Nominal Group Technique

Dr Simon Carter MBBS FRACP
Westmead Children’s Hospital, Sydney
Contents

1. Background and theory
2. Uses
3. Method
4. Analysis
5. Practicalities
6. Discussion

Not covered:
- In depth qualitative analysis
- Visualisation
- Write-up
“...qualitative judgmental problem exploration which is particularly applicable to the subjective and judgmental character of many health planning efforts.”
NGT articles by year of publication

Theory

• **Engagement** of stakeholders
• **Inclusive** as each person has equal opportunity
• **Empowers**: levels the playing field
• **Encourages diversity**: recognises wide range of ideas
• **Enriches** **understanding**
• **Allows** **prioritisation**
• **Works towards** **consensus**

“How do I know what I think until I see what I say?” -attributed to E.M. Forster
Similar qualitative methods

• Sits within focus groups as a different tool
• Qualitative as well as semi-quantitative data
• Focus groups:
  • Not a consensus method
  • Does not prioritise
  • Not quantitative or value-laden
  • Non-verbal cues influence participants
  • Language barriers and dominant participants
Similar qualitative methods

• Survey questionnaires
  • Frequency of opinions
  • ‘Closed’ questions
  • Cursory, curt answers
  • Limited exploration

• Interviews
  • Detailed
  • Narrow field with less scope
  • Not a consensus method
Qualitative research family

Focus groups

Nominal group technique

Survey or Interview questions
NGT applicability

• Problem exploration – very broad!
• Concepts, individuals or groups, systems
• Prioritisation
• Use before continuing with:
  • Questionnaire
  • In-depth interviews
• Use before developing a measurement tool

Example settings and populations

- Patients, caregivers, physicians, administrators...
- Schools and teenagers
- Teaching and learning
- Disempowered populations
- Research prioritisation
- Transplant allocation principles
- Usability of information platforms

Participants and recruitment

- **Target group**: experience and perceptions of the problem
- **Sampling**: purposive, theoretical, snowballing, convenience
- **Timeframe**: allow weeks
- Give enough information (consent) but don’t pre-empt discussion
- **Hurdles**:
  - Mental health issues, language, safety, contacting families after patient has died
Setting

- **Focus group**
- Power-neutral setting
- 8-12 participants
  - Can be larger setting with tables of ~8
- Chairs in U-shape with flip chart or whiteboard
- Introduction is key
  - Enthusiasm, empower, altruism
  - Goals and housekeeping
Method

FOCUS GROUP ~2 hours

1. Generation of ideas
2. Recording the ideas
3. Discussion
4. Voting
5. Group discussion

1. Generating ideas

- Around 15-20 minutes
- **The Question or Problem** – how it is posed is critical
  - Very precise, unambiguous, ‘set the scene’
  - Workshop or pilot question prior
- Participants record ideas independently

Question examples

“What research topics do you feel are important in X?”

“If researchers wanted to evaluate different treatments for people with X; what should they measure in order to determine which one is better?”

“What factors would influence your decision to be an organ donor?”

“What makes things difficult at school?”

“If you could fix, change or make anything better for children with kidney disease, what would it be?”
2. Recording ideas

- 20-25 minutes
- Round-robin style
- Each participant proposes one idea at a time
- Write all ideas on flip chart or board
- Briefly clarify if necessary
- Continue until all ideas recorded
3. Discussing ideas

- 15 minutes
- Consider each idea in turn
  - Clarify, elaborate, defend, dispute
- **Harness the group**
- Have prompt questions
- Engage with logic, beliefs and values behind each idea
- Can add new items
Break time

- 10-15 minutes
- This is important
- Most focus groups have a half-way break
- Print out ranking lists for participants
4. Voting or ranking

- 15-20 minutes
- Individual voting on ideas
- Top 10-20 at least
- If you only want top 10:
  - Highest = 10
  - Lowest = 1
- Keep ranking sheets
5. Group discussion of the ranking

- 15-20 minutes
- Tally voting results, either:
  - Individuals offer top three
  - Write all weighted votes from the group next to the ideas
- Harness the group dynamics
- Re-define problems as necessary

1. Kidney function
2. Dialysis
3. Drug interaction
4. Mobility
5. Nausea/vomiting
6. Fertility
7. Vision/blindness
8. Hair loss/gain
9. Diabetes
10. Bone health
11. Medication burden
12. Protein in urine
13. Sleep
14. Dietary impact
15. Fluid retention
16. Cardiovascular
17. "Usual" activities
18. Fatigue/tired
19. Mood swings
20. Cramps
21. Infection
22. Hospitalisation
23. Skin changes
24. Cancer
25. "Immunity"
26. Skin cancer
27. Joint pain/arthritis
28. Cognitive
29. Muscle weakness
30. Emotional
31. Financial impact
32. Depression
33. Anxiety
34. Mortality
35. Relapses
36. Loss of health
37. Remission
38. Blood pressure
39. Cognition
40. Weight gain
41. Holistic care
42. Many doctors, specific advice
43. Treatable mindset

@song-initiative
www.songinitiative.org
@taligutman
@sydney.edu.au
6. Optional extras

- Sources differ slightly on order of events
- Participants can be given the option of revising their ranks
- Re-ranking
- Relative rating according to importance i.e. ‘weighting’
  - “If no. 1 is 100 points, then is no. 2 at 65? 80? 95?” etc.
Conclude meeting

• 2-5 minutes
• Summarise back to group what they have achieved
• Thank participants and explain next steps
• Gather contacts/ get consent for future research
Summary: the iterative NGT process

1.
2.
3.
4.
5.

Reflect

1.
2.
3.
4.
5.
Analysis
Quantitative

- Simple descriptive statistics
- Excel spreadsheet
- Aggregate and order by rank
  - Simple sum of ranks e.g. listed 1 to 10
- How can you account for items not ranked by everyone?
  - Report number of groups
  - Relative importance score
- Can do weighted rank
  - Report mean

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Ranking</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidney function</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>Mortality</td>
<td>2</td>
<td>0.29</td>
</tr>
<tr>
<td>Need for dialysis or transplant</td>
<td>3</td>
<td>0.22</td>
</tr>
<tr>
<td>Fatigue</td>
<td>4</td>
<td>0.17</td>
</tr>
<tr>
<td>Life participation</td>
<td>5</td>
<td>0.16</td>
</tr>
<tr>
<td>Anxiety</td>
<td>6</td>
<td>0.13</td>
</tr>
<tr>
<td>Impact on family</td>
<td>7</td>
<td>0.12</td>
</tr>
<tr>
<td>Ability to work</td>
<td>8</td>
<td>0.11</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>9</td>
<td>0.11</td>
</tr>
<tr>
<td>Immunity</td>
<td>10</td>
<td>0.10</td>
</tr>
</tbody>
</table>
Qualitative

- Same as for focus groups
- Inductive and deductive processes
- Iterative
- Thematic analysis
  - Open coding
  - Axial coding
  - Selective coding
- Grounded theory
  Above, *plus* theoretical sampling

Liamputtong and Ezzy, Qualitative research methods, OUP 2008
Glazer and Strauss 1968, Strauss and Corbin 1990
Problem: low organ donor rates

Irving, What factors influence people’s decision to register for organ donation? The results of a nominal group study, 2014, Transpl Int

POLICY and PRACTICE implications:
1. Perceived outcomes of transplant recipients
2. Healthcare legislation and clinical guidelines
3. Knowledge and information about transplantation
4. Beliefs and attitudes to organ donation
"Glomerulonephritis stops my husband from thinking bigger… although that is really big, there’s also this life" ~ Female caregiver, 36 years

"I always thought anxiety and stress was the biggest [issue]… dialysis and death doesn’t really worry me, because it’s something I can’t control." ~ Male patient, 63 years
Problem: research prioritisation

<table>
<thead>
<tr>
<th>Rank</th>
<th>Key theme</th>
<th>Total rank score (possible range: 1–102)</th>
<th>Number of consultation groups in which topic received at least one vote N = 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Impact on life, how to live with cancer and related support issues</td>
<td>68</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Risk factors and causes</td>
<td>58</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>Early detection and prevention</td>
<td>48</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Research into general information needs (on cancer; treatment, research and access to)</td>
<td>34</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Use and effectiveness of complementary and alternative therapies</td>
<td>30</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>General education of public about cancer</td>
<td>24</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Research into different cancer and patient types</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Research on treatment (curative treatment, treatment types and improvements)</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Experiences and management of side effects</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td>Organisation and funding of health and social care services</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>Coordination, impact and funding of research</td>
<td>19</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Research into recurrence</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>General communication issues involving all parties</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>Accessing patients’ views about cancer, services and research</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>Health and safety in the hospital</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
SONG-Kids: outcomes of chronic kidney disease

Longer lifespan of the transplant. That’s my most important... Frankly, this thing could stop working tomorrow. It could be 10 years from now. That’s a fear of mine. I try not to think about it too much, but the uncertainty... I plan things out. I like to know what I’m getting into... it could just stop working... I want to go outside but I know that I could get bumped in my stomach, I might not go. (Male, young adult, transplant, USA)

I think the biggest challenge and the biggest impact to [my daughter’s] life is her delayed development, and her delayed milestones, and her learning disabilities... I continually now wonder whether it wouldn’t have been wiser to transplant her much earlier... It’s her cognitive abilities that I think were impacted and it really worries me how she’s going to carry on as she gets older and graduates from high school. What she’s going to be able to do, and whether she’s going to be able to live independently, or function efficiently. (Mother, child with a kidney transplant, Canada)
SONG-Kids: outcomes of chronic kidney disease
Ability to travel
Dialysis-free time
Dialysis adequacy
Washed out after dialysis
Anaemia
Mobility
Blood pressure
Fatigue
Impact on family/friends
Pain
Ability to work
Potassium
Infection/Immunity
Target weight
Cardiovascular disease
Depression
Vascular access problems
Drop in blood pressure
Hospitalisation
Death/mortality
Next stage

- Standardised data collection instruments
- What items are measurable?
- Decision ‘rules’
  1. Observable over wide variations
  2. Explain a large range of phenomena
  3. Logistics: ease of measurement, cost
- Acknowledge these are judgement calls
  - involve care providers, patients and care givers, statisticians

Hage, 1971; Flanagan 1954, Psych Bull
Strengths

- Democratic: levels power dynamics
- Efficient: many ideas quickly
- Uses the group’s language and dynamic
- Prioritises by semi-quantification
- May gain consensus; acknowledgment of diversity
- Enriched understanding
- Facilitates research translation

Limitations

• Results relate quite specifically to the group studied
• Subjective by its nature
• Time investment?
• ‘Closed question’ scenario
• Limits more exploratory discussion
Common problems

- **Dominant participants**
  - Practice strategies ahead of time
  - Don’t take them head on
- **Drift**: unfocussed group
  - Reframe discussion; restate goal
- **Too timid**
  - Prompts, normalise
  - Look for commonality
  - Directed questions using known issues
- PRE-EMPT in introduction
- HOUSEKEEPING
Inventory

- Copies of consent and study forms
- Attendance sheet
- Run sheet
- Reimbursements
- Pens
- Paper
- Flip chart and whiteboard markers
- 2 audiorecorders
- Laptop
- USB
- Tissue box
- Organising folders
- Paracetamol
Checklist

- Confirm attendance 2-3 days prior
- Confirm parking
- Access to printer
- Catering and food preferences/allergies
- Payment for venue, catering, carpark

Before
- Registration
- Forms complete?
- Set up wifi
- Set up room

During
- Press PLAY!
- Timer
- Print list
- Non-verbal data

After
- Forms complete?
- Forms named?
- Forms filed?
- Reimbursement
Follow up

- Feed back results!
  - Recognition
  - Respect
  - Implementation of results
  - Next phase of study
  - Ethical (HREC/IRB)

“confident that their views are valued and that action will occur as a result”

Wrap-up

- NGT as a recommended group brainstorming method
- Enables prioritisation in diverse, complex areas
- Wide applicability in current health research climate
  - Research prioritisation
  - Patient engagement
  - Unmet needs

“…qualitative judgmental problem exploration which is particularly applicable to the subjective and judgmental character of many health planning efforts”
Core activities

Webinars
Workshops
Other events e.g. forums

Resources
Listserve
Questions?
Broad approach

1. What is the theoretical framework?
2. What is the issue?
3. What are the desired outcomes?