

Why you should read this article:

- To gain an insight into the value of pre-pilot work
- To consider involving the research team as participants in pre-pilot work
- To understand how pre-pilot work can assist in a reflective and empathetic approach to research

Undertaking pre-pilot work to gain an empathetic insight into participants' perspectives

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Abstract

Background Being an empathetic researcher can be crucial in understanding participants' perspectives. However, while the need for empathy is recognised in qualitative interview research, there is less acknowledgement of its value with other methods of collecting data. Researchers can face various challenges when the instruments and approaches used to collect data are new to them. The value of researchers acting as participants when undertaking pre-pilot work are not be underestimated.

Aim To provide a reflective account of the pre-pilot work undertaken by the authors before their main study.

Discussion Pre-pilot work that involves the researchers as participants can develop cultural competence, as well as empathetic insight into participants' perspectives, thus enabling them to refine and strengthen their main study.

Conclusion It takes time when planning research to incorporate appropriate pre-pilot work that assists personal training and learning. However, this can pay dividends in terms of the empathetic insight gained for the refinement of the proposed study. Pre-pilot work and a reflective approach can strengthen rigour, as well as assist in planning research and collecting data.

Implications for practice Experienced researchers may be novices at using specific tools or methods of collecting data. Pre-pilot work enables a greater understanding and deeper appreciation of participants' perspectives.

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Key words

data collection, methodology, research, study design, study participation

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Introduction

Pre-pilot work can assist researchers in developing their research tools and to meet the needs of study participants

(Creswell 2013, Arunasalam 2017).

A strong body of literature has considered the value of reflective (Clarke 2009, Berger 2015, Johnston et al 2016) and

empathetic (Mallozzi 2009, Adams 2010, McDonagh 2015) approaches to research, but little consideration has been given to researchers acting as participants in pre-pilot work. This can enhance empathetic researchers' perspectives, as well as inform the development and refinement of their studies.

In this article, we discuss our experiences of pre-pilot work in a study involving the use of RealCare dolls (Reality Works 2021). The article provides background to the study, and an overview of the pre-pilot work's methods, analysis and findings. We also discuss the empathetic and reflective researcher.

Background

A local clinical commissioning group approached us to undertake a study examining the use of RealCare dolls with expectant parents aged 18 years and over. RealCare dolls are infant-simulators designed to enable professionals to teach a range of parenting and health-related matters, including sex education. They are wirelessly programmable so that certain responses by carers, such as feeding, nappy changes and rocking, can be tracked. Any instances of 'mishandling', such as not providing the doll with head support, can also be recorded; relevant personnel, such as healthcare professionals, can then offer appropriate advice.

RealCare dolls have been widely used in research primarily focusing on dementia care and young people. Mitchell (2014) recognised the increasing use of dolls as a therapeutic device for people with dementia; promotion of well-being was linked to a reduction in challenging behaviour, greater engagement with others and increased dietary intake.

Mitchell and Templeton's (2014) critical review of 11 published articles on doll therapy determined that most studies found it could be useful for some people living with dementia to use dolls, with greater engagement and communication and fewer episodes of distress. Limitations

to the therapy included confusion over the ownership of the doll and healthcare professionals being uncertain about issues pertaining to autonomy, with some feeling uncomfortable about its use in clinical practice.

McCormack and Sim (2005) suggested that simulated doll or virtual parenting interventions can be valuable in modifying attitudes towards teen pregnancy and parenting, so delaying it until the participants have a better understanding of the associated demands and responsibilities. However, these anecdotal views do not appear to be confirmed by research. For example, Herrman et al (2011) evaluated the effectiveness of simulation as a strategy to influence a group of 79 teenagers' perceptions of pregnancy and parenting. The participants undertook six, weekly, 'baby think it over' classes and an infant-simulator experience. Analysis found no significant differences before and after the tests in teenagers' perceptions of the reality of parenting, suggesting that the use of infant simulators had had minimal effects.

Overall, there is limited empirical evidence supporting the therapeutic use of dolls in these contexts, and no published evidence about its short- or long-term effects (Brinkman et al 2010, 2016) or educational benefits. This highlights a need for further research to identify best practice and increase healthcare professionals' and carers' awareness of it.

Ethical challenges have been raised, particularly concerning whether it is appropriate to encourage older people with dementia to interact with dolls (Mitchell and Templeton 2014), as they may not appreciate these are not real infants. We were aware of the potential stress that RealCare dolls could evoke if users cannot console them or if a negative event, such as mishandling, is logged.

As a result, we felt we needed to further understand the use of the dolls to gain an empathetic insight and refine our proposed study. We undertook pre-pilot work in which we would be the participants.

Key points

- Pre-pilot work enables researchers to have an enhanced understanding of the research process, in particular the data collection tools, enabling refinement
- It can assist in achieving a reflective and empathetic approach to research
- It can enable researchers to gain an enriched appreciation of participants' perspectives
- It can play an invaluable role, but is time-consuming and may have financial implications

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Method

A pilot is a small-scale study conducted in preparation and before the main study to identify feasibility, strengths and limitations of the methodology (Polit and Beck 2018). A pilot can be valuable in any research as it enables ‘specific pre-testing of a particular research instrument’ (van Teijlingen and Hundley 2002), enhancing the quality of the main study. A pre-pilot study takes place even earlier than a pilot, informing the development and refinement of data collection instruments (Creswell 2013), and playing a vital part in assessing their content validity and determining what is included or excluded (Thabane et al 2010, Yan et al 2012). Limited evidence is available about published pre-pilot work and that available did not try to ascertain participants’ perspectives (Griffin et al 2016, Arunasalam 2017).

Pilot and pre-pilot studies are time-consuming, but they can reveal unanticipated problems, giving researchers the opportunity to improve data collection tools (Arunasalam 2017). We undertook our pre-pilot work to gain insight into setting up and using RealCare dolls, as well to appreciate participants’ experiences; this would, in turn, inform our decisions about our future target population and how to prepare it.

Usually, a pilot study is undertaken with participants who possess characteristics that are the same as or similar to those of participants in the main study. However, the objectives of our pre-pilot work were to:

- » Gain an empathetic insight into participants’ perspectives that assisted us in obtaining cultural competence, planning the main study and supporting those involved.
- » Ascertain our experiences of caring for the dolls.
- » Evaluate the quantitative data generated when caring for the dolls.

We undertook pre-pilot work between July and September 2020. This first involved appropriately notifying the university ethics committee and receiving approval.

We then downloaded the RealCare software to password-protected university laptops to enable us to wirelessly control the dolls, programme them and download reports summarising the care interventions we gave. The doll has four programmes: easy, moderate, difficult and random. The doll’s user selects the programme and the timing, with the ‘difficult’ setting requiring the carer to carry out more frequent interventions. For the doll to recognise who is providing care, the carer must wear an electronic bracelet linked to the doll and its programme, with the wearer gently tapping the bracelet on the doll’s shoulder so that the software can record the subsequent actions.

Each of us cared for the doll for two separate eight-hour periods using different programmes (Table 1). Two of us used each programme as we felt this would produce sufficient data for a thorough assessment. The RealCare doll’s software generated quantitative information that enabled us to objectively examine our behaviours. We developed reflective logs (Figure 1) and used these to collect data by recording our subjective experiences. We documented any positive or negative perceptions in the appropriate columns while caring for the doll; in the ‘overall’ section, we added a more detailed, reflective account to provide an in-depth review of events that enabled the experiences to be considered from different perspectives (Bolton and Delderfield 2018).

Table 1. The programmes tested by each researcher

Researcher	Programme
JP	» Random » Moderate
SR	» Difficult » Easy
LW	» Difficult » Random
BL	» Easy » Moderate

Analysis

One researcher (LW) could review all the data from the eight reflective logs and the RealCare doll’s software, as the data were not cumbersome. The researcher collated and summarised the material, scrutinising the positive and negative experiences as well as the ‘overall’ reflective section of the logs and allocated codes to important terms, which helped to identify themes. Another member of the team (JP) checked and agreed the results. An audit trail enhances trustworthiness and credibility (Noble and Smith 2015), so we documented each stage of the pre-pilot work; we also met regularly to reflect on and discuss each aspect of the work.

Results

The quantitative data reports gave scores for ‘proper care’ – feeding, burping and rocking the doll, as well as changing its nappy – and ‘mishandling’ – shaking the doll, providing poor head support, holding the doll in the wrong position and roughly handling the doll – in addition to an overall performance given as a percentage. On one occasion, the overall performance was 100% while on another it was 0%; the latter made us question whether the doll had appropriately recorded the activities and highlighted the need for the bracelet to be correctly positioned before the care

intervention. The other scores were all between 48% and 79%.

Overall, the data from the logs and the software indicated that ‘moderate’ was the most suitable programme for the main study as this would not be too demanding for participants and would provide an opportunity for them to undertake a good range of interventions for the doll.

The reflective logs detailed thoughts and experiences about caring for the dolls, with three main themes emerging: ‘technology’, ‘interaction’ and ‘uncertainty’.

Technology

There were initial challenges with downloading the software and becoming familiar with its usage.

‘I found the first day of trying to use the technology and trying to be able to meet the needs of the baby was very stressful and demanding... but also in setting it up to get the right programme etc.’ (BW)

‘One of the difficulties was transferring the programme to the doll – this took several attempts and was then successful.’ (BL)

Some of us lacked confidence in the use of the electronic bracelet and whether it had been activated before each care intervention:

‘At one point in the afternoon, I tried to scan my bracelet to offer the baby a feed, but this did not work.’ (SR)

Figure 1. Reflective log to record the researchers’ experiences

RealCare doll and assessing functionality: Reflective Log
 [Please use a separate log for each RealCare doll Programme]

Research team member name:

RealCare doll Programme [please specify]:

Date:

Start time of programme: Finish time of programme:

Date and time of comment	Comments [Please record the <i>challenges/negative experiences</i> when caring for the RealCare doll]	Comments [Please record the <i>strengths/positive experiences</i> when caring for the RealCare doll]
Overall		

Interaction

All of us commented on the fact the doll always presented a problem, such as crying very loudly when needing to be fed or have its nappy changed. Apart from some occasional happy gurgles, which normally occurred after a care activity, there was very little positive interaction.

This was an enormous insight, as we felt that the doll could not portray the potential joy of having a baby:

'When the baby required attention it whimpered, which fairly quickly escalated to a loud cry. The cry was noticeably different (very distressed) after a head support incident.' (SR)

'When the nappy change worked, the baby made a noise – a brief gurgle and then stopped, showing this intervention had worked.' (JP)

Uncertainty

We were uncertain about the actions needed to placate the doll, as sometimes we could rapidly resolve an issue and sometimes it took considerable time. In addition, the doll could have lengthy periods without requiring care, which led us to feel uncertain and worry that we were 'ignoring' it:

'With the easy schedule, I feel there were more and longer restful periods than a content baby would have in real life.' (SR)

'It actually at times made me feel rather a failure in my parenting of it, and when I once had the baby out in the garden and couldn't placate it, I got worried about what the neighbours might be thinking about what was going on... There is a risk that with a parent who wasn't feeling confident... it could be a very disempowering and distressing experience.' (BL)

Discussion

Papadopoulos and Lees (2003) discussed the importance of developing health researchers who are culturally competent and able to apply the appropriate skills

at all stages of their research. Kim (2010) highlighted the benefits of pilot work in terms of developing cultural competence, one important aspect being the cultural self-engagement of researchers. This section critically considers the value of the pre-pilot work in our study, as well as the skills we developed, in the context of existing literature relating to the empathetic and reflective researcher.

Being an empathetic researcher

Empathy is concerned with gaining a deeper understanding of someone's perspective (McDonagh 2015). Petty (2017) commented on the need to be empathetic when undertaking qualitative research interviews, suggesting that it is a 'humane element'. Mallozzi (2009) and Adams (2010) also stressed the need for good listening skills. However, less attention has been given to developing an empathetic approach when using other methods of collecting data.

'Reflexive embodied empathy' is sharing experiences with others (Finlay 2005) – the researcher perceives and feels participants' experiences to better understand the study's methods (Doyle 2013). Researchers often use themselves as tools for creating knowledge, but 'if the qualitative researcher is to be the research instrument, then he or she must be fully aware of the nature of that instrument' (Gilbert 2000).

Empathy can be experienced at the cognitive and affective levels, and can reflect feelings of sharing and identification (Vazquez Maggio and Westcott 2014). It involves being able to take and understand the positions, feelings and experiences of others and communicates interest and concern for people (Bull 2013). In doing so, researchers are acting ethically to protect participants from any undue distress.

Being an empathetic researcher is synonymous with being an emotionally intelligent one. All researchers have experiences but there is no consensus

on the role emotion plays in research. Dickson-Swift et al (2009) highlighted that an emotional ‘way of knowing’ can be contrasted with an objective, scientific approach, and acknowledged that researchers do not often report their emotions. However, Camacho (2016) argued that all emotional reactions, positive or negative, intense or mild, can be useful data. Emotions may be triggered for participants and researchers, especially when engaging in research relating to sensitive topics.

In our study, undertaking the pre-pilot work and analysing the associated data helped us to achieve a deeper understanding of participants’ perspectives. We identified important areas – technology, interaction and uncertainty – that participants may find challenging and we will take them into account when we plan the main study.

The doll cannot provide feedback about touch or response to voices, which may hamper any proposed assessments in relation to parenting or learning to be a parent. Similarly, the doll cannot consider the context of parenting and how this might affect physical care and the associated support required – for example, when there is domestic abuse.

Overall, this pre-pilot work enabled us to develop an empathy with participants that would otherwise not have been possible.

Being a reflective researcher

Reflection is a process of making sense of events, situations and actions to learn from them (Bolton and Delderfield 2018) – an essential outcome of our pre-pilot work. Reflection is also an important component of reflexivity concerned with questioning researchers’ attitudes and values, to appreciate our roles and how they relate to others. There is a need for researchers to be constantly aware of how and why they are conducting their research, and reflection is an important part of this, particularly self-awareness in relation to

data collection and interpretation. Noble and McIlveen (2012) suggested that reflection goes beyond self-observation to become ‘critical consciousness’, assisting personal and professional learning as well as transformation throughout the research process.

Reflective engagement by using logs enabled us to document personal thoughts, which was crucial to our individual learning as well as enabling us to learn from each other. Barton (2008) argued researchers should acknowledge their subjectivity and in our study, the literature we examined indicated there was no evidence RealCare dolls help to prevent teen pregnancy, which could have influenced our perceptions of the doll. However, keeping logs and acknowledging our presuppositions gave us the opportunity to reflect on our experiences during the pre-pilot.

Qualitative researchers cannot be completely objective, so researchers have often criticised the trustworthiness and authenticity of exploratory research such as ours (Walker et al 2013). Reflexivity has emerged as a way of imparting transparency and honesty in relation to the methodological processes and meaning of the data – and as a necessary element of quality (Probst 2015).

We were aware of our different backgrounds and how these could influence our experiences. Those of us with adult children were more anxious when caring for the doll, as we had parented young children several years previously, than those of us with younger children. This affected our self-confidence and our perceived parenting skills. Being reflective enabled us to further develop an empathetic approach and to think about how parental participants might feel. Hegelund (2005) offered a valuable insight that we felt much affinity with: ‘Because the researcher does have his or her background of knowledge with her all the time, and because this cannot, nor ought it to, be switched off, it will affect (also in the sense

of give meaning to) what he or she sees and concludes.’

Implications for practice

Our pre-pilot exercise proved essential in several ways. Firstly, having a deepened and enhanced understanding of the participants’ perspective has informed the planning of the main research study and the challenges it may present. For example, we will now develop a ‘Top Tips’ participant guidance sheet that will include answers to questions such as: ‘Can I stop the simulation programme early?’ [yes, guidance will be given] and ‘How do I know why the doll is crying?’ [you will need to try different care activities to console the doll such as feeding, burping and changing its nappy].

In addition, one of us will be available for participants to contact. Most importantly, we will give more time than we originally anticipated to preparing the participants, and we will focus strongly on allaying their anxiety and the physical care of the doll. We will also address debriefing opportunities for participants, given the emotions the doll can raise.

Secondly, careful planning is a prerequisite of robust research, but researchers should not underestimate the benefits of more fully understanding participants’ potential experiences. Our work gave us a much better insight into the possible power relationship between researchers and participants. For example, a participant might feel we were judging their caring abilities – it will take time to build trust and rapport to prevent this.

In addition, we have an enhanced appreciation of the data generated from the dolls and, as a result, we will initially only use qualitative methods, as the quantitative data could cause participants to feel we are assessing their caring abilities. We will also inform participants of our work and discuss the challenges that we encountered. Nevertheless, we remain acutely aware that participants may have different demographic characteristics to us,

so although the pre-pilot work has been invaluable, we are still considering piloting the main study.

Thirdly, a reflexive approach can reduce the risk of harmful effects to participants as part of researchers’ overriding duty to do no harm. It also provides a way for participants to be integral parts of the production and questioning of knowledge. This is in line with a constructivist approach, which not only embraces reflection, it considers ‘myself’ as an ethically and socially responsible researcher (Valkenburg et al 2020). Examination of the self through critical reflection and supervision is an essential aspect of undertaking ethical research.

Finally, we are all experienced researchers – we all have doctorates and one of us is a professor. Nevertheless, we were all novices at using the RealCare doll, which reminded us of the anxiety and discomfort novice researchers may feel. We have developed not only a stronger empathy for our participants, but also a renewed empathy for the doctoral students we supervise and who are embarking on their own research careers.

Conclusion

The value of sharing pre-pilot work helps to develop culturally competent research practice (Kim 2010), empathy with participants and the refinement of the main study. We have learnt so much from the pre-pilot work, but we acknowledge the potential implications of recommending this approach – we are all expected to adhere to tight timelines within a defined budget, so we need to be realistic about how research can benefit from the researcher-participant perspective efficiently and effectively.

Despite these challenges, there are considerable benefits. We therefore encourage researchers, particularly those who are novices, to think deeply about participants’ perspectives. This will not only help you to refine your study, but strengthen it, too.

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