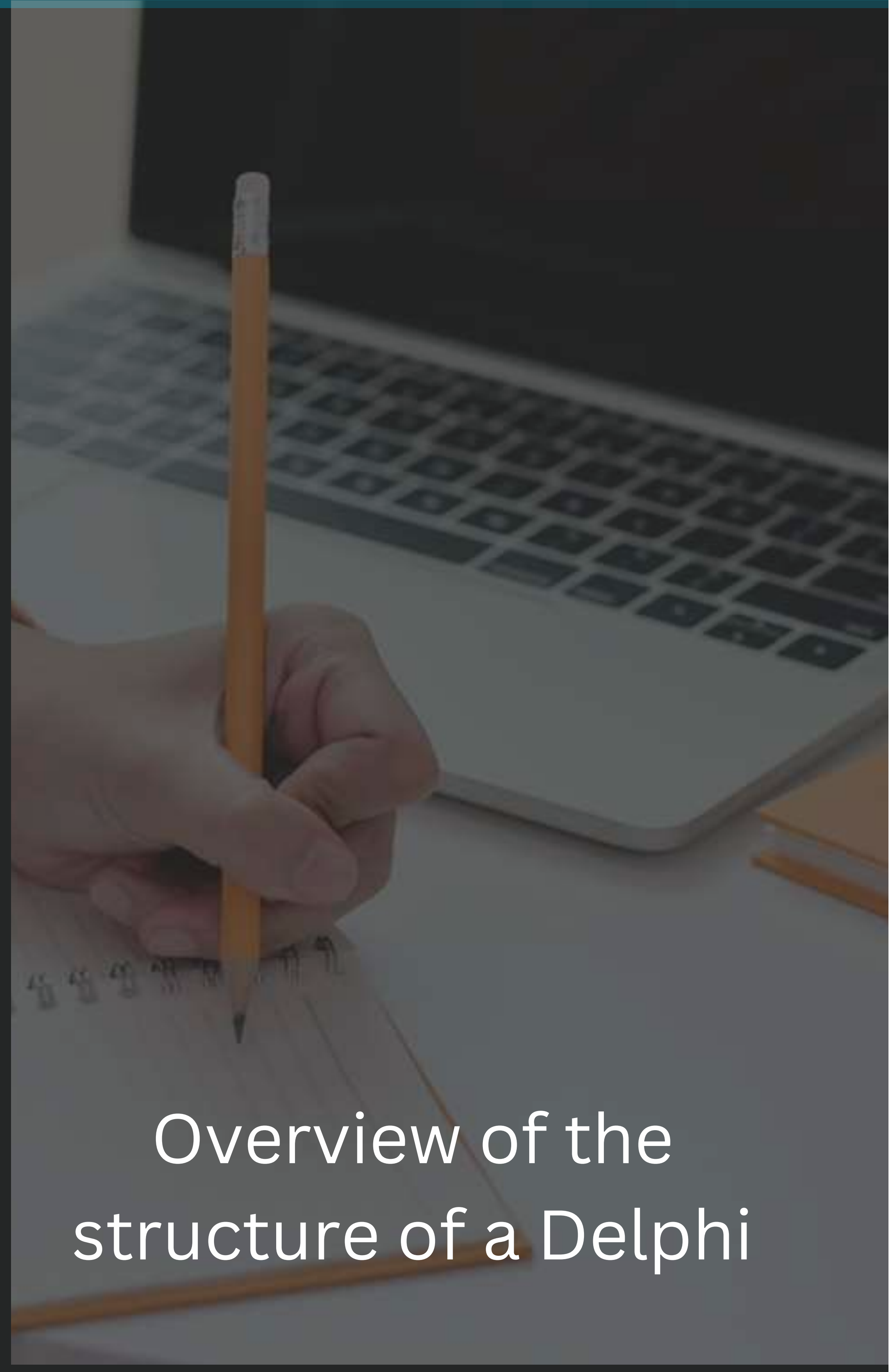
Research Skills for Clinicians
Workshop Series

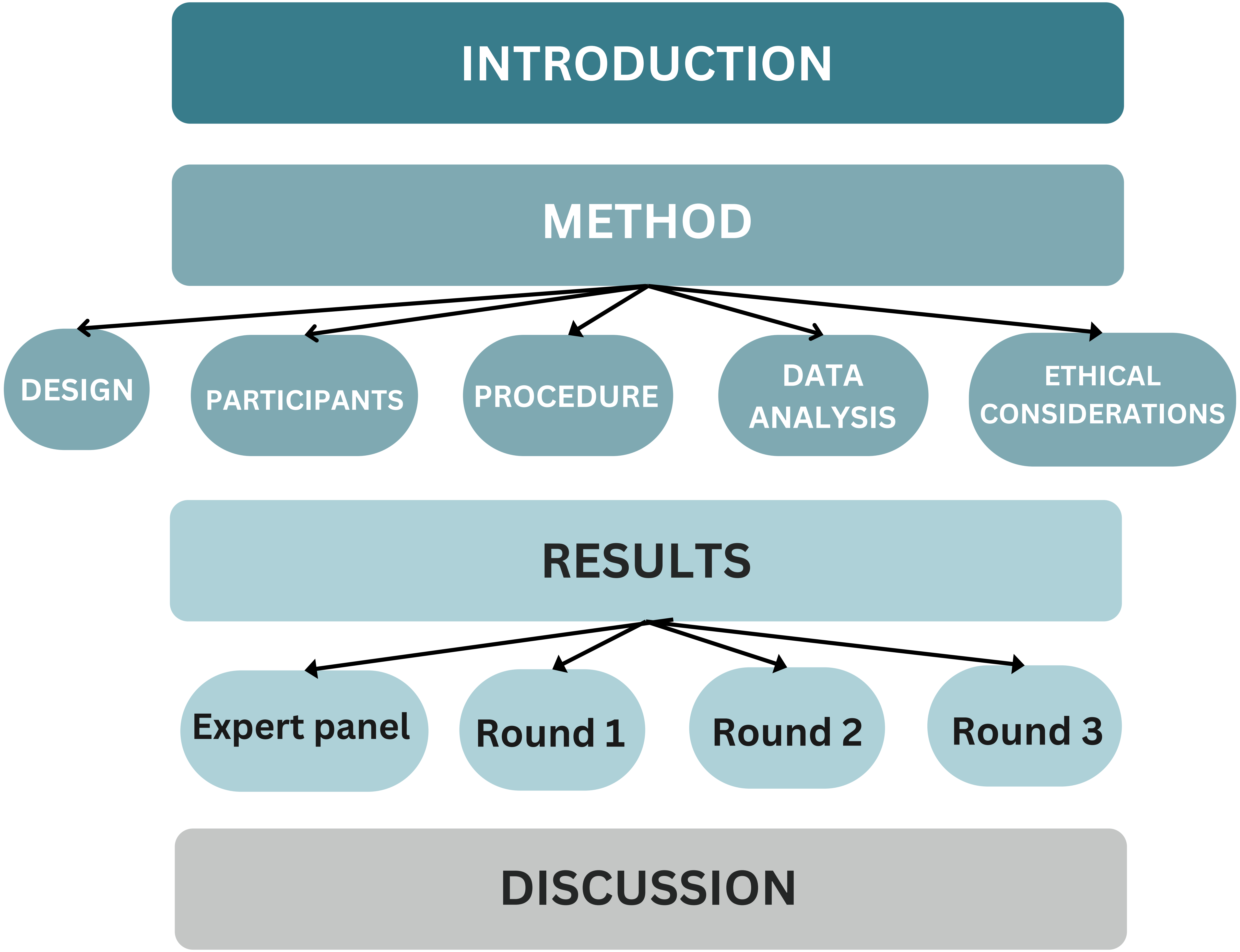
Conducting Delphi Studies

Centre for Developmental and Complex Trauma
Part of St Andrew's Healthcare

PART IV: REPORTING A DELPHI STUDY



Overview of the structure of a Delphi



INTRODUCTION

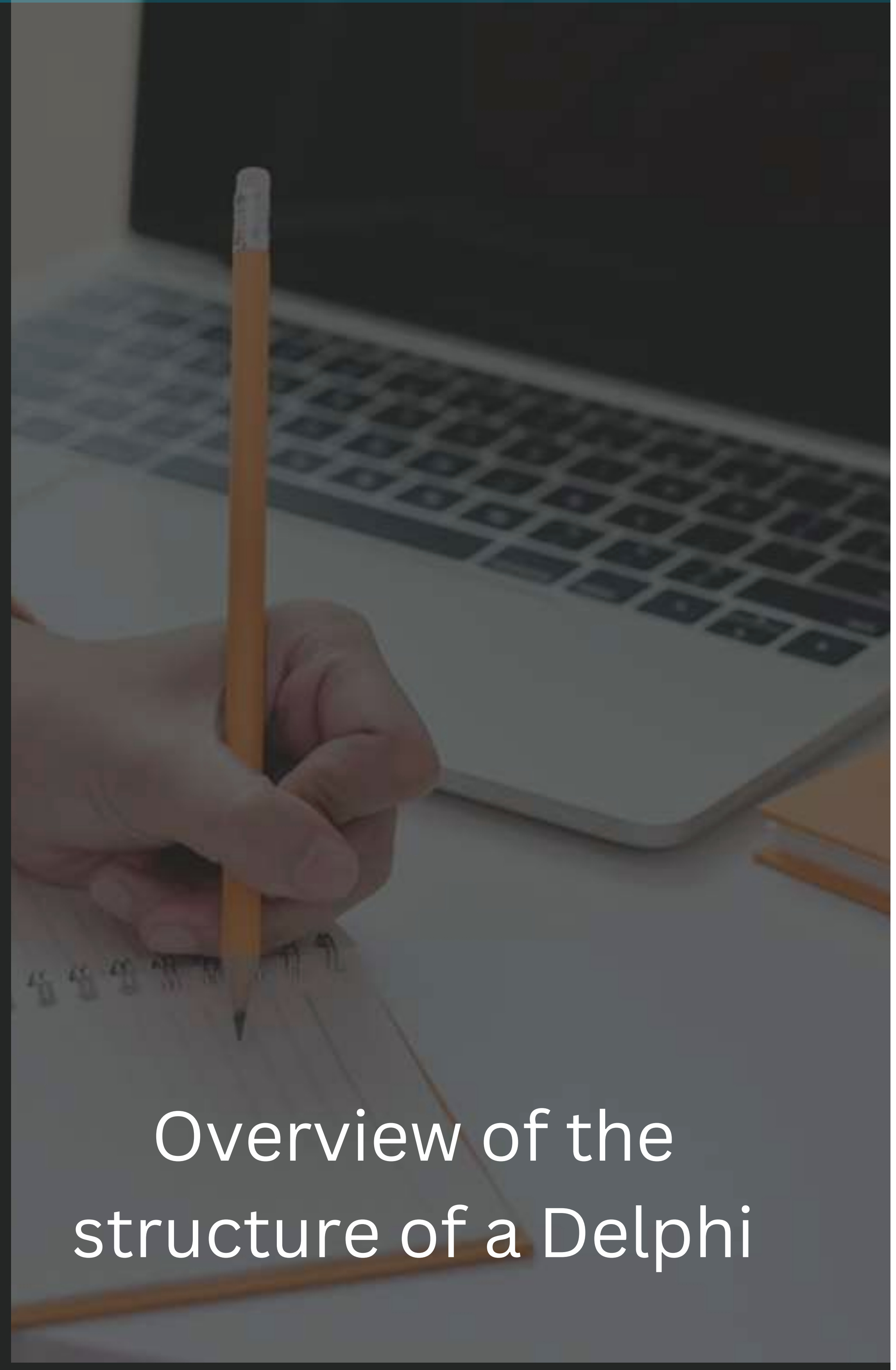
METHOD

- DESIGN
- PARTICIPANTS
- PROCEDURE
- DATA ANALYSIS
- ETHICAL CONSIDERATIONS

RESULTS

- Expert panel
- Round 1
- Round 2
- Round 3

DISCUSSION



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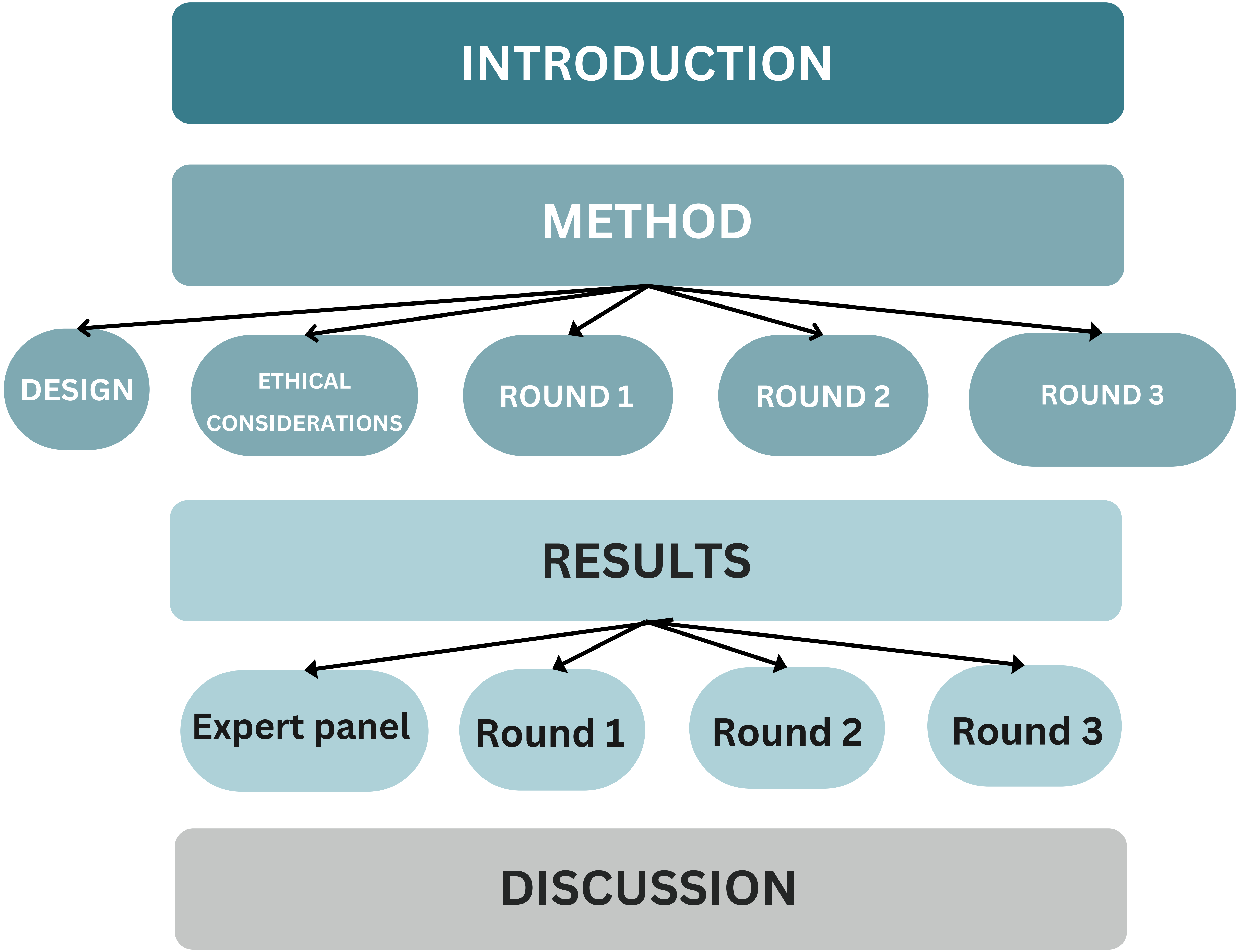

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- ROUND 3

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DISCUSSION

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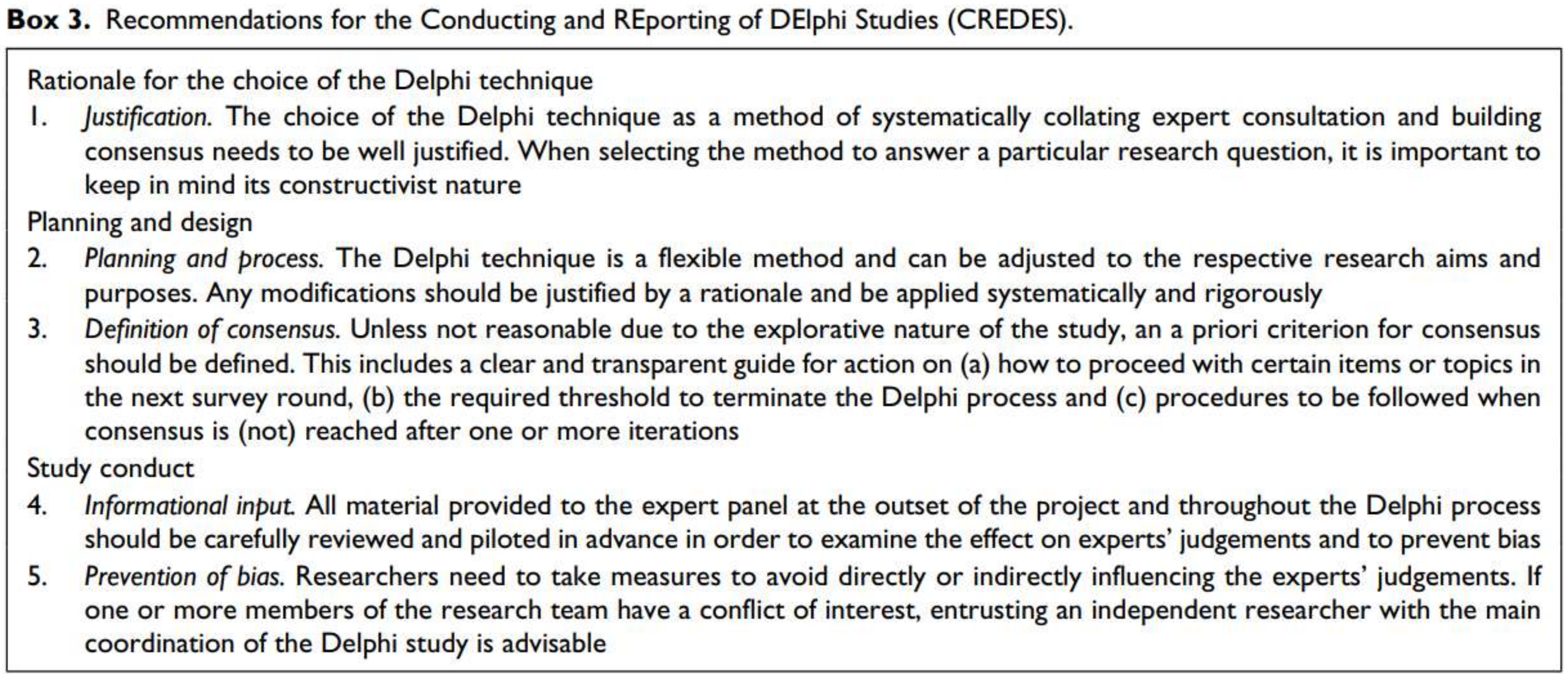
Delphi Reporting Guidance

Guidance on Conducting and REporting DElphi Studies ()



Box 3. Recommendations for the Conducting and REporting of DElphi Studies (CREDES).

Rationale for the choice of the Delphi technique

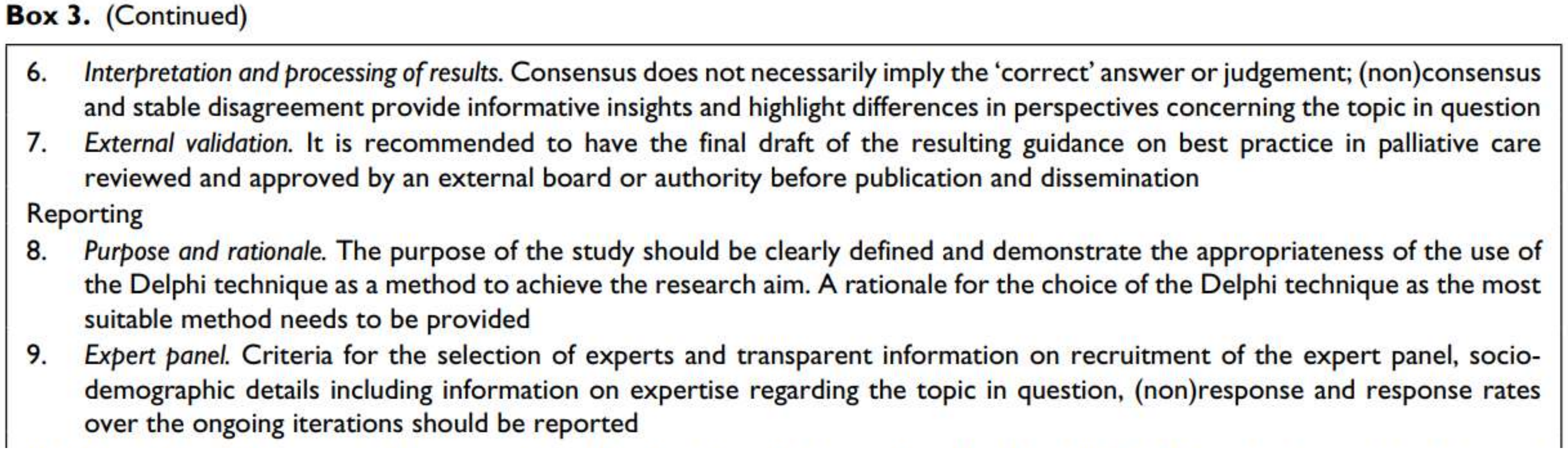
1. *Justification.* The choice of the Delphi technique as a method of systematically collating expert consultation and building consensus needs to be well justified. When selecting the method to answer a particular research question, it is important to keep in mind its constructivist nature

Planning and design

2. *Planning and process.* The Delphi technique is a flexible method and can be adjusted to the respective research aims and purposes. Any modifications should be justified by a rationale and be applied systematically and rigorously
3. *Definition of consensus.* Unless not reasonable due to the explorative nature of the study, an a priori criterion for consensus should be defined. This includes a clear and transparent guide for action on (a) how to proceed with certain items or topics in the next survey round, (b) the required threshold to terminate the Delphi process and (c) procedures to be followed when consensus is (not) reached after one or more iterations

Study conduct

4. *Informational input.* All material provided to the expert panel at the outset of the project and throughout the Delphi process should be carefully reviewed and piloted in advance in order to examine the effect on experts' judgements and to prevent bias
5. *Prevention of bias.* Researchers need to take measures to avoid directly or indirectly influencing the experts' judgements. If one or more members of the research team have a conflict of interest, entrusting an independent researcher with the main coordination of the Delphi study is advisable



Box 3. (Continued)

6. *Interpretation and processing of results.* Consensus does not necessarily imply the 'correct' answer or judgement; (non)consensus and stable disagreement provide informative insights and highlight differences in perspectives concerning the topic in question
7. *External validation.* It is recommended to have the final draft of the resulting guidance on best practice in palliative care reviewed and approved by an external board or authority before publication and dissemination

Reporting

8. *Purpose and rationale.* The purpose of the study should be clearly defined and demonstrate the appropriateness of the use of the Delphi technique as a method to achieve the research aim. A rationale for the choice of the Delphi technique as the most suitable method needs to be provided
9. *Expert panel.* Criteria for the selection of experts and transparent information on recruitment of the expert panel, socio-demographic details including information on expertise regarding the topic in question, (non)response and response rates over the ongoing iterations should be reported

Method

- The purpose of the methods section is to provide the reader with an overview with how the study was conducted. This section should provide sufficient detail to allow a reader to replicate the study in the same way.

- The specific structure and order of the methods section varies between articles, though should include the following:
  - Design *
  - Participants
  - Procedure
  - Data analysis
  - Ethical considerations

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Method: Design

DESIGN *

- What is the Delphi method (brief summary)?
- What was the rationale for it's use?
- How many rounds were conducted?
- Between which dates was data collected?
- What frameworks were used to guide the conduction or reporting of the Delphi (e.g. CREDES)

Method: Design

Between **February and May 2019,** an online two-round Delphi study was conducted among a panel of HCWs in the field of Q-fever in the Netherlands. The Delphi technique is **a group facilitation technique that consists of multiple rounds of questionnaires [23]. The purpose is to systematically collect and combine opinions and judgements from a panel of experts on issues on which there is contradictory or insufficient information. Responses of experts are summarized between rounds and used to compose subsequent questionnaires**. By anonymously providing information on the answers of the panel participants are able to consider and compare their answers to other experts [23, 24]. To the best of our knowledge, there are currently no studies on the perspectives of HCWs on Q-fever care. **Due to the scarcity of previous knowledge on this topic, the Delphi technique was considered the most appropriate method**. Applying this method allows for the evaluation of complex issues on which there is scarce information, like Q-fever care, and is especially useful in the explorative phases [25].

Method: Design

A **three-round Delphi study** involving clinicians and policy makers was conducted in Jordan. The **Delphi method is a technique for gathering opinions on a topic. It is based on the proposition that “pooled intelligence enhances the individual judgment and captures the collective opinion of experts” (De Villiers et al., 2005, p. 639). The Delphi method allows the development of consensus to resolve contradictions in the results of research studies. …**

… The Delphi has most frequently been utilized in healthcare to assess the appropriateness of health-related interventions, identify measures for clinical trials, and solve inconsistencies in different contexts (De Villiers et al., 2005; Jones & Hunter, 1995). **Delphi studies assist with obtaining a greater number of ideas than traditional group discussions, reducing pressure and competition through the group discussion, giving an equal opportunity to each expert to participate and contribute, and prioritizing ideas democratically** (McMillan et al., 2013). …

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Method: Participants

PARTICIPANTS

- Who was your target population?
- What criteria did you use to define an 'expert'?
- How did you identify and recruit experts? (e.g. authors of an earlier literature review? personal networks?)
- What sampling method did you use? (e.g., purposive)
- How many experts did you seek to recruit?

Method: Participants

Participants were **clinicians with expertise diagnosing autism in adult women of typical intelligence**. Our inclusion criteria were based on a previously conducted behavioral phenotyping study, in which 151 participants with experience diagnosing autism were asked to estimate the total number of autism diagnoses they had ever given (de Marchena & Miller, 2017). Marchena and Miller found a **median of 250 diagnoses across their sample, which was the minimum experience we required** for participation. Furthermore, we added the constraint of **having practiced for at least 5 years and assessed at least 100 women in this time.** Awareness around gender-based diagnostic disparities has increased over the past years, and we aimed to recruit clinicians with specific experience in this.

Participants were **recruited through Twitter, mailing lists, and word of mouth**. Participants filled an information and consent form on a secure data collection platform (REDCap), and agreed to be recontacted for validation purposes.

Sample size was decided by previous literature indicating that the majority of Delphi studies include **between 15 and 20 respondents**, prioritizing a small group of expert and motivated participants (Hsu & Sandford, 2017).

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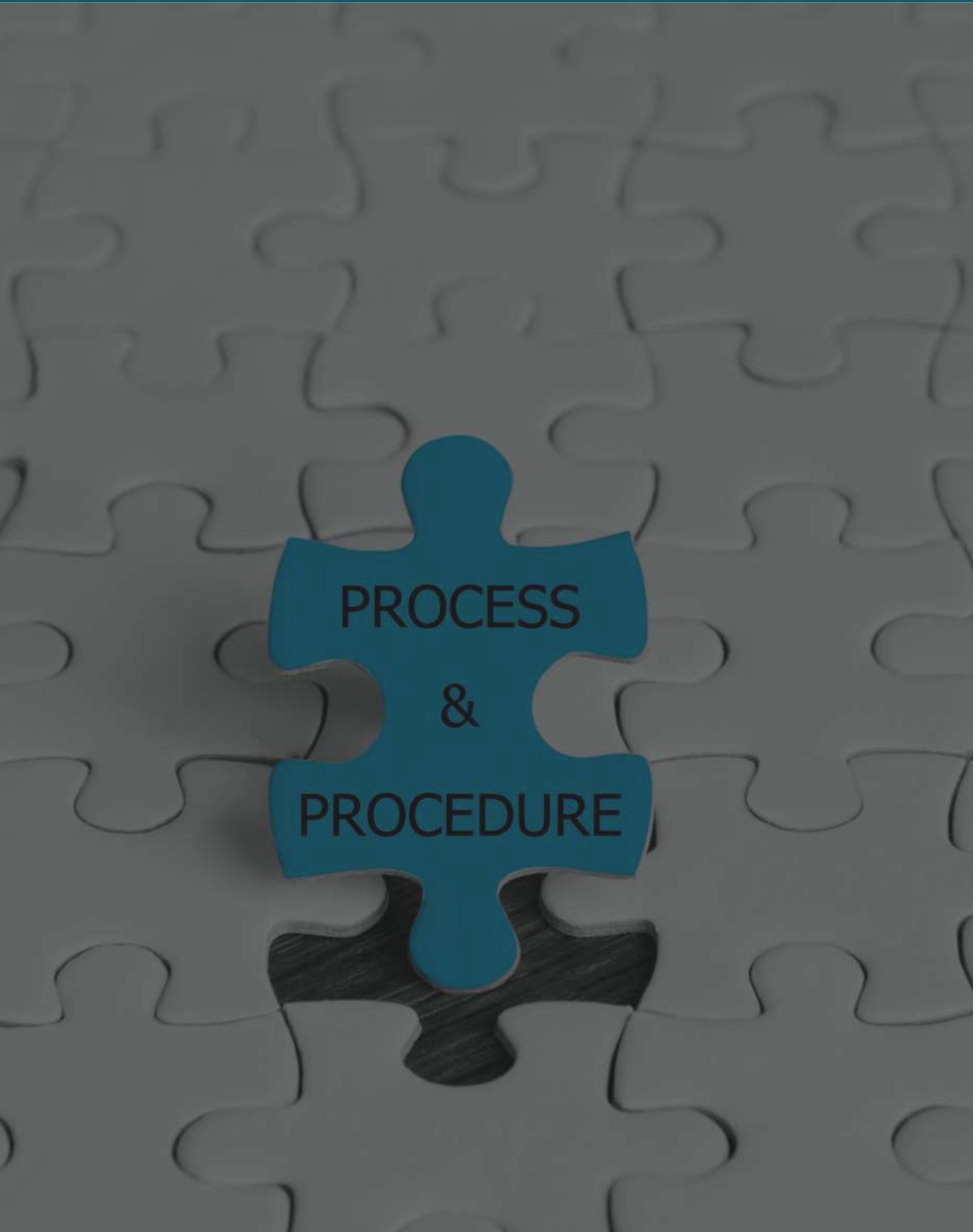
Method: Procedure

PROCEDURE

- How did participants complete the survey?
- How long did participants have to respond at each round?
- What demographic information was collected at each round?
- How were questions at round 1 selected/developed?
- How were questions at round 2 selected/developed?
- How were statements at round 2 rated?
- How were questions at round 3 selected/developed?
- How were statements at round 3 rated?



Method: Procedure

Participants were **sent an email with a unique link to the survey** created using the **online survey platform Qualtrics**. Each round was **open for 4 weeks**, and a **reminder email was sent after 2 weeks**.

In round 1, the panel of experts were presented with the **following open-ended questions:**

- What key facts are essential to understanding young onset dementia (YOD), in relation to: (a) causes and characteristics, (b) symptoms and progression, (c) assessment and diagnosis, …
- What key facts about YOD are different to and the same as late onset dementia?
- What key facts about YOD are frequently misunderstood by health professionals?

These questions were **modelled on those used in the development of the Dementia Knowledge Assessment Scale (DKAS) and in consultation with the research team**. **Responses were analysed by two researchers** to produce a list of statements. This process resulted in a **list of 48 statements** representing the information that experts deemed to be essential in understanding YOD. **Statements from the DKAS were also included** to build on existing work.

In round 2, the s**tatements developed from round 1 were presented to experts,** who were asked to **rate each statement in terms of how essential it was for knowledge of YOD among health professionals from 1 (not important at all) to 5 (very important)**. The responses were then **analysed by two researchers to calculate the level of consensus achieved for each statement.**

In round 3, participants were **presented with the same list of statements, accompanied by each statement's consensus level from the previous round**. Participants were asked to review this new information, and **again rate each statement on the same scale of 1 to 5**. The responses were then **analysed to ascertain the level of consensus obtained** for each statement. This allowed for comparisons to be made between the results of rounds 2 and 3.

Method: Procedure

2.1. Round two: Survey development

Survey items were formulated based upon responses to open-ended questions at round one. In total, the survey comprised of **64 items at round two**. Due to the large number of codes developed in round one, many of the items encompassed multiple codes which shared similarity in meaning.

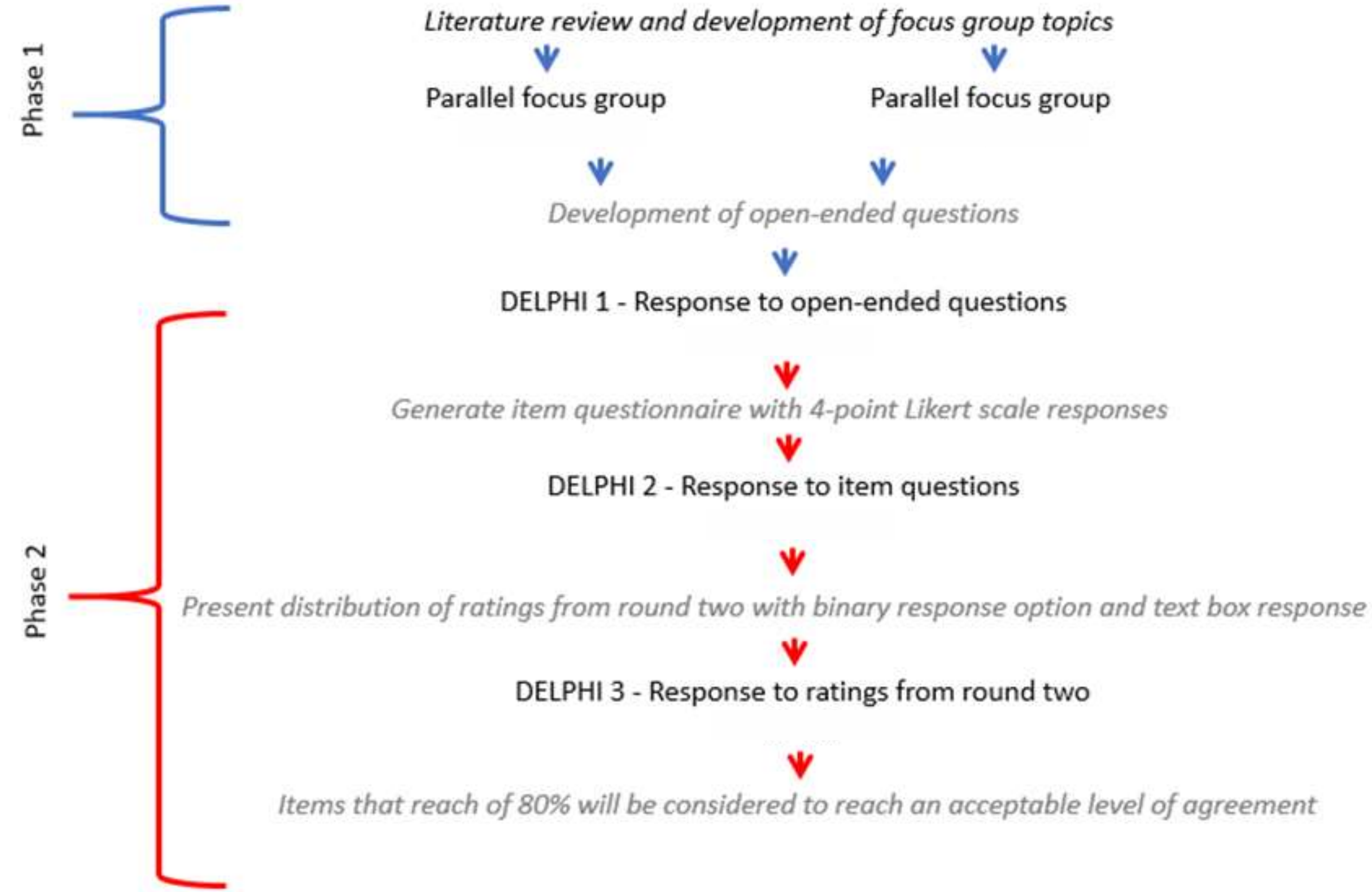
2.2. Round two: Procedure

As per round one, a **link to the questionnaire was sent to participants via email**. Participants again had **three weeks to complete the questionnaire**, and a **reminder was sent one week prior to the deadline**. As before, the definition of 'potentially morally injurious events' proposed by Litz et al. (2009) was provided in the survey and made accessible throughout. At this round, participants were instructed to **indicate the extent to which they agreed or disagreed with each item, on a 4-point Likert scale ranging from 'strongly disagree' to 'strongly agree'**.

In parallel with round one, **experts were asked to indicate the nature of their expert status (healthcare professional in a secure psychiatric setting, academic with previous peer-reviewed publication, or both)** and, where relevant, **the type of professional role in which they were currently, or had most recently worked in**. At this round, **experts were also asked to confirm that they had participated in round one**, for the purpose of ensuring that only those who had partaken in the first round responded. To ensure anonymity and prevent identification of responses, email addresses were not collected at each round, and thus it was not possible to identify who had and had not participated in the survey. Therefore, upon commencement of round two, **participants who had not partaken in round one were asked to provide their email address to the researcher to ensure that they did not receive any further correspondence about the study.**

Method

11. *Procedure.* Flow chart to illustrate the stages of the Delphi process, including a preparatory phase, the actual 'Delphi rounds', interim steps of data processing and analysis, and concluding steps



Phase 1

Literature review and development of focus group topics

Parallel focus group

Parallel focus group

Development of open-ended questions

DELPHI 1 - Response to open-ended questions

Phase 2

Generate item questionnaire with 4-point Likert scale responses

DELPHI 2 - Response to item questions

Present distribution of ratings from round two with binary response option and text box response

DELPHI 3 - Response to ratings from round two

Items that reach of 80% will be considered to reach an acceptable level of agreement

Method: Data analysis

DATA ANALYSIS

- How were responses at round 1 analysed? What method was used and who was involved? How was rigor ensured?
- How were ratings at rounds 2 and 3 analysed?
- How were changes in consensus ratings between rounds 2 and 3 explored?
- What was the consensus threshold set at, and what was the rationale for deciding on this threshold?
- Was the consensus threshold set before or after data analysis?
- Did you look at any differences in ratings dependent on specific expert characteristics (e.g. gender, expertise type) which may have an influence on consensus levels achieved?

Method: Data analysis

Round 1

Responses at round 1 were interpreted using **conventional content analysis** [33] **by the primary researcher**. Participant responses were read repeatedly to develop familiarity and immersion with the data [33]. Phrases that described key concepts were identified through systematic reading of the data [33]. Once concepts were identified they were compared to the wider dataset, similarly to the 'reviewing themes' stage of thematic analysis [34].

In line with the research aim, **concepts were configured into statements recommending ways of working** (e.g. "Staff should provide autistic women with more written information during treatment"). The statements were created by **looking at the original quotes and using experts' own wording** where possible. **The research team met regularly to discuss the content analysis and ensure the statements generated were relevant and did not contain unnecessary overlap**.

Round 2

For each item, the percentage of agreement and disagreement across the sample was calculated. **The consensus threshold was set at 80%.** Whilst the average consensus threshold used within Delphi studies tend to be lower than this (Diamond et al., 2021), a consensus level of 80% was chosen **to ensure that only items on which there was high agreement were retained. The consensus threshold was set a priori to avoid research bias (Holey et al., 2007).**

Round 3

In line with the methods of analysis employed in round two, the **percentage of agreement and disagreement across the sample was calculated for each survey item**. The consensus threshold **remained at 80%**. The **change in average agreement percentage between round two and three was also calculated** for each item.

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Reporting permissions and ethical approvals

- Which organisations and/or ethical review bodies provided approval for the Delphi study?

- If ethical approval was not sought, why was it not needed? What was the rationale for this?

- What ethical processes and documentation were presented to participants prior to data collection (e.g. information sheet)?

- How was informed consent obtained?

- How were participants debriefed following participation?

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Method: Ethical considerations

This research was approved by the Human Research Ethics Committee of The University of Hong Kong (Reference: EA1809012). For the online survey, a written informed consent was obtained from participants. For the phone interview, an audio-recorded joint informed consent was obtained from persons living with dementia or family caregivers.

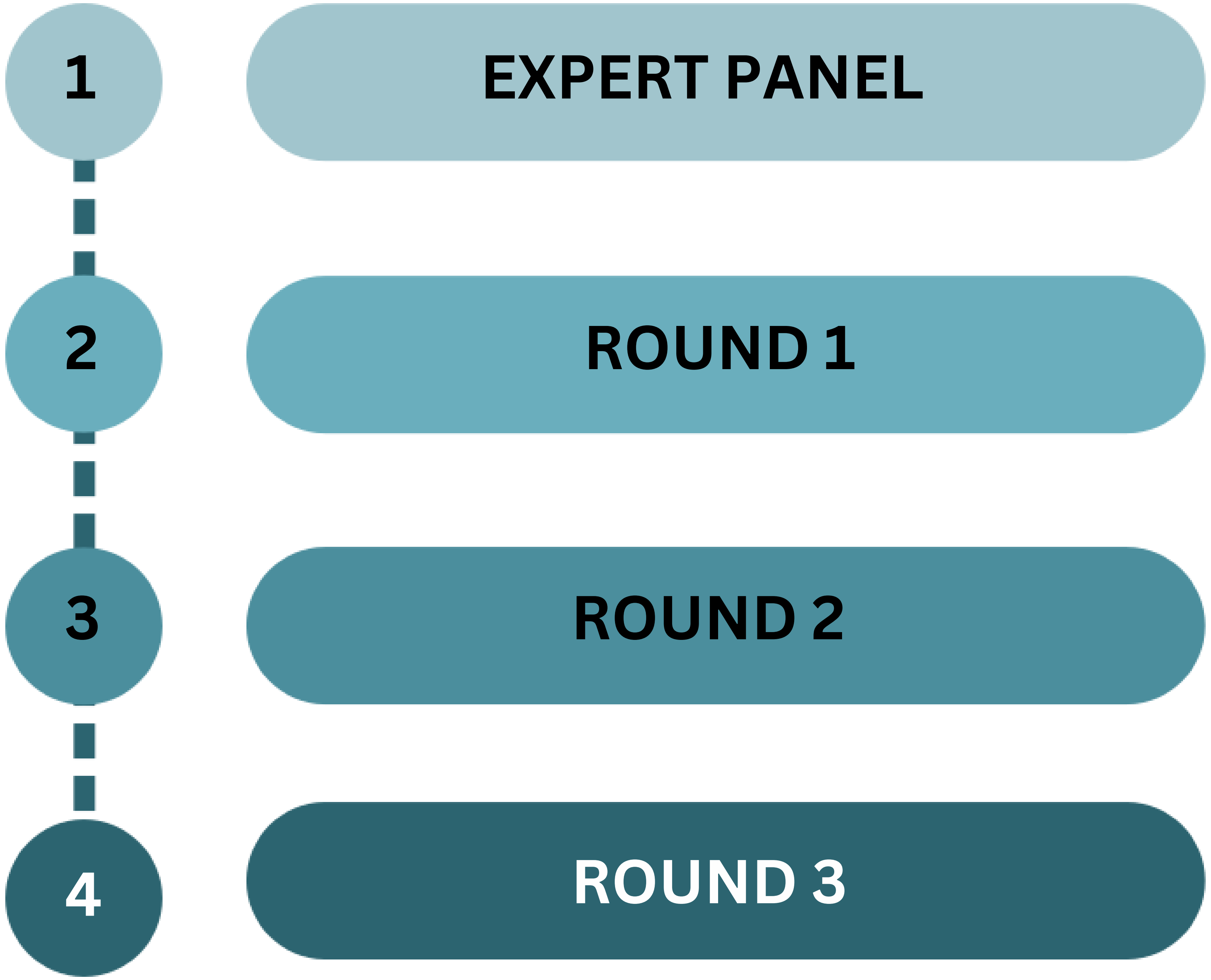
The study was conducted according to established ethical protocols. The need for ethical approval was waivered by a UK Higher Education Institute, research ethics committee and a UK Government, Scientific Advisory Committee. All participation was voluntary and participants were made aware of their right to withdraw from the study at any point without explanation. Participant anonymity was assured via the anonymous online data collection tool. The act of completing each questionnaire was interpreted as consent to participate in the study.

Ethical approval for the study was obtained from the University of Manchester Ethics Committee. Permission for the study was also obtained from private healthcare charities, as recruitment sites. A copy of the participant information sheet was first presented to participants, to ensure they had sufficient understanding of what participation would involve, and the potential benefits and risks of taking part. A consent form was then presented, and experts were asked to indicate their consent to participate. A debrief sheet was presented to experts upon completion of the survey, or upon withdrawal. As the Delphi involved questions relating to stressful experiences, contact details for support resources were provided in the debrief sheet. Participants were able to withdraw at any point prior to completing the survey.

Results

RESULTS:

- There is no one single way to present the results of a Delphi - though it is useful to structure this section by round:



1 EXPERT PANEL

2 ROUND 1

3 ROUND 2

4 ROUND 3

RESULTS:

EXPERT PANEL:

- How many experts took part in round 1 and how does this compare to how many were initially contacted?*
- How many experts took part in rounds 2 and 3?
- What was the percentage of retention between rounds, and what percentage of experts took part in all three rounds?
- What were the key characteristics of the sample? You may wish to report this for every round, or the first and final round - comment on any trends, and list full demographic information in a table

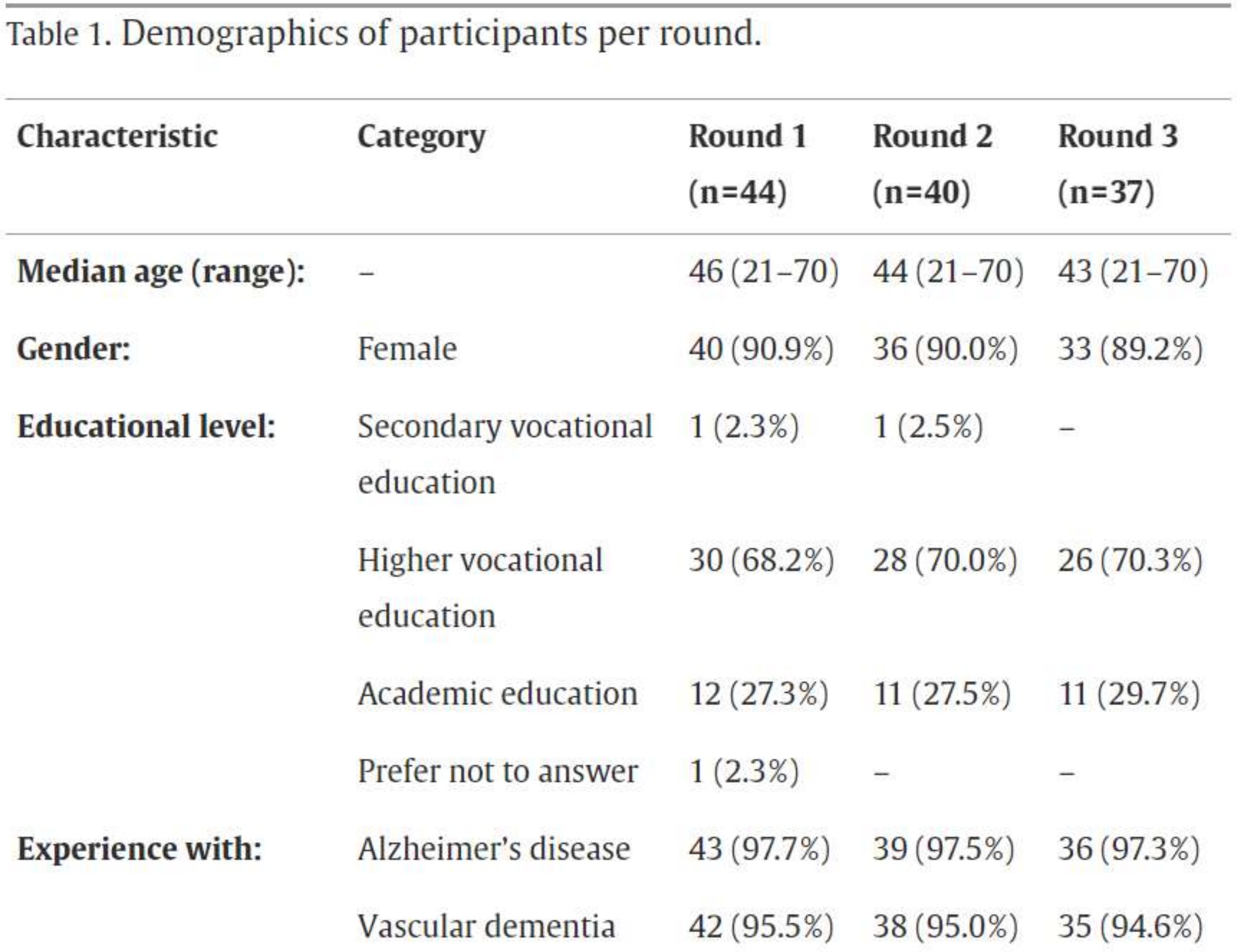


Table 1. Demographics of participants per round.

Characteristic	Category	Round 1 (n=44)	Round 2 (n=40)	Round 3 (n=37)
Median age (range):	–	46 (21–70)	44 (21–70)	43 (21–70)
Gender:	Female	40 (90.9%)	36 (90.0%)	33 (89.2%)
Educational level:	Secondary vocational education	1 (2.3%)	1 (2.5%)	–
	Higher vocational education	30 (68.2%)	28 (70.0%)	26 (70.3%)
	Academic education	12 (27.3%)	11 (27.5%)	11 (29.7%)
	Prefer not to answer	1 (2.3%)	–	–
Experience with:	Alzheimer's disease	43 (97.7%)	39 (97.5%)	36 (97.3%)
	Vascular dementia	42 (95.5%)	38 (95.0%)	35 (94.6%)

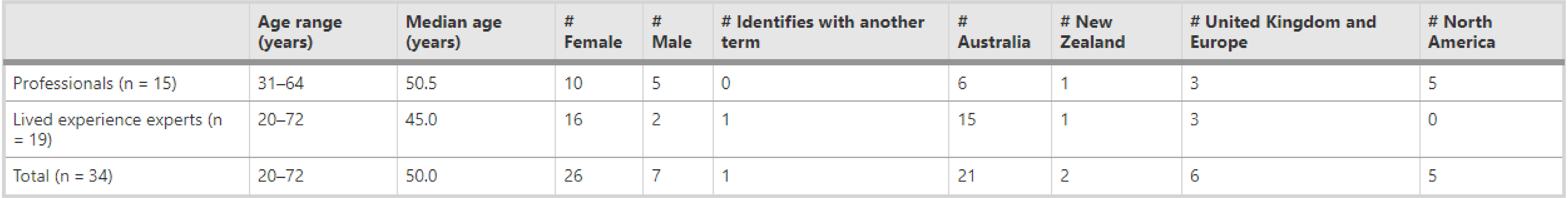
"Table 1 presents the participants' demographics per round of the Delphi study. Participants' age ranged from 21 to 70 years across the three rounds. The majority was female, completed higher vocational education and worked as case manager. Smartphone and tablet use was common among the expert group. Most experts had experience with the use of mHealth"

Engelsma et al. (2022). Expert appraisal and prioritization of barriers to mHealth use for older adults living with Alzheimer's disease and related Dementias: A Delphi study. International Journal of Medical Informatics. https://doi.org/10.1016/j.ijmedinf.2022.104845

RESULTS (EXPERT PANEL):

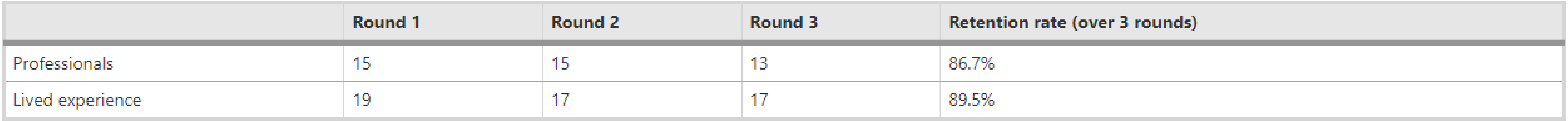
Thirty-four people completed Round 1. Of these, 26 identified as female, 7 identified as male and 1 identified with another term. The average age was 45.3 years (SD = 14.3, range 20–72). Participants were from Australia, Canada, France, New Zealand, Switzerland, the UK and the USA (see Table 1). Of the 34 panellists in Round 1, 30 completed all three rounds. The participation of panellists across the three Delphi survey rounds is shown in Table 2. There were 15 panellists recruited as professionals, with the majority having multiple roles, including 4 psychiatrists, 8 psychologists, 7 academic researchers and authors, 3 mental health nurses and educators, and 1 first responder. Of 19 panellists recruited as lived experience experts, 16 selected personal lived experience as their primary expertise and 3 selected carer roles. Approximately half of all participants (56%) had another source of expertise in addition to their identified expertise, e.g. personal lived experience or carer experience as well as professional experience.

Table 1. Participant characteristics



	Age range (years)	Median age (years)	# Female	# Male	# Identifies with another term	# Australia	# New Zealand	# United Kingdom and Europe	# North America
Professionals (n = 15)	31–64	50.5	10	5	0	6	1	3	5
Lived experience experts (n = 19)	20–72	45.0	16	2	1	15	1	3	0
Total (n = 34)	20–72	50.0	26	7	1	21	2	6	5

Table 2. Participation of Delphi panellists in each round



	Round 1	Round 2	Round 3	Retention rate (over 3 rounds)
Professionals	15	15	13	86.7%
Lived experience	19	17	17	89.5%

Chalmers et al. (2022). Redevelopment of mental health first aid guidelines for supporting someone experiencing a panic attack: a Delphi study. BMC Psychology.. https://doi.org/10.1016/j.ijmedinf.2022.104845

RESULTS:

ROUND 1:

- How many themes/subthemes were extracted?
- Give a description of these and the codes (or a quote) encompassed under each - this works well as a table *
- If multiple coders were used, what was the level of agreement on the allocation of codes to themes?

* This is often missed in most published Delphi's, but it helps to give the reader an understanding of the data behind the statements and key themes extracted

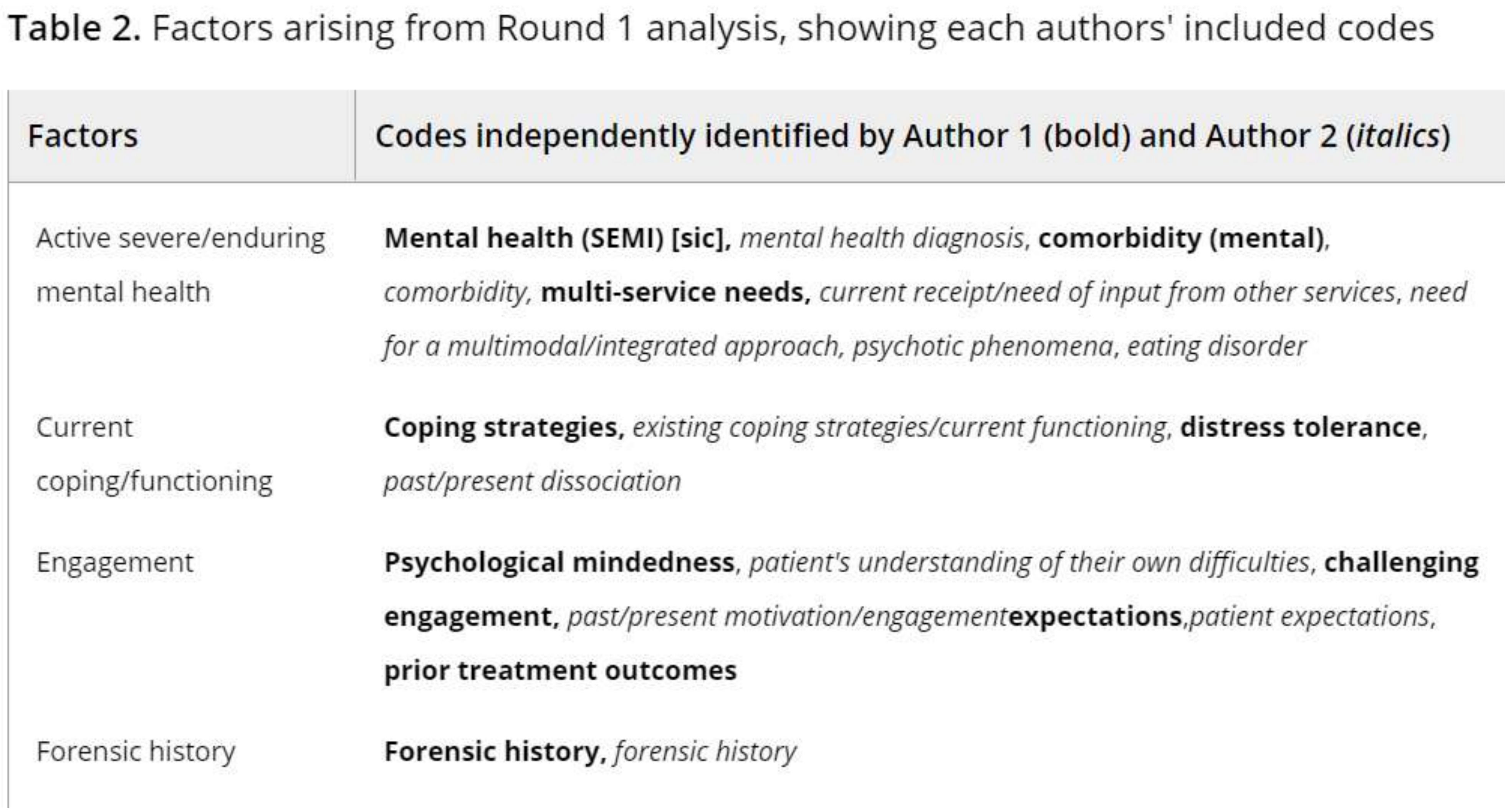


Table 2. Factors arising from Round 1 analysis, showing each authors' included codes

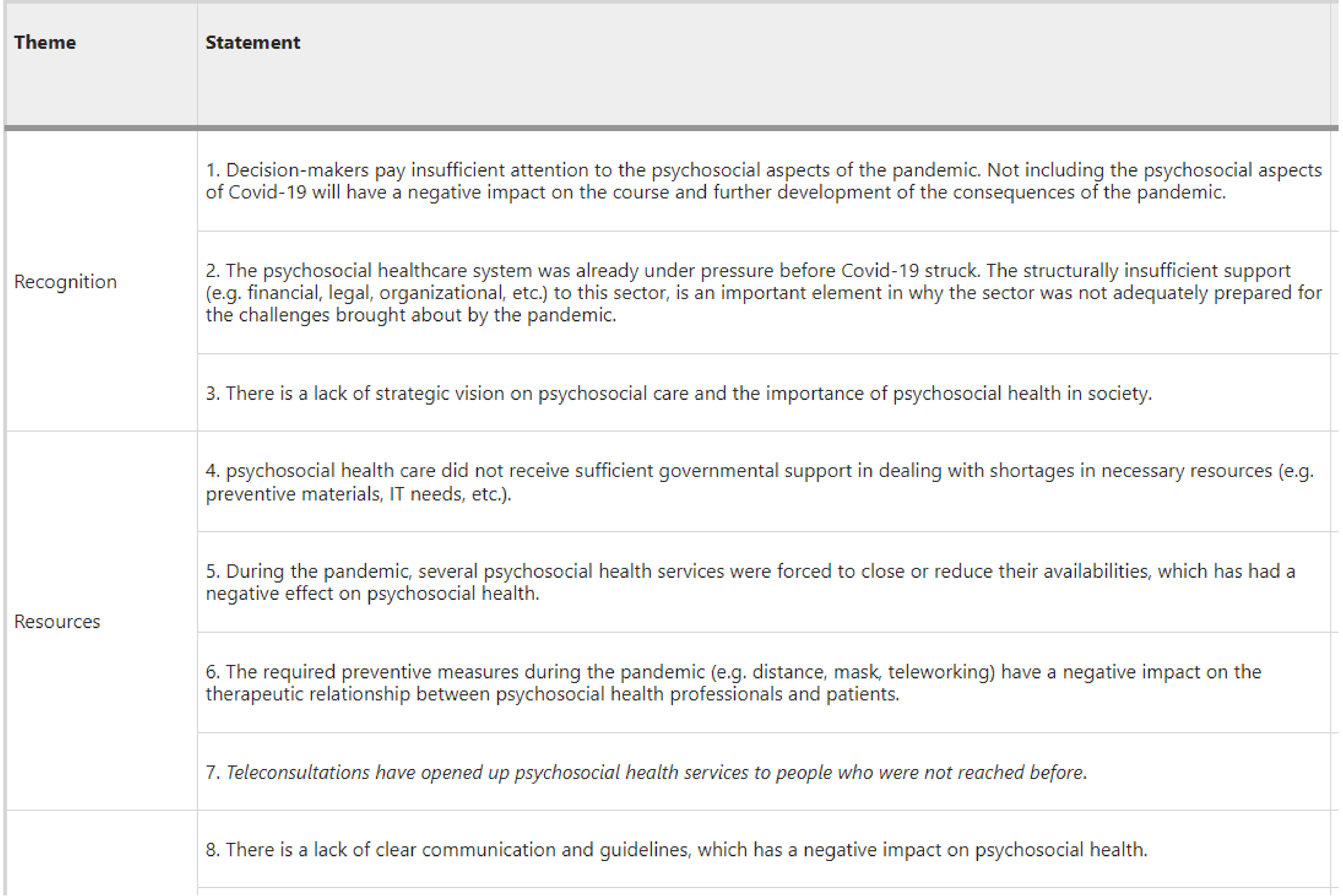
Factors	Codes independently identified by Author 1 (bold) and Author 2 (*italics*)
Active severe/enduring mental health	**Mental health (SEMI) [sic]**, *mental health diagnosis*, **comorbidity (mental)**, *comorbidity*, **multi-service needs**, *current receipt/need of input from other services, need for a multimodal/integrated approach, psychotic phenomena, eating disorder*
Current coping/functioning	**Coping strategies**, *existing coping strategies/current functioning*, **distress tolerance**, *past/present dissociation*
Engagement	**Psychological mindedness**, *patient's understanding of their own difficulties*, **challenging engagement**, *past/present motivation/engagement***expectations**,*patient expectations*, **prior treatment outcomes**
Forensic history	**Forensic history**, *forensic history*

"An initial review of data were carried out independently by the first and second authors (J. S. and G. H.), generating 30 and 31 codes, respectively, which they further organized into 22 and 23 themes, see Figure 1. Comparison of the emergent themes indicated a high level of convergence between the two authors' analyses—56 of 61 codes (91.80%) were allocated to a synonymously titled theme—and a consensus that the number of themes could be further reduced. The third author (E. C.) facilitated a session in which minor discrepancies in language were resolved and some themes combined into broader factors. One code (suitability for a trainee/assistant) was excluded as this was deemed to be a consequence of judgement of complexity, rather than a contributory factor. The final output included 13 factors, presented in Table 2."

Strachan et al. (2022). Understanding complexity in psychological services: A modified Delphi study. Journal of Evaluation in Clinical Practice. https://doi.org/10.1111/jep.13716

RESULTS (ROUND 1):

The participants' responses were independently and ethnographically analyzed (Altheide and Schneider, 2013) by four researchers and structured into summarizing statements by each of the researchers individually. The four researchers presented and discussed their findings in a group session to reach a number of collectively endorsed statements and improve the structure and readability of statements. As a result, 23 statements covering seven thematic subdomains were produced (Tables 2–4). Grouping items into themes has been shown to assist panel members in making judgments and identifying any omissions in a questionnaire's overall reasoning (Jorm, 2015). To ensure the methodological consistency and validity of the defined research statements, the entire process was reviewed by two researchers who were not involved in the analysis process.



Theme	**Statement**
Recognition	1. Decision-makers pay insufficient attention to the psychosocial aspects of the pandemic. Not including the psychosocial aspects of Covid-19 will have a negative impact on the course and further development of the consequences of the pandemic.
	2. The psychosocial healthcare system was already under pressure before Covid-19 struck. The structurally insufficient support (e.g. financial, legal, organizational, etc.) to this sector, is an important element in why the sector was not adequately prepared for the challenges brought about by the pandemic.
	3. There is a lack of strategic vision on psychosocial care and the importance of psychosocial health in society.
Resources	4. psychosocial health care did not receive sufficient governmental support in dealing with shortages in necessary resources (e.g. preventive materials, IT needs, etc.).
	5. During the pandemic, several psychosocial health services were forced to close or reduce their availabilities, which has had a negative effect on psychosocial health.
	6. The required preventive measures during the pandemic (e.g. distance, mask, teleworking) have a negative impact on the therapeutic relationship between psychosocial health professionals and patients.
	7. *Teleconsultations have opened up psychosocial health services to people who were not reached before.*
	8. There is a lack of clear communication and guidelines, which has a negative impact on psychosocial health.

van den Cruyce et al. (2022). The impact of Covid-19 on Belgian mental health care: A Delphi study among psychosocial health professionals, patients, and informal caretakers. Humanities and Social Sciences Communications. https://doi.org/10.1057/s41599-021-01008-0

RESULTS:

ROUND 2:

- How many items was consensus achieved on, based on the threshold you selected?
- Comment on trends in items not reaching consensus
- Report the frequency of agreement/disgareement on each item in a table
  - You may also wish to report the frequency of responses on each specific scale point.
  - Alternatively you could report average scores

TABLE 4. Stakeholders and their roles in environmental responsibility in hospitals (Delphi round 2; response rate 77%)

	Agreement	Agree	Partly agree	Partly disagree	Disagree	Can't say
	%	*n*	*n*	*n*	*n*	*n*
Realising environmental responsibility in hospitals requires collaboration, in which						
The hospital's environmental manager coordinates and develops environmental responsibility at an organisation-wide level	100	23	4	0	0	0
Nursing staff avoid the unnecessary use of material, water and electricity	96	22	4	0	1	0
Nurse managers encourage staff to act in an environmentally responsible	96	22	4	0	1	0

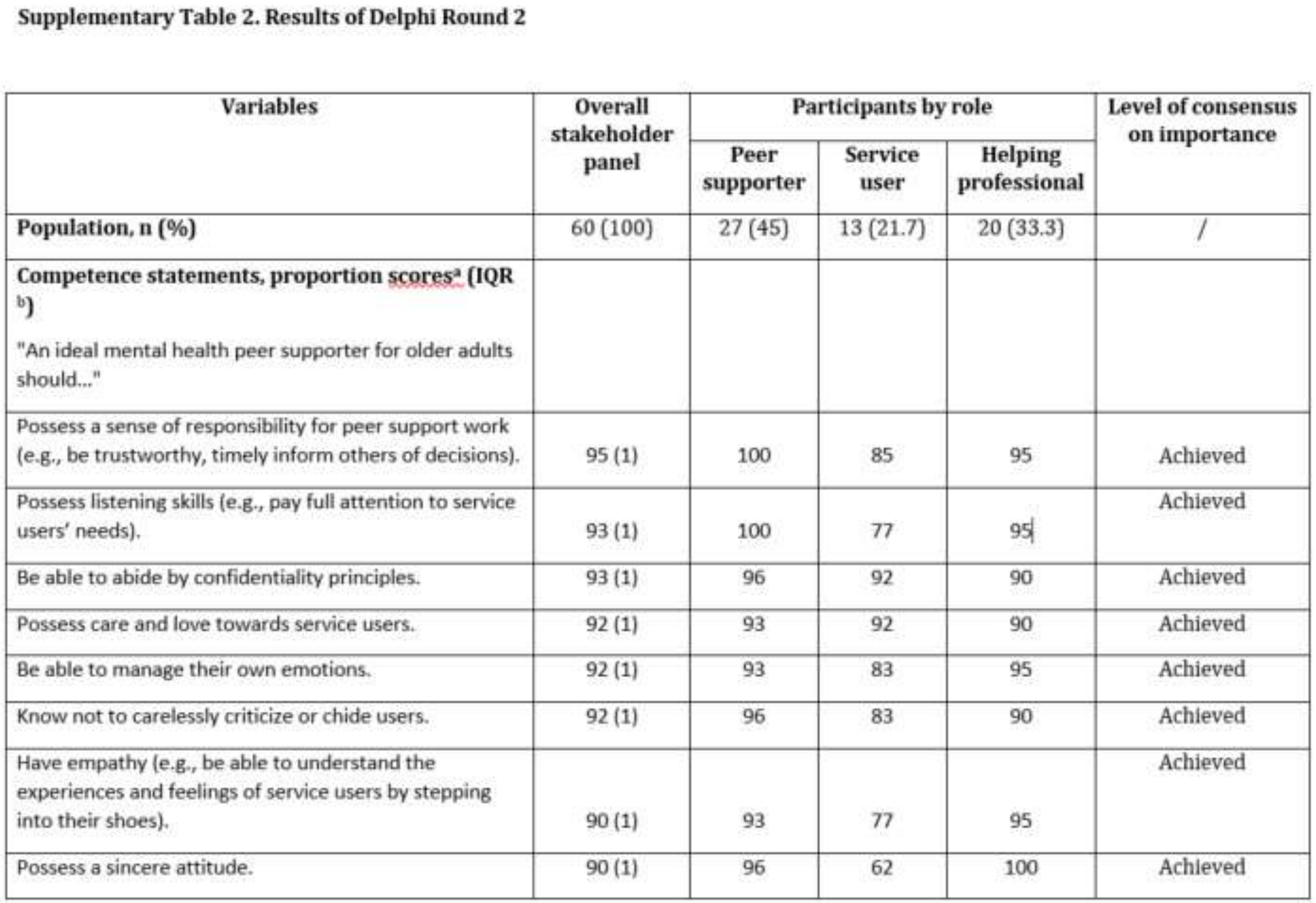
""The nurses reached a consensus on all the statements on stakeholders and tools presented in Tables 4 and 5. Various stakeholders played a role in environmental responsibility in clinical nursing practice. All participants agreed that each hospital needed an environmental manager to coordinate and develop environmental responsibility at an organisation-wide level. The majority (96%) agreed that it was the nurse manager's role to ensure that staff were competent and engaged. Some of the nurses were uncertain about the roles of various stakeholders and responded "can't say." These related to support services (n = 4), purchasing professionals (n = 3), students (n = 3), administrators (n = 2), infection control nurses (n = 2)... "

Kallio et al. (2020). Environmental responsibility in nursing in hospitals: A modified Delphi study of nurses' views. Journal of Clinical Nursing. [*https://doi.org/10.1111/jep.13716*](https://doi.org/10.1111/jep.13716)

RESULTS (ROUND 2):

Supplementary Table 2 details the consensus rating results of all competency statements in round 2. Thirty-two (44.4%) statements met the positive consensus criteria on importance and were included in the framework. These statements mostly related to interpersonal or communication skills, work ethics and self-management. Conversely, 22 (30.6%) statements failed to meet the positive consensus criteria and were excluded. The remaining 18 (25%) achieved borderline consensus.

Overall, the competency statement with the highest consensus on importance was ‘Possess a sense of responsibility for peer support work’, followed by ‘Possess listening skills’ and ‘Be able to abide by confidentiality principles’. The three competency statements securing the least consensus were ‘Be able to provide support to service users’ families and caregivers’, ‘Possess rich volunteering or other support provision experience’ and ‘Be able to bring recovery concepts into different fields as a leader’.



Supplementary Table 2. Results of Delphi Round 2

Variables	**Overall stakeholder panel**	**Participants by role**			**Level of consensus on importance**
		Peer supporter	**Service user**	**Helping professional**	
Population, n (%)	60 (100)	27 (45)	13 (21.7)	20 (33.3)	/
Competence statements, proportion scores^a (IQR ^{b}) "An ideal mental health peer supporter for older adults should..."					
Possess a sense of responsibility for peer support work (e.g., be trustworthy, timely inform others of decisions).	95 (1)	100	85	95	Achieved
Possess listening skills (e.g., pay full attention to service users' needs).	93 (1)	100	77	95	Achieved
Be able to abide by confidentiality principles.	93 (1)	96	92	90	Achieved
Possess care and love towards service users.	92 (1)	93	92	90	Achieved
Be able to manage their own emotions.	92 (1)	93	83	95	Achieved
Know not to carelessly criticize or chide users.	92 (1)	96	83	90	Achieved
Have empathy (e.g., be able to understand the experiences and feelings of service users by stepping into their shoes).	90 (1)	93	77	95	Achieved
Possess a sincere attitude.	90 (1)	96	62	100	Achieved

Wong et al. (2023). A core competency framework for mental health peer supporters of older adults in a Chinese community: cross-culturally informed Delphi study. BJPsych Bulletin. https://doi.org/10.1192/bjb.2023.45

RESULTS:

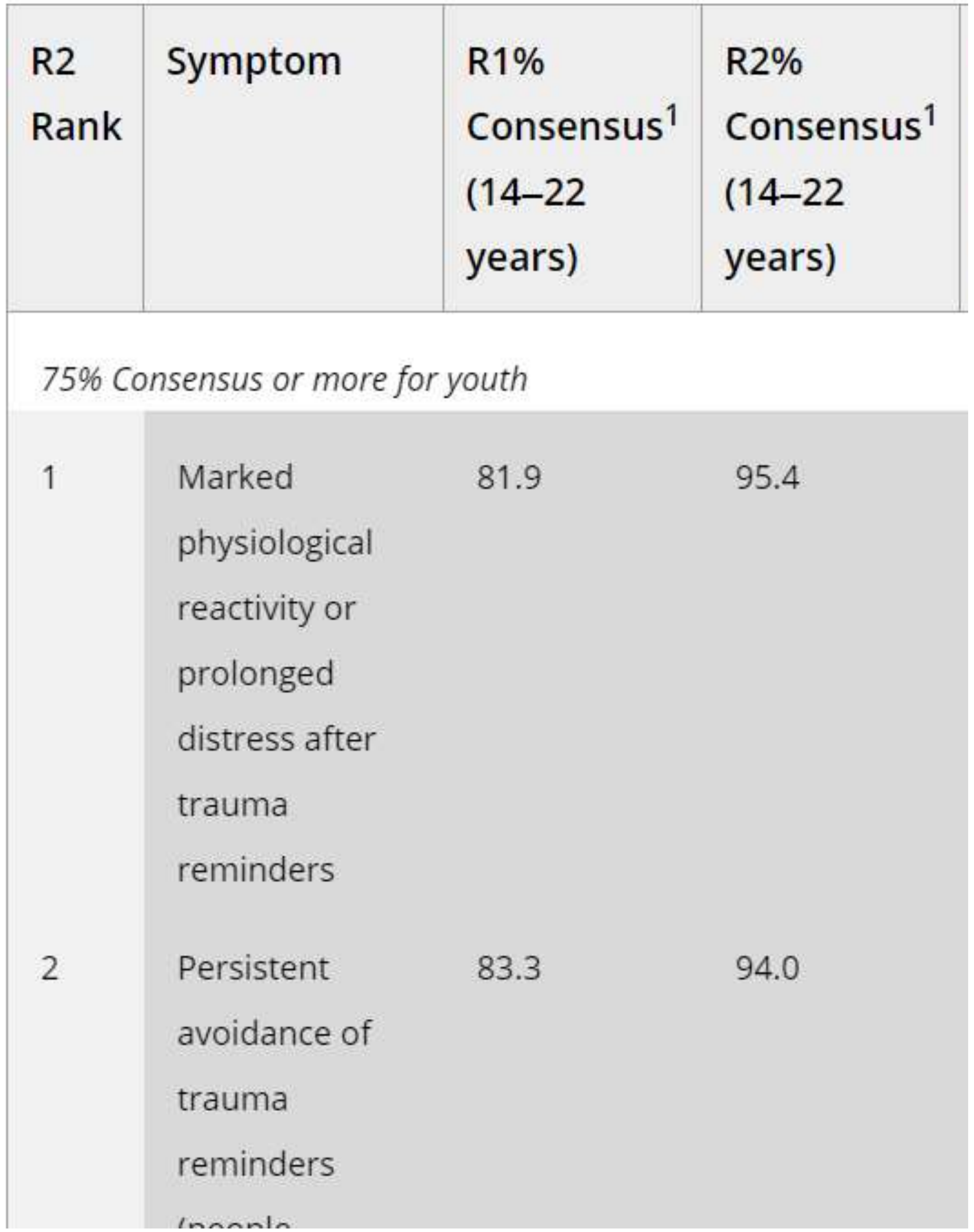
ROUND 3:

In addition to the points identified in round 2:

- Comment on any changes in consensus between rounds 2 and 3
- Report the frequency of agreement/disagreement ratings in a table - you could combine round 2 and 3 into one table and include change in percentage

"Expert consensus identified 22 symptoms as important trauma indicators in young autistic people (14–22 years) in Round 3 (Table 3). This included all 10 symptoms reaching consensus in Round 2. The additional 12 symptoms identified reflected seven symptoms derived from DSM-5 criteria, and five symptoms derived from qualitative interviews and the empirical literature (repetitive self-injurious behavior, non-suicidal self-injury, excessive safety-seeking, regressed adaptive skills, and reduced communicative language). Of note, seven of the 22 symptoms demonstrated >15% change in consensus from Round 2, suggesting that opinion about these symptoms may be less stable. In addition, 11 symptoms had a notable lack of consensus after 2 rounds (50% agreement or less)."

Table 3. Important indicators of a traumatic reaction in youth with ASD



R2 Rank	Symptom	R1% Consensus[1] (14–22 years)	R2% Consensus[1] (14–22 years)
75% Consensus or more for youth			
1	Marked physiological reactivity or prolonged distress after trauma reminders	81.9	95.4
2	Persistent avoidance of trauma reminders (people	83.3	94.0

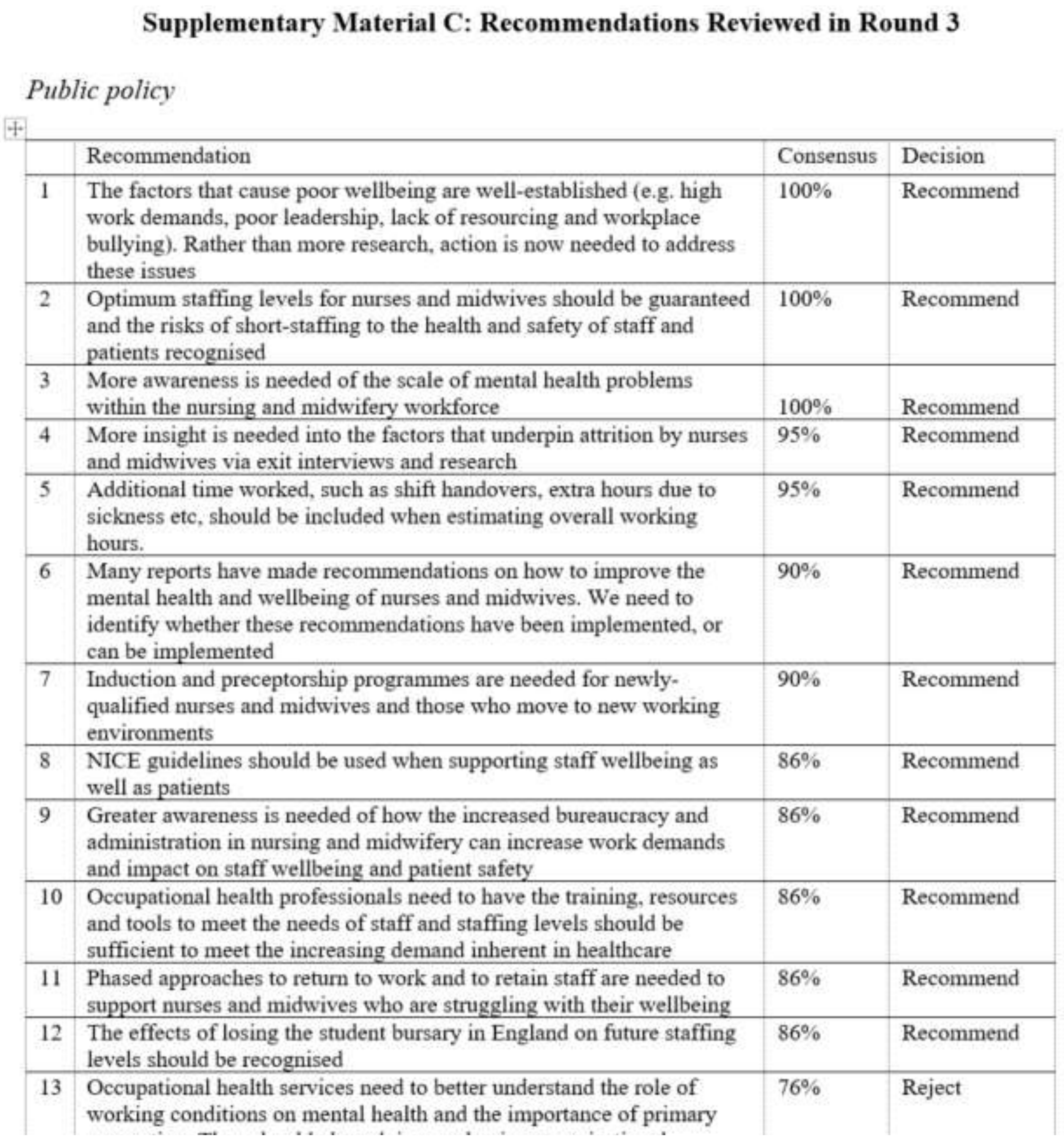
Kerns et al. (2023). Expert consensus regarding indicators of a traumatic reaction in autistic youth: a Delphi survey. Journal of Child Psychology & Psychiatry.. https://doi.org/10.1111/jcpp.13666

RESULTS (ROUND 3):

In total, 68 recommendations were rated in Round 3 consisting of those that had met the re-rate threshold in Round 2 (n = 50) or were developed from the feedback from Round 2 (n = 18) (Appendix S3). Once again, most recommendations focused on the organization (n = 33), followed by research (n = 16), public policy (n = 14), and individuals (n = 5).

Twenty-one of the 23 panellists invited to participate (91%) submitted ratings. Of the 68 recommendations, 45 (66%) were retained after a consensus agreement of at least 80% (Table 1). From these, more than half (n = 26, 57%) related to the organization, 27% (n = 12) pertained to public policy and six (13%) focused on research. Only one (2%) recommendation—“An evidence-based ‘emotional’ curriculum is needed to highlight the need for self-care and build effective coping and resilience during initial training” - related to the individual.

The full list of these 45 recommendations can be found in Appendix S3.



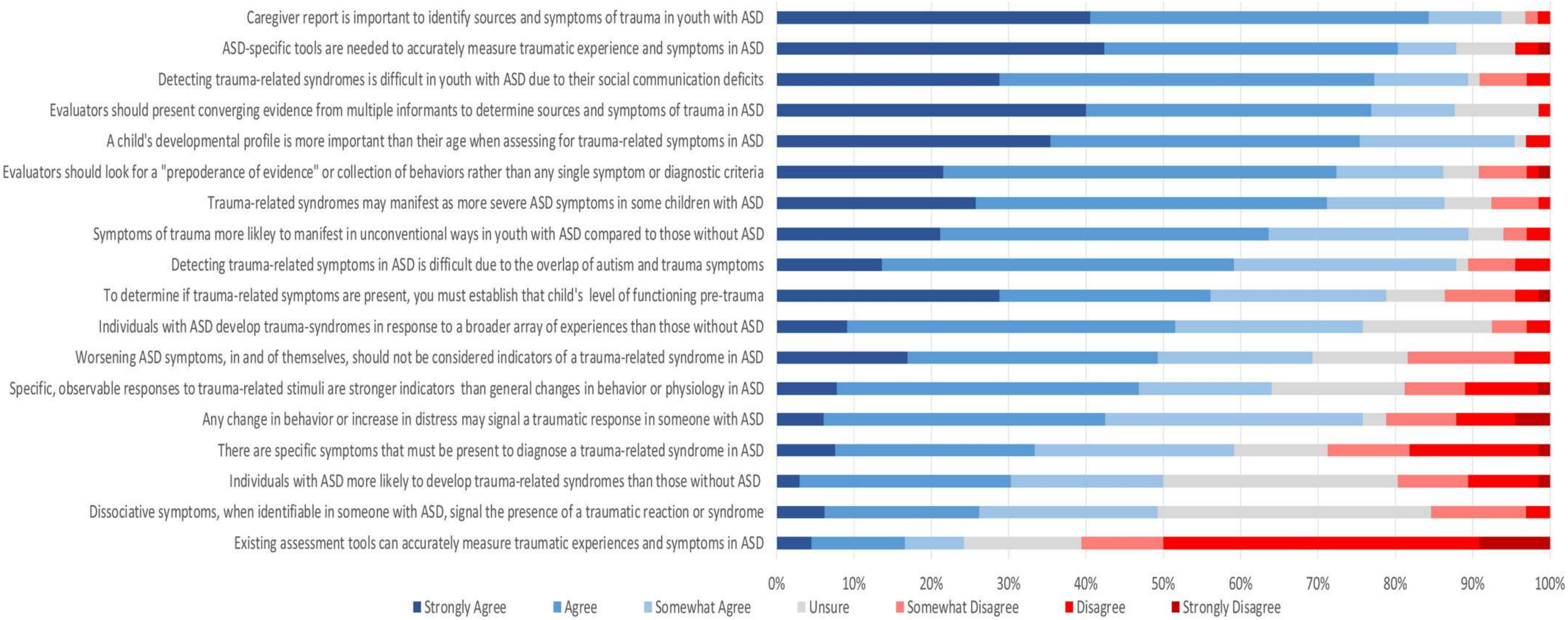
Supplementary Material C: Recommendations Reviewed in Round 3

Public policy

	Recommendation	Consensus	Decision
1	The factors that cause poor wellbeing are well-established (e.g. high work demands, poor leadership, lack of resourcing and workplace bullying). Rather than more research, action is now needed to address these issues	100%	Recommend
2	Optimum staffing levels for nurses and midwives should be guaranteed and the risks of short-staffing to the health and safety of staff and patients recognised	100%	Recommend
3	More awareness is needed of the scale of mental health problems within the nursing and midwifery workforce	100%	Recommend
4	More insight is needed into the factors that underpin attrition by nurses and midwives via exit interviews and research	95%	Recommend
5	Additional time worked, such as shift handovers, extra hours due to sickness etc, should be included when estimating overall working hours.	95%	Recommend
6	Many reports have made recommendations on how to improve the mental health and wellbeing of nurses and midwives. We need to identify whether these recommendations have been implemented, or can be implemented	90%	Recommend
7	Induction and preceptorship programmes are needed for newly-qualified nurses and midwives and those who move to new working environments	90%	Recommend
8	NICE guidelines should be used when supporting staff wellbeing as well as patients	86%	Recommend
9	Greater awareness is needed of how the increased bureaucracy and administration in nursing and midwifery can increase work demands and impact on staff wellbeing and patient safety	86%	Recommend
10	Occupational health professionals need to have the training, resources and tools to meet the needs of staff and staffing levels should be sufficient to meet the increasing demand inherent in healthcare	86%	Recommend
11	Phased approaches to return to work and to retain staff are needed to support nurses and midwives who are struggling with their wellbeing	86%	Recommend
12	The effects of losing the student bursary in England on future staffing levels should be recognised	86%	Recommend
13	Occupational health services need to better understand the role of working conditions on mental health and the importance of primary	76%	Reject

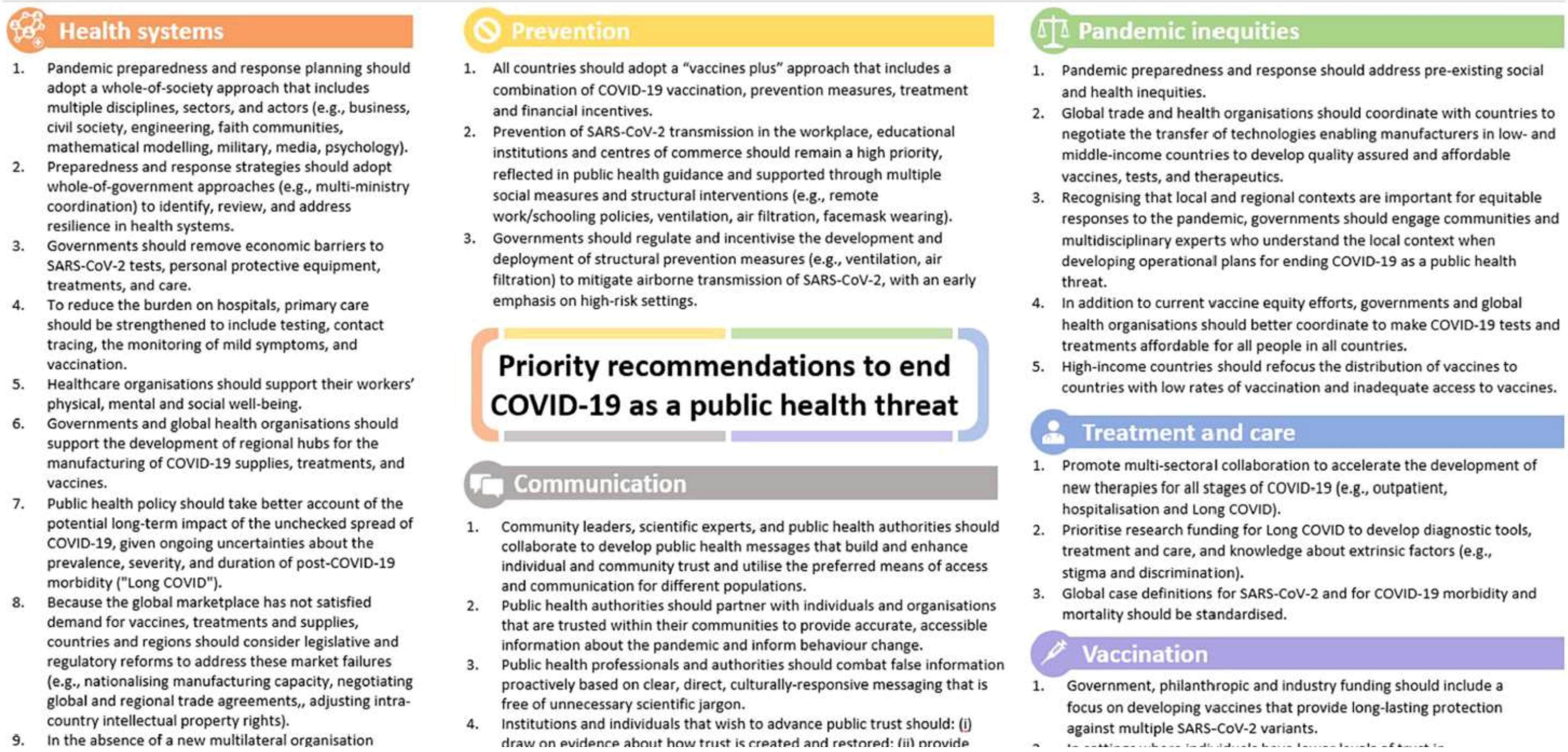
Kerns et al. (2023). Expert consensus regarding indicators of a traumatic reaction in autistic youth: a Delphi survey. Journal of Child Psychology & Psychiatry.. https://doi.org/10.1111/jcpp.13666

Don't be afraid to get creative!



Kerns et al. (2023). Expert consensus regarding indicators of a traumatic reaction in autistic youth: a Delphi survey. Journal of Child Psychology & Psychiatry.. https://doi.org/10.1111/jcpp.13666

Don't be afraid to get creative!



Health systems

1. Pandemic preparedness and response planning should adopt a whole-of-society approach that includes multiple disciplines, sectors, and actors (e.g., business, civil society, engineering, faith communities, mathematical modelling, military, media, psychology).
2. Preparedness and response strategies should adopt whole-of-government approaches (e.g., multi-ministry coordination) to identify, review, and address resilience in health systems.
3. Governments should remove economic barriers to SARS-CoV-2 tests, personal protective equipment, treatments, and care.
4. To reduce the burden on hospitals, primary care should be strengthened to include testing, contact tracing, the monitoring of mild symptoms, and vaccination.
5. Healthcare organisations should support their workers' physical, mental and social well-being.
6. Governments and global health organisations should support the development of regional hubs for the manufacturing of COVID-19 supplies, treatments, and vaccines.
7. Public health policy should take better account of the potential long-term impact of the unchecked spread of COVID-19, given ongoing uncertainties about the prevalence, severity, and duration of post-COVID-19 morbidity ("Long COVID").
8. Because the global marketplace has not satisfied demand for vaccines, treatments and supplies, countries and regions should consider legislative and regulatory reforms to address these market failures (e.g., nationalising manufacturing capacity, negotiating global and regional trade agreements,, adjusting intra-country intellectual property rights).
9. In the absence of a new multilateral organisation

Prevention

1. All countries should adopt a "vaccines plus" approach that includes a combination of COVID-19 vaccination, prevention measures, treatment and financial incentives.
2. Prevention of SARS-CoV-2 transmission in the workplace, educational institutions and centres of commerce should remain a high priority, reflected in public health guidance and supported through multiple social measures and structural interventions (e.g., remote work/schooling policies, ventilation, air filtration, facemask wearing).
3. Governments should regulate and incentivise the development and deployment of structural prevention measures (e.g., ventilation, air filtration) to mitigate airborne transmission of SARS-CoV-2, with an early emphasis on high-risk settings.

Priority recommendations to end COVID-19 as a public health threat

Communication

1. Community leaders, scientific experts, and public health authorities should collaborate to develop public health messages that build and enhance individual and community trust and utilise the preferred means of access and communication for different populations.
2. Public health authorities should partner with individuals and organisations that are trusted within their communities to provide accurate, accessible information about the pandemic and inform behaviour change.
3. Public health professionals and authorities should combat false information proactively based on clear, direct, culturally-responsive messaging that is free of unnecessary scientific jargon.
4. Institutions and individuals that wish to advance public trust should: (i) draw on evidence about how trust is created and restored; (ii) provide

Pandemic inequities

1. Pandemic preparedness and response should address pre-existing social and health inequities.
2. Global trade and health organisations should coordinate with countries to negotiate the transfer of technologies enabling manufacturers in low- and middle-income countries to develop quality assured and affordable vaccines, tests, and therapeutics.
3. Recognising that local and regional contexts are important for equitable responses to the pandemic, governments should engage communities and multidisciplinary experts who understand the local context when developing operational plans for ending COVID-19 as a public health threat.
4. In addition to current vaccine equity efforts, governments and global health organisations should better coordinate to make COVID-19 tests and treatments affordable for all people in all countries.
5. High-income countries should refocus the distribution of vaccines to countries with low rates of vaccination and inadequate access to vaccines.

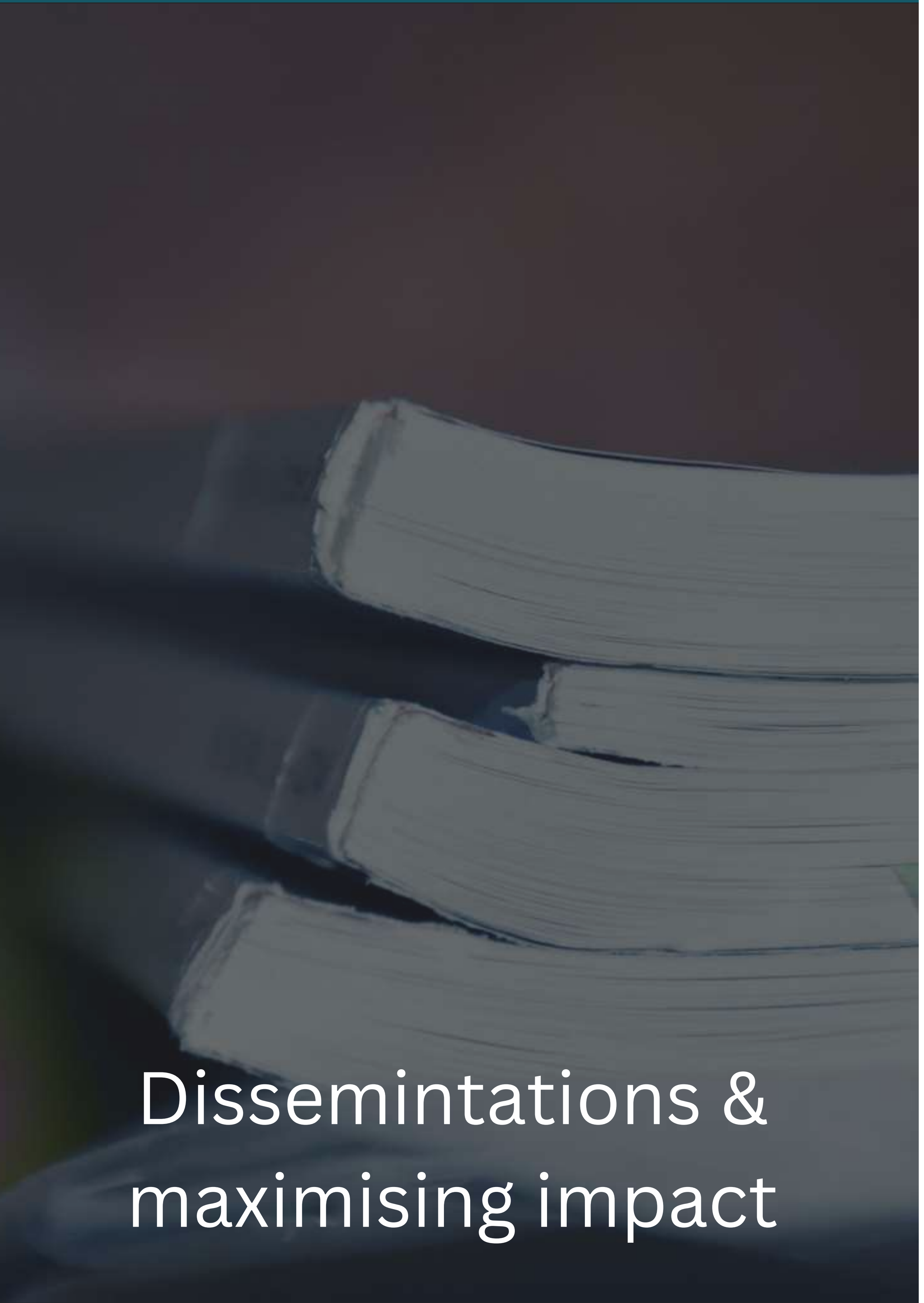
Treatment and care

1. Promote multi-sectoral collaboration to accelerate the development of new therapies for all stages of COVID-19 (e.g., outpatient, hospitalisation and Long COVID).
2. Prioritise research funding for Long COVID to develop diagnostic tools, treatment and care, and knowledge about extrinsic factors (e.g., stigma and discrimination).
3. Global case definitions for SARS-CoV-2 and for COVID-19 morbidity and mortality should be standardised.

Vaccination

1. Government, philanthropic and industry funding should include a focus on developing vaccines that provide long-lasting protection against multiple SARS-CoV-2 variants.

Lazarus et al. (2022). A multinational Delphi consensus to end the COVID-19 public health threat. Nature. https://doi.org/10.1111/jcpp.13666



Dissemintations & maximising impact

Peer-reviewed journal article / Conference presentation

- Publishing your Delphi study in a peer-reviewed journal article is important for a number of reasons, besides boosting your CV:
    - Allows your work to be cited by other researchers which helps in increasing visibility of your findings
    - Avoids unnecessary repetition and allows researchers to build from your work
    - Gives more credibility to the method underlying other outputs that come from the Delphi (e.g. guidance)

- Presentation at conference events, whether in the form of a paper or a poster, can also be a good way to increase visibility and network with individuals who may be key stakeholders in the translation of your findings/recommendations

What is needed to deliver a successful Delphi Study: The sucess and quality of a Delphi study is determined by.......

Subject matter expertise

Having a clearly articulated **coherent, deliverable and *relevant*** Question

Timing

Are there sufficient people (on the globe) able, motivated and willing to answer this question?

Knowledge and rigour of Delphi method

A research team, who will deliver

Well developed project management skills & Processes

Strong network of experts in the project team and in the pool of experts

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Group exercise: What could get in the way of you undertaking your Delphi and your plan to overcome this

10 minutes

Part IV Summary

- The CREDES guidance is a useful checklist for ensuring you're reporting key information in the write-up
- There is no singular way to structure the methods and results sections of a Delphi study - papers present this information in different ways, and to different degrees of depth
- The methods section follows the same format as a standard journal article, and should include information on design, participants, materials/procedure, data analysis plan, and ethical considerations
- The results section should begin with an overview of the panellists that took part in the study, followed by a description of the results at each round
- There is opportunity to be creative in how you present the final results

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Whole day Summary

- Delphi studies provide an opportunity to establish evidence in understudied populations or areas of practice based on expert consensus opinions.

- The success of a Delphi study is only partly due to the quality and rigor of the Delphi design and factors such as networks, timing and availability of experts are critical for success.

- Delphi's typically have three iterative rounds, are anonymous in nature and have varied cut off points for agreeing consensus, with the most common being 70% or 80%.

- The functions of each round in a Delphi vary and, where needed, an additional 4th round can be added.

- Whilst gold standards for Delphi studies do not exist, the CREDES guidance offers practical steps researchers can take to improve adherence and rigor.

Contact Details

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Thank you

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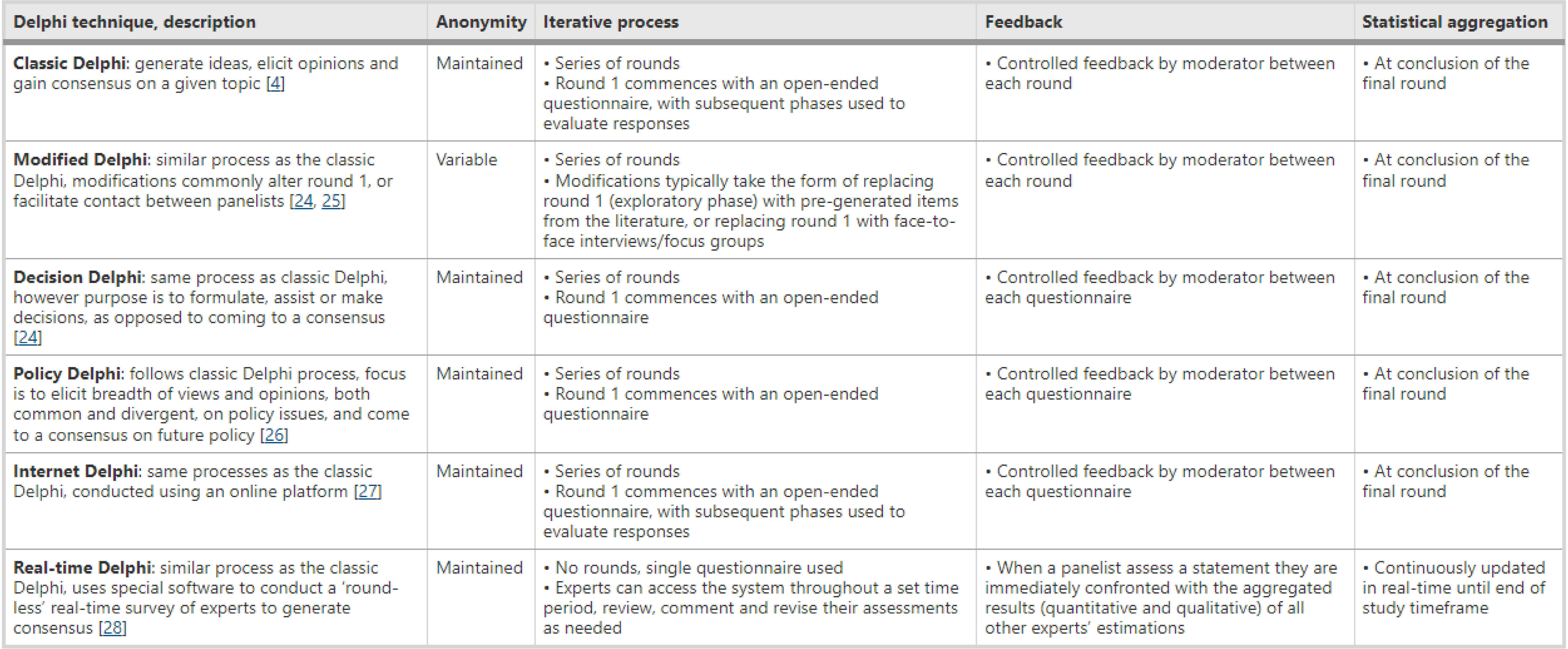

Delphi technique, description	Anonymity	Iterative process	Feedback	Statistical aggregation
Classic Delphi: generate ideas, elicit opinions and gain consensus on a given topic [4]	Maintained	• Series of rounds • Round 1 commences with an open-ended questionnaire, with subsequent phases used to evaluate responses	• Controlled feedback by moderator between each round	• At conclusion of the final round
Modified Delphi: similar process as the classic Delphi, modifications commonly alter round 1, or facilitate contact between panelists [24, 25]	Variable	• Series of rounds • Modifications typically take the form of replacing round 1 (exploratory phase) with pre-generated items from the literature, or replacing round 1 with face-to-face interviews/focus groups	• Controlled feedback by moderator between each round	• At conclusion of the final round
Decision Delphi: same process as classic Delphi, however purpose is to formulate, assist or make decisions, as opposed to coming to a consensus [24]	Maintained	• Series of rounds • Round 1 commences with an open-ended questionnaire	• Controlled feedback by moderator between each questionnaire	• At conclusion of the final round
Policy Delphi: follows classic Delphi process, focus is to elicit breadth of views and opinions, both common and divergent, on policy issues, and come to a consensus on future policy [26]	Maintained	• Series of rounds • Round 1 commences with an open-ended questionnaire	• Controlled feedback by moderator between each questionnaire	• At conclusion of the final round
Internet Delphi: same processes as the classic Delphi, conducted using an online platform [27]	Maintained	• Series of rounds • Round 1 commences with an open-ended questionnaire, with subsequent phases used to evaluate responses	• Controlled feedback by moderator between each questionnaire	• At conclusion of the final round
Real-time Delphi: similar process as the classic Delphi, uses special software to conduct a 'round-less' real-time survey of experts to generate consensus [28]	Maintained	• No rounds, single questionnaire used • Experts can access the system throughout a set time period, review, comment and revise their assessments as needed	• When a panelist assess a statement they are immediately confronted with the aggregated results (quantitative and qualitative) of all other experts' estimations	• Continuously updated in real-time until end of study timeframe