Part 2: a qualitative description of participation in an eight-week infant skin integrity study

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Part 2: a qualitative description of participation in an eight-week infant skin integrity study

Abstract

Background This is the second paper in a two-part series; the first paper was published in volume 29, issue 4 of the British Journal of Midwifery. The qualitative phase of the Baby Skin Integrity Comparison Survey (BaSICS) study was designed to address a dearth of information about research recruitment and retention, and how mothers make decisions about neonatal skincare.

Aims The aim of the qualitative phase of the BaSICS study was to explore participants’ experience of participating in the research and how this interrelated with the experience of newborn skincare.

Methods Semi-structured, face-to-face or telephone interviews were used to collect data. Interviews were transcribed verbatim. Data analysis used both software and manual methods.

Findings Motivation included both altruism and personal benefits. The bespoke smartphone application was a convenient and easy tool for data collection, and being afforded full responsibility for observing and recording infant skin condition increased mothers’ awareness of skin changes. Family, friends and the internet were the most commonly used sources of information about baby skincare.

Conclusion The qualitative interview component of the BaSICS study provided information that could not have been deduced from the daily survey and final questionnaire alone. This provides valuable guidance for future research in the field of infant skincare.

Keywords Qualitative description | Recruitment | Motivation | Infants | Skincare information

Part 2 of this paper presents and discusses the final three themes from the qualitative phase of a larger research project, the Baby Skin Integrity Comparison Survey (BaSICS). As stated in part 1 of this paper, ‘the primary phase of the study, with a sample of 698 mother/baby pairs, sought to determine whether variations occurred in the incidence of IDD (infant diaper dermatitis or nappy rash) when different brands of baby wipes were used during nappy changes’ (MacVane Phipps et al, 2021a). The methods of the study are detailed in part 1 of this paper. It is recommended that the two parts be read together to gain a comprehensive picture of the qualitative phase of the BaSICS study.

Background

The final phase of the BaSICS project was designed as qualitative descriptive research (Sandelowski, 2000; Chafe, 2017). Reporting on this project made use of the participants’ own words to provide open and accessible insights into their experiences, unfiltered by researchers’ interpretations. Researchers elicited information with the use of two main questions: ‘what was your experience of being a research participant?’ and ‘what was your experience of caring for your baby’s skin?’. Suggested prompts helped interviewers to draw out more detailed information from the mothers they interviewed (see Appendix). This is discussed in greater detail in part 1.

A very pertinent topic associated with the first question is that of compliance. While motivation and experience forms part of the discussion in part 1, compliance is explored in this paper (part 2). This topic is of concern to the research community because attrition rates and lost data have been issues raised in previous studies in this field (Lavender et al, 2012). Retention of participants enhances the validity of a research project and may provide lessons on good design and effective researcher-participant interface (Abshire et al, 2017). In the BaSICS study, 722 women were eligible to participate at the time of their baby’s birth. Over 96% of the eligible participants completed...
the study and were compliant in completion of a daily infant skin integrity survey (Price et al, 2020). The majority of the surveys were completed using a bespoke smartphone application. A few mothers reported using the web application on their PCs and three participants opted to use a paper research diary, which was posted to them weekly with a return self-addressed stamped envelope. The participants who chose not to use internet technology were part of an Orthodox Jewish community; the paper option had been designed specifically so that mothers from this group would not be excluded from participation. Understanding more about how such high rates of retention and compliance were achieved will be valuable information for future research studies both for this and other research teams.

The second question concerned accessing and using information about infant skincare. This question was significant because the BaSICS study was designed as ‘real world’ research (Roche et al, 2014). It was not set up as a clinical trial and participants were not instructed to follow any fixed routine regarding nappy changing and skincare or instructed to use or avoid any products when caring for their babies’ skin. The only requirements were that participants exclusively use the products provided: this was a popular brand of nappies, which all participants received, and the brand of baby wipes assigned to them. Therefore, discovering how women accessed infant skincare advice and how they applied that advice to their own infants was an interesting question which could serve to shed light on maternal practices thus contributing to future research into neonatal skincare.

Methods
To provide a brief recap of the qualitative study methods described in part 1 of this paper, ‘the qualitative phase of the BaSICS study was conducted with a small sub sample of participants (n=38) who were contacted on completion of the primary phase of the study and who agreed to be interviewed. The aim of this qualitative phase was to explore mothers’ experience of participating in the research, and how this interrelated with the experience of caring for the newborn’s skin, in order to inform future studies about best practice in engagement and retention in research with mothers and infants in the neonatal period’ (MacVane Phipps et al, 2021a).

Participants in the qualitative phase of the BaSICS research were given a choice of either a face-to-face or telephone interview. Face-to-face interviews were conducted by six members of the research team at a location of the participant’s preference. All interviews were recorded and transcribed verbatim. Three research assistants undertook preliminary analysis of interview data using NVivo software. The primary investigator and the co-investigator carried out further analysis using the manual template analysis method (King, 1998; Brooks et al, 2015). This process is described more comprehensively in part 1.

Results
Data analysis uncovered the five broad themes listed below (MacVane Phipps et al, 2021a). Themes 1 and 2 have been discussed in part 1, while themes 3–5 form the discussion section of this paper (part 2).

- Broad theme 1: motivation and recruitment
- Broad theme 2: experience of being a study participant
- Broad theme 3: compliance and completion
- Broad theme 4: advice and choices
- Broad theme 5: product satisfaction

The overall findings are described in detail in part 2. A brief summary is presented here:

1. Banal altruism (Carrera et al, 2018) and conditional altruism (McCann et al, 2010) both contributed to participants’ motivation to be part of the BaSICS study. Together, these were a stronger motivation than product acquisition.
2. Participants reported a very positive experience of the BaSICS study. They particularly enjoyed the use of smartphone technology to collect daily data.
3. Participants indicated a high degree of commitment to the study; this led to compliance and completion.
4. Participants used family and friends for advice about infant skincare before accessing guidance from NHS sources.
5. Participants expressed satisfaction with the brands of baby wipes that they received. However, there were some personal preferences and these were usually skewed toward either familiar brands or the brand containing the least ingredients (Brand 3) (MacVane Phipps et al, 2021a).

Discussion
The discussion sections of part 1 and 2 of this paper are presented in what may be considered a slightly unconventional manner by focusing the greatest attention on the words of the participants themselves. Relevant literature is used to support insights and discussion of overall themes. This is explained more comprehensively in part 1. While the first two themes of motivation and recruitment, and experience of being a study participant have been discussed in part 1, the discussion section continues with a discourse on compliance and concludes with an exploration of the themes: advice and choices, and product satisfaction.
Compliance and completion presents participants’ experiences of compliance with the research protocol and survey completion. It was evident from data discussed in a previous paper that participants were compliant with the protocol and demonstrated a high level of fidelity to brand assignments (Price et al, 2020). Mothers appeared to be compliant because they enjoyed doing the surveys, with comments like ‘It gave structure to my day’ (P24) and ‘I liked to go back and look at the diagrams and the pictures as well [on the information sheets] and if she had a rash, I’d think about how I would treat it’ (P38). One mother described fidelity to the supplied products as:

‘And I’m still using them now, so I don’t know if that was the desired effect but yeah, I’m still using those products. In fact, I’m so programmed to it that I feel like I can’t use any other brand of wipes—I feel like I’m not allowed!’ (P3)

Overall, mothers expressed the feeling that they had entered into a contract with the research team. By completing their side of the bargain, participants felt that they were contributing to new knowledge, not just gaining free baby care supplies. One mother explained it this way:

‘Well, the fact that I’d signed up and that it was important to your study that I was consistent in reporting to you really, and I wanted your study to be as precise and consistent as possible.’ (P16)

Another demonstrated a similar commitment when she stated:

‘I thought, well, it’s only fair, you know. I’ve signed up to this. I’ve committed. I want to see it through to the end.’ (P32)

Several mothers commented on the fact that using the application encouraged them to take the time to really examine their baby’s skin and thus potentially identify a rash and treat it in the very early stages. Therefore, it is possible that more severe rash, rare in this study, was prevented through the use of the application encouraging mothers to be more mindful while doing nappy changes. One example was a participant who stated:

‘Sometimes if I was changing a nappy in the dark, I thought, “Actually, I should be mindful and have a proper look.” I had to be mindful that I didn’t have a cursory look which I probably would have done if I wasn’t doing the study. I thought, “Oh no, I have to have a good look each time”’. (P1)

Another mother gave a similar response when she said:

‘Yeah, I think it [the application] did [change my practice] because I was having to say what her bottom was like. I was noticing more, thinking actually, you know, I’ve now said she had nappy rash for seven days and I’ve not done anything about it, so it made me think, “she’s getting nappy rash”, “why is she getting nappy rash?” so that’s when we changed and that did solve a lot of our problems, just to change her nappy more often and carried on using the creams.’ (P33)

This greater attention to detail was confirmed by yet another comment:

‘I would have looked anyway but I think it made me more aware. I would look at it, if it was a bit red, I’d notice it and then I’d think, “Yes, I need to log this”. So yes, it did make me more aware.’ (P38)

This protective effect of being involved in a research project has previously been recognised by Garcia Bartels et al (2014) in their study of the effects of diaper cream and wet wipes on skin barrier properties in 89 babies who were approximately nine months old at the time of the study. Babies in the Garcia Bartels et al (2014) study had very low rates of diaper rash and the researchers suggested that this effect might be partly because participation in the research caused parents to be more observant and vigilant about early signs of skin breakdown. Similarly, Ehretsman et al (2001) noted that in conducting visual assessments over the course of a four-week study, erythema and IDD reduced as the study progressed. They suggested that this effect might be due to the study itself, in that parents became more vigilant in cleansing their infants during nappy changes, aware that skin assessments were taking place.

The concept that outcomes may alter due to the fact that observation is taking place is well-known in research, particularly in ‘real world’ studies (Fernald et al, 2012). Known as the Hawthorne effect, this is named after the research site where it was first observed (Oswald et al, 2014). The latter authors suggest that developing a degree of comraderie and trust between researchers and those being studied can help to mitigate the Hawthorne effect. However, it is difficult to apply this principle to the BaSICS study where the mothers themselves were the observers and
the data recorders. In fact, the effect could be said to be beneficial as mothers admitted that in recognising that they had to maintain a daily record of observations, they became more observant and more apt to notice subtle changes in their baby’s skin condition.

**Advice and choices** described where women obtained advice and how they made choices about infant skincare and other newborn care issues. Most women reported obtaining advice from family and friends first, then using Google to search for answers to questions and finally turning to the NHS, and by this they often meant using NHS web-based resources, rather than asking the health professionals. Mothers said things like: ‘Got my advice from mum, she has six children’ (P36); ‘my mum was my main source of advice’ (P23); ‘my mum and my sisters’ (P14); ‘my friend was my main source of information’ (P37).

One mother who was a health professional herself admitted relying more on the advice of experienced friends rather than on her own professional knowledge:

‘A lot of it for me has been word of mouth from other mums, also the health visitor but mostly other mums. You know when she had nappy rash, I was madly texting all my mum friends and saying, “what do you use that actually works?”’. (P38)

Some mothers relied on an application for their information as illustrated by this mother’s words:

‘I mainly got information from the Baby Centre app, as lots of information when you are pregnant and then when you’ve had your baby it sends you information on baby care.’ (P13)

This application markets itself as more popular than the NHS for pregnancy and infant care information and although it is a commercial enterprise the credibility of the information it provides is attested by the panel of UK experts who provide the advice, including obstetricians, midwives, GPs and other health professionals (Baby Centre, 2020). When prompted for more information about where she accessed information, one mother confessed that she didn’t like to ‘bother’ the midwives when they visited in the postnatal period. She reported that midwives only visited a couple of times, they weren’t midwives she had met during her pregnancy and they seemed focused on completing a specific task, such as weighing the baby or doing the baby heel-prick test rather than taking time to discuss wider issues around postnatal care (P36).

Mothers whose babies had experienced more severe nappy rash (four to five on the five-point scale) were more likely to report seeking professional help. One mother identified her baby’s very frequent loose stools, which she attributed to breastfeeding, as the reason for the severe nappy rash her baby experienced. She admitted that this caused her to stop using the allocated brand of wipes and nappies; she recorded this in her daily survey. When she spoke about seeking help, she said:

‘Erm, well, the GP was the first port of call, and yeah, friends who’ve got babies as well, and they said, “oh try this cream” or “try doing this”, and a family member suggested using the hairdryer, so friends and family, and then sort of internet searching, you know, Google searching, probably more my husband than me. Oh and I have a book as well, and the book suggested all the things that the GP suggested, like letting the skin air and cleaning frequently, and using cotton wool and water.’ (P11)

This mother was concerned enough about her baby’s skin to book a GP visit. Additional sources of advice were friends, Google and a book on baby care.

Other mothers suggested that without the support of family and friends, they would have struggled, both from lack of knowledge and a lack of emotional and social support. A mother, who was a midwife herself, mentioned how confusing infant skincare advice could be and how even midwives were unsure about the right advice to give. She gave the example of using oil on babies’ skin, saying:

‘You know, not too long ago we were saying “olive oil’s fine to use on the skin” but actually that’s not supposed to be the best because some people use coconut oil. They say that’s better than olive oil because that can be quite harsh on the skin. I think it can be quite confusing for healthcare professionals and I think it has changed over the years so I think it’s probably confusing for parents as well.’ (P1)

In terms of infant skincare practices, most mothers followed midwives’ advice not to bathe babies immediately after birth and when they did start bathing their baby to use water alone rather than baby bath products. Mothers who gave their babies baths often suggested it was to establish a routine (P2), especially if there were older children in the family who were bathed before being put to bed (P33). Some mothers saved the baby’s bath for the father and felt that it was a bonding opportunity for their baby and the father who may have been away from home during the day (P31).

There appeared to be some cultural variation in infant skin treatment. One mother interviewed
The experience of participating in the research study

Did you find the nappy area assessment scale and the line drawings related

Did you find it easy or hard to remember to do the assessment every day?

How satisfied were you with the products supplied to you?

Did you bathe your baby? If so, at what age did you start giving baby baths?

How did you find out about the research and what attracted you to sign up to

How did you clean your baby’s skin during the first eight weeks of life?

Did you use the baby electronic survey tool (phone application or web-based

application) or a paper version? What was that like?

Did you find the nappy area assessment scale and the line drawings related
to the appearance of your baby’s nappy area?

Did you find it easy or hard to remember to do the assessment every day?
The next question could be: ‘Tell me about caring for your baby’s skin. What was
that like for you?’

Prompts related to this question might be:

● How did you clean your baby’s skin during the first eight weeks of life?

● Did you bathe your baby? If so, at what age did you start giving baby baths?

● What was your main source of information about how to care for your
baby’s skin?

● How satisfied were you with the products supplied to you?

who was of African origin talked about the cultural
importance of the early first bath and subsequent
daily baths (P24). Some black and Asian mothers
reported the use of oil to massage their babies’ skin
with information about which oils to use sourced
from friends and relatives rather than from health
professionals. Sudocrem and Bepanthen were the
nappy creams used most commonly by all mothers.
Only a few mothers reported prophylactic use of these
products, with most waiting until the baby’s bottom
appeared red, as one mother reported:

‘I did use creams sometimes but I generally didn’t use it
preventatively. I just used it when it was starting to look
like there was a bit of redness. I just used either because
I just used Sudocrem for my daughter, so I just used a
little bit of Sudocrem or I got a couple of free samples of
Bepanthen, so I used that. Yeah, I generally didn’t use it
every day, erm, because if I thought his skin looked fine,
I thought there’s no need to use it.’ (P1)

Product satisfaction examined mother’s satisfaction
with the baby wipes and the nappies supplied to them
during the BaSICS study. Findings provided additional
insight to the data from a final survey on day 56 of
each mother’s participation in the larger BaSICS study.

The results of this survey will be reported in a future
publication. Participants allocated all brands of wipes
considered that they were satisfactory, although there
were personal preferences. All mothers interviewed
preferred wipes to using cotton wool and water which
one mother described as ‘quite a faff’ (P13).

There was some indication of development of brand
loyalty, especially in first-time mothers. Some mothers
were influenced by previous experience, evidenced by
comments such as, ‘we used Brand 3 with our first child
so we felt totally confident with the brand’ (P27). One
mother whose child developed a level four-to-five rash
reported that her GP had told her that she should only
use water and cotton wool or the wipes identified as
Brand 3 in this study (P32). The question that was most
insightful was, ‘would you recommend this brand to a
friend?’ When participants responded affirmatively to
this question, it confirmed their positive opinion of the
brand to which they were allocated. The few negative
responses, such as ‘too harsh’ (P37), ‘too wet’ (P20),
‘tore easily’ (P20), may provide useful information to
baby wipe manufacturers from a production or
marketing perspective.

Conclusion

As explained in part 1, ‘the aim of the primary study
was to compare brands of wipes to determine if
incidence of IDD varied between different study arms.
The findings indicated that brand is a determinant
of rash incidence. The aim of the qualitative phase
of the research reported in this paper was to explore
participants’ experiences of the research study in greater
depth with a small sub-sample’ (MacVane Phipps et al,
2012a). We aimed to describe mothers’ feelings about
participating in the study, to find out their motivation
for volunteering for and completing the study, and to
determine where mothers sought information about
baby skincare and how they applied this information
to the care of their own infant. We also sought to
investigate brand acceptability and what contributed
to brand preferences, although this information was
primarily to provide an enhanced understanding of
data collected in the day 56 product information survey,
which has not yet been reported.

Overall, the qualitative element of the BaSICS study
provided valuable insights into the acceptability of the
study methods and the infant skincare practices used
by new parents. This enabled the research team to gain
a greater understanding of what motivated women to
sign up to the study and to complete eight weeks of
daily observations. This information will be useful
to other researchers working with similar populations.
The qualitative findings also provided a closer look at how
mothers access information and support in the early

Appendix

Baby Skin Integrity Comparison Survey
Qualitative research guide for exit and completion interviews
Version 3.0  08.10.2017

The purpose of the exit or completion interview is to collect qualitative data
from participants in two areas:

● The experience of participating in the research study

● Infant skincare (beliefs, routines, observations)

Researchers should begin the interview by reminding participants that their
participation is voluntary and that they may end the interview at any time.
The interview should commence with the open question: ‘Tell me about your
experience of being part of this research study.’

Prompts related to this question might be:

● How did you find out about the research and what attracted you to sign up to
be a participant?

● Did you use the baby electronic survey tool (phone application or web-based
application) or a paper version? What was that like?

● Did you find the nappy area assessment scale and the line drawings related
to the appearance of your baby’s nappy area?

● Did you find it easy or hard to remember to do the assessment every day?
The next question could be: ‘Tell me about caring for your baby’s skin. What was
that like for you?’

Prompts related to this question might be:

● How did you clean your baby’s skin during the first eight weeks of life?

● Did you bathe your baby? If so, at what age did you start giving baby baths?

● What was your main source of information about how to care for your
baby’s skin?

● How satisfied were you with the products supplied to you?

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postnatal period, particularly around infant skincare and the prevention of nappy rash.

There is certainly scope for future qualitative research exploring information seeking around skincare practice in the postnatal period. The data demonstrated that new mothers are able and willing to participate in extended term projects and may be favourably inclined to continue with ongoing data collection for even longer than originally anticipated. The smartphone application as a tool for collecting survey data was particularly well received and women appreciated automated reminders to complete daily surveys rather than finding them intrusive. New mothers did not feel pressured to complete the daily surveys on infant skin integrity but they did feel, as one mother pointed out, almost a contractual obligation. Both partners, the research team and the mothers were giving something to the other, and in turn receiving something they wanted. In a study with no element of product comparison, it might be important to identify something that would be of sufficient value to participants to maintain that sense of contractual obligation: giving something of value (data) and in return receiving something of value. In the words of one mother who was asked how she felt about participation in the study, ‘yeah, brilliant. I definitely would do it again’ (P19).

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Key points

- Well-designed research delivered by a research team who support high levels of engagement with participants leads to higher levels of compliance and completion
- New mothers are most likely to ask and take advice about infant skincare from family and friends rather than from health professionals, even when professional advice forms part of a postnatal care package
- Mothers make informed decisions about products associated with infant skincare. Previous positive experience and products considered the most ‘natural’ due to a limited number of ingredients influence parental choice
CPD reflective questions

- Do you feel that the qualitative phase of the Baby Skin Integrity Comparison Survey (BaSICS) study added to research knowledge? Why or why not?
- What was the ‘mother-as-co-researcher’ model used to collect data in the primary phase of the BaSICS study? How did this affect participant engagement with the research?
- In what way did women feel that they had entered into a contract with the research team and how did this influence their engagement with the research?
- Why do you think mothers accessed information and advice from family and friends rather than from health professionals? How can health professionals use this information to improve information giving in their practice areas?
- What is the Hawthorne Effect in research and how might it have influenced this study?


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