

1 **Abstract**

2 Background: Traditional approaches to research can sometimes face difficulties in
3 engaging participants, allowing flexibility and ultimately eliciting data about people's
4 experiences. When this occurs researchers should be more innovative with research
5 design. Visual methods are an alternative approach to interview based qualitative
6 research, where images (often photographs) are used as stimuli and/or structure within
7 the interview. However, little has been published in the nursing literature to guide
8 nurse researchers in applying and evaluating this method.

9 Aim: To increase nurse researchers' awareness of visual methods and their potential,
10 to enable them to make informed choices about methods in health research.

11 Discussion: Visual methods with a particular focus on methods which use
12 photographs within health research are introduced. The benefits of using photographs
13 in health research, such as reducing the gap between researcher and participant; and
14 facilitating expression of meaningful data, are discussed along with ethical, analytical
15 and practical difficulties. Discussion points are illustrated with reflections from health
16 research, and a comparison of interviews with and without the use of photographs is
17 also presented

18 Conclusion: Using photographs offers a good alternative to more traditional
19 approaches but the exact benefits are difficult to evidence because of the complexities
20 of the research interaction.

21 Implications for practice: this detailed discussion of visual methods and the associated
22 methodological issues should increase nurse researchers' awareness of the method,
23 assist them in making informed choices about research methods, and encourage their
24 use in health research.

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DRAFT

27 **Introduction**

28 A fundamental aspect of research is to determine how best to propose and answer
29 questions (Packard, 2008). Traditional approaches to research can sometimes face
30 difficulties in engaging participants, allowing flexibility and ultimately eliciting data
31 about people's experiences to address the research question. When this occurs
32 researchers have the opportunity to be more innovative with design and
33 methodologies (Edmondson, 2013) to ensure a tailored approach (Matthews, 2007).
34 Visual methods (e.g. photo-elicitation and photo-voice) are alternative approaches to
35 interview based research, where images (often photographs) are used as stimuli and/or
36 structure within interviews. Over the last decade, the use of visual methods in nursing
37 research has progressed from "being a waif on the margins" (Harper, 2002) and
38 disregarded due to subjectivity (Riley and Manias, 2004), to an alternative method
39 with potential to reveal more data than traditional interviews (Balmer et al., 2015).
40 Consumer led research and promotion of participatory methods has facilitated the
41 increased popularity of visual methods (Wiles et al., 2008). However, little has been
42 published to guide nurse researchers in applying and evaluating this method (Miller,
43 2015, Wiles et al., 2008, Riley and Manias, 2004). This article aims to increase nurse
44 researchers' awareness of visual methods and their potential, to enable them to make
45 informed choices about methods in health research.

46

47 **What do we mean by ‘visual’ methods?**

48 The ‘visual’ is a vital part of how the majority of people understand the world and
49 there are numerous ways research could incorporate visual elements. Utilising
50 photographs, images, paintings, video and drawings within research can enrich
51 methods traditionally focussed on verbal or written communication (for detailed
52 examples of using visual methods in psychology see Reavey (2011)). This article will
53 focus on the ‘photo elicitation’ and ‘photovoice’ methods; where photographs are the
54 main visual element.

55 Photo elicitation was first used in the 1950s by Collier et al to investigate
56 psychological stress (Harper, 2002). The main application of this method involves
57 participants taking photographs and the researcher using these as a stimulus during
58 subsequent interviews (Harper, 2002).

59 Photovoice, previously known as photo novella, developed in the 1990s by Wang and
60 Burris (1997), is also a method where photographs are taken by the participant (or
61 researcher) to enable them to think critically about their community and discuss the
62 different influences on their lives, through a group process. It is referred to as a
63 Community Based Participatory Research (CBPR) method whereby groups identify
64 issues in the community, select photographs based on those issues, participate in
65 group meetings to describe the photos and explore meanings, and exhibit the

66 photographs and narratives to stakeholder groups to influence policy makers (Wang
67 and Burris, 1997).

68 Unlike the group action approach used in photovoice (Wang and Burris, 1997), photo-
69 elicitation seeks individualised accounts (Harper, 2002). Application of these methods
70 enables the creation of knowledge closely focussed on the experience of participants
71 and their interaction with their environment (Lal et al., 2012). Participation is
72 expanded beyond the traditional interview and a more active participant role is
73 encouraged (Meo, 2010), see table 1. For example, 'auto driving' is a technique
74 within visual interviewing which emphasises and encourages the participant, to 'drive
75 the interview' (Frith et al., 2005: p.190).

76

77 **How have visual methods been used in health research?**

78 Historically visual methods have been more commonly used within sociology,
79 psychology, geography, but their use is increasing within health research (Lal et al.,
80 2012, Pain, 2012). For example, in a wide range of health topics such as cancer
81 (Balmer et al., 2015); chronic disease (Drew et al., 2010); end of life care (Tishelman
82 et al., 2016); self-harm (Edmondson et al., 2018); and mental health (Han and Oliffe,
83 2015). It has also been used in diverse age groups including; children (Whiting,

84 2015), young people (Wells et al., 2012), adults (Balmer et al., 2015) and older people
85 (Wiersma, 2011) .

86

87 Several reviews of visual methods in health research have highlighted areas of
88 benefit, as well as where more information is required (Catalani and Minkler, 2010,
89 Lal et al., 2012, Pain, 2012, Riley and Manias, 2004, Balmer et al., 2015). Pain (2012)
90 concluded researchers would benefit from comparisons of visual methods with other
91 approaches to help make informed choices about methodology. Riley et al (2004)
92 suggested the method be promoted in nursing to enrich traditional forms of data
93 collection and provide different approaches to research. Gaps in the literature included
94 further examination of the ethical, methodological (Lal et al., 2012) analytical and
95 confidentiality issues (Balmer et al., 2015), related to the method. Along with the key
96 benefits and difficulties associated with using visual methods, these identified gaps in
97 the literature are discussed to help nurse researchers make informed choices about
98 methods, and applied examples from the authors research are used throughout:
99 ‘Teenager’s experiences of continued education following a diagnosis of cancer’
100 (Pini, 2014) and ‘Listening with your eyes: Using pictures and words to explore self-
101 harm’ (Edmondson, 2013) .

102

103 **Key benefits of using visual methods in health research**

104 The key benefits of visual methods have been shown in three areas; with participants
105 who may find it **difficult to verbally express** themselves (Pink, 2004); to explore
106 **sensitive subject areas** such as cancer (Pini, 2014) and self-harm (Edmondson et al.,
107 2018); to **engage young people** in research, for example to explore chronic disease
108 self-management (Drew et al., 2010).

109
110 Underpinning visual methods are two main perceived benefits: reducing the gap
111 between researcher and participant: and facilitating expression of meaningful data.

112
113 **Reducing the gap between researcher and participant**

114 It is well documented that visual interview methods help establish rapport with
115 participants (Smith et al., 2012). They have been described as a bridge building
116 method, helping to bring together the worlds of participant and researcher (Packard,
117 2008, Drew et al., 2010). The way the method is conducted, both prior to and during
118 the interview, can facilitate participant comfort and encourage their engagement.
119 Interviews can be daunting and unfamiliar, especially when difficult experiences are
120 discussed. The method allows participants to prepare for the interview by giving them
121 time to consider and take photographs, prior to the interview, which they would like

122 to discuss. Enabling them to feel more in control of the pending research encounter.
123 The unfamiliarity is also reduced by the time spent in contact with the researcher
124 before the interview (Edmondson, 2013). It can be beneficial for researchers to meet
125 participants and speak over the telephone prior to interviews to discuss themselves
126 and their interest in the topic area, but also to provide some coaching on the method.
127 This approach can help participants engage with the process and build a rapport with
128 the researcher, especially in a longitudinal design (Pini, 2014).

129

130 The photograph itself provides a concrete starting point for the participant to begin
131 conversations:

132 *“It’s quite a good thing because if like if you were just to say come in*
133 *and talk about it, I wouldn’t know where to start or anything and it’s*
134 *a good like, it’s a talking point like the picture you can say I’ve taken*
135 *this picture because...” (participant quote, Edmondson, 2013)*

136

137 Discussing the meaning of photos during the interview facilitates the sense of working
138 something out together (Harper, 2002). Enabling participants to use their own
139 photographs to set the agenda (which photographs to discuss, in what order, for how
140 long) can result in feelings of empowerment (Packard, 2008). There is an implicit
141 message that the participant has an important perspective to share (Drew et al., 2010)

142 and many studies have also found using photographs to explore meanings and
143 memories as a cathartic, positive, rewarding experience for participants (Balmer et al.,
144 2015, Edmondson et al., 2018).

145

146 **Facilitating expression of meaningful data**

147 The inclusion of photographs facilitates extensive and holistic accounts of participant
148 experience (Balmer et al., 2015). The photograph can take the researcher into
149 different environments (place of work, home, bedroom, hospital), with different
150 people (family, friends, colleagues) and add an emotional layer, which may be
151 difficult to verbalise (Balmer et al., 2015). Going into the world of the participant can
152 offer access to unpredictable information (Meo, 2010, Pyle, 2013) and unlocked
153 stories (Leibenberg, 2009), providing a rich narrative (Pyle, 2013, Thomson, 2012).
154 The polysemic properties of photographs enable unexpected meanings to emerge, see
155 figure 1. In a similar way, Balmer (2015) reported how the same photograph (of a
156 spouse) revealed discussions about very different aspects of the participants’
157 experience with cancer, for example; expectations and reality of support, body image
158 alterations and changes to sexuality, communication difficulties, relationship
159 breakdown and guilt about the impact of cancer on others. They referred to Barthes
160 ‘obvious’ and ‘obtuse’ meanings of photographs, the latter being more personal and

161 emotional and more likely to disrupt the reading of a photograph (Barthes, 2003).
162 This introduction of multiple meanings within interviews can bring about enhanced or
163 different understanding of the phenomena of interest (Edmondson, 2013).

164 Figure 1 about here.

165 Different parts of the brain are used to process visual and verbal information,
166 therefore responses to words and pictures can be different (Harper, 2002). Visual
167 information evokes a deeper level of consciousness, which can result in different
168 information being elicited (Harper, 2002). Responding to visual stimuli is said to elicit
169 more emotional responses than verbal questioning alone, which can enrich the
170 interview content (Prosser, 2006) and highlight significant issues (Harrison, 2002).

171 The visual element is said to promote self-understanding, expression, communication
172 and focus during interviews (Drew et al., 2010), thus facilitating more comprehensive
173 interviews (Harper, 2002). Rather than fitting experiences to pre-determined
174 questions, the active process of using participant photographs enables better
175 expression and encourages participants to consider - what is important to them, how
176 might they visually represent that and then reflect on the meaning of their
177 photograph(s) using their own words (Harper, 2002, Wells et al., 2012).

178

179 Using photographs reduces difficulties they might have understanding research led
180 questions (Lachal et al., 2012). In so doing a diverse range of people can be
181 empowered to take part in research (Balmer et al., 2015), that is enjoyable
182 (Edmondson et al., 2018) and “ better than just a normal survey” (Drew et al., 2010).

183

184 Photographs are also helpful in introducing difficult subject matter (Lachal et al.,
185 2012) and communicating experiences that are difficult to express verbally (Harrison,
186 2002). They can reinforce the “truthful nature of the verbal tale” (Johnson, 2004
187 p.432) and help participants feel confident in their expressions. They can also
188 facilitate discussions by providing something both researcher and participant can look
189 at, which can reduce awkwardness about eye contact or knowing where to look (Pini,
190 2014), see figure 2. The act of looking at the photograph can also create a sense of
191 distance between the participant and their experience (Balmer et al., 2015), enabling
192 them to opt in/out of direct personal association and talk about an issue more broadly
193 (Harrison, 2002).

194 Figure 2 about here.

195 Photographs can also serve as a memory aid during the interview (Pyle, 2013) and an
196 anchor for narratives by providing something physical that can be referred back to if
197 the participant needs to re-orientate themselves (Pini, 2014):

198

199 *the [photographs] were good because it gives like something to talk*
200 *about which I'd probably forget if I was just talking like this so... it*
201 *was like a reminder to tell you whatever it was" (participant quote,*
202 *Pini, 2014)*

203

204

205 **Comparing interviews with /without photographs**

206 Collier (1957), who first named the photo elicitation method, was also the first to
207 compare it to non-visual interview methods. He reported how photographs facilitated
208 recall; aided understanding and enabled richer, more emotional discussions, compared
209 to interview alone (cited in Harper, 2002). Meo (2010) also compared interviews
210 with and without photographs and reported similar results – more detailed and
211 enjoyable interviews; a closer examination of whom and what was important;
212 emergence of unexpected topics; and enhanced participation and control for
213 participants.

214 Table 1 details a number of different objectives researchers strive for when
215 conducting qualitative research, and compares how interviews, with and without
216 photographs, meet those objectives.

217

218 Table 1 about here

219

220 **Key difficulties with using visual methods**

221 This approach does not appeal to all (Frith and Harcourt, 2007) and there are well-
222 documented challenges for the researcher and the researched and include ethical,
223 analytical and practical concerns.

224

225 **Ethical difficulties**

226 Although ethical guidelines apply to all research, visual methods specifically lack a
227 history of ethical practice (Balmer et al., 2015). Ethical issues relating to anonymity,
228 consent, and copyright are common challenges. Lack of knowledge of the method
229 disadvantages studies in gaining approval from committees who are simply unfamiliar
230 (Wiles et al., 2008). Both Miller (2015) and Pitt (2014) urge scholars to purposefully
231 state their reasons for using visual methods, detailing the range of advantages, in
232 order to break this cycle.

233 Once approval is obtained, researchers inevitably strive to protect participants through
234 anonymising any identifiable data in the photographs and transcripts. Removing
235 identifiable data before publication / presentation is necessary, but often difficult to
236 completely anonymise photographs (Tishelman et al., 2016). Pixelating photographs
237 is an option, but can feel contradictory when participants aim to express themselves.
238 To include photographs of others, participants are (ethically) required to seek written
239 consent from that person. In this situation participants may either ignore the consent
240 procedure because they find it awkward or unnecessary, or they do not capture the
241 photographs they would like to (Pini, 2014).

242
243 Complexities and strategies with regards to consent have been discussed in the
244 literature. Davies (2008) focused on issues of informed consent for visual researchers
245 and, amongst other recommendations, suggested offering participants the choice to
246 consent to use of individual photographs, rather than consent to use all of the data.

247 Copyright can present as an issue. In most cases the participant owns the image and
248 the consent process obtains permission for the researcher to use data. Participants may
249 however take photographs of art work, images in a magazine or from the internet.

250 Ascertaining the copyright owner can prove difficult and even impossible in some
251 cases (Edmondson, 2013).

252

253 **Analytical difficulties:**

254 There is limited guidance for analysing combined images and transcripts (Frith and
255 Harcourt, 2007, Gleeson, 2011). Instead, authors typically present an analysis of the
256 textual data only. This is perhaps due to the dearth of literature/explicit guidance on
257 how to handle visual data with systematic rigour and transparency (Gleeson, 2011)
258 and the view that the images are used as a stimulus, rather than as “containing” data in
259 their own right (Warren, 2005).

260 Polytextual thematic analysis has therefore been developed as a method of analysis
261 (Gleeson, 2011) that enables researchers to include visual data in the analysis. The
262 method follows the same key stages as a thematic analysis, as described by Braun and
263 Clarke (2006), but applies the stages to working with photographs as data. For
264 example, the first step is to familiarise with the photographs (view each photograph
265 separately and note thoughts and feelings that emerge. Note details of the specific
266 content of the photograph that evoked thoughts/feelings - use of colour, placement,
267 and content). This process is then repeated whilst viewing all of the photographs
268 together to generate initial codes. The data is then managed as one source (a list of
269 codes which consist of images and text) for the remaining stages of the analysis
270 (searching, reviewing, defining and naming themes).

271

272 **Practical difficulties:**

273 To ensure a complete execution of the method the participant requires equipment to
274 collect data; instructions / guidance (motivation) to collect data, and the researcher
275 requires equipment for sharing photographs (between participant and researcher) and
276 viewing them (in print /electronically). Although most mobile phone devices feature a
277 camera, this is not always the most practical or preferred choice because participants
278 may not want sensitive photos on their own phone. Using study cameras however is
279 not without risk (or resistance). Disposable cameras are not advisable because they
280 can be seen as an out-of-date medium (Drew et al., 2010) which can restrict the
281 amount of data collected and options for viewing/ deleting photographs.

282 The offer of instructions / guidance around the content or number of photos can also
283 inadvertently restrict data collection. For example, when provided with examples and
284 guidance participants tended to produce images that were very closely linked to the
285 examples, which likely reduced the level of individual authenticity (Pini, 2014).

286 Without restriction participants can explore all different aspects of their experience
287 and the researcher avoids restricting access to data, however, no restrictions can be
288 overwhelming and appear more burdensome. An abundance of photographs can prove
289 difficult to work with during the interview and the analysis phase (Edmondson, 2013)

290 and can disrupt the flow of discussion; (Packard, 2008). Also, during the analysis and
291 listening to the audio recordings, it isn't always obvious which photographs are being
292 discussed. Meo (2010) suggested numbering each photograph and referring to the
293 number throughout the interview.

294 There is no guidance on the optimal number of photographs or the time between data
295 collection and interview. This balance needs to be carefully considered and adapted to
296 the needs of individual projects.

297 Finally, the researcher needs to prepare for participants who present without
298 photographs. This can happen for many reasons, such as difficulty with the concept of
299 capturing elements of their experiences visually (Drew et al., 2010) or practical
300 difficulties in capturing certain images (Edmondson, 2013). Researchers can respond
301 by developing an interview guide featuring a discussion of the practical and emotional
302 difficulties the participant has encountered in trying to capture images and what might
303 be missing from the photographs they present (Edmondson et al., 2018, Edmondson,
304 2013).

305

306 **Conclusions:**

307 It is left to the researcher to consider whether the benefits of using visual methods
308 outweigh the disadvantages (Packard, 2008). Using this method offers a good

309 alternative to more traditional approaches, but the exact benefits of the methods are
310 difficult to evidence because of the complexities of the research interaction (Pain,
311 2012). Therefore, as with any interview based research (or clinical work), the skill of
312 the interviewer and the relational aspects remain of fundamental importance (Packard,
313 2008).

314 This detailed discussion of visual methods and the associated methodological issues
315 will facilitate nurse researchers' awareness of the method, assist them in making
316 informed choices about research methods and encourage their use in health research
317 to enrich data and promote understanding. Employing visual methods in future
318 nursing research will contribute to the growing awareness and popularity of visual
319 methods.

320

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