

Table of Contents

| | | |
|---------------|---|----|
| | Introduction | 15 |
| Part I | Introduction to practice-based research | 17 |
| 1 | Research competence for a professional context | 19 |
| 1.1 | The research spectrum | 20 |
| 1.2 | Embedding practice-based research in higher vocational education | 24 |
| 1.3 | What can you learn from practice-based research? | 25 |
| 1.4 | Evidence-based practice in the healthcare sector | 29 |
| 1.5 | The five steps of evidence-based practice | 30 |
| 1.5.1 | Step 1: Translating a (clinical) problem into an answerable question | 31 |
| 1.5.2 | Step 2: Efficiently searching for the best evidence | 33 |
| 1.5.3 | Step 3: Evaluating the relevance, quality and applicability of the evidence you found | 36 |
| 1.5.4 | Step 4: Applying the results in practice | 40 |
| 1.5.5 | Step 5: Regularly evaluating the process and the results | 42 |
| 1.6 | Evidence-based practice, practice-based evidence and practice-based research | 43 |
| 1.7 | Summary | 44 |
| 2 | The ethics of research in (allied) healthcare | 45 |
| 2.1 | Historical background | 46 |
| 2.2 | Ethical assessment of research | 47 |
| 2.2.1 | Medical Research Involving Human Subjects Act | 47 |
| 2.2.2 | Non-WMO-governed research | 49 |
| 2.2.3 | Additional laws and regulations governing research | 50 |
| 2.2.4 | Codes of conduct | 53 |
| 2.3 | Reaching out to participants | 55 |
| 2.4 | The secure collection and storage of research data and personal data | 61 |

| | | |
|------|---|----|
| 2.5 | Fraud and plagiarism | 64 |
| 2.6 | Intellectual property, publication rights and confidentiality | 66 |
| 2.7 | Publishing research | 69 |
| 2.8 | Assessment criteria for the ethical aspects of research | 71 |
| 2.9 | Back to the case | 74 |
| 2.10 | Summary | 76 |

3 Critically reading research literature 77

| | | |
|-------|--|-----|
| 3.1 | General quality criteria | 80 |
| 3.1.1 | Research question and justification of the research design | 80 |
| 3.1.2 | Analysing strengths and weaknesses | 81 |
| 3.1.3 | Applicability | 81 |
| 3.2 | Quantitative descriptive research | 81 |
| 3.3 | Quantitative intervention research and the randomised controlled trial (RCT) | 86 |
| 3.3.1 | Quality criteria | 87 |
| 3.3.2 | Interpretation of the results | 92 |
| 3.4 | Quantitative observational research | 92 |
| 3.4.1 | Cohort study (prospective and retrospective) | 95 |
| 3.4.2 | Case-control study | 96 |
| 3.4.3 | Quality criteria | 97 |
| 3.4.4 | Interpretation of the results | 100 |
| 3.5 | Diagnostic research | 101 |
| 3.5.1 | Quality criteria | 101 |
| 3.5.2 | Interpretation of the results | 104 |
| 3.6 | Qualitative research | 106 |
| 3.6.1 | Quality criteria | 109 |
| 3.6.2 | Interpretation of the results | 111 |
| 3.7 | Design research | 112 |
| 3.8 | Systematic review | 113 |
| 3.8.1 | Quality criteria | 113 |
| 3.8.2 | Interpretation of the results | 115 |
| 3.9 | Summary | 116 |

| | | |
|----------------|--|-----|
| Part II | The preparation | 117 |
| 4 | From preliminary investigation to research question | 119 |
| 4.1 | What research question do you want to dedicate (part of) your life to? | 120 |
| 4.2 | The contents of a research project plan | 121 |
| 4.2.1 | The title | 122 |
| 4.2.2 | The introduction | 123 |
| 4.3 | Identifying a practical problem | 124 |
| 4.4 | Clarifying the problem definition via a preliminary investigation | 125 |
| 4.5 | Searching for relevant literature for your preliminary investigation | 127 |
| 4.5.1 | Where will you look? | 127 |
| 4.5.2 | How to look? | 129 |
| 4.6 | Formulating the research question | 133 |
| 4.6.1 | PICO, PICOT and DDO strategy | 136 |
| 4.6.2 | Main question and subquestions | 143 |
| 4.7 | Summary | 144 |
| 5 | The right research method (design) | 145 |
| 5.1 | Method of the research project plan | 145 |
| 5.2 | Representing the method in your project plan | 146 |
| 5.3 | Choosing a research design | 147 |
| 5.4 | Participants and test subjects | 149 |
| 5.5 | Data collection: (measuring) instruments and procedures | 151 |
| 5.6 | Data analysis | 154 |
| 5.7 | Time frame and budgeted costs | 154 |
| 5.8 | Bibliography and appendices | 155 |
| 5.9 | Summary | 155 |

Part III Conducting your own research 157

6 Quantitative research 159

| | | |
|-------|--|-----|
| 6.1 | When and why do you conduct quantitative research? | 160 |
| 6.2 | Methods/approach | 162 |
| 6.2.1 | Observation schedule | 163 |
| 6.2.2 | Survey | 165 |
| 6.2.3 | (Physical) measurements | 167 |
| 6.2.4 | Developing a measurement protocol | 168 |
| 6.3 | Collecting data | 169 |
| 6.4 | Processing data | 170 |
| 6.4.1 | Determining reliability | 170 |
| 6.4.2 | Data analysis and statistics | 172 |
| 6.4.3 | From test to interpretation | 174 |
| 6.4.4 | Data analysis software | 176 |
| 6.5 | Presentation and justification of your findings | 176 |
| 6.6 | Summary | 180 |

7 Qualitative research 181

| | | |
|-------|---|-----|
| 7.1 | When and why do you conduct qualitative research? | 181 |
| 7.2 | Qualitative research: interviews | 182 |
| 7.3 | Qualitative research: focus groups | 183 |
| 7.4 | Other forms of qualitative research and combinations of methods | 184 |
| 7.5 | Conducting qualitative research | 184 |
| 7.5.1 | Further development of the method | 185 |
| 7.5.2 | Further preparation of the interviews | 185 |
| 7.5.3 | Practising interviews | 187 |
| 7.5.4 | Collecting data | 187 |
| 7.5.5 | Processing data | 189 |
| 7.5.6 | Reading through the transcripts | 192 |
| 7.5.7 | Analysing and coding data | 193 |
| 7.6 | Presentation of the results | 195 |
| 7.7 | Summary | 197 |

| | | |
|----------|---|------------|
| 8 | Participatory action research | 199 |
| 8.1 | What is participatory action research? | 199 |
| 8.1.1 | Developing PAR | 200 |
| 8.1.2 | The unique position of PAR | 201 |
| 8.2 | Conducting PAR | 202 |
| 8.2.1 | Research questions | 202 |
| 8.2.2 | Phases of research | 202 |
| 8.2.3 | Diversity in research methods | 204 |
| 8.2.4 | Quality | 206 |
| 8.3 | Equality and shared ownership | 206 |
| 8.3.1 | Researchers | 207 |
| 8.3.2 | Practical partners | 207 |
| 8.3.3 | Students | 209 |
| 8.4 | Sharing results | 210 |
| 8.5 | Ethical dilemmas | 212 |
| 8.5.1 | Differences in power or hierarchy in the collaboration | 213 |
| 8.5.2 | The blurring of the lines between researcher and co-researcher | 214 |
| 8.5.3 | Whose are the results and who decides what counts as a result? | 215 |
| 8.5.4 | Resources | 216 |
| 8.6 | Summary | 217 |
| | | |
| 9 | Design research | 219 |
| 9.1 | The specific mindsets of the design researcher | 221 |
| 9.1.1 | An open and creative perspective of the problem situation | 221 |
| 9.1.2 | Don't do anything for us without us | 221 |
| 9.1.3 | Doing is the new thinking | 222 |
| 9.1.4 | Paying attention to the broader (healthcare) context | 223 |
| 9.1.5 | Validation | 224 |
| 9.2 | The phases of design-based research | 224 |
| 9.2.1 | Discover | 225 |
| 9.2.2 | Define | 227 |
| 9.2.3 | Develop | 229 |
| 9.2.4 | Deliver | 231 |
| 9.3 | Performing design research | 234 |
| 9.3.1 | Preparation | 234 |
| 9.3.2 | Performance | 235 |
| 9.4 | Reporting on design-based research | 236 |
| 9.5 | Summary | 239 |

| | | |
|----------------|--|-----|
| 10 | Literature review | 241 |
| 10.1 | When and why do you conduct a literature review? | 242 |
| 10.2 | Development of the method | 244 |
| 10.2.1 | Where to look? | 245 |
| 10.2.2 | How to develop a good and efficient search strategy? | 245 |
| 10.2.3 | What does the selection process look like? | 246 |
| 10.2.4 | Appraising the quality of studies | 248 |
| 10.2.5 | Data extraction | 248 |
| 10.2.6 | Data synthesis and interpretation | 249 |
| 10.3 | Presentation and justification of your findings | 252 |
| 10.4 | Summary | 257 |
| | | |
| Part IV | The presentation | 259 |
| | | |
| 11 | Impact on society | 261 |
| 11.1 | Impact of the research results | 262 |
| 11.2 | Network analysis | 264 |
| 11.3 | A suitable title | 265 |
| 11.4 | Written presentation | 266 |
| 11.4.1 | How to write a policy document? | 267 |
| 11.4.2 | How to write an article or project report? | 269 |
| 11.4.3 | Scientific writing style | 277 |
| 11.5 | Verbal presentation | 280 |
| 11.5.1 | Connection to the audience | 281 |
| 11.5.2 | Contents and structure of the presentation | 281 |
| 11.5.3 | The actual presentation: presentation techniques | 282 |
| 11.6 | Summary | 283 |
| | | |
| | Tips for correctly referring to sources | 285 |
| | | |
| | References | 293 |
| | | |
| | Index | 301 |
| | | |
| | About the authors | 313 |