the data

All data that we capture will be stored on secure servers located within Canada, with only information necessary for the research study being collected. All information obtained will be kept strictly confidential, within the limits of the law. To preserve the confidentiality of the data, a code number known only to those directly involved with this research project will be assigned to each participant, and any personally identifiable information will be stored in a secured computer file.

3.6 Consensus meeting

This step will aim to detail the final items to be included in the priority list.

3.6.1 Participants

Participants will be invited from the eDelphi phase and selected purposively by the Research team to include individuals with a variety of backgrounds (e.g., country, academic level, research context), with equal representation of males and females, and that had selected the box showing their interest in participating in the consensus meeting. Approximately 25 people will be invited to an online meeting, a size which balances diversity of opinion with meaningful opportunities for interaction,[31] and maximizes the ability to achieve consensus.

The individuals selected will be contacted by email, with a link that provides access to the Information and Consent Form of the Consensus Meeting. After accepting, participants will access the Zoom platform with an invitation link sent by email.

The meeting will be recorded to aid with the generation of the final report. Zoom's inbuilt anonymous voting system will be used for people to be able to vote on the inclusion

or exclusion of items.

3.6.2 Meeting structure

Established nominal group technique methods will guide the consensus meeting.[26,32] The summary of the results of the previous work will be provided in advance to ground conversations on empirical information and to facilitate cohesive discussion during the meeting.[27] The meeting will start with formal presentations. Using a triangulation approach,[33,34] we will then lead a structured discussion of each proposed item.[35] An experienced, independent facilitator will conduct the discussions.[27] Participants will discuss and vote (using anonymous e-ballots), with the potential for a re-vote if needed,[28] with only items supported by at least 75% of participants being adopted.[27]

3.6.3 Anticipated output

The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. This list draft will be circulated to the consensus group participants who will be asked to check if the document accurately represents the discussions had and decisions made during the meeting.[35] Then, we will distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content and to assess whether the consensus meeting accurately captured their opinions.[27]

3.8 Team members

The project will be organized and developed by two main groups: the Central Scientific Committee and the Coordinating Research Team. The full list of members is available on the website (https://mbmc-cmcm.ca/projects/edelphi/). The Central Scientific Committee will be responsible for: the review and editing of the initial list of methodological items; providing feedback on the survey structure and project plan; providing feedback on the results of each survey round (agreeing on the items that participants may suggest, dropping of items, etc.); and helping to share the eDelphi with their networks. The research team, the Montreal Behavioural Medicine Centre, will be responsible for: creating and delivering on the project timelines; creating project documents; setting up and organising the surveys; and managing the public partner involvement in the project.

3.9 Patient and public involvement

Given the emphasis on the methodological aspects of the RR process, with researchers being the primary target end-user of this work, we decided to not include patients on the CSC. The eDelphi does include interested parties, e.g., guideline and policy developers, end-users (public and patients), journal editors, from whom we will draw upon for the final consensus meeting, to ensure that the final document will have direct input from all related groups. In addition, we will leverage interested parties in the creation of a variety of knowledge translation products, e.g., lay summaries, public-facing presentations, infographics, etc.

3.10 Expected outcomes

The Delphi process is a well-established consensus-building process that will provide us with a good picture of the priority questions that need to be answered regarding the methodological conduct of RRs. It will help to make decisions on priority research questions and to design future methodological studies that will answer those questions. These will ultimately create an evidence base for evidence synthesis researchers when deciding the best approaches to perform a RR, including for the healthcare field.

4. ETHICS AND DISSEMINATION

This study was approved by the Concordia University Human Research Ethics Committee under the Certification Number 30015229.

The dissemination plan includes both traditional academic knowledge products, e.g., presentations and scientific meetings and publication in peer-reviewed journals, as well as other knowledge dissemination products, e.g., lay summaries, public-facing presentations, and infographics. We will also leverage social media, via the members of the CSC and related organisations, to disseminate results and information as broadly as possible.

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AUTHORS' CONTRIBUTIONS:

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Design and Methods: Ariany M Vieira, Chiara de Waure, Andrea Tricco, Sandy Oliver, Jovana Stojanovic, Paula A B Ribeiro, Danielle Pollock, Elie Akl, John Lavis, Tanja Kuchenmuller, Peter Bragge, Laurenz Langer, Simon L Bacon.

Drafting of the manuscript: Ariany M Vieira and Simon L Bacon.

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Supervision. Simon L Bacon.

All the authors read and accept the last version of the protocol.

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COMPETING INTERESTS STATEMENT:

The authors alone are responsible for the views expressed in this paper and they do not necessarily represent the views, decisions or policies of the institutions with which they are affiliated. The authors have no conflicts of interest to declare.

SUPPLEMENTARY MATERIAL

Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

Table of Contents

Ethics Certification

UNIVERSITÉ Concordia UNIVERSITY

CERTIFICATION OF ETHICAL ACCEPTABILITY FOR RESEARCH INVOLVING HUMAN SUBJECTS

Name of Applicant:	Dr. Simon Bacon
Department:	Faculty of Arts and Science\Health, Kinesiology and Applied Physiology
Agency:	Canadian Diabetes Association Canadian Institutes of Health Research
Title of Project:	Identifying priority questions regarding rapid reviews methodology: an eDelphi study
Certification Number:	30015229
Valid From:	May 02, 2022 To: May 01, 2023

The members of the University Human Research Ethics Committee have examined the application for a grant to support the above-named project, and consider the experimental procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

Richard DeMont

Dr. Richard DeMont, Chair, University Human Research Ethics Committee

Information and Consent Form – eDelphi Process

Study Title: Identifying priority questions regarding rapid reviews methodology: an eDelphi process

Researcher: Simon Bacon

Researcher's Contact Information: Simon L. Bacon, Ph.D.**;** Professor, Department of Health, Kinesiology, and Applied Physiology, Concordia University, and Researcher, Research Centre, CIUSSS du Nord-de-l'Île-de-Montréal (simon.bacon@concordia.ca; 514-338-2222 ext. 3709).

Source of funding for the study: CIHR-SPOR Chair in Innovative Patient-Oriented, Behavioural Clinical Trials

You are being invited to participate in the research study mentioned above. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the study is to survey a group of rapid reviews experts, using a modified eDelphi process, in order to identify the priority research questions and gaps about the conduct of rapid reviews.

Rapid reviews are being explored as an evidence synthesis method that it is resource-limited and that allows the production of a reliable summary, especially when decision-making is urgent. However, the methods to build this reliable evidence synthesis are not clear and there are many questions regarding the methods' required steps. The eDelphi process is a well-established consensus-building method that allows the construction of a consensus towards a specific question. This process will be done exclusively online, and will include several survey rounds during which participants will review selected items and rank their priority order.
It is anticipated that at the end of the process, a 10-item priority list will be generated, with the **most relevant questions that need to be answered regarding the methods of rapid reviews**.

B. PROCEDURES

Approximately 30-50 rapid reviews experts will participate in the eDelphi process.
If you agree to participate, you will be asked to answer some general questions about yourself (e.g., experience with evidence synthesis, job title, country).

You will then be asked to participate in three rounds of online surveys, using the LimeSurvey platform that you will access through an email with a personalised link.

Round 1
You will use three options of categories to rate the importance of suggested methodological questions of rapid reviews (high, medium, and low). For the items rated as very important, you will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.). Specific questions with open format responses will allow for modifications to the wording of items, as well as suggestions of additional items.

Round 2
Items will be rephrased according to the responses from Round 1. You will be provided with the median and inter-quartile range of rankings and you will re-rate the perceived importance of each item. You will also be asked whether you agree with items excluded from Round 1 or if any essential items are still missing.

Round 3
You will re-rate the remaining items. After this round, we will generate a final list of items for discussion at the consensus meeting (those items believed important by ≥33% of participants).

In total, participating in this study will take around 20 minutes each round.

After the eDelphi phase, some participants will be selected purposively by the investigative team (to include individuals with a variety of backgrounds, e.g., country, academic level, research context), with equal representation of men and women. Approximately 25 people will be invited to a consensus meeting.

The consensus meeting will also happen online and will follow established nominal group technique methods. The summary of the results of the previous work will be provided in advance, to ground conversations on empirical information and to facilitate cohesive discussion during the meeting. The meeting will start with presentations and a discussion and vote process will happen to discuss each item of the priority question list. The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. Drafts will be circulated to consensus group

participants to check that the document accurately represents the discussions had and decisions made during the meeting. We will then distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content, and to assess whether the consensus meeting accurately captured their opinions.

You can chose to participate in the Consensus Meeting or not. In case you don't want to participate, you can still be part of the eDelphi process.

C. RISKS AND BENEFITS

There are no risks associated with your participation to this study. The only possible drawback or disadvantage is the time required to complete the survey, which should take around 20 minutes, per round, for a total of around 60 minutes.

This research is not intended to benefit you personally. The primary advantage associated with taking part in this study is to have the opportunity to express your own concerns and questions regarding the development of rapid reviews and to contribute to creating a priority list of methodological questions and issues relevant to rapid reviews. At the end, you will have access to the results and will be able to see what has been identified as missing in the field of rapid reviews research methods.

D. CONFIDENTIALITY

Survey data will be collected on LimeSurvey, which is hosted by Concordia University on secure servers located within Canada. Only information necessary for the research study will be collected. Participants will access the LimeSurvey platform with a personalised link sent by email.

All information obtained will be kept strictly confidential, within the limits of the law. To preserve your identity and the confidentiality of your data, you will be identified with a code number known only to those directly involved with this research project. Only this code number will be used during analysis.

All data captured through LimeSurvey will be transferred and stored on secure servers located at the CIUSSS-NIM, under the responsibility of Dr. Simon Bacon. Personal data about participants, such as basic demographic information, will be kept in a separate database on secure servers also hosted by the CIUSSS-NIM.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

The final study results may be printed in medical journals or shared with other people at scientific meetings, but it will be impossible to identify you. Participants of the last phase of the study, that includes the consensus meeting, may inform the research team in case they want to participate in the publication process.

All data will be stored for a period of 10 years.

F. CONDITIONS OF PARTICIPATION

Your participation in this study is voluntary. It is purely your decision. If you do participate, you can withdraw from the study at any time and for any reason, without having to justify your decision.

You can also ask that the information you provided not be used, and your choice will be respected. If you decide that you don't want us to use your information, you must tell the research team within one (1) week (7 days). If data collection has finished and analyses are completed (this may be true for the various phases of the online survey) then we would not be able to exclude data.

No compensation will be offered to participants.

There are no negative consequences for not participating, stopping in the middle, or asking us not to use your information.

G. PARTICIPANT'S DECLARATION

☐ I have read and understood this form. I have had the chance to ask questions by email and any questions have been answered. I agree to participate in the eDelphi phase of this research under the conditions described.

Please let us know if you are interested in being invited to attend the consensus meeting:

☐ Yes, I am interested in attending the consensus meeting. Not all participants will be invited. I understand that I am free to refuse to attend if I am invited.

☐ No, I do not want to be invited to attend the consensus meeting. I am interested in participating only in the eDelphi phase of the study.

NAME (please print)

_____

DATE _____

If you have questions about the scientific or scholarly aspects of this research, please contact the following members of the research team:

Ariany Marques Vieira, PhD Student, Department of Health, Kinesiology, and Applied Physiology, Concordia University. Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (ariany.marquesvieira@concordia.mail.ca).

Geneviève Szczepanik, Research Coordinator, Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (genevieve.szczepanik@mbmc-cmcm.ca; (514) 358-6214)

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Information and Consent Form – Consensus Meeting

Study Title: Identifying priority questions regarding rapid reviews methodology: an eDelphi process

Researcher: Simon Bacon

Researcher's Contact Information: Simon L. Bacon, Ph.D.**;** Professor, Department of Health, Kinesiology, and Applied Physiology, Concordia University, and Researcher, Research Centre, CIUSSS du Nord-de-l'Île-de-Montréal (simon.bacon@concordia.ca; 514-338-2222 ext. 3709).

Source of funding for the study: CIHR-SPOR Chair in Innovative Patient-Oriented, Behavioural Clinical Trials

You are being invited to participate in the research study mentioned above. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the study is to survey a group of rapid reviews experts, using a modified eDelphi process, in order to identify the priority research questions and gaps about the conduct of rapid reviews.

Rapid reviews are being explored as an evidence synthesis method that it is resource-limited and that allows the production of a reliable summary, especially when decision-making is urgent. However, the methods to build this reliable evidence synthesis are not clear and there are many questions regarding the methods' required steps. The eDelphi process is a well-established consensus-building method that allows the construction of a consensus towards a specific question. This process will be done exclusively online, and will include several survey rounds during which participants will review selected items and rank their priority order.
It is anticipated that at the end of the process, a 10-item priority list will be generated, with the **most relevant questions that need to be answered regarding the methods of rapid reviews**.

B. PROCEDURES

Approximately 30-50 rapid reviews experts will participate in the eDelphi process.
If you agreed to participate in the three eDelphi rounds, you were asked to answer some general questions about yourself (e.g., experience with evidence synthesis, job title, country), which we may use in the consensus meeting analysis and report.

After the three eDelphi rounds of online surveys, some participants will be selected purposively by the investigative team (to include individuals with a variety of backgrounds, e.g., country, academic level, research context), with equal representation of men and women. Approximately 25 people will be invited to a consensus meeting.

The consensus meeting will also happen online and will follow established nominal group technique methods. The summary of the results of the previous work will be provided in advance, to ground conversations on empirical information and to facilitate cohesive discussion during the meeting. The meeting will start with presentations and a discussion and vote process will happen to discuss each item of the priority question list. The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. Drafts will be circulated to consensus group participants to check that the document accurately represents the discussions had and decisions made during the meeting. We will then distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content, and to assess whether the consensus meeting accurately captured their opinions.

For the voting process and general data collection, a member of the research group will work as a minute taker. The meeting will happen using Zoom as the online meeting platform and will be recorded. The Montreal Behavioural Medicine Centre has a license to Zoom which guarantees security and privacy. AES 256-bit encryption safeguards all log-in.

C. RISKS AND BENEFITS

There are no risks associated with your participation to this study. The only possible drawback or disadvantage is the time required to participate in the meeting and to review the documents provided, which should take around in total 200 minutes.

This research is not intended to benefit you personally. The primary advantage associated with taking part in this study is to have the opportunity to express your own concerns and questions regarding the development of rapid reviews and to contribute to creating a priority list of methodological questions and issues relevant to rapid reviews. At the end, you will have

access to the results and will be able to see what has been identified as missing in the field of rapid reviews research methods.

D. CONFIDENTIALITY

The meeting will happen using Zoom platform. Data will be collected by the minute taker and meeting recording. The Zoom line is hosted by the Montreal Behavioural Medicine Centre. Only information necessary for the research study will be collected. Participants will access the Zoom platform with an invitation link sent by email.

All information obtained will be kept strictly confidential, within the limits of the law. To preserve your identity and the confidentiality of your data, you will not be identified and only a code number known only to those directly involved with this research project. Only this code number will be used during analysis.

On a scientific publication or any report of the consensus meeting, a list of the attendees can be shared. This usually is done to allow transparency and a better interpretation of the results by including names, affiliation or position and credentials of the consensus expert panel members. If the research team decides to publish the list of the attendees, only this information will be shared, and not individual contributions or specific answers linked to each participant.

Participants need to respect each other's confidentiality and not reveal anyone's opinion, position, or share any information outside of the meeting.

The meeting recording captured through Zoom will be transferred and stored on secure servers located at the CIUSSS-NIM, under the responsibility of Dr. Simon Bacon. Personal data about participants, such as basic demographic information collected in the survey phase of the project, will be kept in a separate database on secure servers also hosted by the CIUSSS-NIM.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

The final study results may be printed in medical journals or shared with other people at scientific meetings. Participants of the last phase of the study, that includes the consensus meeting, may inform the research team in case they want to participate in the publication process.

All data will be stored for a period of 10 years.

F. CONDITIONS OF PARTICIPATION

Your participation in this study is voluntary. It is purely your decision.

In case you sign the Information and Consent Form agreeing to participate in the consensus meeting, you can change your mind and cancel your participation in the meeting up to five days before the meeting date. If you do participate in this phase of the study (consensus meeting), you will not be able to completely withdraw from the study. Participants may withdraw and the direct quotes from them can be excluded, but because each participant's answers can influence other participants' answers, it is impossible to completely remove the data.

If you decide that you don't want us to use your information, you must tell the research team as soon as possible, up to one week after the consensus meeting. After that, ff data collection has finished, and the summary document detailing the questions that will generate the final priority list meeting is already done, then we would not be able to exclude data.

In case you sign the Information and Consent Form agreeing to participate in the consensus meeting, you can change your mind and cancel your participation in the meeting up to five days before the meeting date.

No compensation will be offered to participants.

There are no negative consequences for not participating, stopping in the middle, or asking us not to use your information.

G. PARTICIPANT'S DECLARATION

☐ I have read and understood this form. I have had the chance to ask questions by email and any questions have been answered. I agree to participate in the consensus meeting phase of this research under the conditions described.

NAME (please print)

_____

DATE _____

If you have questions about the scientific or scholarly aspects of this research, please contact the following members of the research team:

Ariany Marques Vieira, PhD Student, Department of Health, Kinesiology, and Applied Physiology, Concordia University. Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (ariany.marquesvieira@concordia.mail.ca).

Geneviève Szczepanik, Research Coordinator, Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (genevieve.szczepanik@mbmc-cmcm.ca; (514) 358-6214)

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Glossary of terms/List of definitions

Data analysis is the process of taking data and turning it into a useful material to answer a research question. There are different methods, such as qualitative and quantitative approaches.

Data abstraction/extraction is related to the act of separating, withdrawing, and taking data of interest from included studies or different sources. Usually, information about study characteristics, descriptive data, and findings (outcome data) are part of data extraction (Munn *et al*., 2014).

Efficiency is the ability to perform something well, successfully, and without waste (e.g. time, money). Balance between quality and resource consumption.

Evidence synthesis is a type of study developed to gather available evidence to answer a specific question. This includes SRs, scoping reviews, living reviews, overview of reviews and RRs for example.

Grey literature is materials and research produced outside of the traditional commercial or academic publishing and distribution channels. Common grey literature publication types include pre-prints, reports, working papers, government documents, white papers and evaluation (Simon Fraser Library, accessed in 2022).

Methods: Research methods are particular processes for collecting and analyzing data. For evidence syntheses, it usually covers the methods for: acquisition of evidence (search strategy, inclusion criteria, selection process), data extraction, data analysis, data appraisal/risk of bias/quality assessment strategy, and data synthesis process.

Rapid systematic reviews (RRs) are another evidence synthesis method that accelerates the process of conducting a traditional systematic review through streamlining or omitting a variety of methods to produce evidence in a resource-efficient manner (Hamel *et. al.*, 2021). The kinds of methods that this study will include are: search strategy, studies selection (level one and two of the screening), data extraction, risk of bias appraisal and data analysis. It is also referred in this project as **Rapid Reviews**.

Report: ***"****A document (paper or electronic) supplying information about a particular study. It could be a journal article, preprint, conference abstract, study register entry, clinical study report, dissertation, unpublished manuscript, government report, or any other document providing relevant information"* (Page *et al*., 2021).

Risk of bias appraisal/assessment: "*The purpose of study quality assessment is to capture and analyze variations among the included studies—those that met initial inclusion criteria— in terms of their credibility and vulnerability to various sources of bias"* (Littell *et al.*, 2008, Chapter 4).

Screening is part of the studies selection process for a review, checking if the references fit or not the inclusion criteria. It includes different levels, such as Title and Abstract and Full text screening.

Search Strategy, in the context of evidence syntheses, is the structured plan of how to find studies of interest. The search strategy includes the terms that are going to be used and also the sources that will be consulted (e.g. databases, repositories).

Stakeholder: the parties who will engage in, benefit from or be affected by the procedure (Tricco AC, et al. WHO Practical Guide, 2017). For this study, stakeholders of a rapid review process include decision-makers, guideline

and policy developers, healthcare providers, health system managers, end-users (public and patients), and journal editors.

Synthesis: In the context of evidence syntheses, the synthesis is the summarization of the data that were collected. "*In systematic reviews of quantitative (numerical) data, data synthesis usually appears as a meta-analysis, a statistical method that combines the results of a number of studies to calculate a single summary effect"* (Munn *et al*., 2014).

Systematic reviews (SRs) are the most common type of evidence synthesis. It is a way of searching, selecting, appraising, and synthesising the available evidence to answer a research question. It organises all empirical evidence that fits in pre-specified eligibility criteria and aim to reduce bias (Higgins *et. al.*, 2022).

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Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

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Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

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Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

Abstract

Introduction: Rapid systematic reviews (RRs) have the potential to provide timely information to decision-makers, thus directly impacting healthcare. However, consensus regarding the most efficient approaches to performing RRs and the presence of several unaddressed methodological issues pose challenges. With such a large potential research agenda for RRs, it is unclear what should be prioritised.

Objective: To elicit a consensus from RR experts and interested parties on what are the most important methodological questions (from the generation of the question to the writing of the report) for the field to address in order to guide the effective and efficient development of RRs.

Methods and analysis: An eDelphi study will be conducted. Researchers with experience in evidence synthesis and other interested parties (e.g., knowledge users, patients, community members, policymaker, industry, journal editors, and healthcare providers) will be invited to participate. The following steps will be taken: 1) A core group of experts in evidence synthesis will generate the first list of items based on the available literature; 2) Using LimeSurvey, participants will be invited to rate and rank the importance of suggested RR methodological questions. Questions with open format responses will allow for modifications to the wording of items or the addition of new items; 3) Survey rounds will be performed asking participants to re-rate items, with items deemed of low importance being removed at each round; 4) A list of items will be generated with items believed to be of high importance by ≥75% of participants being included; and 5) This list will be discussed at an online consensus meeting that will generate a summary document containing the final priority list. Data analysis will be performed using raw numbers, means, and frequencies.

Ethics and dissemination: This study was approved by the Concordia University Human Research Ethics Committee (#30015229). Both traditional, e.g., scientific conference presentations and publication in scientific journals, and non-traditional, e.g., lay summaries and infographics, knowledge translation products will be created.

Strengths and limitations of this study:

- The eDelphi process is a well-recognised and highly structured method for consensus building.
- Understanding potential differences in research priorities will be made possible by including a variety of participant profiles, researchers, and key end users (such as policy-makers, guideline producers, healthcare professionals, etc.).
- The modified eDelphi approach, using an online format, although it may elicit challenges, can also allow for faster data collection, a broader range of individuals across the globe, is more cost-effective than in person Delphi approaches, and is less susceptible to the judgements of group members with higher status.
- Although this study is an important addition to the literature in the evidence-synthesis field, and it can serve as a 'road-map' for future RR methodological studies, it is only the first step towards refining the conduct of Rapid systematic reviews in a more time-efficient way.

1. BACKGROUND

Evidence syntheses (e.g., systematic reviews [SRs]) are a useful strategy for a number of uses and domains, notably to summarise evidence around a specific question.[1] In a health context, findings form SRs have been used to make decisions for: clinical practice, normally through clinical practice guidelines; healthcare systems; and shaping policy.[1,2] However, conducting a full SR is time-consuming, sometimes taking up to two years to conduct,[3] by which time the scientific literature may have already moved on, and expensive, with an estimated cost of at least US$100,000 needed for a high-quality SR.[4,5]

To address the challenges of SRs, the concept of rapid evidence products has been introduced, including inventories, rapid response briefs, and rapid systematic reviews (RRs).[6] RRs result from a evidence synthesis approach that use streamlined procedures,[7,8] so certain methodological elements are simplified or omitted compared to SRs.[9] Currently, RRs are being conducted to answer urgent questions and/or to support decisions where there is limited time and/or resources i.e., in situations where time- and cost-efficiency are key.[10,11] For example, RRs have been extensively used in addressing issues related to the COVID-19 pandemic.[8,12] Preliminary evidence suggests that the conclusions reached by RRs are typically consistent with those of SRs.[10] In addition, when applied to policy decision-based health technology assessment reports, RRs have been shown to positively impact the healthcare system, resulting in a reduction of expenditures.[13,14]

The use of high-quality evidence summary methods is essential to providing reliable results. For traditional SRs, there are well-defined, pre-specified methods, e.g., for conducting searches, selecting relevant studies, appraising their quality, and synthesizing the available evidence to answer the research question, which ensure quality and reduce bias.[3] However, though methodological rigor and transparency are still essential to have representative and reliable results in RRs,[8] there is a lack of standardised methodologies on how to adapt SR methods to be able to reliably perform a RR.[15,16] Several studies and reviews [15–17], have noted this lack of consensus in the methodological approaches being utilised for RRs, highlighting heterogeneous nomenclature and terminology being used to describe the same concepts, and the use of varied methodologies without a clear rationale behind the choices being made.

In 2017, the World Health Organization (WHO) commissioned a guide on how to perform RRs, which explored various approaches. The guide emphasised that methods can be simplified at any stage of the review process and that decisions should consider

the resources at hand and be customised to the needs of the decision-makers.[6] The Cochrane Initiative has also produced some methodological guidance for RRs,[18] but the impact and costs of each approach are still unclear. Evidence Synthesis Ireland, using the James Lind Alliance method, identified RR research priorities.[19] Among the top 10 questions generated, three focused on methodological issues but in relatively broad categories.

The current study will build on the findings from Evidence Synthesis Ireland by further exploring more focused questions around RRs methods, i.e., the stages between question generation and report writing. The identification of these unanswered questions is required to design and develop methodological studies that can then inform the conduct of RRs. For example, questions about how many databases should be included, database search limitations, and if peer review is necessary for all steps have not yet been answered. Given the number of areas that still need to be explored, the small amount of current available evidence, the limited available resources to conducted methodological studies, and the lack of general consensus on where to start, the aim of this project is to elicit a consensus from RR experts and interested parties on what are the most important methodological questions to improve time-efficiency of RRs, and, ultimately, create a prioritised research agenda for the field to address.

2. OBJECTIVES

- To identify and compile the main unanswered questions related to the methods used in conducting time-efficiency RRs, specifically from the stage after generating the research question to just before writing the final report.
- To create a priority list of the most crucial questions regarding RRs methods that need to be addressed.

3. METHODS

The study will follow the general eDelphi process[20–22] and the Guidance on Conducting and REporting DElphi Studies (CREDES).[23] There will be an initial generation of potential research areas, followed by multiple rounds of an online survey for ranking, and then a final consensus meeting. The eDelphi process is particularly useful in surveying areas of uncertainty and obtaining consensus.[20,24] This method has the advantage of enabling each participant to express views impersonally, it is low resource and flexible,[25] and it has been widely used in health research.[26] After ethical approval, the study will start in March 2022, with the first survey round starting in June 2022 and the

last round in being finalized in January 2023. The consensus meeting will then occur in the summer of 2023.

Given the focus on efficiency, rather than just quality, the eDelphi will ask participants to answer: "How important would answering this question be to improve the time-efficiency (balance between the time taken and the quality of the final results) of a systematic RR in a particular field?".

3.1 Participants

The sample will consist of two key groups: international experts who have published RRs or undertaken methodological research in RRs and knowledge synthesis; and key end-users. To standardise the level of expertise, all experts will self-identify, answering eligibility questions, on the basis of having: verifiable experience in designing or delivering evidence summary research; participation in at least one RR; having ≥5 years of research experience; and self-rating their knowledge on evidence synthesis as ≥7 on a 0 (no expertise) to 10 (expert) point Likert-like scale. We will also include interested parties (e.g., guideline and policy developers, end-users (public and patients), industry members, and journal editors) who have had previous experiences in participating in any aspect of evidence synthesis.

A recruitment email will be distributed by our global partners through their contacts lists, e.g., the International Behavioural Trials Network (IBTN, https://www.ibtnetwork.org/), the Strategy for Patient-Oriented Research (SPOR) Evidence Alliance (https://sporevidencealliance.ca/), COVID-END (https://www.mcmasterforum.org/networks/covid-end). In addition, as performed by Tricco et. al.,[15] organisations that produce RRs, identified through the International Network of Agencies for Health Technology Assessment's (INAHTA, https://www.inahta.org/) list, will be asked to distribute the study invitation to members of their group. The recruitment email will provide a link to access the information about the study and the consent form. There are no restrictions on the country of origin of the participants, but all study-related information will be provided in English.

3.2 Providing Consent

The informed consent forms will explain the objective, procedures, and other details that are important to participants (Supplementary Material). Participants will be asked to read the ethics board-approved information/consent forms and provide agreement by checking a box confirming that they have: reviewed the information/consent form; consent

to participate in the survey, and understand that their participation is voluntary and entirely confidential. The contact details of study team members will be listed in the information/consent form in case they have queries. There will be two consent forms, one for the eDelphi rounds and one for the Consensus Meeting. Limesurvey, will be used to obtain consent, as well as to distribute the surveys.

3.3 Initial topic generation

A core group of experts in evidence synthesis, mainly within the biomedical sciences, referred to as the Central Scientific Committee (CSC), and drawn from the leadership of the SPOR Evidence Alliance, IBTN, COVID-END, and notable published scholars, will generate a list of methodological questions that they think are relevant to RRs. The items will be specific and focused, in order to be able to generate specific research questions rather than broad conceptual areas.

The included topics will cover the period after the review question has been generated and before the creation of the final report, e.g., search strategy, studies selection (level one and two screening), data extraction, risk of bias appraisal, and synthesis. The item list will also be drawn from the WHO guide for RRs,[6] the Delphi process on RR methods,[15] and the Priority III study[19] to form the initial 'long-list' of items.

This phase of the study will take around three months to ensure the inclusion of as many appropriate items as possible.

3.4 Online survey

The eDelphi process will involve approximately 50 RRs experts and end-users, who will be asked to complete at least three rounds of online questionnaires, spaced around one month apart. Each survey round will be open for about five weeks, sufficient time for participants to complete it. A system will tag data to individuals and provide them with their scores from previous rounds, while also reporting the summated data.

3.4.1 Prior to Round 1

The initial survey will include basic demographic information, including eligibility questions (i.e., years of experience, job title, country and province of residence, age group, and sex). Once they agree to participate in the study, participants will be provided with more specific sociodemographic questions (Supplementary Material) and the 'long-list' of survey items from the previous phase.[27] We will only provide the survey to those agreeing to participate to prevent attrition biases.[28]

3.4.2 Round 1

As per our previous eDelphi projects (e.g., Dragomir et. al.[29]), participants will rate the importance of suggested items ("How important would answering this question be to improve the time-efficiency - balance between the time taken and the quality of the final results - of a systematic RR in a particular field?"), focusing on the concept, rather than on the wording. Importance can be rated as: low; medium; or high (Table 1). For all items that an individual rates as high or medium importance, they will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.) until all items are ranked. Specific questions with open format responses will allow for modifications to the concept of items. Participants will also be able to add new items that they believe were missing in the initial round.

Responses will be collated and summarised.[26] Any items rated as low by 50% or more of the participants will be excluded, a consensus threshold that is similar to those adopted in other Delphi studies.[24,29] As this is the first round, the threshold will be lower than the following rounds. The CSC will review comments and make necessary changes to items or add new relevant items.

Table 1 – Classification of the items

Importance Level	**Conceptualisation**
Low importance	Item is helpful to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a rapid systematic review
Medium importance	Item is desirable to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a rapid systematic review
High importance	Item is essential to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a rapid systematic review

3.4.3 Round 2

Participants will be provided with the percentage of respondents ranking each item as high priority, as well as their ratings in the previous round. They will be able to re-rate the perceived importance of each item, as well as the importance of any new items. They will also be asked whether they agree with items excluded from Round 1 or if any essential

items are still missing. The items for which ≥ 75% of people disagree with the exclusion of will remain on the main list for the next round. For all items that an individual rates as high importance, they will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.) until all items are ranked. Items rated as low by 75% or more of the participants in Round 2 will be excluded.[29]

As in Round 1, open-format questions will allow suggestions for modifications to the items or the addition of new items. The comments will be reviewed by the CSC and changes or additions will be made as needed.

3.4.4 Round 3

A summary of round 2 will be provided, including the percentage of respondents rating each item as high priority, as well as their own rating. Participants will re-rate and re-rank the remaining items. After Round 3, we will generate a final list of items for discussion at the consensus meeting (those believed to be of high importance by ≥75% of participants). Three rounds should allow us to reach stability and agreement about most items.[28,30] Information about deviant cases will be shared with the consensus group.[27]

3.5 Security of the data

All data that we capture will be stored on secure servers located within Canada, with only information necessary for the research study being collected. All information obtained will be kept strictly confidential, within the limits of the law. To preserve the confidentiality of the data, a code number known only to those directly involved with this research project will be assigned to each participant, and any personally identifiable information will be stored in a secured computer file.

3.6 Consensus meeting

This step will aim to detail the final items to be included in the priority list.

3.6.1 Participants

Participants will be invited from the eDelphi phase and selected purposively by the Research team to include individuals with a variety of backgrounds (e.g., country, academic level, research context), and that had selected the box showing their interest in participating in the consensus meeting. Approximately 25 people will be invited to an online meeting, a size that balances diversity of opinion with meaningful opportunities for interaction,[31] and maximizes the ability to achieve consensus.

The individuals selected will be contacted by email, with a link that provides access to the Information and Consent Form of the Consensus Meeting. After accepting, participants will access the Zoom platform with an invitation link sent by email.

The meeting will be recorded to aid with the generation of the final report. Zoom's inbuilt anonymous voting system will be used for people to be able to vote on the inclusion or exclusion of items.

3.6.2 Meeting structure

Established nominal group technique methods will guide the consensus meeting.[26,32] The summary of the results of the previous work will be provided in advance to ground conversations on empirical information and to facilitate cohesive discussion during the meeting.[27] The meeting will start with formal presentations. Using a triangulation approach,[33,34] we will then lead a structured discussion of each proposed item.[35] An experienced, independent facilitator will conduct the discussions.[27] Participants will discuss and vote (using anonymous e-ballots), with the potential for a re-vote if needed,[28] with only items supported by at least 75% of participants being adopted.[27]

3.6.3 Anticipated output

The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. This list draft will be circulated to the consensus group participants who will be asked to check if the document accurately represents the discussions and decisions made during the meeting.[35] Then, we will distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content and to assess whether the consensus meeting accurately captured their opinions.[27]

3.7 Data analysis

The research team will analyze the sociodemographic characteristics of the participants using raw numbers, means, and percentages. For each round of data collection, the frequency of participant ratings for each item will be used to determine the percentage of low, medium, or high for each item. For the ranking question, each ranking position will receive a score with the highest position receiving the lowest score. The average score of each item will be calculated by dividing the sum of scores attributed to

that item by the number of participants that ranked it. An ascending order will be presented, with the first item, considered the most important one, i.e., the one with the lowest score. Data on average rank and the number of individuals providing data will be included in summary tables.

3.8 Team members

The project will be organized and developed by two main groups: the Central Scientific Committee and the Coordinating Research Team. The full list of members is available on the website (https://mbmc-cmcm.ca/projects/edelphi/). The Central Scientific Committee will be responsible for: the review and editing of the initial list of methodological items; providing feedback on the survey structure and project plan; providing feedback on the results of each survey round (agreeing on the items that participants may suggest, dropping of items, etc.); and helping to share the eDelphi with their networks. The research team, the Montreal Behavioural Medicine Centre, will be responsible for: creating and delivering on the project timelines; creating project documents; setting up and organising the surveys; and managing the public partner involvement in the project.

3.9 Patient and public involvement

Given the emphasis on the methodological aspects of the RR process, with researchers being the primary target end-user of this work, we decided to not include patients in the CSC. The eDelphi does include interested parties, e.g., guideline and policy developers, end-users (public and patients), journal editors, from whom we will draw upon for the final consensus meeting, to ensure that the final document will have direct input from all related groups. In addition, we will leverage interested parties in the creation of a variety of knowledge translation products, e.g., lay summaries, public-facing presentations, infographics, etc.

3.10 Expected outcomes and limitations

The Delphi process is a well-established consensus-building process that will provide us with a good picture of the priority questions that need to be answered regarding the methodological conduct of RRs. The present study will generate a list of specific and focused questions, which can be used to prioritise research questions and to design future methodological studies that will answer those questions. These will ultimately

create an evidence base for evidence synthesis researchers when deciding the best approaches to perform a RR.

While this research represents an important initial stage towards refining the conduction of RRs in a more time-efficient way, it will not provide definitive answers on the conduct of RRs. In addition, the response rates and representation of different profiles, perspectives, and experiences of participant's can not be guaranteed. However, the breadth and diversity of the recruitment strategy will likely help mitigate this issue. Finally, the terminology used might be interpreted differently across individuals from different domains and backgrounds. To try and mitigate against this an extensive list of definitions will be used and we will emphasise that items need to be evaluated based on the concept, rather than on the wording.

4. ETHICS AND DISSEMINATION

This study was approved by the Concordia University Human Research Ethics Committee under the Certification Number 30015229.

The dissemination plan includes both traditional academic knowledge products, e.g., presentations and scientific meetings and publication in peer-reviewed journals, as well as other knowledge dissemination products, e.g., lay summaries, public-facing presentations, and infographics. We will also leverage social media, via the members of the CSC and related organisations, to disseminate results and information as broadly as possible. We will specifically target potential funders, as these will be the bodies that will be targeted for the future methodological studies that will be needed to address the final priority list.

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AUTHORS' CONTRIBUTIONS:

Concept: Ariany M Vieira, Geneviève Szczepanik, Jovana Stojanovic, Paula A B Ribeiro, and Simon L Bacon.

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Drafting of the manuscript: Ariany M Vieira and Simon L Bacon.

Critical revision of the manuscript for important intellectual content: Ariany M Vieira, Geneviève Szczepanik, Chiara de Waure, Andrea Tricco, Sandy Oliver, Jovana Stojanovic, Paula A B Ribeiro, Danielle Pollock, Elie Akl, John Lavis, Tanja Kuchenmuller, Peter Bragge, Laurenz Langer, Simon L Bacon.

Supervision. Simon L Bacon.

All the authors read and accept the last version of the protocol.

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COMPETING INTERESTS STATEMENT:

The authors alone are responsible for the views expressed in this paper and they do not necessarily represent the views, decisions or policies of the institutions with which they are affiliated. The authors have no conflicts of interest to declare.

SUPPLEMENTARY MATERIAL

Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

Table of Contents

Ethics Certification

UNIVERSITÉ Concordia UNIVERSITY

CERTIFICATION OF ETHICAL ACCEPTABILITY FOR RESEARCH INVOLVING HUMAN SUBJECTS

Name of Applicant:	Dr. Simon Bacon
Department:	Faculty of Arts and Science\Health, Kinesiology and Applied Physiology
Agency:	Canadian Diabetes Association Canadian Institutes of Health Research
Title of Project:	Identifying priority questions regarding rapid reviews methodology: an eDelphi study
Certification Number:	30015229
Valid From:	May 02, 2022 To: May 01, 2023

The members of the University Human Research Ethics Committee have examined the application for a grant to support the above-named project, and consider the experimental procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

Richard DeMont

Dr. Richard DeMont, Chair, University Human Research Ethics Committee

Information and Consent Form – eDelphi Process

Study Title: Identifying priority questions regarding rapid reviews methodology: an eDelphi process

Researcher: Simon Bacon

Researcher's Contact Information: Simon L. Bacon, Ph.D.**;** Professor, Department of Health, Kinesiology, and Applied Physiology, Concordia University, and Researcher, Research Centre, CIUSSS du Nord-de-l'Île-de-Montréal (simon.bacon@concordia.ca; 514-338-2222 ext. 3709).

Source of funding for the study: CIHR-SPOR Chair in Innovative Patient-Oriented, Behavioural Clinical Trials

You are being invited to participate in the research study mentioned above. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the study is to survey a group of rapid reviews experts, using a modified eDelphi process, in order to identify the priority research questions and gaps about the conduct of rapid reviews.

Rapid reviews are being explored as an evidence synthesis method that it is resource-limited and that allows the production of a reliable summary, especially when decision-making is urgent. However, the methods to build this reliable evidence synthesis are not clear and there are many questions regarding the methods' required steps. The eDelphi process is a well-established consensus-building method that allows the construction of a consensus towards a specific question. This process will be done exclusively online, and will include several survey rounds during which participants will review selected items and rank their priority order.
It is anticipated that at the end of the process, a 10-item priority list will be generated, with the **most relevant questions that need to be answered regarding the methods of rapid reviews**.

B. PROCEDURES

Approximately 30-50 rapid reviews experts will participate in the eDelphi process.
If you agree to participate, you will be asked to answer some general questions about yourself (e.g., experience with evidence synthesis, job title, country).

You will then be asked to participate in three rounds of online surveys, using the LimeSurvey platform that you will access through an email with a personalised link.

Round 1
You will use three options of categories to rate the importance of suggested methodological questions of rapid reviews (high, medium, and low). For the items rated as very important, you will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.). Specific questions with open format responses will allow for modifications to the wording of items, as well as suggestions of additional items.

Round 2
Items will be rephrased according to the responses from Round 1. You will be provided with the median and inter-quartile range of rankings and you will re-rate the perceived importance of each item. You will also be asked whether you agree with items excluded from Round 1 or if any essential items are still missing.

Round 3
You will re-rate the remaining items. After this round, we will generate a final list of items for discussion at the consensus meeting (those items believed important by ≥33% of participants).

In total, participating in this study will take around 20 minutes each round.

After the eDelphi phase, some participants will be selected purposively by the investigative team (to include individuals with a variety of backgrounds, e.g., country, academic level, research context), with equal representation of men and women. Approximately 25 people will be invited to a consensus meeting.

The consensus meeting will also happen online and will follow established nominal group technique methods. The summary of the results of the previous work will be provided in advance, to ground conversations on empirical information and to facilitate cohesive discussion during the meeting. The meeting will start with presentations and a discussion and vote process will happen to discuss each item of the priority question list. The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. Drafts will be circulated to consensus group

participants to check that the document accurately represents the discussions had and decisions made during the meeting. We will then distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content, and to assess whether the consensus meeting accurately captured their opinions.

You can chose to participate in the Consensus Meeting or not. In case you don't want to participate, you can still be part of the eDelphi process.

C. RISKS AND BENEFITS

There are no risks associated with your participation to this study. The only possible drawback or disadvantage is the time required to complete the survey, which should take around 20 minutes, per round, for a total of around 60 minutes.

This research is not intended to benefit you personally. The primary advantage associated with taking part in this study is to have the opportunity to express your own concerns and questions regarding the development of rapid reviews and to contribute to creating a priority list of methodological questions and issues relevant to rapid reviews. At the end, you will have access to the results and will be able to see what has been identified as missing in the field of rapid reviews research methods.

D. CONFIDENTIALITY

Survey data will be collected on LimeSurvey, which is hosted by Concordia University on secure servers located within Canada. Only information necessary for the research study will be collected. Participants will access the LimeSurvey platform with a personalised link sent by email.

All information obtained will be kept strictly confidential, within the limits of the law. To preserve your identity and the confidentiality of your data, you will be identified with a code number known only to those directly involved with this research project. Only this code number will be used during analysis.

All data captured through LimeSurvey will be transferred and stored on secure servers located at the CIUSSS-NIM, under the responsibility of Dr. Simon Bacon. Personal data about participants, such as basic demographic information, will be kept in a separate database on secure servers also hosted by the CIUSSS-NIM.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

The final study results may be printed in medical journals or shared with other people at scientific meetings, but it will be impossible to identify you. Participants of the last phase of the study, that includes the consensus meeting, may inform the research team in case they want to participate in the publication process.

All data will be stored for a period of 10 years.

F. CONDITIONS OF PARTICIPATION

Your participation in this study is voluntary. It is purely your decision. If you do participate, you can withdraw from the study at any time and for any reason, without having to justify your decision.

You can also ask that the information you provided not be used, and your choice will be respected. If you decide that you don't want us to use your information, you must tell the research team within one (1) week (7 days). If data collection has finished and analyses are completed (this may be true for the various phases of the online survey) then we would not be able to exclude data.

No compensation will be offered to participants.

There are no negative consequences for not participating, stopping in the middle, or asking us not to use your information.

G. PARTICIPANT'S DECLARATION

☐ I have read and understood this form. I have had the chance to ask questions by email and any questions have been answered. I agree to participate in the eDelphi phase of this research under the conditions described.

Please let us know if you are interested in being invited to attend the consensus meeting:

☐ Yes, I am interested in attending the consensus meeting. Not all participants will be invited. I understand that I am free to refuse to attend if I am invited.

☐ No, I do not want to be invited to attend the consensus meeting. I am interested in participating only in the eDelphi phase of the study.

NAME (please print)

_____

DATE _____

If you have questions about the scientific or scholarly aspects of this research, please contact the following members of the research team:

Ariany Marques Vieira, PhD Student, Department of Health, Kinesiology, and Applied Physiology, Concordia University. Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (ariany.marquesvieira@concordia.mail.ca).

Geneviève Szczepanik, Research Coordinator, Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (genevieve.szczepanik@mbmc-cmcm.ca; (514) 358-6214)

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Information and Consent Form – Consensus Meeting

Study Title: Identifying priority questions regarding rapid reviews methodology: an eDelphi process

Researcher: Simon Bacon

Researcher's Contact Information: Simon L. Bacon, Ph.D.**;** Professor, Department of Health, Kinesiology, and Applied Physiology, Concordia University, and Researcher, Research Centre, CIUSSS du Nord-de-l'Île-de-Montréal (simon.bacon@concordia.ca; 514-338-2222 ext. 3709).

Source of funding for the study: CIHR-SPOR Chair in Innovative Patient-Oriented, Behavioural Clinical Trials

You are being invited to participate in the research study mentioned above. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the study is to survey a group of rapid reviews experts, using a modified eDelphi process, in order to identify the priority research questions and gaps about the conduct of rapid reviews.

Rapid reviews are being explored as an evidence synthesis method that it is resource-limited and that allows the production of a reliable summary, especially when decision-making is urgent. However, the methods to build this reliable evidence synthesis are not clear and there are many questions regarding the methods' required steps. The eDelphi process is a well-established consensus-building method that allows the construction of a consensus towards a specific question. This process will be done exclusively online, and will include several survey rounds during which participants will review selected items and rank their priority order.
It is anticipated that at the end of the process, a 10-item priority list will be generated, with the **most relevant questions that need to be answered regarding the methods of rapid reviews**.

B. PROCEDURES

Approximately 30-50 rapid reviews experts will participate in the eDelphi process.

If you agreed to participate in the three eDelphi rounds, you were asked to answer some general questions about yourself (e.g., experience with evidence synthesis, job title, country), which we may use in the consensus meeting analysis and report.

After the three eDelphi rounds of online surveys, some participants will be selected purposively by the investigative team (to include individuals with a variety of backgrounds, e.g., country, academic level, research context), with equal representation of men and women. Approximately 25 people will be invited to a consensus meeting.

The consensus meeting will also happen online and will follow established nominal group technique methods. The summary of the results of the previous work will be provided in advance, to ground conversations on empirical information and to facilitate cohesive discussion during the meeting. The meeting will start with presentations and a discussion and vote process will happen to discuss each item of the priority question list. The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. Drafts will be circulated to consensus group participants to check that the document accurately represents the discussions had and decisions made during the meeting. We will then distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content, and to assess whether the consensus meeting accurately captured their opinions.

For the voting process and general data collection, a member of the research group will work as a minute taker. The meeting will happen using Zoom as the online meeting platform and will be recorded. The Montreal Behavioural Medicine Centre has a license to Zoom which guarantees security and privacy. AES 256-bit encryption safeguards all log-in.

C. RISKS AND BENEFITS

There are no risks associated with your participation to this study. The only possible drawback or disadvantage is the time required to participate in the meeting and to review the documents provided, which should take around in total 200 minutes.

This research is not intended to benefit you personally. The primary advantage associated with taking part in this study is to have the opportunity to express your own concerns and questions regarding the development of rapid reviews and to contribute to creating a priority list of methodological questions and issues relevant to rapid reviews. At the end, you will have

access to the results and will be able to see what has been identified as missing in the field of rapid reviews research methods.

D. CONFIDENTIALITY

The meeting will happen using Zoom platform. Data will be collected by the minute taker and meeting recording. The Zoom line is hosted by the Montreal Behavioural Medicine Centre. Only information necessary for the research study will be collected. Participants will access the Zoom platform with an invitation link sent by email.

All information obtained will be kept strictly confidential, within the limits of the law. To preserve your identity and the confidentiality of your data, you will not be identified and only a code number known only to those directly involved with this research project. Only this code number will be used during analysis.

On a scientific publication or any report of the consensus meeting, a list of the attendees can be shared. This usually is done to allow transparency and a better interpretation of the results by including names, affiliation or position and credentials of the consensus expert panel members. If the research team decides to publish the list of the attendees, only this information will be shared, and not individual contributions or specific answers linked to each participant.

Participants need to respect each other's confidentiality and not reveal anyone's opinion, position, or share any information outside of the meeting.

The meeting recording captured through Zoom will be transferred and stored on secure servers located at the CIUSSS-NIM, under the responsibility of Dr. Simon Bacon. Personal data about participants, such as basic demographic information collected in the survey phase of the project, will be kept in a separate database on secure servers also hosted by the CIUSSS-NIM.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

The final study results may be printed in medical journals or shared with other people at scientific meetings. Participants of the last phase of the study, that includes the consensus meeting, may inform the research team in case they want to participate in the publication process.

All data will be stored for a period of 10 years.

F. CONDITIONS OF PARTICIPATION

Your participation in this study is voluntary. It is purely your decision.

In case you sign the Information and Consent Form agreeing to participate in the consensus meeting, you can change your mind and cancel your participation in the meeting up to five days before the meeting date. If you do participate in this phase of the study (consensus meeting), you will not be able to completely withdraw from the study. Participants may withdraw and the direct quotes from them can be excluded, but because each participant's answers can influence other participants' answers, it is impossible to completely remove the data.

If you decide that you don't want us to use your information, you must tell the research team as soon as possible, up to one week after the consensus meeting. After that, ff data collection has finished, and the summary document detailing the questions that will generate the final priority list meeting is already done, then we would not be able to exclude data.

In case you sign the Information and Consent Form agreeing to participate in the consensus meeting, you can change your mind and cancel your participation in the meeting up to five days before the meeting date.

No compensation will be offered to participants.

There are no negative consequences for not participating, stopping in the middle, or asking us not to use your information.

G. PARTICIPANT'S DECLARATION

☐ I have read and understood this form. I have had the chance to ask questions by email and any questions have been answered. I agree to participate in the consensus meeting phase of this research under the conditions described.

NAME (please print)

_____

DATE _____

If you have questions about the scientific or scholarly aspects of this research, please contact the following members of the research team:

Ariany Marques Vieira, PhD Student, Department of Health, Kinesiology, and Applied Physiology, Concordia University. Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (ariany.marquesvieira@concordia.mail.ca).

Geneviève Szczepanik, Research Coordinator, Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (genevieve.szczepanik@mbmc-cmcm.ca; (514) 358-6214)

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Eligibility Questions

1. Please, select the category with which you most strongly identify.

Researcher (including research-focus students)

Healthcare practitioner (including trainees)

Policymaker

Patient / community member / caregiver

2. How many years of experience do you have with evidence syntheses*?

***** *Evidence syntheses are studies developed to gather available evidence to answer a specific question. This includes systematic reviews, scoping reviews, and rapid reviews.*

None

Less or equal 4 years

5-6 years

7-8 years

9-10 years

11-12 years

13-14 years

15 years or more

3. In what aspects of evidence synthesis have you previously participated in (tick all that apply)?

Conceptualization/Research question development

Undertaking literature searches

Study screening and selection

Data extraction

Quality appraisal

Data synthesis

Interpretation of results

Knowledge translation

Other

4. How would you rate your own knowledge about conducting evidence syntheses (e.g., systematic reviews, rapid reviews, meta-analyses)? Use a scale from 0 = no expertise to 10 = very strong expertise.

5. What is the approximate number of rapid reviews* that you have previously participated in?

** Rapid Reviews accelerate the process of conducting a traditional systematic review through streamlining or omitting a variety of methods to produce evidence in a resource-efficient manner. It is a systematic way of summarizing the literature in a more resource-efficient way, usually taking less than 12 weeks to be finalized.*

0

1 or 2

3 or 4

5 or 6

7 or more

Sociodemographic Information Questions

This project aims to include responses from a wide range of people, including people with a variety of backgrounds considered experts in evidence-synthesis. For that, we would like to ask you for some general information about you. Your answers will be confidential, and no individual will be identified when the results are presented. Your contact is requested to send you the next rounds of the survey. This project aims to include responses from a wide range of people, including people with a variety of backgrounds providing valuable expertise in evidence-synthesis. To this end, we would like to ask questions about your personal background. Your answers will be confidential, and no individual will be identified when the results are presented. Your contact information is only requested to send you the next rounds of the survey.

1. In which age group do you better fit?

66 years or more

56-65 years

46-55 years

36-45 years

26-35 years

18-25 years

Less than 18 years

Prefer not to answer

2. With which sex do you most strongly identify?

Female

Male

Prefer not to answer

Other

3. What is your job title?

This information will help to understand the profile of the participants. You can write in a few words your current position. For example, Graduate student, Research Assistant, Managing director.

4. In which country do you currently work?

This question will help to understand the demographics of the participants. You can write the name of the country where you hold a position. For example: Canada, Australia, Nigeria.

5. In which city do you currently work?

6. In what field/area or research do you predominantly perform your evidence syntheses (please select all that apply)?

Evidence syntheses are studies developed to gather evidence available to answer a specific question. This includes systematic reviews, scoping reviews, and rapid reviews, for example.

Clinical

Public Health

Health system

Prefer not to answer

Other

7. What is your role in evidence synthesis (lead reviewer, coordinator, field expert, contributor to study selection and data extraction, responsible for results interpretation,…) ?

Evidence syntheses are studies developed to gather evidence available to answer a specific question. This includes systematic reviews, scoping reviews, and rapid reviews, for example.

Glossary of terms/List of definitions

Data analysis is the process of taking data and turning it into a useful material to answer a research question. There are different methods, such as qualitative and quantitative approaches.

Data abstraction/extraction is related to the act of separating, withdrawing, and taking data of interest from included studies or different sources. Usually, information about study characteristics, descriptive data, and findings (outcome data) are part of data extraction (Munn *et al*., 2014).

Efficiency is the ability to perform something well, successfully, and without waste (e.g. time, money). Balance between quality and resource consumption.

Evidence synthesis is a type of study developed to gather available evidence to answer a specific question. This includes SRs, scoping reviews, living reviews, overview of reviews and RRs for example.

Grey literature is materials and research produced outside of the traditional commercial or academic publishing and distribution channels. Common grey literature publication types include pre-prints, reports, working papers, government documents, white papers and evaluation (Simon Fraser Library, accessed in 2022).

Methods: Research methods are particular processes for collecting and analyzing data. For evidence syntheses, it usually covers the methods for: acquisition of evidence (search strategy, inclusion criteria, selection process), data extraction, data analysis, data appraisal/risk of bias/quality assessment strategy, and data synthesis process.

Rapid systematic reviews (RRs) are another evidence synthesis method that accelerates the process of conducting a traditional systematic review through streamlining or omitting a variety of methods to produce evidence in a resource-efficient manner (Hamel *et. al.*, 2021). The kinds of methods that this study will include are: search strategy, studies selection (level one and two of the screening), data extraction, risk of bias appraisal and data analysis. It is also referred in this project as **Rapid Reviews**.

Report: ***"****A document (paper or electronic) supplying information about a particular study. It could be a journal article, preprint, conference abstract, study register entry, clinical study report, dissertation, unpublished manuscript, government report, or any other document providing relevant information"* (Page *et al*., 2021).

Risk of bias appraisal/assessment: "*The purpose of study quality assessment is to capture and analyze variations among the included studies—those that met initial inclusion criteria— in terms of their credibility and vulnerability to various sources of bias"* (Littell *et al.*, 2008, Chapter 4).

Screening is part of the studies selection process for a review, checking if the references fit or not the inclusion criteria. It includes different levels, such as Title and Abstract and Full text screening.

Search Strategy, in the context of evidence syntheses, is the structured plan of how to find studies of interest. The search strategy includes the terms that are going to be used and also the sources that will be consulted (e.g. databases, repositories).

Stakeholder: the parties who will engage in, benefit from or be affected by the procedure (Tricco AC, et al. WHO Practical Guide, 2017). For this study, stakeholders of a rapid review process include decision-makers, guideline

and policy developers, healthcare providers, health system managers, end-users (public and patients), and journal editors.

Synthesis: In the context of evidence syntheses, the synthesis is the summarization of the data that were collected. "*In systematic reviews of quantitative (numerical) data, data synthesis usually appears as a meta-analysis, a statistical method that combines the results of a number of studies to calculate a single summary effect"* (Munn *et al*., 2014).

Systematic reviews (SRs) are the most common type of evidence synthesis. It is a way of searching, selecting, appraising, and synthesising the available evidence to answer a research question. It organises all empirical evidence that fits in pre-specified eligibility criteria and aim to reduce bias (Higgins *et. al.*, 2022).

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Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

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Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

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Keywords: Rapid review; Systematic review; Delphi; Priority setting; Consensus; Evidence synthesis.

Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

Abstract

Introduction: Rapid systematic reviews (RRs) have the potential to provide timely information to decision-makers, thus directly impacting healthcare. However, consensus regarding the most efficient approaches to performing RRs and the presence of several unaddressed methodological issues pose challenges. With such a large potential research agenda for RRs, it is unclear what should be prioritised.

Objective: To elicit a consensus from RR experts and interested parties on what are the most important methodological questions (from the generation of the question to the writing of the report) for the field to address in order to guide the effective and efficient development of RRs.

Methods and analysis: An eDelphi study will be conducted. Researchers with experience in evidence synthesis and other interested parties (e.g., knowledge users, patients, community members, policymaker, industry, journal editors, and healthcare providers) will be invited to participate. The following steps will be taken: 1) A core group of experts in evidence synthesis will generate the first list of items based on the available literature; 2) Using LimeSurvey, participants will be invited to rate and rank the importance of suggested RR methodological questions. Questions with open format responses will allow for modifications to the wording of items or the addition of new items; 3) Survey rounds will be performed asking participants to re-rate items, with items deemed of low importance being removed at each round; 4) A list of items will be generated with items believed to be of high importance by ≥75% of participants being included; and 5) This list will be discussed at an online consensus meeting that will generate a summary document containing the final priority list. Data analysis will be performed using raw numbers, means, and frequencies.

Ethics and dissemination: This study was approved by the Concordia University Human Research Ethics Committee (#30015229). Both traditional, e.g., scientific conference presentations and publication in scientific journals, and non-traditional, e.g., lay summaries and infographics, knowledge translation products will be created.

Strengths and limitations of this study:

- The eDelphi process is a well-recognised and highly structured method for consensus building.
- Understanding potential differences in research priorities will be made possible by including a variety of participant profiles, researchers, and key end users (such as policy-makers, guideline producers, healthcare professionals, etc.).
- The modified eDelphi approach, using an online format, although it may elicit challenges, can also allow for faster data collection, a broader range of individuals across the globe, is more cost-effective than in person Delphi approaches, and is less susceptible to the judgements of group members with higher status.
- Although this study is an important addition to the literature in the evidence-synthesis field, and it can serve as a 'road-map' for future RR methodological studies, it is only the first step towards refining the conduct of Rapid systematic reviews in a more time-efficient way.

1. BACKGROUND

Evidence syntheses (e.g., systematic reviews [SRs]) are a useful strategy for a number of uses and domains, notably to summarise evidence around a specific question.[1] In a health context, findings from SRs have been used to make decisions for: clinical practice, normally through clinical practice guidelines; healthcare systems; and shaping policy.[1,2] However, conducting a full SR is time-consuming, sometimes taking up to two years to conduct,[3] by which time the scientific literature may have already moved on, and expensive, with an estimated cost of at least US$100,000 needed for a high-quality SR.[4,5]

To address the challenges of SRs, the concept of rapid evidence products has been introduced, including inventories, rapid response briefs, and rapid systematic reviews (RRs).[6] RRs result from an evidence synthesis approach that uses streamlined procedures,[7,8] so certain methodological elements are simplified or omitted compared to SRs.[9] Currently, RRs are being conducted to answer urgent questions and/or to support decisions where there is limited time and/or resources i.e., in situations where time- and cost-efficiency are key.[10,11] For example, RRs have been extensively used in addressing issues related to the COVID-19 pandemic.[8,12] Preliminary evidence suggests that the conclusions reached by RRs are typically consistent with those of SRs.[10] In addition, when applied to policy decision-based health technology assessment reports, RRs have been shown to positively impact the healthcare system, resulting in a reduction of expenditures.[13,14]

The use of high-quality evidence summary methods is essential to providing reliable results. For traditional SRs, there are well-defined, pre-specified methods, e.g., for conducting searches, selecting relevant studies, appraising their quality, and synthesizing the available evidence to answer the research question, which ensure quality and reduce bias.[3] However, though methodological rigor and transparency are still essential to have representative and reliable results in RRs,[8] there is a lack of standardised methodologies on how to adapt SR methods to be able to reliably perform a RR.[15,16] Several studies and reviews [15–17], have noted this lack of consensus in the methodological approaches being utilised for RRs, highlighting heterogeneous nomenclature and terminology being used to describe the same concepts, and the use of varied methodologies without a clear rationale behind the choices being made.

In 2017, the World Health Organization (WHO) commissioned a guide on how to perform RRs, which explored various approaches. The guide emphasised that methods can be simplified at any stage of the review process and that decisions should consider

the resources at hand and be customised to the needs of the decision-makers.[6] The Cochrane Initiative has also produced some methodological guidance for RRs,[18] but the impact and costs of each approach are still unclear. Evidence Synthesis Ireland, using the James Lind Alliance method, identified RR research priorities.[19] Among the top 10 questions generated, three focused on methodological issues but in relatively broad categories.

The current study will build on the findings from Evidence Synthesis Ireland by further exploring more focused questions around RRs methods, i.e., the stages between question generation and report writing. The identification of these unanswered questions is required to design and develop methodological studies that can then inform the conduct of RRs. For example, questions about how many databases should be included, database search limitations, and if peer review is necessary for all steps have not yet been answered. Given the number of areas that still need to be explored, the small amount of current available evidence, the limited available resources to conducted methodological studies, and the lack of general consensus on where to start, the aim of this project is to elicit a consensus from RR experts and interested parties on what are the most important methodological questions to improve time-efficiency of RRs, and, ultimately, create a prioritised research agenda for the field to address.

2. OBJECTIVES

- To identify and compile the main unanswered questions related to the methods used in conducting time-efficiency RRs, specifically from the stage after generating the research question to just before writing the final report.
- To create a priority list of the most crucial questions regarding RRs methods that need to be addressed.

3. METHODS

The study will follow the general eDelphi process[20–22] and the Guidance on Conducting and REporting DElphi Studies (CREDES).[23] There will be an initial generation of potential research areas, followed by multiple rounds of an online survey for ranking, and then a final consensus meeting. The eDelphi process is particularly useful in surveying areas of uncertainty and obtaining consensus.[20,24] This method has the advantage of enabling each participant to express views impersonally, it is low resource and flexible,[25] and it has been widely used in health research.[26] After ethical approval, the study will start in March 2022, with the first survey round starting in June 2022 and the

last round in being finalized in January 2023. The consensus meeting will then occur in the period of June to September 2023.

Given the focus on efficiency, rather than just quality, the eDelphi will ask participants to answer: "How important would answering this question be to improve the time-efficiency (balance between the time taken and the quality of the final results) of a systematic RR in a particular field?".

3.1 Participants

The sample will consist of two key groups: international experts who have published RRs or undertaken methodological research in RRs and knowledge synthesis; and key end-users. To standardise the level of expertise, all experts will self-identify, answering eligibility questions, on the basis of having: verifiable experience in designing or delivering evidence summary research; participation in at least one RR; having ≥5 years of research experience; and self-rating their knowledge on evidence synthesis as ≥7 on a 0 (no expertise) to 10 (expert) point Likert-like scale. We will also include interested parties (e.g., guideline and policy developers, end-users (public and patients), industry members, and journal editors) who have had previous experiences in participating in any aspect of evidence synthesis.

A recruitment email will be distributed by our global partners through their contacts lists, e.g., the International Behavioural Trials Network (IBTN, https://www.ibtnetwork.org/), the Strategy for Patient-Oriented Research (SPOR) Evidence Alliance (https://sporevidencealliance.ca/), COVID-END (https://www.mcmasterforum.org/networks/covid-end). In addition, as performed by Tricco et. al.,[15] organisations that produce RRs, identified through the International Network of Agencies for Health Technology Assessment's (INAHTA, https://www.inahta.org/) list, will be asked to distribute the study invitation to members of their group. The recruitment email will provide a link to access the information about the study and the consent form. There are no restrictions on the country of origin of the participants, but all study-related information will be provided in English.

3.2 Providing Consent

The informed consent forms will explain the objective, procedures, and other details that are important to participants (Supplementary Material). Participants will be asked to read the ethics board-approved information/consent forms and provide agreement by checking a box confirming that they have: reviewed the information/consent form; consent

to participate in the survey, and understand that their participation is voluntary and entirely confidential. The contact details of study team members will be listed in the information/consent form in case they have queries. There will be two consent forms, one for the eDelphi rounds and one for the Consensus Meeting. Limesurvey, will be used to obtain consent, as well as to distribute the surveys.

3.3 Initial topic generation

A core group of experts in evidence synthesis, mainly within the biomedical sciences, referred to as the Central Scientific Committee (CSC), and drawn from the leadership of the SPOR Evidence Alliance, IBTN, COVID-END, and notable published scholars, will generate a list of methodological questions that they think are relevant to RRs. The items will be specific and focused, in order to be able to generate specific research questions rather than broad conceptual areas.

The included topics will cover the period after the review question has been generated and before the creation of the final report, e.g., search strategy, studies selection (level one and two screening), data extraction, risk of bias appraisal, and synthesis. The item list will also be drawn from the WHO guide for RRs,[6] the Delphi process on RR methods,[15] and the Priority III study[19] to form the initial 'long-list' of items.

This phase of the study will take around three months to ensure the inclusion of as many appropriate items as possible.

3.4 Online survey

The eDelphi process will involve approximately 50 RRs experts and end-users, who will be asked to complete at least three rounds of online questionnaires, spaced around one month apart. Each survey round will be open for about five weeks, sufficient time for participants to complete it. A system will tag data to individuals and provide them with their scores from previous rounds, while also reporting the summated data.

3.4.1 Prior to Round 1

The initial survey will include basic demographic information, including eligibility questions (i.e., years of experience, job title, country and province of residence, age group, and sex). Once they agree to participate in the study, participants will be provided with more specific sociodemographic questions (Supplementary Material) and the 'long-list' of survey items from the previous phase.[27] We will only provide the survey to those agreeing to participate to prevent attrition biases.[28]

3.4.2 Round 1

As per our previous eDelphi projects (e.g., Dragomir et. al.[29]), participants will rate the importance of suggested items ("How important would answering this question be to improve the time-efficiency - balance between the time taken and the quality of the final results - of a systematic RR in a particular field?"), focusing on the concept, rather than on the wording. Importance can be rated as: low; medium; or high (Table 1). For all items that an individual rates as high or medium importance, they will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.) until all items are ranked. Specific questions with open format responses will allow for modifications to the concept of items. Participants will also be able to add new items that they believe were missing in the initial round.

Responses will be collated and summarised.[26] Any items rated as low by 50% or more of the participants will be excluded, a consensus threshold that is similar to those adopted in other Delphi studies.[24,29] As this is the first round, the threshold will be lower than the following rounds. The CSC will review comments and make necessary changes to items or add new relevant items.

Table 1 – Classification of the items

Importance Level	**Conceptualisation**
Low importance	Item is helpful to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a rapid systematic review
Medium importance	Item is desirable to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a rapid systematic review
High importance	Item is essential to understand how to improve the time-efficiency (balance between the time taken and the quality of the final results) of a rapid systematic review

3.4.3 Round 2

Participants will be provided with the percentage of respondents ranking each item as high priority, as well as their ratings in the previous round. They will be able to re-rate the perceived importance of each item, as well as the importance of any new items. They will also be asked whether they agree with items excluded from Round 1 or if any essential

items are still missing. The items for which ≥ 75% of people disagree with the exclusion of will remain on the main list for the next round. For all items that an individual rates as high importance, they will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.) until all items are ranked. Items rated as low by 75% or more of the participants in Round 2 will be excluded.[29]

As in Round 1, open-format questions will allow suggestions for modifications to the items or the addition of new items. The comments will be reviewed by the CSC and changes or additions will be made as needed.

3.4.4 Round 3

A summary of round 2 will be provided, including the percentage of respondents rating each item as high priority, as well as their own rating. Participants will re-rate and re-rank the remaining items. After Round 3, we will generate a final list of items for discussion at the consensus meeting (those believed to be of high importance by ≥75% of participants). Three rounds should allow us to reach stability and agreement about most items.[28,30] Information about deviant cases will be shared with the consensus group.[27]

3.5 Security of the data

All data that we capture will be stored on secure servers located within Canada, with only information necessary for the research study being collected. All information obtained will be kept strictly confidential, within the limits of the law. To preserve the confidentiality of the data, a code number known only to those directly involved with this research project will be assigned to each participant, and any personally identifiable information will be stored in a secured computer file.

3.6 Consensus meeting

This step will aim to detail the final items to be included in the priority list.

3.6.1 Participants

Participants will be invited from the eDelphi phase and selected purposively by the Research team to include individuals with a variety of backgrounds (e.g., country, academic level, research context), and that had selected the box showing their interest in participating in the consensus meeting. Approximately 25 people will be invited to an online meeting, a size that balances diversity of opinion with meaningful opportunities for interaction,[31] and maximizes the ability to achieve consensus.

The individuals selected will be contacted by email, with a link that provides access to the Information and Consent Form of the Consensus Meeting. After accepting, participants will access the Zoom platform with an invitation link sent by email.

The meeting will be recorded to aid with the generation of the final report. Zoom's inbuilt anonymous voting system will be used for people to be able to vote on the inclusion or exclusion of items.

3.6.2 Meeting structure

Established nominal group technique methods will guide the consensus meeting.[26,32] The summary of the results of the previous work will be provided in advance to ground conversations on empirical information and to facilitate cohesive discussion during the meeting.[27] The meeting will start with formal presentations. Using a triangulation approach,[33,34] we will then lead a structured discussion of each proposed item.[35] An experienced, independent facilitator will conduct the discussions.[27] Participants will discuss and vote (using anonymous e-ballots), with the potential for a re-vote if needed,[28] with only items supported by at least 75% of participants being adopted.[27]

3.6.3 Anticipated output

The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. This list draft will be circulated to the consensus group participants who will be asked to check if the document accurately represents the discussions and decisions made during the meeting.[35] Then, we will distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content and to assess whether the consensus meeting accurately captured their opinions.[27]

3.7 Data analysis

The research team will analyze the sociodemographic characteristics of the participants using raw numbers, means, and percentages. For each round of data collection, the frequency of participant ratings for each item will be used to determine the percentage of low, medium, or high for each item. For the ranking question, each ranking position will receive a score with the highest position receiving the lowest score. The average score of each item will be calculated by dividing the sum of scores attributed to

that item by the number of participants that ranked it. An ascending order will be presented, with the first item, considered the most important one, i.e., the one with the lowest score. Data on average rank and the number of individuals providing data will be included in summary tables.

3.8 Team members

The project will be organized and developed by two main groups: the Central Scientific Committee and the Coordinating Research Team. The full list of members is available on the website (https://mbmc-cmcm.ca/projects/edelphi/). The Central Scientific Committee will be responsible for: the review and editing of the initial list of methodological items; providing feedback on the survey structure and project plan; providing feedback on the results of each survey round (agreeing on the items that participants may suggest, dropping of items, etc.); and helping to share the eDelphi with their networks. The research team, the Montreal Behavioural Medicine Centre, will be responsible for: creating and delivering on the project timelines; creating project documents; setting up and organising the surveys; and managing the public partner involvement in the project.

3.9 Patient and public involvement

Given the emphasis on the methodological aspects of the RR process, with researchers being the primary target end-user of this work, we decided to not include patients in the CSC. The eDelphi does include interested parties, e.g., guideline and policy developers, end-users (public and patients), journal editors, from whom we will draw upon for the final consensus meeting, to ensure that the final document will have direct input from all related groups. In addition, we will leverage interested parties in the creation of a variety of knowledge translation products, e.g., lay summaries, public-facing presentations, infographics, etc.

3.10 Expected outcomes and limitations

The Delphi process is a well-established consensus-building process that will provide us with a good picture of the priority questions that need to be answered regarding the methodological conduct of RRs. The present study will generate a list of specific and focused questions, which can be used to prioritise research questions and to design future methodological studies that will answer those questions. These will ultimately

create an evidence base for evidence synthesis researchers when deciding the best approaches to perform a RR.

While this research represents an important initial stage towards refining the conduct of RRs in a more time-efficient way, it will not provide definitive answers on the conduct of RRs. In addition, the response rates and representation of different profiles, perspectives, and experiences of participant's can not be guaranteed. However, the breadth and diversity of the recruitment strategy will likely help mitigate this issue. Finally, the terminology used might be interpreted differently across individuals from different domains and backgrounds. To try and mitigate against this an extensive list of definitions will be used and we will emphasise that items need to be evaluated based on the concept, rather than on the wording.

4. ETHICS AND DISSEMINATION

This study was approved by the Concordia University Human Research Ethics Committee under the Certification Number 30015229.

The dissemination plan includes both traditional academic knowledge products, e.g., presentations and scientific meetings and publication in peer-reviewed journals, as well as other knowledge dissemination products, e.g., lay summaries, public-facing presentations, and infographics. We will also leverage social media, via the members of the CSC and related organisations, to disseminate results and information as broadly as possible. We will specifically target potential funders, as these will be the bodies that will be targeted for the future methodological studies that will be needed to address the final priority list.

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Concept: Ariany M Vieira, Geneviève Szczepanik, Jovana Stojanovic, Paula A B Ribeiro, and Simon L Bacon.

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Drafting of the manuscript: Ariany M Vieira and Simon L Bacon.

Critical revision of the manuscript for important intellectual content: Ariany M Vieira, Geneviève Szczepanik, Chiara de Waure, Andrea Tricco, Sandy Oliver, Jovana Stojanovic, Paula A B Ribeiro, Danielle Pollock, Elie Akl, John Lavis, Tanja Kuchenmuller, Peter Bragge, Laurenz Langer, Simon L Bacon.

Supervision. Simon L Bacon.

All the authors read and accept the last version of the protocol.

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COMPETING INTERESTS STATEMENT:

The authors alone are responsible for the views expressed in this paper and they do not necessarily represent the views, decisions or policies of the institutions with which they are affiliated. The authors have no conflicts of interest to declare.

SUPPLEMENTARY MATERIAL

Identifying priority questions regarding rapid systematic reviews' methods: protocol for an eDelphi study

Table of Contents

Ethics Certification

UNIVERSITÉ Concordia UNIVERSITY

CERTIFICATION OF ETHICAL ACCEPTABILITY FOR RESEARCH INVOLVING HUMAN SUBJECTS

Name of Applicant:	Dr. Simon Bacon
Department:	Faculty of Arts and Science\Health, Kinesiology and Applied Physiology
Agency:	Canadian Diabetes Association Canadian Institutes of Health Research
Title of Project:	Identifying priority questions regarding rapid reviews methodology: an eDelphi study
Certification Number:	30015229
Valid From:	May 02, 2022 To: May 01, 2023

The members of the University Human Research Ethics Committee have examined the application for a grant to support the above-named project, and consider the experimental procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

Richard DeMont

Dr. Richard DeMont, Chair, University Human Research Ethics Committee

Information and Consent Form – eDelphi Process

Study Title: Identifying priority questions regarding rapid reviews methodology: an eDelphi process

Researcher: Simon Bacon

Researcher's Contact Information: Simon L. Bacon, Ph.D.**;** Professor, Department of Health, Kinesiology, and Applied Physiology, Concordia University, and Researcher, Research Centre, CIUSSS du Nord-de-l'Île-de-Montréal (simon.bacon@concordia.ca; 514-338-2222 ext. 3709).

Source of funding for the study: CIHR-SPOR Chair in Innovative Patient-Oriented, Behavioural Clinical Trials

You are being invited to participate in the research study mentioned above. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the study is to survey a group of rapid reviews experts, using a modified eDelphi process, in order to identify the priority research questions and gaps about the conduct of rapid reviews.

Rapid reviews are being explored as an evidence synthesis method that it is resource-limited and that allows the production of a reliable summary, especially when decision-making is urgent. However, the methods to build this reliable evidence synthesis are not clear and there are many questions regarding the methods' required steps. The eDelphi process is a well-established consensus-building method that allows the construction of a consensus towards a specific question. This process will be done exclusively online, and will include several survey rounds during which participants will review selected items and rank their priority order.
It is anticipated that at the end of the process, a 10-item priority list will be generated, with the **most relevant questions that need to be answered regarding the methods of rapid reviews**.

B. PROCEDURES

Approximately 30-50 rapid reviews experts will participate in the eDelphi process.
If you agree to participate, you will be asked to answer some general questions about yourself (e.g., experience with evidence synthesis, job title, country).

You will then be asked to participate in three rounds of online surveys, using the LimeSurvey platform that you will access through an email with a personalised link.

Round 1
You will use three options of categories to rate the importance of suggested methodological questions of rapid reviews (high, medium, and low). For the items rated as very important, you will be asked to rank them in order of priority (1=highest priority, 2=2nd highest, etc.). Specific questions with open format responses will allow for modifications to the wording of items, as well as suggestions of additional items.

Round 2
Items will be rephrased according to the responses from Round 1. You will be provided with the median and inter-quartile range of rankings and you will re-rate the perceived importance of each item. You will also be asked whether you agree with items excluded from Round 1 or if any essential items are still missing.

Round 3
You will re-rate the remaining items. After this round, we will generate a final list of items for discussion at the consensus meeting (those items believed important by ≥33% of participants).

In total, participating in this study will take around 20 minutes each round.

After the eDelphi phase, some participants will be selected purposively by the investigative team (to include individuals with a variety of backgrounds, e.g., country, academic level, research context), with equal representation of men and women. Approximately 25 people will be invited to a consensus meeting.

The consensus meeting will also happen online and will follow established nominal group technique methods. The summary of the results of the previous work will be provided in advance, to ground conversations on empirical information and to facilitate cohesive discussion during the meeting. The meeting will start with presentations and a discussion and vote process will happen to discuss each item of the priority question list. The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. Drafts will be circulated to consensus group

participants to check that the document accurately represents the discussions had and decisions made during the meeting. We will then distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content, and to assess whether the consensus meeting accurately captured their opinions.

You can chose to participate in the Consensus Meeting or not. In case you don't want to participate, you can still be part of the eDelphi process.

C. RISKS AND BENEFITS

There are no risks associated with your participation to this study. The only possible drawback or disadvantage is the time required to complete the survey, which should take around 20 minutes, per round, for a total of around 60 minutes.

This research is not intended to benefit you personally. The primary advantage associated with taking part in this study is to have the opportunity to express your own concerns and questions regarding the development of rapid reviews and to contribute to creating a priority list of methodological questions and issues relevant to rapid reviews. At the end, you will have access to the results and will be able to see what has been identified as missing in the field of rapid reviews research methods.

D. CONFIDENTIALITY

Survey data will be collected on LimeSurvey, which is hosted by Concordia University on secure servers located within Canada. Only information necessary for the research study will be collected. Participants will access the LimeSurvey platform with a personalised link sent by email.

All information obtained will be kept strictly confidential, within the limits of the law. To preserve your identity and the confidentiality of your data, you will be identified with a code number known only to those directly involved with this research project. Only this code number will be used during analysis.

All data captured through LimeSurvey will be transferred and stored on secure servers located at the CIUSSS-NIM, under the responsibility of Dr. Simon Bacon. Personal data about participants, such as basic demographic information, will be kept in a separate database on secure servers also hosted by the CIUSSS-NIM.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

The final study results may be printed in medical journals or shared with other people at scientific meetings, but it will be impossible to identify you. Participants of the last phase of the study, that includes the consensus meeting, may inform the research team in case they want to participate in the publication process.

All data will be stored for a period of 10 years.

F. CONDITIONS OF PARTICIPATION

Your participation in this study is voluntary. It is purely your decision. If you do participate, you can withdraw from the study at any time and for any reason, without having to justify your decision.

You can also ask that the information you provided not be used, and your choice will be respected. If you decide that you don't want us to use your information, you must tell the research team within one (1) week (7 days). If data collection has finished and analyses are completed (this may be true for the various phases of the online survey) then we would not be able to exclude data.

No compensation will be offered to participants.

There are no negative consequences for not participating, stopping in the middle, or asking us not to use your information.

G. PARTICIPANT'S DECLARATION

☐ I have read and understood this form. I have had the chance to ask questions by email and any questions have been answered. I agree to participate in the eDelphi phase of this research under the conditions described.

Please let us know if you are interested in being invited to attend the consensus meeting:

☐ Yes, I am interested in attending the consensus meeting. Not all participants will be invited. I understand that I am free to refuse to attend if I am invited.

☐ No, I do not want to be invited to attend the consensus meeting. I am interested in participating only in the eDelphi phase of the study.

NAME (please print)

_____

DATE _____

If you have questions about the scientific or scholarly aspects of this research, please contact the following members of the research team:

Ariany Marques Vieira, PhD Student, Department of Health, Kinesiology, and Applied Physiology, Concordia University. Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (ariany.marquesvieira@concordia.mail.ca).

Geneviève Szczepanik, Research Coordinator, Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (genevieve.szczepanik@mbmc-cmcm.ca; (514) 358-6214)

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Information and Consent Form – Consensus Meeting

Study Title: Identifying priority questions regarding rapid reviews methodology: an eDelphi process

Researcher: Simon Bacon

Researcher's Contact Information: Simon L. Bacon, Ph.D.**;** Professor, Department of Health, Kinesiology, and Applied Physiology, Concordia University, and Researcher, Research Centre, CIUSSS du Nord-de-l'Île-de-Montréal (simon.bacon@concordia.ca; 514-338-2222 ext. 3709).

Source of funding for the study: CIHR-SPOR Chair in Innovative Patient-Oriented, Behavioural Clinical Trials

You are being invited to participate in the research study mentioned above. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the study is to survey a group of rapid reviews experts, using a modified eDelphi process, in order to identify the priority research questions and gaps about the conduct of rapid reviews.

Rapid reviews are being explored as an evidence synthesis method that it is resource-limited and that allows the production of a reliable summary, especially when decision-making is urgent. However, the methods to build this reliable evidence synthesis are not clear and there are many questions regarding the methods' required steps. The eDelphi process is a well-established consensus-building method that allows the construction of a consensus towards a specific question. This process will be done exclusively online, and will include several survey rounds during which participants will review selected items and rank their priority order.
It is anticipated that at the end of the process, a 10-item priority list will be generated, with the **most relevant questions that need to be answered regarding the methods of rapid reviews**.

B. PROCEDURES

Approximately 30-50 rapid reviews experts will participate in the eDelphi process.

If you agreed to participate in the three eDelphi rounds, you were asked to answer some general questions about yourself (e.g., experience with evidence synthesis, job title, country), which we may use in the consensus meeting analysis and report.

After the three eDelphi rounds of online surveys, some participants will be selected purposively by the investigative team (to include individuals with a variety of backgrounds, e.g., country, academic level, research context), with equal representation of men and women. Approximately 25 people will be invited to a consensus meeting.

The consensus meeting will also happen online and will follow established nominal group technique methods. The summary of the results of the previous work will be provided in advance, to ground conversations on empirical information and to facilitate cohesive discussion during the meeting. The meeting will start with presentations and a discussion and vote process will happen to discuss each item of the priority question list. The consensus meeting will generate a summary document detailing the questions that will generate the final priority list. Drafts will be circulated to consensus group participants to check that the document accurately represents the discussions had and decisions made during the meeting. We will then distribute a final version of the document to all eDelphi participants to seek feedback on its wording and content, and to assess whether the consensus meeting accurately captured their opinions.

For the voting process and general data collection, a member of the research group will work as a minute taker. The meeting will happen using Zoom as the online meeting platform and will be recorded. The Montreal Behavioural Medicine Centre has a license to Zoom which guarantees security and privacy. AES 256-bit encryption safeguards all log-in.

C. RISKS AND BENEFITS

There are no risks associated with your participation to this study. The only possible drawback or disadvantage is the time required to participate in the meeting and to review the documents provided, which should take around in total 200 minutes.

This research is not intended to benefit you personally. The primary advantage associated with taking part in this study is to have the opportunity to express your own concerns and questions regarding the development of rapid reviews and to contribute to creating a priority list of methodological questions and issues relevant to rapid reviews. At the end, you will have

access to the results and will be able to see what has been identified as missing in the field of rapid reviews research methods.

D. CONFIDENTIALITY

The meeting will happen using Zoom platform. Data will be collected by the minute taker and meeting recording. The Zoom line is hosted by the Montreal Behavioural Medicine Centre. Only information necessary for the research study will be collected. Participants will access the Zoom platform with an invitation link sent by email.

All information obtained will be kept strictly confidential, within the limits of the law. To preserve your identity and the confidentiality of your data, you will not be identified and only a code number known only to those directly involved with this research project. Only this code number will be used during analysis.

On a scientific publication or any report of the consensus meeting, a list of the attendees can be shared. This usually is done to allow transparency and a better interpretation of the results by including names, affiliation or position and credentials of the consensus expert panel members. If the research team decides to publish the list of the attendees, only this information will be shared, and not individual contributions or specific answers linked to each participant.

Participants need to respect each other's confidentiality and not reveal anyone's opinion, position, or share any information outside of the meeting.

The meeting recording captured through Zoom will be transferred and stored on secure servers located at the CIUSSS-NIM, under the responsibility of Dr. Simon Bacon. Personal data about participants, such as basic demographic information collected in the survey phase of the project, will be kept in a separate database on secure servers also hosted by the CIUSSS-NIM.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

The final study results may be printed in medical journals or shared with other people at scientific meetings. Participants of the last phase of the study, that includes the consensus meeting, may inform the research team in case they want to participate in the publication process.

All data will be stored for a period of 10 years.

F. CONDITIONS OF PARTICIPATION

Your participation in this study is voluntary. It is purely your decision.

In case you sign the Information and Consent Form agreeing to participate in the consensus meeting, you can change your mind and cancel your participation in the meeting up to five days before the meeting date. If you do participate in this phase of the study (consensus meeting), you will not be able to completely withdraw from the study. Participants may withdraw and the direct quotes from them can be excluded, but because each participant's answers can influence other participants' answers, it is impossible to completely remove the data.

If you decide that you don't want us to use your information, you must tell the research team as soon as possible, up to one week after the consensus meeting. After that, ff data collection has finished, and the summary document detailing the questions that will generate the final priority list meeting is already done, then we would not be able to exclude data.

In case you sign the Information and Consent Form agreeing to participate in the consensus meeting, you can change your mind and cancel your participation in the meeting up to five days before the meeting date.

No compensation will be offered to participants.

There are no negative consequences for not participating, stopping in the middle, or asking us not to use your information.

G. PARTICIPANT'S DECLARATION

☐ I have read and understood this form. I have had the chance to ask questions by email and any questions have been answered. I agree to participate in the consensus meeting phase of this research under the conditions described.

NAME (please print)

_____

DATE _____

If you have questions about the scientific or scholarly aspects of this research, please contact the following members of the research team:

Ariany Marques Vieira, PhD Student, Department of Health, Kinesiology, and Applied Physiology, Concordia University. Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (ariany.marquesvieira@concordia.mail.ca).

Geneviève Szczepanik, Research Coordinator, Montreal Behavioural Medicine Centre, CIUSSS du Nord-de-l'Île-de-Montréal (genevieve.szczepanik@mbmc-cmcm.ca; (514) 358-6214)

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Eligibility Questions

1. Please, select the category with which you most strongly identify.

Researcher (including research-focus students)

Healthcare practitioner (including trainees)

Policymaker

Patient / community member / caregiver

2. How many years of experience do you have with evidence syntheses*?

***** *Evidence syntheses are studies developed to gather available evidence to answer a specific question. This includes systematic reviews, scoping reviews, and rapid reviews.*

None

Less or equal 4 years

5-6 years

7-8 years

9-10 years

11-12 years

13-14 years

15 years or more

3. In what aspects of evidence synthesis have you previously participated in (tick all that apply)?

Conceptualization/Research question development

Undertaking literature searches

Study screening and selection

Data extraction

Quality appraisal

Data synthesis

Interpretation of results

Knowledge translation

Other

4. How would you rate your own knowledge about conducting evidence syntheses (e.g., systematic reviews, rapid reviews, meta-analyses)? Use a scale from 0 = no expertise to 10 = very strong expertise.

5. What is the approximate number of rapid reviews* that you have previously participated in?

** Rapid Reviews accelerate the process of conducting a traditional systematic review through streamlining or omitting a variety of methods to produce evidence in a resource-efficient manner. It is a systematic way of summarizing the literature in a more resource-efficient way, usually taking less than 12 weeks to be finalized.*

0

1 or 2

3 or 4

5 or 6

7 or more

Sociodemographic Information Questions

This project aims to include responses from a wide range of people, including people with a variety of backgrounds considered experts in evidence-synthesis. For that, we would like to ask you for some general information about you. Your answers will be confidential, and no individual will be identified when the results are presented. Your contact is requested to send you the next rounds of the survey. This project aims to include responses from a wide range of people, including people with a variety of backgrounds providing valuable expertise in evidence-synthesis. To this end, we would like to ask questions about your personal background. Your answers will be confidential, and no individual will be identified when the results are presented. Your contact information is only requested to send you the next rounds of the survey.

1. In which age group do you better fit?

66 years or more

56-65 years

46-55 years

36-45 years

26-35 years

18-25 years

Less than 18 years

Prefer not to answer

2. With which sex do you most strongly identify?

Female

Male

Prefer not to answer

Other

3. What is your job title?

This information will help to understand the profile of the participants. You can write in a few words your current position. For example, Graduate student, Research Assistant, Managing director.

4. In which country do you currently work?

This question will help to understand the demographics of the participants. You can write the name of the country where you hold a position. For example: Canada, Australia, Nigeria.

5. In which city do you currently work?

6. In what field/area or research do you predominantly perform your evidence syntheses (please select all that apply)?

Evidence syntheses are studies developed to gather evidence available to answer a specific question. This includes systematic reviews, scoping reviews, and rapid reviews, for example.

Clinical

Public Health

Health system

Prefer not to answer

Other

7. What is your role in evidence synthesis (lead reviewer, coordinator, field expert, contributor to study selection and data extraction, responsible for results interpretation,…) ?

Evidence syntheses are studies developed to gather evidence available to answer a specific question. This includes systematic reviews, scoping reviews, and rapid reviews, for example.

Glossary of terms/List of definitions

Data analysis is the process of taking data and turning it into a useful material to answer a research question. There are different methods, such as qualitative and quantitative approaches.

Data abstraction/extraction is related to the act of separating, withdrawing, and taking data of interest from included studies or different sources. Usually, information about study characteristics, descriptive data, and findings (outcome data) are part of data extraction (Munn *et al*., 2014).

Efficiency is the ability to perform something well, successfully, and without waste (e.g. time, money). Balance between quality and resource consumption.

Evidence synthesis is a type of study developed to gather available evidence to answer a specific question. This includes SRs, scoping reviews, living reviews, overview of reviews and RRs for example.

Grey literature is materials and research produced outside of the traditional commercial or academic publishing and distribution channels. Common grey literature publication types include pre-prints, reports, working papers, government documents, white papers and evaluation (Simon Fraser Library, accessed in 2022).

Methods: Research methods are particular processes for collecting and analyzing data. For evidence syntheses, it usually covers the methods for: acquisition of evidence (search strategy, inclusion criteria, selection process), data extraction, data analysis, data appraisal/risk of bias/quality assessment strategy, and data synthesis process.

Rapid systematic reviews (RRs) are another evidence synthesis method that accelerates the process of conducting a traditional systematic review through streamlining or omitting a variety of methods to produce evidence in a resource-efficient manner (Hamel *et. al.*, 2021). The kinds of methods that this study will include are: search strategy, studies selection (level one and two of the screening), data extraction, risk of bias appraisal and data analysis. It is also referred in this project as **Rapid Reviews**.

Report: ***"****A document (paper or electronic) supplying information about a particular study. It could be a journal article, preprint, conference abstract, study register entry, clinical study report, dissertation, unpublished manuscript, government report, or any other document providing relevant information"* (Page *et al*., 2021).

Risk of bias appraisal/assessment: "*The purpose of study quality assessment is to capture and analyze variations among the included studies—those that met initial inclusion criteria— in terms of their credibility and vulnerability to various sources of bias"* (Littell *et al.*, 2008, Chapter 4).

Screening is part of the studies selection process for a review, checking if the references fit or not the inclusion criteria. It includes different levels, such as Title and Abstract and Full text screening.

Search Strategy, in the context of evidence syntheses, is the structured plan of how to find studies of interest. The search strategy includes the terms that are going to be used and also the sources that will be consulted (e.g. databases, repositories).

Stakeholder: the parties who will engage in, benefit from or be affected by the procedure (Tricco AC, et al. WHO Practical Guide, 2017). For this study, stakeholders of a rapid review process include decision-makers, guideline

and policy developers, healthcare providers, health system managers, end-users (public and patients), and journal editors.

Synthesis: In the context of evidence syntheses, the synthesis is the summarization of the data that were collected. "*In systematic reviews of quantitative (numerical) data, data synthesis usually appears as a meta-analysis, a statistical method that combines the results of a number of studies to calculate a single summary effect"* (Munn *et al*., 2014).

Systematic reviews (SRs) are the most common type of evidence synthesis. It is a way of searching, selecting, appraising, and synthesising the available evidence to answer a research question. It organises all empirical evidence that fits in pre-specified eligibility criteria and aim to reduce bias (Higgins *et. al.*, 2022).

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