Article

Visual Methodologies in Qualitative Research: Autophotography and Photo Elicitation Applied to Mental Health Research

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Abstract

Introduction: Visual methodologies are a collection of methods used to understand and interpret images. These methods have been used for a long time in anthropology and sociology; however, they are a relatively new way to research for the majority of disciplines, especially health research. Two effective visual methodologies that could be used in health research are autophotography and photo elicitation. **Autophotography:** Autophotography is asking participants to take photographs of their environment and then using the photographs as actual data. Autophotography captures the world through the participant's eyes with subsequent knowledge production. **Photo Elicitation:** Photo elicitation is using photographs or other visual mediums in an interview to generate verbal discussion to create data and knowledge. Different layers of meaning can be discovered as this method evokes deep emotions, memories, and ideas. Photo elicitation interviews contribute to trustworthiness and rigor of the findings through member checking. **Mental Health Research:** This article aims to describe the use of autophotography and photo elicitation to compare people with clinically diagnosed depression and people without depression and their ideas about sources of meaning in life and beliefs about the meaning of life. The analytical approach incorporates eight steps. Firstly, data analysis began during the interviews, then came organizing the data, coding the data, structured analysis, detailed analysis, interpretative analysis, creating themes, and the write-up. The steps taken to ensure trustworthiness were Shenton's credibility, transferability, confirmability, and dependability. This method is a new, innovative, and viable method for mental health researchers.

Keywords
visual methodologies, qualitative health research, autophotography, photo elicitation, mental health research

What Is Already Known?

- Visual methods enhance the richness of data by discovering additional layers of meaning, adding validity and depth, and creating knowledge. They add to traditional methods by capturing more detail and a different kind of data than verbal and written methods.
- Visual methodologies can be used on almost any population by allowing participants to express their ideas in a nonverbal way but have been underutilized in health research.
- Visual methods result in increased trustworthiness of the findings through member checking.

What This Paper Adds?

- This article gives an overview of the visual methodologies of autophotography and photo elicitation and how

they can be implemented into mental health research as a new, unique, and innovative methodology for qualitative health research.
- This article gives examples of autophotography and photo elicitation and how they have added further validity, depth, richness, and new insights to already existing verbal and written data collection methods.
- This article shows the steps taken to analyze the data generated from a study using autophotography and photo elicitation in mental health care.

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Introduction to Visual Qualitative Research Methodologies

Visual methodologies are used to understand and interpret images (Barbour, 2014) and include photography, film, video, painting, drawing, collage, sculpture, artwork, graffiti, advertising, and cartoons. Visual methodologies are a new and novel approach to qualitative research derived from traditional ethnography methods used in anthropology and sociology. There has been recent enthusiasm for the use of visual methods in qualitative research (Barbour, 2014). They add value to already existing methods by bringing another dimension (Balmer, Griffiths, & Dunn, 2015), by capturing rich multidimensional data (Mah, 2015), and by adding valuable insights into the everyday worlds of participants (Barbour, 2014). Researchers use these images and methods to create knowledge (Thomas, 2009), which is becoming increasingly recognized as advantageous in health and illness research (Balmer et al., 2015).

A literature review conducted by Pain (2012) to evaluate the choice and use of visual methodologies found that visual methods enhance the richness of data and help with the relationship between the researcher and participant. Data enhancement was achieved because it facilitated communication, enhanced rapport building, enabled the expression of emotions and tacit knowledge (the unspoken or unexpressed), and encouraged reflection. This approach acknowledged participants as experts in their own lives, facilitated empowerment, and allowed for collaboration. Using visual methods to facilitate and enrich communication enhanced the data producing richer and a different kind of data than verbal methods (Pain, 2012). Visual methods are an effective and acceptable method for qualitative research and are becoming more widely used in multiple disciplines (Pain, 2012). Two specific visual methods that can be used in qualitative research are autophotography and photo elicitation.

Autophotography

Autophotography is an ethnographic research method used in the field that creates an environment where the researcher and the reader can see the world through the participant's eyes by the use of photography. Autophotography began in anthropology in the 19th century, as photographs were often taken by researchers in the field and then presented to audiences to show native cultures in other lands (Thomas, 2009). These days photographs in fieldwork are used as actual data, particularly in ethnographic research (Thomas, 2009) and may be taken by participants. Photographs can show depth and detail that cannot be conveyed through words (Guest, Namey, & Mitchell, 2013, p. 239).

Autophotography has become an important tool for building bridges between marginalized groups in research because it does not rely on participants having to speak for themselves. It also does not rely on survey questionnaires and other research instruments that might be culturally biased (Noland, 2006). Autophotography can significantly enhance conventional approaches to qualitative research as it allows those who may not be fluent in the required language to express themselves with confidence and clarity, giving marginalized groups the same opportunities (Noland, 2006). Autophotography can also give participants a chance to think about who they are and to express this through their chosen images (Noland, 2006). Thomas (2009) has suggested that when participants take a photograph knowing that it is for research, they have made decisions about how they want to represent themselves in the visual scene they have created.

In the past, autophotography has relied on the use of disposable cameras, which were inexpensive onetime use cameras that became affordable in the 1990s. More recently, digital photography has become popular and will in time widen the use of autophotography in qualitative research. From the 1990s, with the desktop computer, and the development of the Internet and digital photography, autophotography has become more popular as a visual methodology in qualitative research (Thomas, 2009). Collier and Collier (1986) were pioneers in photographic methods and have written much about this research method. Their widely used book: *Visual Anthropology: Photography as a Research Method* is a commonly used and cited text on this research method.

A similar research method to autophotography is Photovoice developed by Wang and Burris (1997) which involves getting community members to take photographs of their concerns and assets so they can identify, represent, and enhance their community through the specific photographs they have chosen. This then allows them to act as possible catalysts for social action and change. It allows people to see the viewpoint of the people who live the lives rather than seeing them through the eyes of the researchers. Participants select the photographs and tell the stories about what the photographs mean, therefore giving voice to the stories and identifying the issues and themes that emerge (No Author, 2017; Wang & Burris, 1997). The Photovoice method is similar to autophotography, as both methods are a collaboration between participants and researcher/s and allow others to see the world through the participant's eyes.

Photo Elicitation

Photo elicitation is the use of photographs to generate verbal discussion (Thomas, 2009). The visual images can be produced by the informant or by the researcher. Photo elicitation is now a widely known and a frequently used technique which involves using one or more visual images in an interview and then asking participant's to comment on the visual images used (Bigante, 2010).

Photo elicitation produces a different kind of information as it evokes feelings, memories, and information (Harper, 2002). The difference between conventional interviews and photo elicitation lies in the way participants respond to the symbolic representations in the photographs. The parts of the brain that process visual information are in evolutionary terms older than the parts of the brain that process verbal information; therefore,

visual images evoke deeper parts of human consciousness than words do (Harper, 2002). Words alone use less of the brain's capacity than processing visual images using words (Harper, 2002). This is probably why the photo elicitation interview is not simply an interview process but a process that elicits more information and evokes a different kind of information during an interview (Harper, 2002).

Different layers of meaning can be discovered by using this method. A participant photographing their own images gives them the freedom to choose what they want to talk about in the interview, which makes them more relaxed because they know what the content of the interview will be. The participants can also choose the order of the photographs to be discussed, giving them more power to guide the researcher in the interview (Noland, 2006).

> "Photo elicitation may overcome the difficulties posed by in-depth interviewing because it is anchored in an image that is understood, at least in part, by both parties. If the interview has been successful, the understanding has increased through the interview process." (Harper, 2002, p. 20)

Therefore, photo elicitation can lead participants and researchers toward common understandings (Harper, 2002). In photo elicitation interviewing, the researcher observes the emotions that arise in the participants as they discuss the meanings of the photographs. The participant also elicits insights that are not necessarily clear in the photographs. This method allows for triangulation between different information sources and can bring different insights to the research (Bigante, 2010) and therefore increases rigor. Photo elicitation can add additional validity and depth, new opportunities, and new viewpoints (Bigante, 2010).

Harper (2002, p. 23) points out that photo elicitation interviews can create "deep and interesting talk." Much of the work and outcome of photo elicitation interviewing is a collaborative effort rather than an individual effort by the researcher and therefore involves joint theorizing which occurs in the interview. However, the researcher still has a facilitative role, drawing out what is needed in the interview and helping the participant frame and formulate their responses (Jenkings, Woodward, & Winter, 2008). Therefore, photo elicitation interviews can be both data collection methods and a form of data analysis. Researchers using this method have found that the meanings and emotions elicited can differ from or add to traditional verbal methods of interviewing (Harper, 2002).

Studies Using Autophotography and Photo Elicitation

Photo elicitation interviewing has been used in a range of studies successfully (Mannay, 2013) including interviewing children where traditional verbal interviewing methods created limitations (Epstein, Stevens, McKeever, & Baruchel, 2006). Researchers have also used photo elicitation to study social, racial, and peer cliques in high schools (Thomas, 2009) and in a Maasai village in Tanzania, exploring the use and preservation of natural resources (Bigante, 2010), children, families, university students, farmers, substance abusers, medical illnesses, with different cultures and ethnic groups, in the social identities of children, in the importance of clothing for adolescents, the work environment (Harper, 2002), in parents accounts of long-term distress after the preterm birth of a child (Kantrowitz-Gordon & Vandermause, 2016), and in visual autobiographies (Harper, 2002).

Collier and Collier (1986) used visual anthropology (photography) as a research method for many years including using topics such as religion, to convey joy and aspirations, psychological hardships of life, and different cultural practices and to gain a better understanding of different cultures. It was also used to research businesses, work scenes, and power struggles, children and their engagement in education, cultural and linguistic minorities, social relationships and social structure, cultural ceremonies, and urban versus rural living.

Autophotography and photo elicitation have also been used for understanding meaning in people's lives in the field of psychology (Steger et al., 2013). Previous research relied on verbal methods, but not everyone has highly developed verbal skills and even people who do can still find it hard to articulate what they want to say. Using photography allows the researcher to elicit new information not captured previously (Steger et al., 2013). Autophotography generates rich, informative responses and deeper feelings, which allows the capturing of subtle meanings. Allowing participants to clarify what they actually meant to convey in their photographs increases trustworthiness of the findings through member checking. This shows that by going beyond written and verbal responses, photography has great potential to be used in almost any population, so the participants can share their worlds. Those such as the poor, migrants, the homeless, or the illiterate could readily be studied using this method to gain a detailed picture of their unique experiences (Steger et al., 2013).

Studies Using Autophotography and Photo Elicitation in Mental Health Research

One study used autophotography and photo elicitation based on the broad features of ethnographic research (photographic ethnography) to study people with long-term mental illnesses for mental health nursing research (Erdner, Andersson, Magnusson, & Lutzen, 2009). The researchers realized that this cohort may not be cognitively able to express their views, so this research design was more relevant to and respectful of the integrity of this group. They found the method very effective in capturing the lived experience of participants, especially in relation to the difficulties of feeling socially unacceptable when suffering from a long-term mental illness. The participants were the photographers and authors of their own narratives. The researchers found participants were more readily able to reflect on their photographs and the meanings they attributed to them (Erdner et al., 2009).

Photography has also been used in groups of mental health clients to explore possible meanings to their broken lives and suffering and how facades played a role in their stories. The facades they developed helped them hide their suffering from themselves and their social connections. The researchers found the use of cameras and the group setting protected the storyteller from a too direct approach to understanding their suffering allowing for greater insight about this phenomenon (Sitvast, Abma, & Widdershoven, 2010).

Photographs have been found to give extra depth to the interview content by adding richness and depth and revealing more than would have been revealed if only an interview had been conducted. This allows for a deep and broader understanding and a richer, more holistic, profound, and multifaceted look at the topic to create meaning. Unexpectedly, participants have reported they enjoyed the process of creating photographs to explain and show the researchers what they were trying to say. This research technique has therapeutic value, as well as being an effective method of data collection (Balmer et al., 2015). The authors used autophotography and photo elicitation in mental health research to broaden our understandings of meaning in/of life, which is outlined below.

An In-depth Example of How Photo Methods Are Used in Mental Health Research

Following a review of the literature on sources of meaning in life and people's beliefs about the meaning of life, Glaw, Kable, Hazelton, and Inder (2017) used the visual qualitative methods of autophotography and photo elicitation to examine sources of meaning in life and beliefs about the meaning of life in Australians in midlife with or without depression for mental health research. Past research on these topics had shown that people have difficulties articulating their ideas around meaning in/of life, so the rationale for using autophotography was that it is a method that allows people to express their ideas in a nonverbal way, allowing researchers to capture more detail and a different kind of response than verbal or written methods alone would. The rationale for using photo elicitation interviews was that it allowed collaboration between the researcher and participants and created member checking, therefore increasing rigor.

This study used purposive (nonprobability) voluntary sampling (Blaxter, Hughes, & Tight, 2013) to produce a self-selecting sample. Recruitment took place via the university homepage with interested people being invited to contact the researcher for further information regarding participation in the study, leading to some potential biases due to recruitment of this cohort. A community setting was selected as being more ethically appropriate to conduct this study, because people in an acute care setting may be very ill and may struggle to participate in research of this type. Consequently, academic staff from one Australian university were selected as a study population for this research. Three rounds of advertising were conducted during February and March 2016. People were eager to participate, and within 24 hours of advertising, almost all of the participants had been recruited. This approach resulted in a sample of middle- to upper-class white-collar workers.

All participants were asked to provide written informed consent prior to being included in this study and were required to have capacity to give informed consent on their own behalf. For the participants who were diagnosed with depression, they were required to be well enough to be in the workplace and therefore able to give full written informed consent. Ethics approval was gained from the University Human Research Ethic Committee. Participation was voluntary and participants were informed of the purpose, methods, risks, demands, and potential benefits of the research, including consent to use photographic images and confidentiality of photographic images with people in them.

Participants were asked to take photographs of their sources of meaning in life and then to list them from most important to least important. Following this, they were asked to write about their beliefs about the meaning of life and to complete demographic data and mental health screening assessments. Participants were divided into two groups, one group were midlife Australian academics who had never suffered from a mental illness and the second group were midlife Australian academics who had been clinically diagnosed with depression.

Three weeks after the baseline screenings and baseline assessments, participants were invited to interview to discuss their photographs and thoughts about meaning in/of life. Eleven participants were involved, nine were female and two were male. Six did not have a mental illness and five had been clinically diagnosed with depression or depression and anxiety. All participants were Australian citizens and were between the ages of 40 and 60 years old and classified as midlife. Data collection was conducted between April and July 2016 using the methods of autophotograph and photo elicitation interviewing. Data analysis was undertaken between August 2016 and January 2017 using interpretative thematic analysis developed by experts in the field of photographic methods and analysis (Collier & Collier, 1986; Noland, 2006; Thomas, 2009).

Analytical Approach

Firstly, the researchers gathered the photographs into different themes and then counted how many themes emerged across all of the photographs. The researchers indicated the number of themes that arose and also interpreted the processes that lead to these groupings (Thomas, 2009).

Thematic analysis was used to analyze the findings as words and photographs can be more powerful than numbers alone. Thematic analysis involved identifying themes that emerge from the data (Harding, 2013). Thematic analysis was "a method of identifying, analysing and reporting patterns (themes) within the data" (Braun & Clarke, 2006, p. 77). Thematic analysis involves searching through a data set to find repeated patterns of meaning (Braun & Clarke, 2006). Coding played an important part in the thematic analysis as coding needed to be performed initially in order to break up the data

and to find links. These steps allow the researchers to find themes in the data (Liamputtong, 2013).

The analytical approach used incorporated Collier and Collier (1986), Noland (2006), and Thomas's (2009) recommendations for data analysis combined, as outlined in the eight steps below. This research project used Collier and Collier's (1986) instructions on photographic analysis who were the pioneers of this method, and it also incorporated more recent researchers' approaches (Noland, 2006; Thomas, 2009) to interpretive thematic analysis to ensure comprehensive analysis of the visual, verbal, and written data.

This eight-step process used involved data analysis beginning during the interviews as a collaboration, then organizing the data, coding the data, structured analysis, detailed analysis, interpretative analysis, creating themes, and the write-up of findings.

Step 1 involved the data analysis beginning during the interviews as a collaboration between participants and researcher (XG) resulting in a collaborative interaction (Collier & Collier, 1986). *Step 2* involved organizing the data. Photographs were numbered and organized into tables, with the normal control group's photographs in one column and the depression group's photographs in the other. The categories with the most photographs were placed at the top of the table, with the least photographed items at the bottom of the table. Questions and observations were documented as per Collier and Collier's (1986) instructions. Fortnightly, meetings with qualitative and quantitative experts were conducted to discuss the data and the themes emerging. This process also included peer review of the data and the findings as they emerged.

Step 3 involved coding the data by giving the photographs names (descriptors) as identified by the participants. Each photograph was then placed into a category/theme. Photographs which did not belong in a common category were placed in a separate category called miscellaneous. Counting and comparing of the photographs was then conducted to find out which were the most important categories and which were less important categories within the two groups. The most commonly photographed themes were allocated to the top of the table and the least photographed themes were placed at the bottom of the table. This gave an accurate picture of the important sources of meaning in life for each group. In the written essays on the beliefs about the meaning of life, categories were also created and counting conducted to identify the most frequently discussed categories/themes. Common themes began to emerge and were recorded.

Step 4 involved structured analysis. Counting and comparing categories was conducted, along with graphs and tables being constructed to present the different categories and how frequently they were discussed. The researcher considered all aspects of the photographs including color, image, shades, content, meaning, reasons why the photograph was taken, and the differences between the groups.

Step 5 involved detailed analysis. Each category/theme was numbered and named, usually using a commonly used word that the participants had used. For example, "a very important source of meaning for me is family," so "family" became the category. Then counting how many themes emerged from the data and which themes had the most to least number of photographs in it allowed the researcher to identify the most and least important themes in each group. Narrowing of the broader themes was then conducted. Detailed analysis of the written essays on the beliefs about the meaning of life was also conducted. Important categories and quotes were recorded, and detailed information about what they meant was recorded and clarified. This allowed for common themes to emerge, with accurate quotes to reflect or confirm emerging themes.

Step 6 involved interpretative analysis to understand and make sense of the emerging data. This approach provided insights into how the participants make sense of their worlds, so that ideas and meanings could be found and clarified. Thoughts, questions, and observations were recorded and themes were developed in much more detail. Final analysis of the patterns and meanings that emerged from the data was clarified by moving back and forth again and again through the photographs, interview transcripts, and written essays.

Step 7 involved creating themes; thematic analysis continued by finding important themes and binding them into major/overarching or related themes. The refinement of themes was conducted and the themes were located into priority order from most important to least important. Common themes emerged and were recorded in detail.

Step 8 involved the write-up of the findings into a readable, interesting, and coherent piece of academic work including the methodological process of interpretative thematic analysis, the findings, conclusion, and clinical implications. This allows the reader to understand the process, the data that emerged, and how this can be implemented into clinical practice. Rigor was ensured throughout the process by using Shenton's (2004) strategies for ensuring trustworthiness to demonstrate credibility, transferability, confirmability, and dependability.

Discussion

This article describes the use of autophotography and photo-elicitation as a method to examine ideas about sources of meaning in life and beliefs about the meaning of life in people with or without clinical depression. This article described the use of the methods of autophotography and photo elicitation and how they can be and have been successfully used in qualitative health research. The data were analyzed using an eight-step plan incorporating the combined approaches of Collier and Collier (1986) Noland (2006), and Thomas (2009), and this approach has proven to be successful.

This visual methodological approach used in this study was enhanced by including the more traditional methods of verbal and written data collection modalities as well. This included autophotography, photo elicitation interviews, written essays, and questionnaires allowing for several avenues of data collection and member checking functions, which increased the rigor and trustworthiness of the study. This combination of methods (visual, verbal, and written) gave participants time to capture
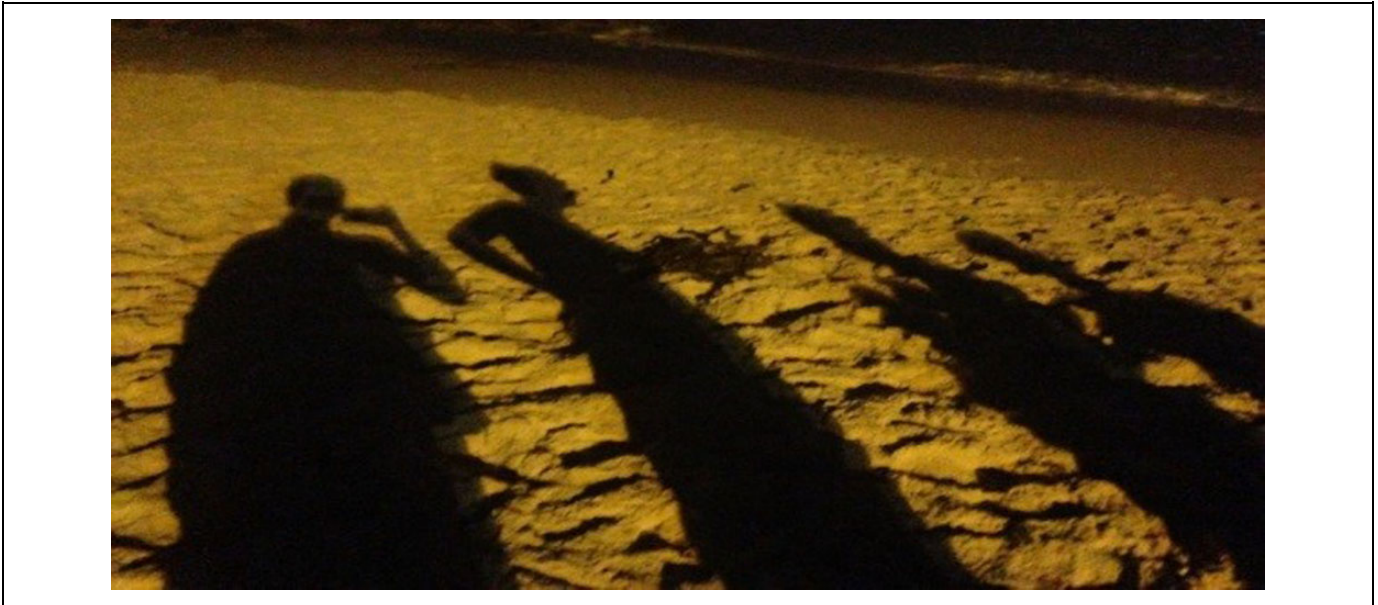
Figure 1. Family. This photograph is an interesting example of how creative the participants were in this study. Not wanting to gain written consent from every member of her family and to maintain their anonymity, instead the participant photographed her family's shadows in the sand.

the images they wanted to and time to reflect deeply on the concepts they wanted to discuss prior to the interview. It also gave participants different avenues to get their messages across, including giving participants with mental illnesses options as to how they could gather and present their data while also managing their mental health symptoms. If photography was challenging for them, then they could still write or talk about their chosen categories of meaning in/of life.

The participants in this study embraced the opportunity to discuss the meaning of life and to photograph their sources of meaning in life. They reported having found the process immensely cathartic, enjoyable, and beneficial to their own lives and futures because it allowed for deep reflection on the important things in their lives. Some participants claimed to have gained more from their participation in the study than the research team, as it allowed them to analyze their lives in a way they had not done before, gaining valuable insights for themselves.

This process created a richness in the data that may not have been present had participants not had the time to photograph and to think about their sources of meaning in life and beliefs about the meaning of life. This article illustrates that the visual methods of autophotography and photo elicitation are a unique and innovative way to collect data and can be successfully implemented into health and mental health research.

The photographs produced by the participants in this study were impressive—they showed beautiful, creative, and descriptive images of their sources of meaning in life and enhanced the written data, drawing out deeper meanings. Participants were very creative in the ways they presented the images of people in their photographs and followed the consenting requirements. For example, one participant

Figure 2. Celebration. Another example of how a participant represented celebration without the need to gain consent for images of people.

photographed her family's shadows in the sand to represent family, rather than providing identifiable images of them; she maintained their confidentiality and avoided having to gain written consent from each member of her family (see Figures 1–4).

Strengths of This Method

Autophotography and photo elicitation enhanced traditional data collection methods in this study by allowing the

Figure 3. Health and fitness. No consent needed for this image as the people are unidentifiable.

Figure 4. Working as a midwife. Another image that did not need written consent and that is very creative.

participants to express themselves through their chosen images. This methodology allowed participants to think and reflect prior to interview and to capture their ideas through photography and on paper. The visual images created subsequent knowledge; elicited memories, meanings, and deep emotions; and brought different layers and insights to the research. The photographs, verbal responses, and the written data provided trustworthiness and rigor through member checking. Joint theorizing was conducted in the photo elicitation interviews as participants spoke about and analyzed their own materials in conjunction with the interviewer. Therefore, deep and meaningful data were collected through this process, and the method was confirmed as a viable approach to data collection and analysis in qualitative mental health research.

Limitations of This Method

A potential limitation of this research is that visual materials may be interpreted differently by researchers compared to participants. To minimize this, we used photo elicitation interviewing as a member checking tool. Autophotography should be used in conjunction with photo elicitation interviewing to allow participants to explain exactly what the photographs mean so that misunderstandings or misinterpretations of the photographs are minimized.

Visual methods also require participants to have basic skills in operating a camera; therefore, it may not be an appropriate method for certain cohorts such as very young children or the disabled and may attract participants who are creative and perhaps younger. Given the current widespread use of cameras with mobile phones across all age groups, this was less likely to bias recruitment for this study. Participating in a method like this may also take courage for people who aren't used to putting their inner most thoughts and ideas out as images for all to see (No Author, 2010). One of the main limitations is that findings from this research are not able to be generalizable, especially outside the mid-aged group of well-educated adults.

Another additional limitation is that consent needs to be obtained from all people appearing in the images for confidentiality reasons. If consent cannot be obtained, then that image is either not included in the study or the image needs to be blurred

so that the people in them are unrecognizable to maintain their anonymity. Therefore, the complete participant perspective may not be able to be portrayed. This project gained consent from all participants and where possible from the people in the images. For images that included people that had not consented, the people's faces were blurred so they could not be identified.

Implications for Health and Mental Health Professionals

Visual methodologies, specifically autophotography and photo elicitation, are a new and innovative way for nurses and other health and mental health professionals to collect data and research topics in health care. These methods add additional layers of meaning to the data and are a viable method for qualitative research. Deep, rich, and interesting data emerge from this method, potentially creating more understanding and knowledge about patients, their lives, and their illness experiences. Edner, Andersson, Magnusson, and Lutzen (2009) have shown that using these methods can be a particularly effective way of understanding patients suffering from mental illnesses, as these patients may not always be able to articulate what they are thinking and feeling but can represent this through their photographs. This indicates that visual methodologies could be used successfully in health and mental health research but have been underutilized thus far.

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