Contents

Preface ix
Acknowledgements x

1 The Delphi Technique 1
Introduction 1
History of the technique 2
What is the Delphi technique? 3
Defining the Delphi technique 3
The Delphi process 4
Original Delphi 4
Idea generation 5
Priority setting versus consensus 5
Non-consensus Delphi 5
Types of Delphi 6
How has the Delphi evolved? 6
Sampling and the use of experts 7
Defining ‘expert’ 7
Employing an expert panel 8
Size of the expert panel 8
Valid opinion 9
Anonymity 9
Quasi-anonymity 9
Group dynamics 10
Delphi rounds 10
Round 1 11
Subsequent rounds 11
Response rates 12
Enhancing response rate 12
Consensus 13
Does consensus exist in expert panels? 14
Concept of consensus 14
Increasing popularity in nursing and health research 14
Comparison of the Delphi with other consensus methods 15
Nominal group technique 15
Consensus conference 16
Key learning points 16
Recommended further reading 17
2 Debates, Criticisms and Limitations of the Delphi 18

Introduction 18
The qualitative-quantitative debate – which paradigm does the Delphi belong to? 18
Criticisms of the Delphi technique 20
Lack of universal guidelines 20
Size of expert panel 21
Implications of lack of anonymity 22
Expert ‘opinion’ 23
Level of consensus 27
Limitations of the Delphi 28
Pressures of conformity 28
Demanding nature of the technique 29
Key learning points 30
Recommended further reading 31

3 Applications of the Delphi in Nursing and Health Research 32

Introduction 32
Historical application of the Delphi technique in nursing 32
Identification of clinical nursing research priorities 36
Trends of the Delphi in nursing 40
Key learning points 41
Recommended further reading 42

4 How to Get Started with the Delphi Technique 43

Introduction 43
Preparation and practicalities 43
Suitability of the Delphi 43
Availability of resources 44
Level of consensus 45
Identifying target sample – panel of experts 46
Who is the target population? 46
How do you select your experts? 47
Sampling criteria 47
What size does the sample have to be? 48
Response rate and attrition 53
Deciding on nature and delivery of the first round 55
Gaining names and addresses 56
Deciding on a ‘return by’ date 56
Administration 57
Invitation to participate 57
Explicit cover letter outlining the working of the Delphi 59
Design of questionnaire 59
Contents

Administration systems 63
Mailing 64
  Maximising response rate 64
Content analysis 65
  Process 66
Key learning points 67
Recommended further reading 67

5 Conducting the Research Using the Delphi Technique 69
Introduction 69
First round 69
  Classical Delphi 69
  Modified Delphi 70
  Return of first round 71
  Consideration of sample size and number of items
    generated 71
  Bootstrapping 72
  Content analysis 72
Subsequent rounds 73
  Round 2 74
  Cover letter explaining Round 2 74
  Instructions for Round 2 75
  Designing Round 2 questionnaires 76
  Likert scales 77
  Round 2 analysis 77
  Sample motivation 78
  Follow-ups/reminders 78
Round 3 78
  Individual and group feedback 78
  Round 3 analysis 81
Number of rounds 81
When to stop 82
When not to stop 82
Reaching consensus 82
Key learning points 83
Recommended further reading 83

6 Analysing Data from a Delphi and Reporting Results 84
Introduction 84
Analysis of Round 1 85
  Content analysis – the practical aspects 85
  Demographics for sample profiling 86
Analysis of middle rounds (Round 2) 86
  Consensus level 86
  Statistical analysis 86
<table>
<thead>
<tr>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical feedback to panel</td>
<td>87</td>
</tr>
<tr>
<td>Exclusion of items with consensus</td>
<td>88</td>
</tr>
<tr>
<td>Analysis of end round (Round 3)</td>
<td>89</td>
</tr>
<tr>
<td>Determining the end of the process</td>
<td>89</td>
</tr>
<tr>
<td>Statistical analysis</td>
<td>89</td>
</tr>
<tr>
<td>Items that have gained consensus</td>
<td>90</td>
</tr>
<tr>
<td>Items that have not gained consensus</td>
<td>90</td>
</tr>
<tr>
<td>Stability of responses</td>
<td>91</td>
</tr>
<tr>
<td>Examples of statistical analysis used in recent Delphi studies</td>
<td>92</td>
</tr>
<tr>
<td>Reporting of results from a Delphi study</td>
<td>92</td>
</tr>
<tr>
<td>Key learning points</td>
<td>95</td>
</tr>
<tr>
<td>Recommended further reading</td>
<td>95</td>
</tr>
<tr>
<td>7 Reliability and Validity</td>
<td>96</td>
</tr>
<tr>
<td>Introduction</td>
<td>96</td>
</tr>
<tr>
<td>Reliability</td>
<td>96</td>
</tr>
<tr>
<td>Criteria to assess rigour</td>
<td>99</td>
</tr>
<tr>
<td>Response rates as a measure of rigour</td>
<td>99</td>
</tr>
<tr>
<td>Is the definitive answer reached?</td>
<td>99</td>
</tr>
<tr>
<td>Validity</td>
<td>100</td>
</tr>
<tr>
<td>Content validity</td>
<td>100</td>
</tr>
<tr>
<td>Criterion-related validity</td>
<td>100</td>
</tr>
<tr>
<td>Threats to validity</td>
<td>101</td>
</tr>
<tr>
<td>Key learning points</td>
<td>104</td>
</tr>
<tr>
<td>Recommended further reading</td>
<td>104</td>
</tr>
<tr>
<td>8 Ethical Considerations</td>
<td>105</td>
</tr>
<tr>
<td>Introduction</td>
<td>105</td>
</tr>
<tr>
<td>Ethical principles</td>
<td>105</td>
</tr>
<tr>
<td>Respect for human dignity</td>
<td>106</td>
</tr>
<tr>
<td>Justice</td>
<td>106</td>
</tr>
<tr>
<td>Principle of beneficence</td>
<td>108</td>
</tr>
<tr>
<td>Principle of non-maleficence</td>
<td>108</td>
</tr>
<tr>
<td>The role of the researcher</td>
<td>108</td>
</tr>
<tr>
<td>Ethics documentation</td>
<td>109</td>
</tr>
<tr>
<td>Key learning points</td>
<td>113</td>
</tr>
<tr>
<td>Recommended further reading</td>
<td>113</td>
</tr>
<tr>
<td>9 A Classical Delphi Design Case Study</td>
<td>114</td>
</tr>
<tr>
<td>Introduction</td>
<td>114</td>
</tr>
<tr>
<td>Background</td>
<td>114</td>
</tr>
<tr>
<td>Methods</td>
<td>115</td>
</tr>
<tr>
<td>Initial considerations</td>
<td>116</td>
</tr>
<tr>
<td>Enhancing response rates</td>
<td>117</td>
</tr>
</tbody>
</table>
10 A Modified Delphi Case Study

Introduction 125
Aims of the study 126
Methodology 126
Expert panel 126
   Round 1 – focus groups 127
   Delphi Round 2 – postal round 127
   Round 3 – postal round 128
   Consensus conference 129
Results 129
   Commissioning of health and social care 129
   Leadership 131
   Generic and specialist roles 131
   Clinical governance 132
   Teamwork 133
   Public involvement 133
   Education 134
   Practical training versus academia 135
   Attitudes to nurse training and education 135
   Multidisciplinary education in nurse training 135
   Communication 135
Conclusion 136
Recommendations 137
   Commissioning of health and social care 137
   Leadership 137
   Generic and specialist roles 138
   Clinical governance 138
   Teamwork 139
   Public involvement 139
   Education 140
   Communication 140
   Reflections on the modified Delphi 140
Acknowledgements 141
Further information 141
Publications 141
Contents

11 e-Delphi Case Study 142
  Introduction 142
  Sample 142
    Setting a consensus level 143
    Theoretical framework 143
  Data collection and analysis 144
    Design of instrument 144
    Pilot study 144
    Round 1 144
    Round 2 145
    Round 3 145
  Ethical considerations 145
  Results 146
    Round 1 146
    Round 2 146
    Round 3 147
  Discussion 147
  Conclusion 148
    Reflections on the e-Delphi 149
  Acknowledgements 150
  Further information 150
  Publications 150

Annotated Bibliography 151
References 164
Index 193