

Delphi Technique

The do nots and why nots

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MedStatStudio

Objectives

- Understand when to use the Delphi Method and when to consider other techniques
- Understand how to choose and manage the 'Expert Panel'
- Define consensus, and use this definition to determine how questions advance during the Delphi rounds

Quiz: Part A

Part A

In which of the following scenarios would Delphi Methodology be the best choice? Indicate yes or no.

1. Y N The head of a disaster medicine research group wishes to determine the research priorities for the next 10 years.
2. Y N A researcher would like to know if the directors in the hospitals in their region are satisfied with the standard regional guidelines for CBRN preparedness.
3. Y N A technology firm would like to know what technologies are likely to be most important to disaster medicine scene response in the future.
4. Y N A disaster medicine specialist would like to know which model of N-95 mask is most likely to fit properly for health care providers working in an Ebola response center.
5. Y N A large health care region would like to develop a policy to help healthcare providers make ethical decisions in the event of a disaster.
6. Y N A researcher wishes to assess whether the number of victims of natural disasters would increase with a shift to world reliance on solar energy.

Quiz: Part B

Part B

1. What is the optimal number of experts for the Delphi Panel?
 - A. Minimum _____
 - B. Maximum _____
2. When a statement reaches consensus in the first round, but the answer is contrary to what the researcher expected, what is the next step?
 - A. Drop the statement entirely from the study analysis
 - B. Drop the statement from the next questionnaire, but include it in the study analysis
 - C. Convert the statement to an open ended question, and include it in the next questionnaire
 - D. Include the statement in the next questionnaire with the same wording

Quiz: Part C

Part C

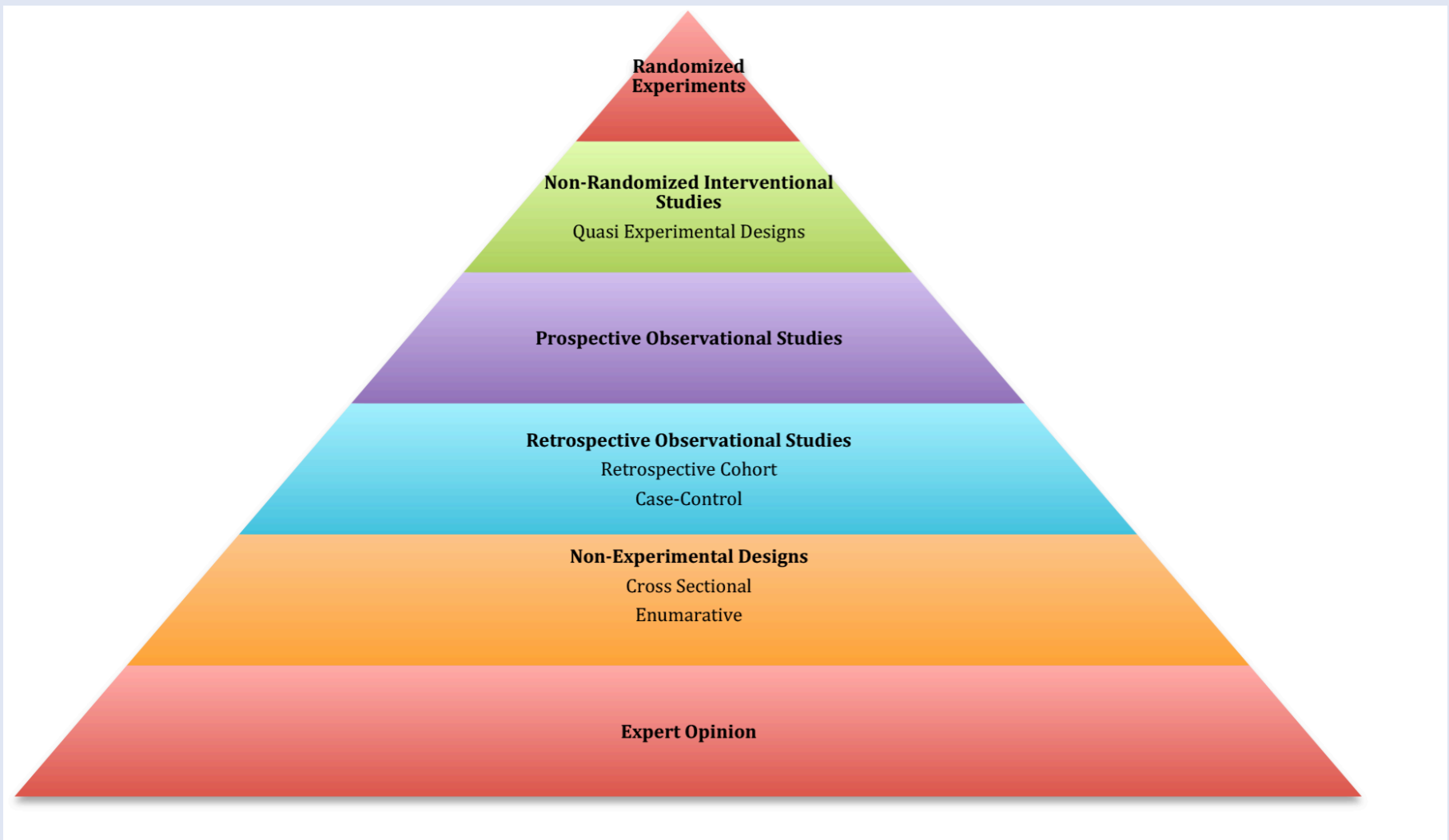
For the following scenarios, indicate TRUE if the statement has reached consensus, and FALSE if it has not.

1. _____ When asked if virtual reality was important for training in disaster medicine, 50% of respondents stated yes and 50% stated no.
2. _____ When rating the importance of Twitter for disaster response on a scale of 1 to 10, the median response was 9 with an interquartile range of 3.
3. _____ When asked if photography by drone would be useful during a MCI, experts used a 5-point Likert scale. 100% of respondents stated "Neither agree nor disagree"

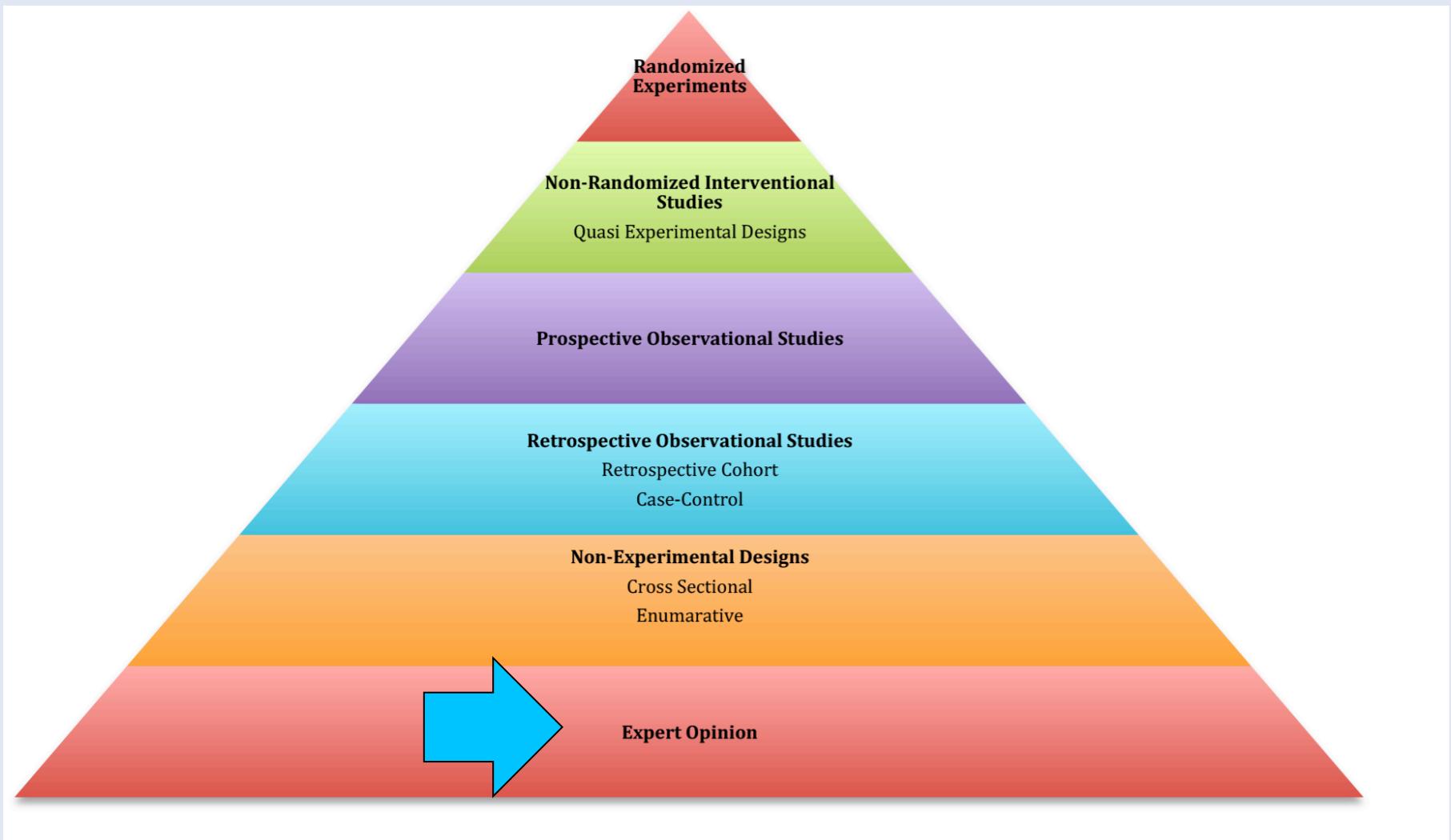
History

- Invented by the RAND corporation to forecast the impact of technology on warfare.
- “It is primarily concerned with making the best you can of a less than perfect fund of information.”
- Purpose is to achieve agreement among a group of experts on a certain issue where none previously existed

Strength of Evidence ??



Strength of Evidence



Advantages of Delphi

- Addresses three main problems with focus groups:
 - Dominant personalities
 - Group pressure
 - Noise

Disadvantages of Delphi

- Cannot produce right or wrong answers, only expert opinion
- Opinion is a belief that may or may not be actually true
- Consensus does not always mean the correct answer
- "This method is not a replacement for rigorous scientific reviews of published reports or for original research" (Keeney et al, 2011)
- Internal validity is largely unknown

Planning a Delphi Study

- Lack of universal guidelines
- Study plan must include:
 1. Cover letter
 2. Design of the survey tool
 1. Pilot test
 2. Reliability / Validity
 3. Size of Expert Panel
 4. Implications on lack of anonymity
 5. Level of Consensus
- Timeline (remember Delphi is slow)
 - At least 2 weeks between rounds

Situations to use Delphi

- Develop priorities
- Develop policy
- Forecast about the future

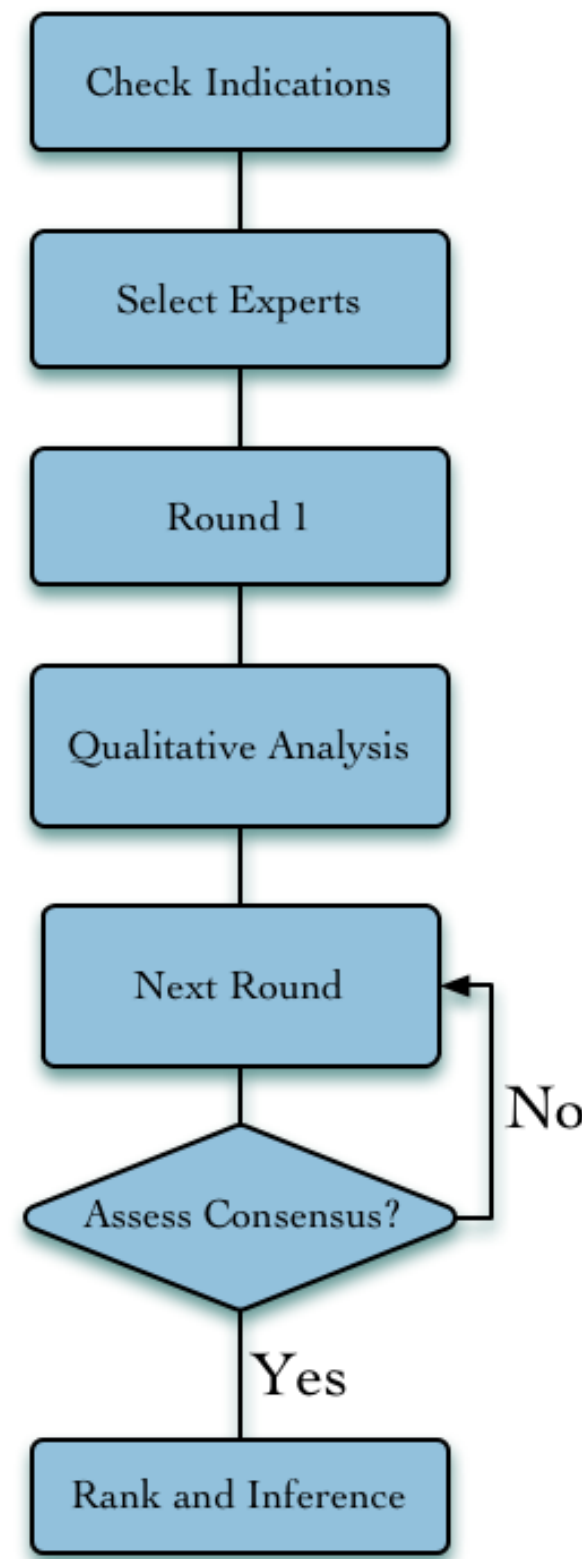
Useful when the research problem does not lend itself to precise analytical techniques. (Keeney 2001)

Analysis of Delphi Studies

- Qualitative analysis
 - (Analyze results of open ended questions)
- Quantitative analysis
 - Calculate Consensus
 - Calculate ratings
 - Rank

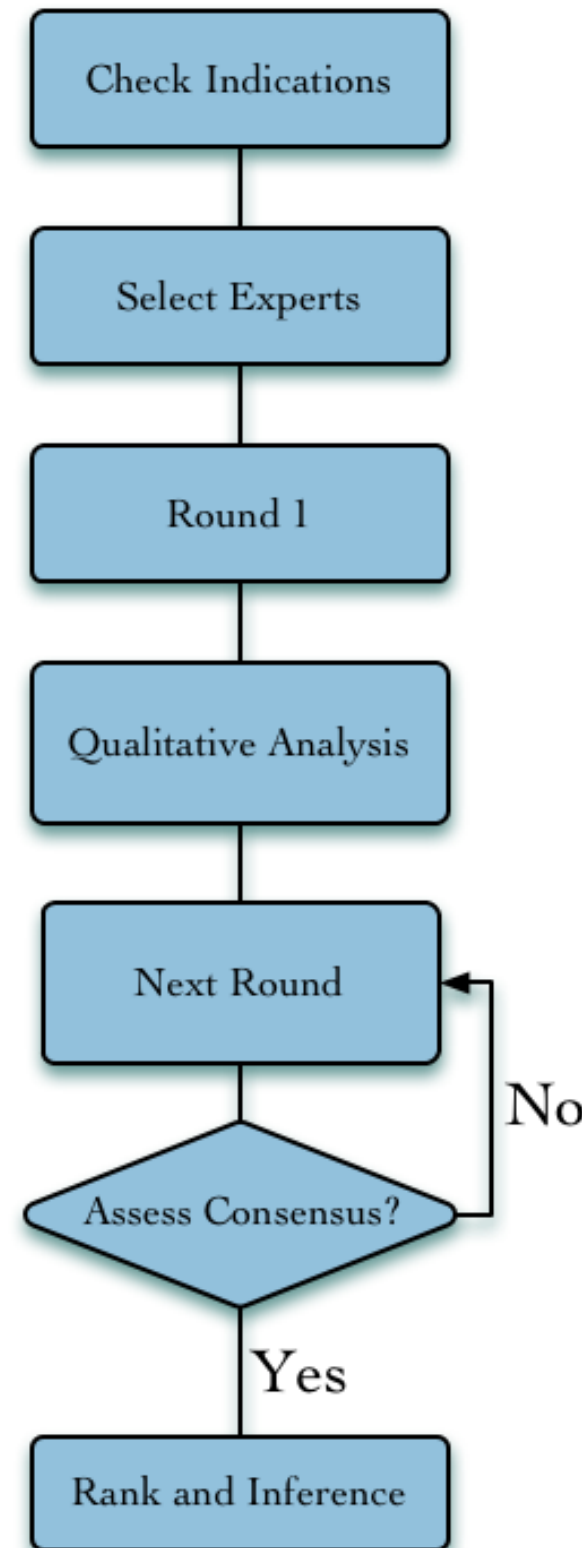
Delphi: Workflow

1. Check Indications
2. Select experts
3. Round 1
4. Qualitative Analysis
5. Next Round
6. Assess Consensus
7. Repeat until consensus obtained
8. Rank and Inference



Delphi: Check Indications

1. **Check Indications**
2. Select experts
3. Round 1
4. Qualitative Analysis
5. Next Round
6. Assess Consensus
7. Repeat until consensus obtained
8. Rank and Inference

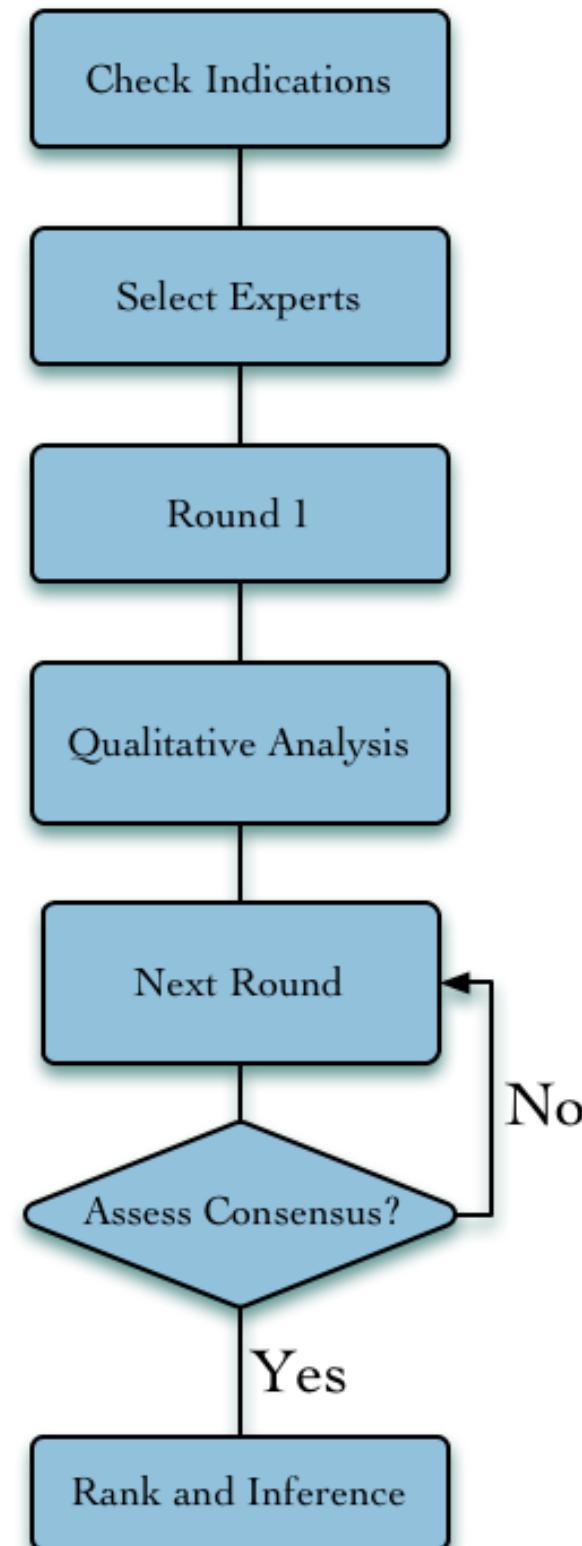


Indications

1. The answer is essential and needs to be known NOW.
2. There is absolutely no other way to find the answer
3. You have lots of time or money (preferably both)

Delphi: Select Experts

1. Check Indications
- 2. Select experts**
3. Round 1
4. Qualitative Analysis
5. Next Round
6. Assess Consensus
7. Repeat until consensus obtained
8. Rank and Inference



Selection of Experts

- 8-12 Experts suggested (diminishing returns if more are added)
- Requirements for Experts:
 - Knowledge and experience with the issues under investigation
 - Capacity and willingness to participate
 - Sufficient time to participate
 - Effective communication skills
- Note that many panels are not true 'experts' but rather 'informed advocates'

Ethics

- Give at least 2 weeks for experts to decide if they will participate and to forward any questions
- Confidentiality should be assured
- Comments should never have names mentioned

Ethics

Table 8.1 Information to be included in a participant information sheet for a Delphi study

1. Study title
2. Invitation to take part
3. What is the purpose of the study?
4. Why have I been chosen?
5. Do I have to take part?
6. What will happen to me if I take part?
7. What if anything goes wrong?
8. Will my taking part in the study be kept confidential?
9. What happens when the study stops?
10. Who is organising and funding the research?
11. What are the possible benefits of taking part?
12. Who has reviewed the study?
13. Who do I contact for further information?

From Keeney et al, 2011

Ethics

Delphi participant information sheet

1. Study title

A study to identify research priorities for the therapy professions

2. Invitation paragraph

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please read the following information carefully. Please ask us if there is anything that is not clear or if you would like more information and please take your time to decide whether you wish to join this study.

3. What is the purpose of the study?

The therapy professions (which include Chiropractic/Podiatry, Dietetics, Occupational Therapy, Orthotics, Physiotherapy and Speech and Language Therapy) constitute a growing proportion of the public health-care workforce, playing an important and very significant role in the provision of health care. The recent shift from treatment intervention which focuses on cure, to one which focuses on the quality of life outcomes and changes in the way services are delivered, has strengthened in many ways the potential role of the therapies. More than ever, there is a need to ensure that evidence is sought and applied for the effective and efficient delivery of services at both the systems and individual level. There is a need to determine research priorities for the therapy professions in the context of needs in the wider health care arena, thereby ensuring a focused, coherent and coordinated approach for future therapy research and investment and achievement of optimal outcome from all resources.

4. Why have I been chosen?

You have been asked to take part because you have been identified as an expert in this area. The research study aims to identify research priorities for Therapy services as perceived by the professions themselves, but also key stakeholders other relevant statutory, voluntary and charitable bodies and consumers.

5. Do I have to take part?

It is up to you to decide whether or not to take part and there is no obligation. If you decide to take part you will be given this information sheet to keep and you will be asked to sign a consent form. If you decide to take part, and then withdraw, you are free to withdraw at any time without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your employment or service provision in any way.

6. What will happen to me if I take part?

If you agree to take part in the study you will be asked in the first instance to complete a consent form and return this. This research will be carried out using the Delphi technique consisting of three questionnaires (known as rounds) aimed to achieve consensus. With your permission the questionnaires will be posted or e-mailed to you. After receipt of the enclosed consent form, you will shortly receive the first questionnaire. Simple and specific instructions will be provided for each questionnaire.

The amount of time necessary for completion of each questionnaire (or rounds) will vary with each panellist; but should range from approximately 15–30 minutes for Round 1, 10–20 minutes for Round 2, and 20–30 minutes for Round 3. There are no right or wrong answers to the questions. This study is seeking your expert opinion.

Figure 8.1 Participant information sheet

The following points are important for you to remember:

1. Your participation is entirely voluntary.
2. You may decline to withdraw from the study at any time.
3. You will remain anonymous to the other participants (or experts) throughout this Delphi study and only the researchers will be able to identify your specific answers.
4. All records are confidential. Your name will only be recorded on the consent form; it will not be recorded on the questionnaire. All information will be handled, and stored in accordance with the requirements of the Data Protection Act 1998. This information will only be available to members of the research team. All information will be destroyed 5 years after the research is complete.
5. Any information that you provide will be confidential and when the results of the study are reported, you will not be identifiable in the findings.
6. Following the study information gathered will be sent for publication in a professional journal and will also be presented at conferences. All details about people who took part in the study will be kept anonymous.
7. You will only have to complete the consent form once; return of completed Delphi rounds implies your consent to participate.

7. What if something goes wrong?

We are not aware of any complications or risks that could arise from you taking part in this study. However, if you decide to take part in the study you will be given written information detailing the names and telephone number of the organisations to contact should you have any complaints or difficulties with any aspect of the study.

8. Will my taking part in this study be kept confidential?

If you consent to take part in this study, your name will not be disclosed and would not be revealed in any reports or publications resulting from this study. Apart from your consent form, your name will not be recorded on Delphi rounds. Each participant will be allocated a unique code. You will remain anonymous to the other participants (or experts) throughout this Delphi study and only the researchers will be able to identify your specific answers. All information will be handled, and stored in accordance with the requirements of the Data Protection Act 1998. All information will be destroyed 5 years after the research is complete.

9. What happens when the research study stops?

The results of this project will be used to develop future therapy research to help improve services and individual care practices. The findings may be sent for publication in a professional journal and/or may be presented at conferences.

10. Who is organising and funding the research?

The researcher should provide details here of the funder of the research study and the name of the principal investigator.

11. What are the possible benefits of taking part?

We cannot promise the study will help you as an individual, but the information we obtain might help improve the future research direction for the therapy professions.

12. Who has reviewed the study?

The study has been approved by **insert name of Research Ethics Committee and date of approval**.

13. Further Information

If you wish to contact someone for further information regarding this study you can contact:

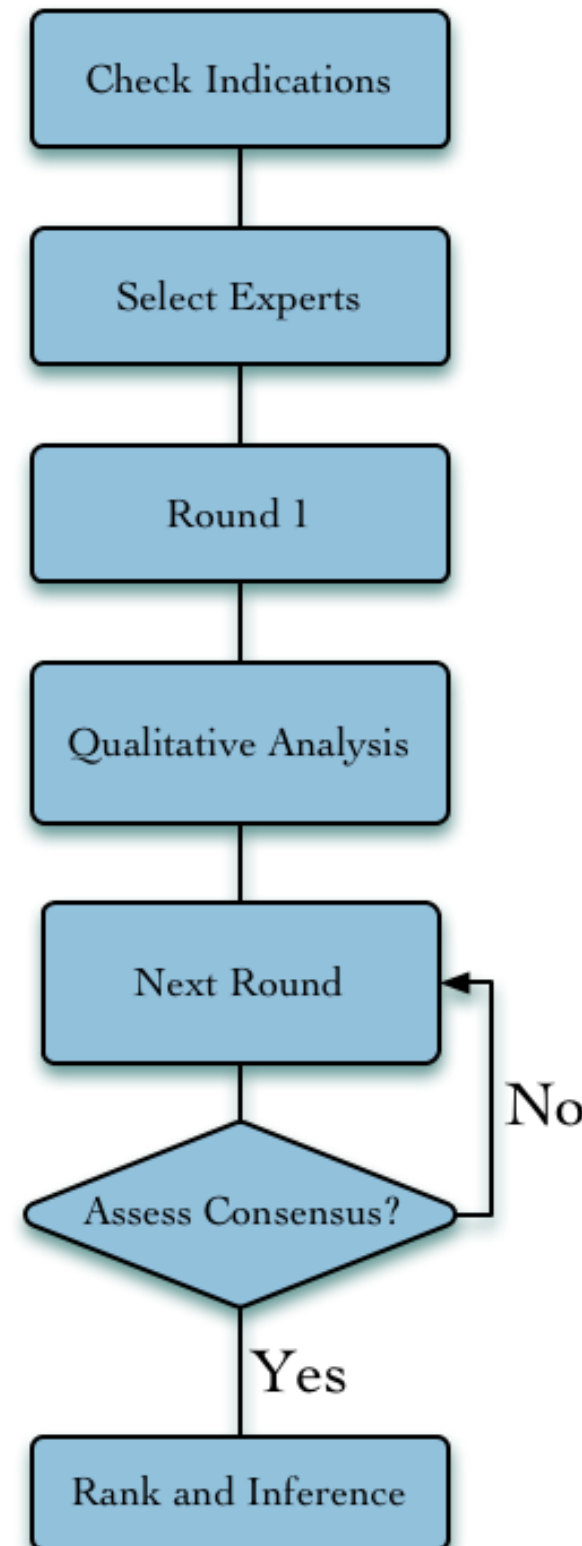
Insert Researcher's name and contact details

Thank you for taking time to read this information.

Figure 8.1 (Continued)

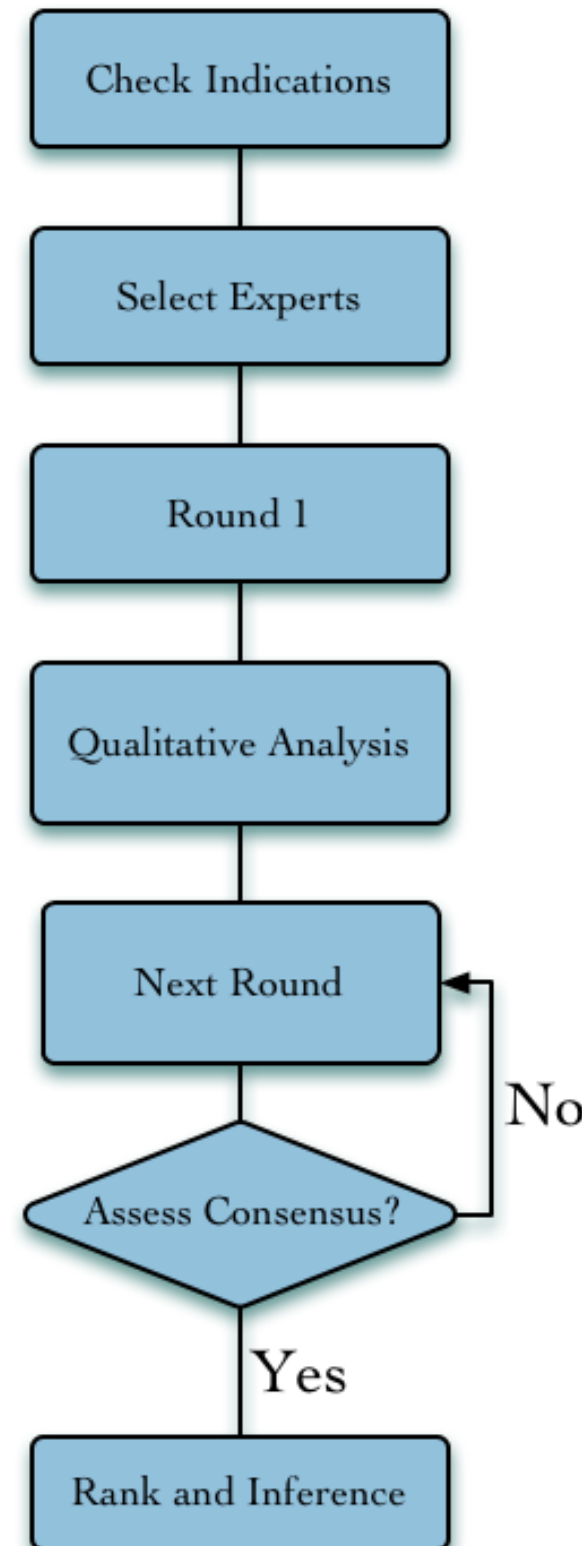
Delphi: Round 1

1. Check Indications
2. Select experts
- 3. Round 1**
4. Qualitative Analysis
5. Next Round
6. Assess Consensus
7. Repeat until consensus obtained
8. Rank and Inference



Delphi: Qualitative Analysis

1. Check Indications
2. Select experts
3. Round 1
- 4. Qualitative Analysis**
5. Next Round
6. Assess Consensus
7. Repeat until consensus obtained
8. Rank and Inference



Qualitative Analysis

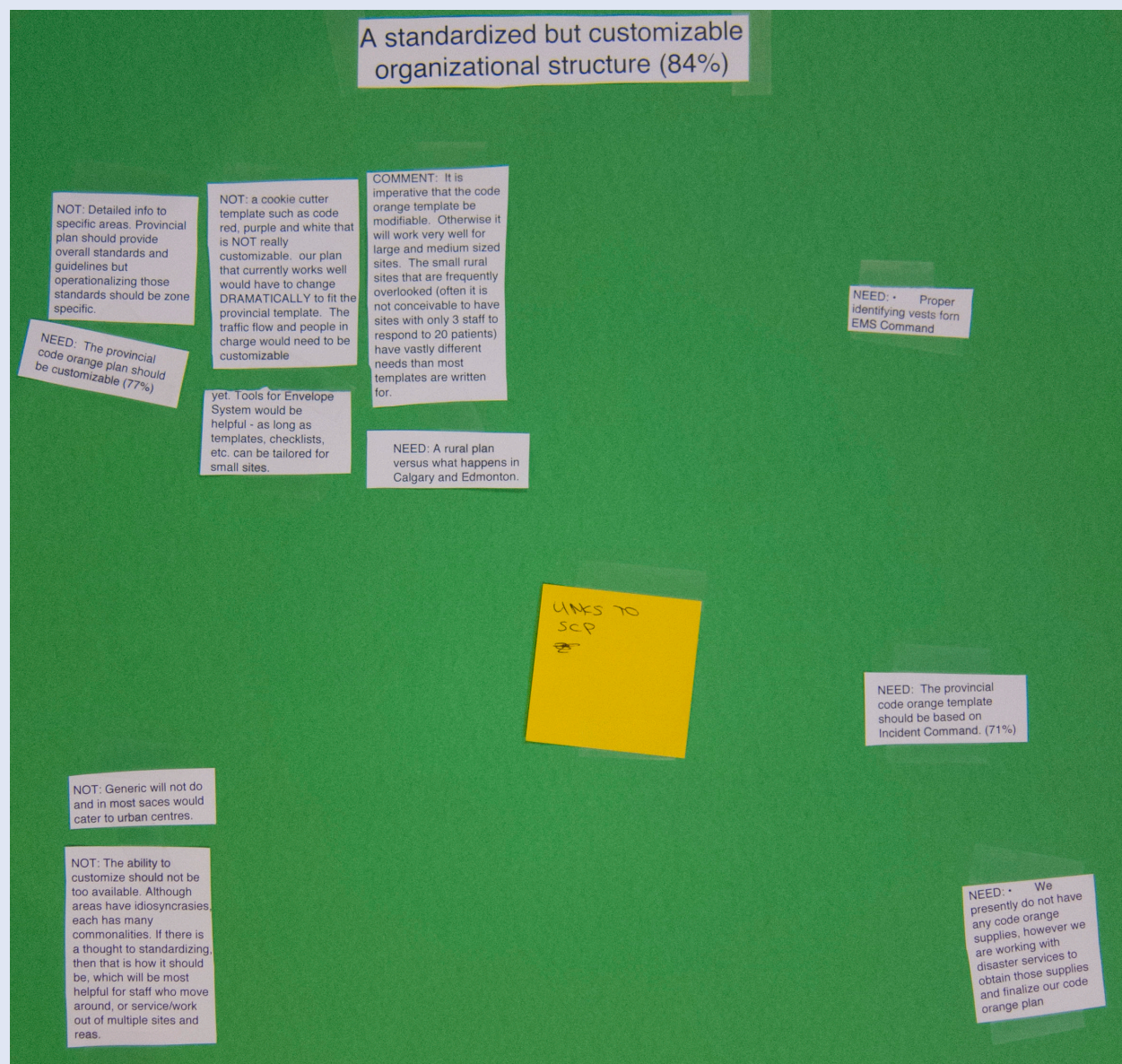
- Amount of information from first round can be overwhelming.
- Often ideas are worded differently by participants and need to be grouped.
- Attempt to not change wording if possible.

Goal of Qualitative Analysis

- Identify statements that are similar and group
- Retain unique statements
- Use these to create closed (ranking) questions

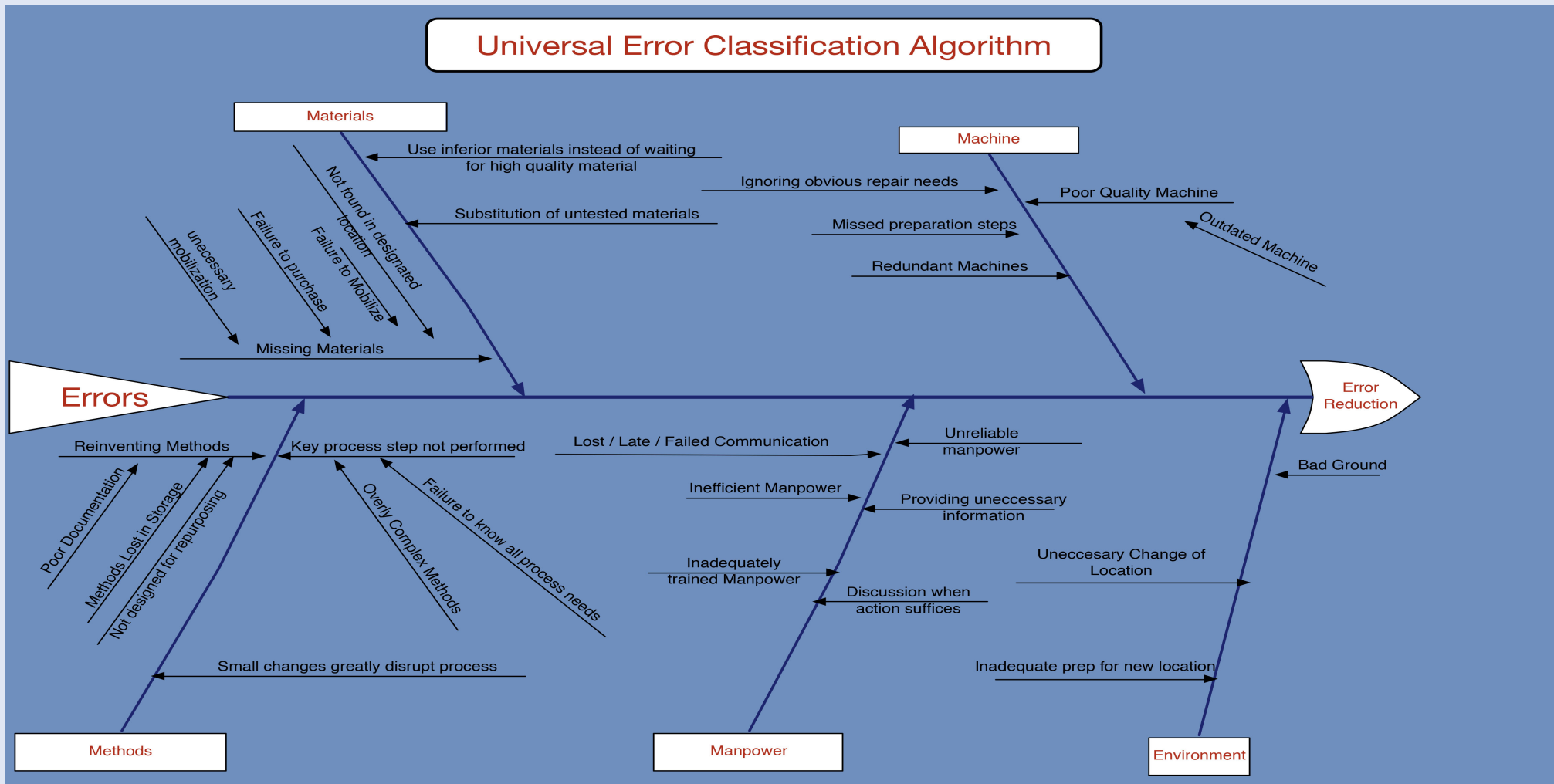
Qualitative Analysis

Affinity Diagram



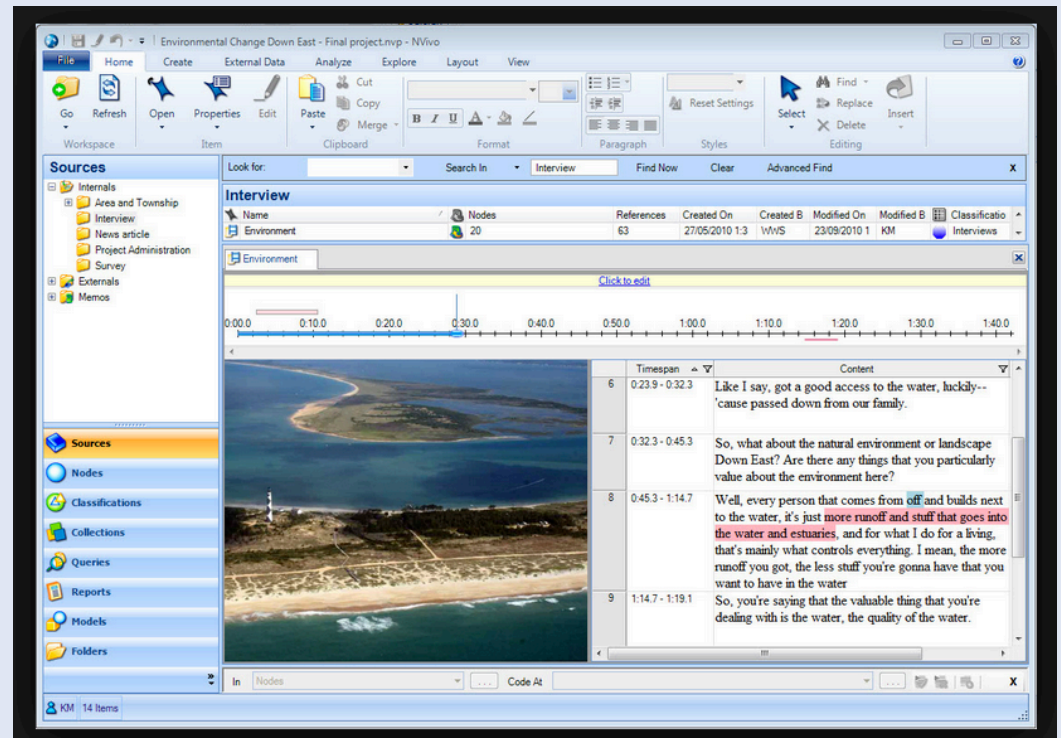
Qualitative Analysis

Fishbone Diagram

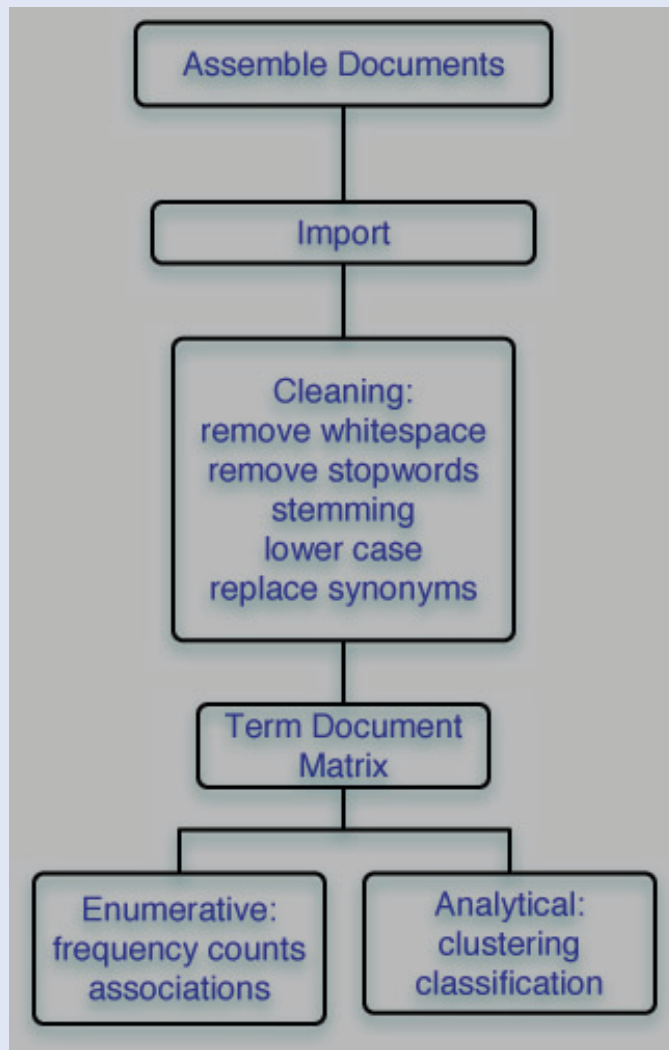


Software Solutions

- Nvivo
 - Helps to structure qualitative data
 - Classify, sort, and arrange information
 - Variety of statistical tests
 - Likely unnecessary for small group size



Text Mining



A screenshot of a spreadsheet application showing a list of tweets. The spreadsheet has columns labeled I through P. The first row (row 1) contains the headers: generator_, object_post, object_id. The subsequent rows (rows 2-37) contain tweet data, including timestamps (e.g., 2012-05-20T), user handles (e.g., @ilpost, @mybioniceye), and tweet content (e.g., "La notevole foto del recupero di un dipinto dalle macerie di una chie...").

	I	J	K	L	M	N	O	P
1	generator_	object_post	object_id					
2	2012-05-20T	2012-05-20T	RT @ilpost: La notevole foto del recupero di un dipinto dalle macerie di una chie					
3	2012-05-20T	2012-05-20T	RT @mybioniceye: Il geologo in me: RT @crlmion: #terremoto l'acqua risalita da					
4	2012-05-20T	2012-05-20T	Terrore in Emilia, piú di 75 scosse sismiche - Corriere.it http://t.co/HnhjqcFN_vf_					
5	2012-05-20T	2012-05-20T	RT @lindaemme: a sto punto mi vien da pensare che il legista Venturi e Sgarbi ie					
6	2012-05-20T	2012-05-20T	Terremoto, 7 morti. Le scosse continuano A Crevalcore crolla una torre, 300 sfoll					
7	2012-05-20T	2012-05-20T	RT @Corriereit: Terremoto, terremoto di magnitudo 6.0 Nuova forte scossa nel f					
8	2012-05-20T	2012-05-20T	TERREMOTO IN EMILIA. NICOLA, OPERAIO 35ENNE, MORTO PER IL CAMBIO DI T					
9	2012-05-20T	19:20:59.000	RT @Agenzia_Italia: Terremoto: bimba salva per miracolo					
10	2012-05-20T	2012-05-20T	RT @Lettera43: Terremoto in Emilia, trema l'area del contestato maxi deposito c					
11	2012-05-20T	2012-05-20T	RT @disinformatico: äöi@ChiccaMassa: @disinformatico Ecco la telefonata http					
12	2012-05-20T	2012-05-20T	http://t.co/CeQ2e76Y Continuano le scosse di terremoto in Emilia... http://t.co/					
13	2012-05-20T	2012-05-20T	Terremoto in Emilia, unäö»auto invita ad uscire di casa per scosse: ma sono scia					
14	2012-05-20T	2012-05-20T	RT @marcellofit: @angealfa @pbersani @Pierferdinando A.B.C. #terremoto in E					
15	2012-05-20T	2012-05-20T	RT @ezekiel: gli aggiornamenti sulla provincia di Ferrara raccolti da @marzap17					
16	2012-05-20T	2012-05-20T	TERREMOTO IN EMILIA: PRIMA DELLE SCOSSE FORTE AUMENTO DEL LIVELLO DE					
17	2012-05-20T	2012-05-20T	cosa fare in caso di #terremoto http://t.co/OL3tPrPk					
18	2012-05-20T	2012-05-20T	RT @marcellofit: @angealfa @pbersani @Pierferdinando A.B.C. #terremoto in E					
19	2012-05-20T	2012-05-20T	RT @NichiVendola: Con läö»Emilia Romagna: Un terremoto di importante intens					
20	2012-05-20T	19:22:21.000	RT @Agenzia_Italia: Terremoto: bimba salva per miracolo					
21	2012-05-20T	2012-05-20T	Terremoto in Emilia: morti, sfollati e infinite scosse: #emilia romagna #terremot					
22	2012-05-20T	2012-05-20T	RT @chiadegli: E nonostante #terremoto e pioggia, l'Emilia iÄ tra le regioni con p					
23	2012-05-20T	2012-05-20T	Terremoto in Emilia Romagna 6 morti a Ferrara, uno a Bologna Scosse continue.					
24	2012-05-20T	19:23:29.000	RT @Agenzia_Italia: Terremoto: bimba salva per miracolo					
25	2012-05-20T	2012-05-20T	RT @retesolidarieta: Terremoto in Emilia: partono le colonne mobili da altre reg					
26	2012-05-20T	2012-05-20T	RT @BlitzQuotidiano: Terremoto in Emilia: morti, sfollati e infinite scosse: #emili					
27	2012-05-20T	2012-05-20T	"Stä crollando il municipio", la scossa in diretta Guarda il Video http://t.co/LdS9f					
28	2012-05-20T	2012-05-20T	#Terremoto in Emilia...la preoccupazione iÄ piú che lecita post #Aquila http://t.co/					
29	2012-05-20T	2012-05-20T	Terremoto del 5.9 Richter alle ore 4.04 in Emilia Romagna äöñ Il Fatto Quotidian					
30	2012-05-20T	2012-05-20T	RT @marcellofit: @angealfa @pbersani @Pierferdinando A.B.C. #terremoto in E					
31	2012-05-20T	2012-05-20T	RT @ilpost: La notevole foto del recupero di un dipinto dalle macerie di una chie					
32	2012-05-20T	2012-05-20T	Emilia, terremoto di magnitudo 5.9 Almeno tre morti nel Ferrarese http://t.co/X					
33	2012-05-20T	2012-05-20T	con il pensiero anche all'Emilia #terremoto					
34	2012-05-20T	2012-05-20T	Sgarbi: "L'Emilia sapriä reagire, non come l'Abruzzo che si piange addosso". Ma					
35	2012-05-20T	2012-05-20T	äöiTerremoto in Emilia, un'auto invita ad uscire di casa per scosse: ma sono scia					
36	2012-05-20T	2012-05-20T	#terremoto: attivo n.verde 800 848.088, per i familiari dei pazienti trasferiti da o					
37	2012-05-20T	2012-05-20T	Ti prego Monti quando esprimi il tuo rincrescimento e la tua partecipazione per					

Classification of twitter data from the 2012 Emilia-Romagna earthquake by machine learning: comparison of k-nearest neighbours, kernel support vector machine, and string kernel methods

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**MedStatStudio**

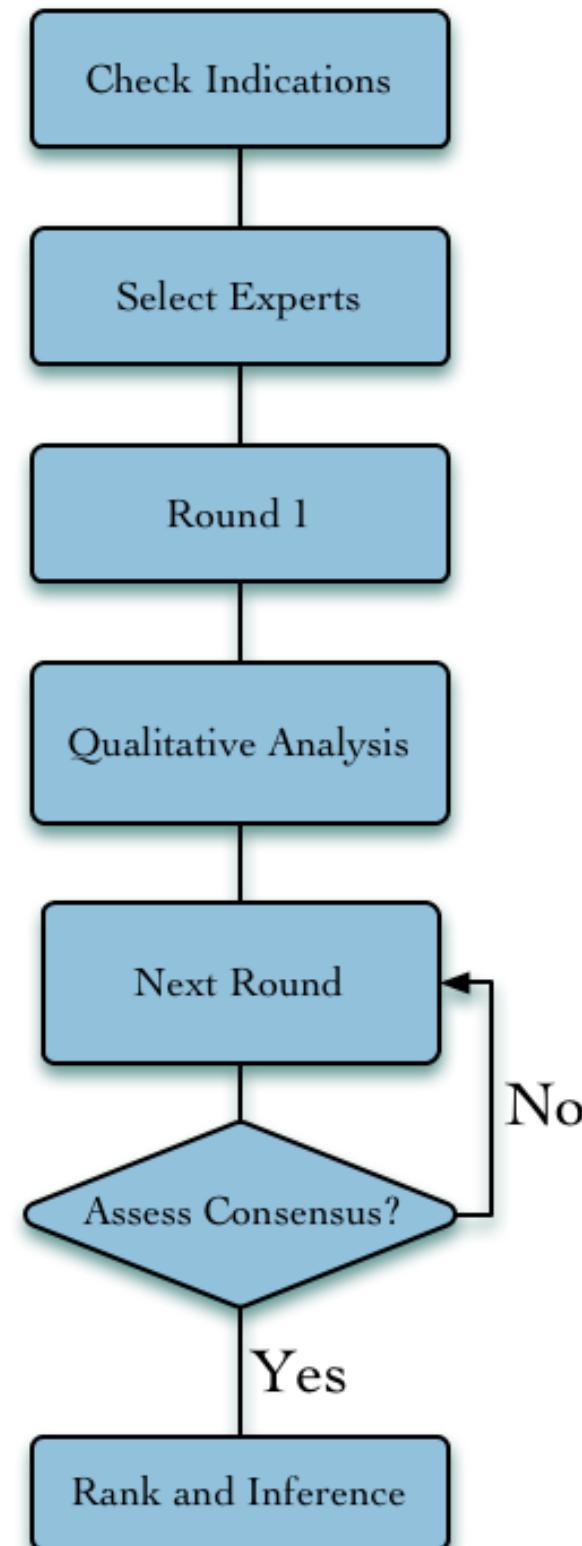


Rule of Parsimony

Use a complicated methodology only when it is clear by demonstration that nothing else will do

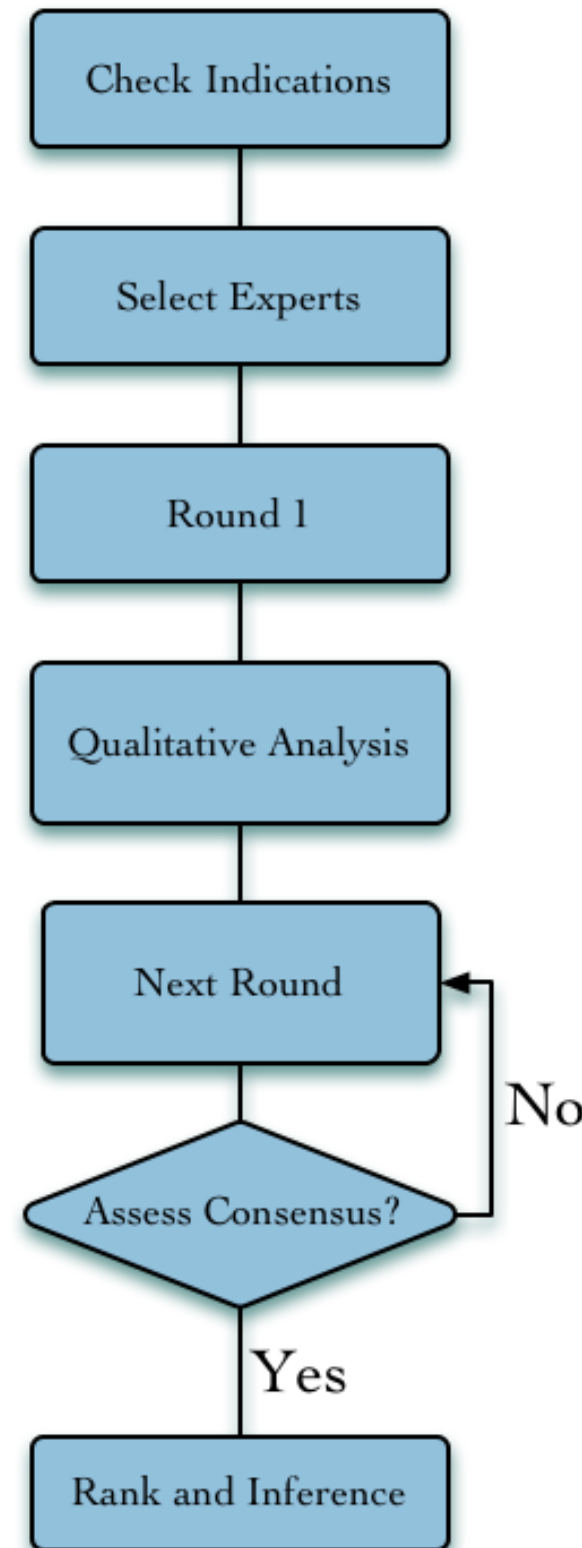
Delphi: Round 2

1. Check Indications
2. Select experts
3. Round 1
4. Qualitative Analysis
5. **Next Round**
6. Assess Consensus
7. Repeat until consensus obtained
8. Rank and Inference



Delphi: Assess Consensus

1. Check Indications
2. Select experts
3. Round 1
4. Qualitative Analysis
5. Next Round
- 6. Assess Consensus**
7. Repeat until consensus obtained
8. Rank and Inference



What is consensus

Indicates whether the expert panel agree with one another. NOT whether they agree or disagree with the statement.

Example: If all experts disagree with a statement, this is consensus

Quantitative: Consensus

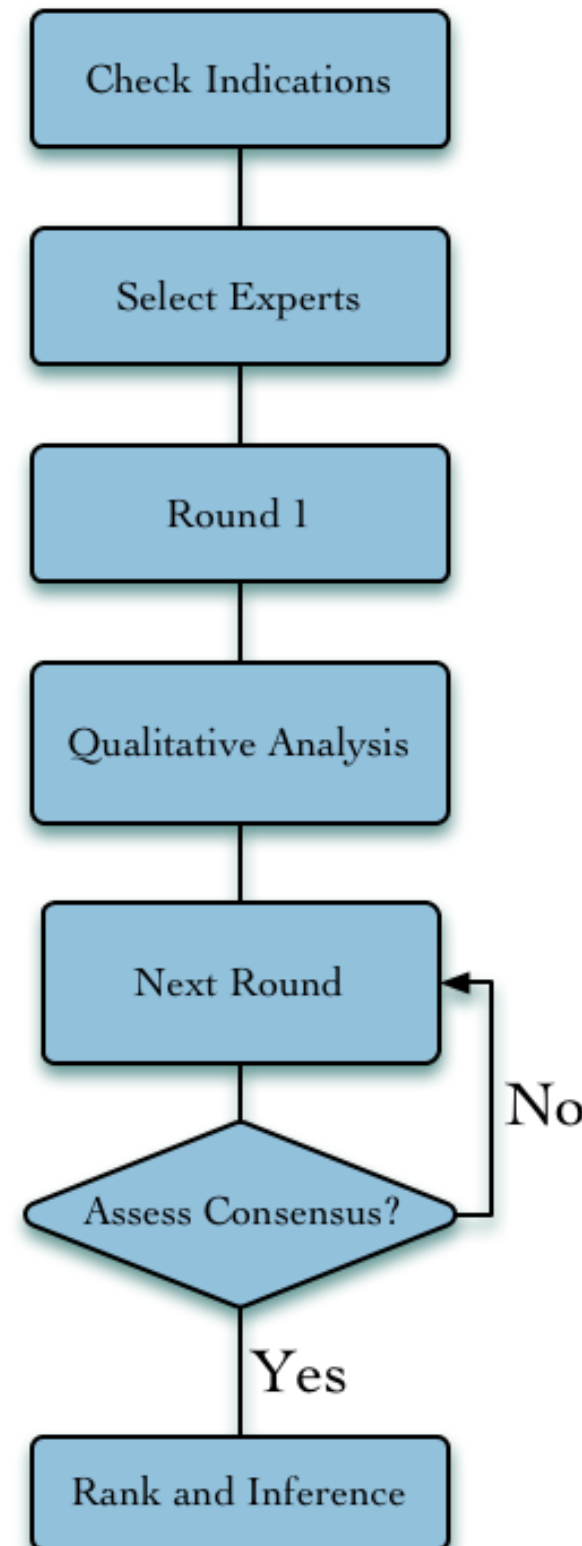
- There is no universal agreement of what is sufficient consensus in a Delphi study.
- Recommendation vary from 51% to 80%
- This MUST be decided before any data is obtained.
- Stability between rounds may be a better indicator.

Consensus

- For Categorical Variables:
 - Between 51% to 100% agreement
- For Continuous Variable:
 - Rankin, 1994: (For 3 point scale)
 - $IQR \leq 1.0$
 - Rayens and Hahn 2000: (For 4 point scale)
 - $IQR < 1.0$ OR
 - $IQR = 1.0$ and $>60\%$ of respondents are generally positive or negative.

Delphi: Round 3

1. Check Indications
2. Select experts
3. Round 1
4. Qualitative Analysis
5. Next Round
6. Assess Consensus
7. **Repeat until consensus obtained**
8. Rank and Inference

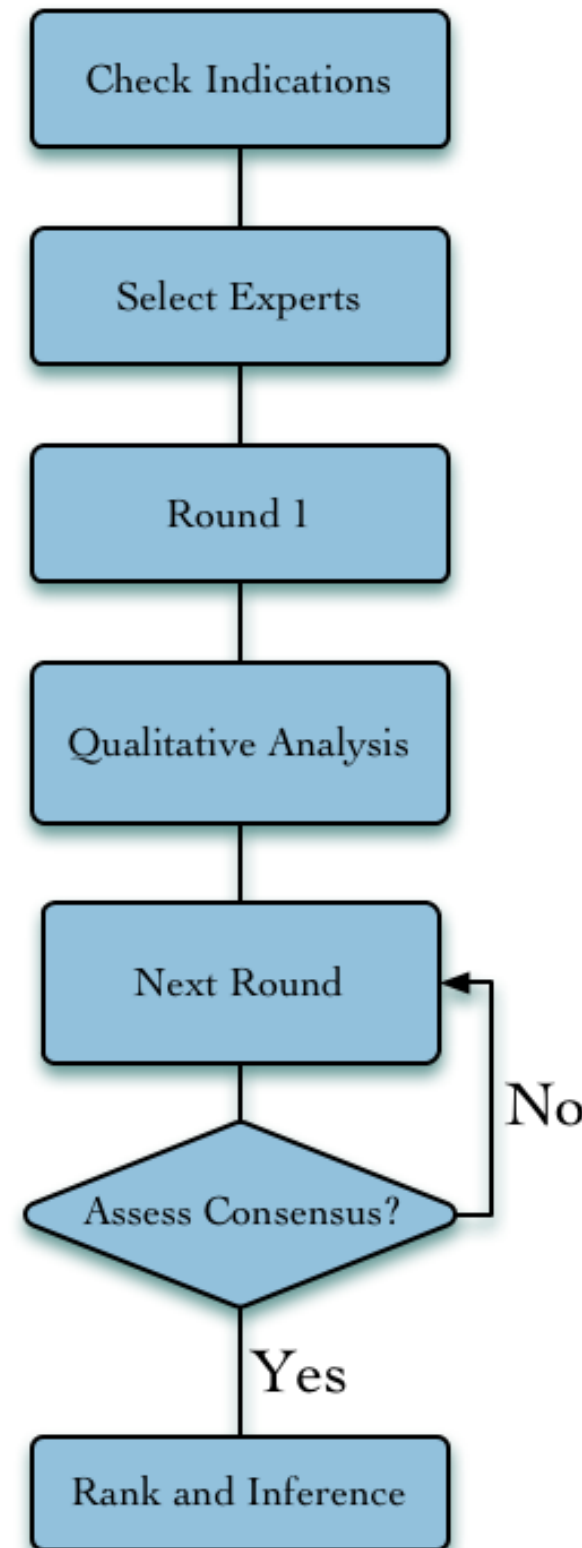


Classical Delphi Subsequent Rounds

- Rounds continue until “consensus” is obtained.
- At least 70% response rate needed to maintain rigor
- REMINDER: Criteria for consensus is established BEFORE the survey is administered

Delphi: Rank and Inference

1. Check Indications
2. Select experts
3. Round 1
4. Qualitative Analysis
5. Next Round
6. Assess Consensus
7. Repeat until consensus obtained
8. **Rank and Inference**



Ranking

- Normally those statements that have consensus are then ranked from highest to lowest
- Generally median if categories are descriptive (Likert).
- Mean if ranking is ratio (1-9)

Inference

- *Friendomization* is common
- Remember experts are NOT a random sample. Cannot infer about the general population.
- Use of confidence intervals and p-values is questionable

Example...

Questions??

Delphi Example

"I want to run a Delphi study on the use of social media in disaster management / crisis intelligence. Basically it's about trying to find consensus from disaster experts on the actual proper use of social media should be as a standard in response organizations. I feel like I'm on the fringe of what has been deemed as science and just general assumptions, so I believe a Delphi can give a nice push in this direction."

Barry Lynam, EMDM 2014

Criteria to Use Delphi

1. The answer is essential and needs to be known NOW. ✓
2. There is absolutely no other way to find the answer ✓
3. You have lots of time or money (preferably both) ✓

Methodology

Due to financial / time restraints the study was limited to two rounds. (Modified Delphi).

Modified Delphi

- Sometimes first round of open ended questions is skipped.
- The first round is replaced by a focus group or face-to-face interviews. (or guessing)
- Initial interviews may increase compliance

Survey Intro

Use of Social Media Technology in Disaster Management

Dear EXPERT:

Thank you for taking part in this survey!

As an expert in this field you are asked for your own personal academic opinions on the following statements. Each block of statements includes a space to note down further ideas that you might think are important to ask other experts in the next round. It is recommended, for the sake of advancement of this science, that you do expose those ideas, as they will be seriously considered, might be inquired to other experts and could be included in the final policy recommendations report.

Some of these statements might seem out-of-date or obvious from your own point of view. However, this is a multinational study that has within its objectives to suggest and recommend international standards. There are still a number of countries that might not have even started implementing these systems, or might not even have the infrastructure to initiate their planning.

Please assume that the statements *exposed are possible* when answering.

Survey Tool: 9-Point Scale

PLEASE GIVE YOUR OPINION
USING THE FOLLOWING SCALE:

STRONGLY DISAGREE < 0 1 2 3 4 5 6 7 8 9 > STRONGLY AGREE

	Different types of disasters have specific Social Media usage patterns
	The various purposes of diverse Social Media networks at particular stages of unfolding disasters should be studied to optimize the use of this Big Data resource
	Social Media must be a standard means of communication between Official Disaster Response Agencies and population
	Operations Centers within Official Disaster Response Agencies should implement robust Social Media teams (for information mining, spreading and coordination tasks)
	Social Media can help accelerate structural damage estimates and assessments even during unfolding disasters (real-time imagery and geo-tagging sent from mobile internet devices)
Other statements in mind:	

Survey Tool: Binary

- Do you use social media for personal reasons daily?
- Have you ever used social media to learn about an emergency situation?
- Do you use social media for professional reasons daily?
- Have you ever used social media to help manage an emergency situation?

Example

Definition of Consensus:

- "Consensus was concluded for items with an Interquartile range (IQR) ≤ 1.00 when rated on a nine point semantic differential scale."*
- "For binary (yes/no) questions, consensus was defined as greater than 75% agreement."*

Consensus: 9-points Scale

\$statement.igr

<u>s1</u>	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16
3.00	1.00	2.00	1.00	<u>1.00</u>	2.00	2.75	2.00	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	3.00	2.00	4.00	2.00	<u>2.00</u>
<u>s17</u>	s18	s19	s20	s21	s22	s23	s24	s25	s26	s27	s28	s29	s30		
3.00	2.00	<u>2.00</u>	4.00	<u>4.00</u>	<u>4.00</u>	1.00	2.00	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	1.00	1.75	1.00		

Consensus: 9-Point Scale

\$statement.igr

<u>s1</u>	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16
3.00	1.00	2.00	1.00	1.00	2.00	2.75	2.00	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	3.00	2.00	4.00	2.00	<u>2.00</u>
<u>s17</u>	s18	s19	s20	s21	s22	s23	s24	s25	s26	s27	s28	s29	s30		
3.00	2.00	<u>2.00</u>	4.00	<u>4.00</u>	<u>4.00</u>	1.00	2.00	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	1.00	1.75	1.00		

Following the first round, consensus was obtained for questions #2, 4, 5, 23, 28, and 30.

Consensus: Binary

\$use.personal.table

n y
1 10 27

\$use.learning.table

n y
1 5 32

\$use.professional.table

n y
1 12 25

\$use.manage.table

n y
1 19 18

n y
1 10 27

\$use.learning.table

n y
1 5 32

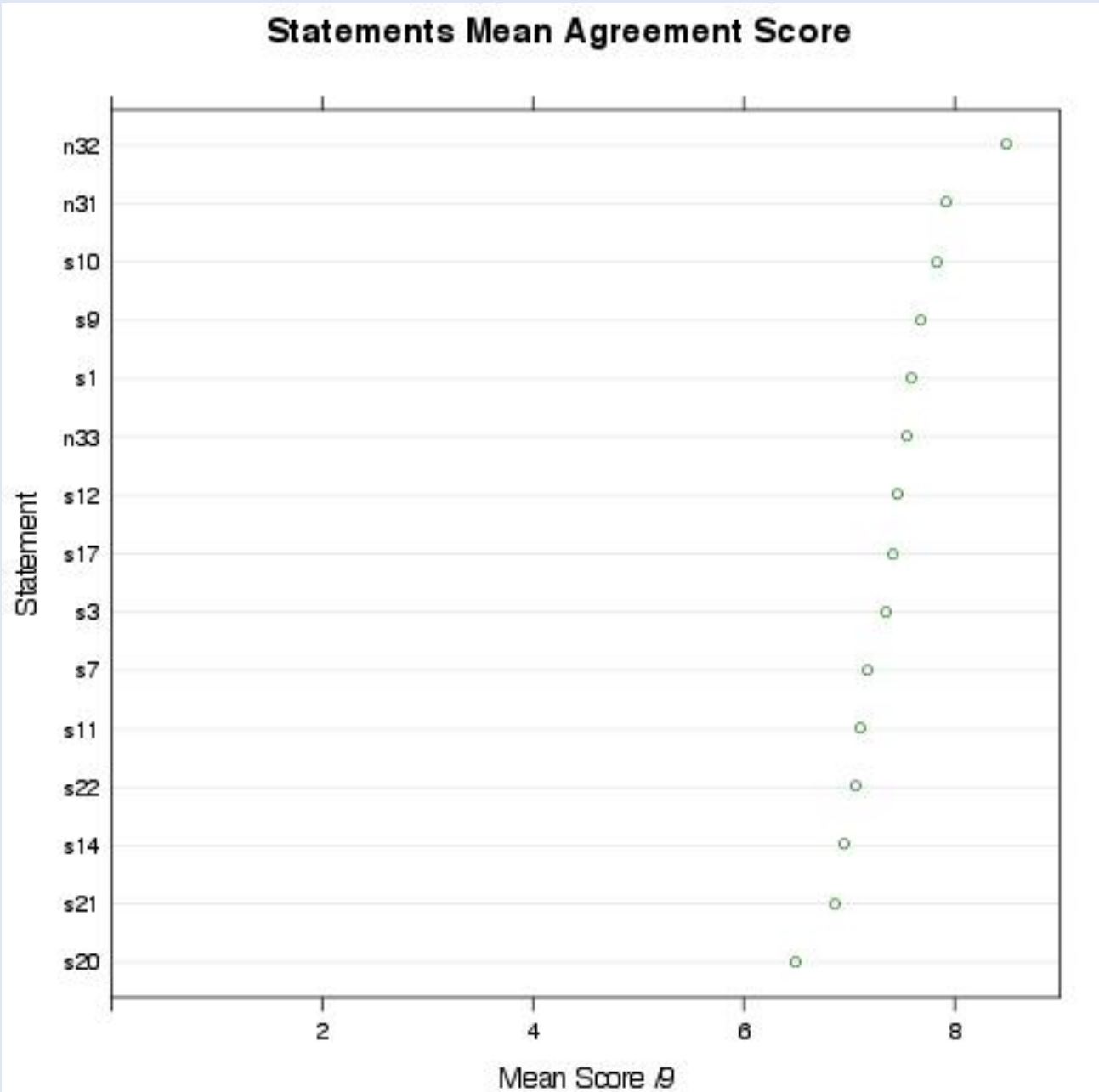
\$use.professional.table

n y
1 12 25

\$use.manage.table

n y

Ranking



Inference

“Reliability of the 9-point semantic differential scale was assessed using Chronbach’s Alpha to assess for internal consistency. Scores of greater than 0.8 were deemed acceptable”

“

References

Highly recommended
for anyone doing a
Delphi Study



Checklist

The screenshot shows a web browser window with the URL <https://www.medstatstudio.com/decision/checklists/index.php>. The page features the MedStatStudio logo and a navigation menu with links for Home, Simulation, Decision Support, Research Logistics, and Teaching. The main heading is "Checklists". A search bar contains the text "delphi". Below the search bar, the "Medicine" category is selected, displaying a list of medical conditions and their corresponding checklists. A sidebar on the left lists various medical conditions under the "Medicine" heading, and a "Statistics" section is partially visible at the bottom. The footer contains links for FAQ, Contacts, Online Learning, SurgeSim, Project Management, Git, and Cloud.

MedStatStudio

Home Simulation Decision Support Research Logistics Teaching

Checklists

Search Checklists

delphi Search Checklists

Medicine

- ACLS**
Advanced Cardiac Life Support
- Airway Management**
Management of the airway including bag valve mask ventilation, endotracheal intubation, surgical airways, needle cricothyrotomy, and laryngeal mask airway
- ALTE**
Apparent Life Threatening Events among children and infants. Includes discussion of apnea.
- Bacterial Meningitis**
Diagnosis and management of bacterial meningitis
- Bronchiolitis**
Management of acute wheezing and suspected bronchiolitis in children
- Chicken Pox**
Primary varicella infection.
- Congenital Heart Disease**
Emergency management of congenital heart disease in neonates and infants
- Crying**
Crying in infancy (less than 3 months of age)
- Fever**
Workup of pediatric and adult patients with fever and no obvious source.
- Hand Foot and Mouth**

Statistics

FAQ Contacts Online Learning SurgeSim Project Management Git Cloud

Quiz: Part A

Part A

In which of the following scenarios would Delphi Methodology be the best choice? Indicate yes or no.

1. Y N The head of a disaster medicine research group wishes to determine the research priorities for the next 10 years.
2. Y N A researcher would like to know if the directors in the hospitals in their region are satisfied with the standard regional guidelines for CBRN preparedness.
3. Y N A technology firm would like to know what technologies are likely to be most important to disaster medicine scene response in the future.
4. Y N A disaster medicine specialist would like to know which model of N-95 mask is most likely to fit properly for health care providers working in an Ebola response center.
5. Y N A large health care region would like to develop a policy to help healthcare providers make ethical decisions in the event of a disaster.
6. Y N A researcher wishes to assess whether the number of victims of natural disasters would increase with a shift to world reliance on solar energy.

Quiz: Part B

Part B

1. What is the optimal number of experts for the Delphi Panel?
 - A. Minimum _____
 - B. Maximum _____
2. When a statement reaches consensus in the first round, but the answer is contrary to what the researcher expected, what is the next step?
 - A. Drop the statement entirely from the study analysis
 - B. Drop the statement from the next questionnaire, but include it in the study analysis
 - C. Convert the statement to an open ended question, and include it in the next questionnaire
 - D. Include the statement in the next questionnaire with the same wording

Quiz: Part C

Part C

For the following scenarios, indicate TRUE if the statement has reached consensus, and FALSE if it has not.

1. _____ When asked if virtual reality was important for training in disaster medicine, 50% of respondents stated yes and 50% stated no.
2. _____ When rating the importance of Twitter for disaster response on a scale of 1 to 10, the median response was 9 with an interquartile range of 3.
3. _____ When asked if photography by drone would be useful during a MCI, experts used a 5-point Likert scale. 100% of respondents stated "Neither agree nor disagree"

Objectives

- Understand when to use the Delphi Method and when to consider other techniques.
- Understand how to choose and manage the 'Expert Panel'.
- Define consensus, and use this definition to determine how questions advance during the Delphi rounds.

Delphi Technique

The do nots and why nots

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