Participants' views of telephone interviews within a grounded theory study

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ABSTRACT

Aim: To offer a unique contribution to the evolving debate around the use of the telephone during semistructured interview by drawing on interviewees' reflections on telephone interview during a grounded theory study.

Background: The accepted norm for qualitative interviews is to conduct them face-to-face. It is typical to consider collecting qualitative data via telephone only when face-to-face interview is not possible. During a grounded theory study, exploring users' experiences with overnight mask ventilation for sleep apnoea, the authors selected the telephone to conduct interviews. This article reports participants' views on semistructured interview by telephone.

Design: An inductive thematic analysis was conducted on data pertaining to the use of the telephone interview in a grounded theory study.

Methods: The data were collected during four months of 2011 and six months in 2014. The article presents an inductive thematic analysis of sixteen participants' opinions regarding telephone interviewing and discusses these in relation to existing literature reporting the use of telephone interviews in grounded theory studies.

Findings: Overall, participants reported a positive experience of telephone interviewing. From each participants reports we identified four themes from the data: being 'phone savvy; concentrating on voice instead of your face; easy rapport; and not being judged or feeling inhibited.

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Conclusion: By drawing on these data, we argue that the telephone as a data collection tool in grounded theory research and other qualitative methodologies need not be relegated to second best status. Rather, researchers can consider telephone interview a valuable first choice option.

Keywords: telephone interviewing, participant views, grounded theory, data collection, qualitative research, nursing research

SUMMARY STATEMENT

Why is this research or review needed?

- A tacit assumption exists that face-to-face is best for semistructured interview.
- Available literature on the telephone as a qualitative data collection tool in its own right is sparse.
- There is scant literature on the telephone as a data collection tool in grounded theory.

What are the key findings?

- By offering valuable participant reflections around the use of the telephone during semistructured interview addresses an underexplored area in the grounded theory literature and contributes to wider debate.
- The value of nonvisual paralinguistic cues amplified via the telephone should not be overlooked and can be considered as useful as facial expression and body language during qualitative interview.
- Interviewees reported a positive experience of semistructured interview via the telephone, including confident telephone use and freedom to disclose personal or sensitive information via the telephone without feeling judged or inhibited.

How should the findings be used to influence research?

- This article provides insight into an untapped avenue of data collection that might provide ideas for future research practice and methodological debate.
- Telephone interview need not be relegated to a second best option during qualitative and grounded theory research.
- Further research is recommended to comprehensively compare qualitative face-to-face and telephone interview.

INTRODUCTION

The interview, in its various forms, is an internationally recognised method of data collection in several research methodologies (Buetow 2007, Green & Thorogood 2009b, Kvale & Brinkmann 2009b, Holloway & Wheeler 2010c, Nagy *et al.* 2010, Birks & Mills 2011b, Denzin & Lincoln 2011, Charmaz 2014a). It is typical to use face-to-face interviews in qualitative research whereas historically, telephone interviewing has been confined to quantitative research in the form of the telephone-administered survey (Platt 2001, Block & Erskine 2012). In the main, the international literature available relating to telephone interviewing is focused on the validity and reliability of the telephone as a medium for data collection in quantitative methodologies (Wilson *et al.* 1998, Shuy 2001, Cook *et al.* 2003). However, telephone interviewing is rarely considered as a means to apprehend another's social world in qualitative studies (Warren 2001). During our grounded theory study, exploring users' experiences with overnight mask ventilation (CPAP) for sleep apnoea, we selected telephone interview as a method to conduct semistructured interviews. To explore this method of interviewing we nested an exploratory study in the larger GT study. In this article, we report participants' views on this method of interviewing and discuss these in the context of the existing international literature.

Background

In grounded theory, there is an emphasis on observation in the field as data: being able to see participants act in their social settings (Corbin & Strauss 2008, Birks & Mills 2011b, Charmaz 2014a). However, the social setting of our grounded theory study exploring users' experiences with CPAP was participants' bedrooms as they went to sleep using CPAP. Consequently being present in someone's bedroom was incongruous with ethical requirements for the study. Observation was therefore ruled out as a method of data collection and we offered participants semi-structured interview. Participants agreed on interview via telephone and we subsequently chose to explore their experience by inviting views regarding this mode of interviewing.

Birks and Mills (2011a) suggest that, whilst telephone interview can be used to mitigate logistical issues during a grounded theory study, it should not be a first choice method because the absence of visual cues might disadvantage the researcher (Nagy *et al.* 2010). Whilst Charmaz (2001, 2014a) and Corbin and Strauss (2008) make no comment on using the telephone to conduct a grounded theory interview, they implicitly assume that an interview be

conducted face-to-face. Kvale and Brinkman (2009a) express the same view, as do Holloway and Wheeler (2010b), despite commenting on the growing popularity of the telephone interview. Equally Denzin and Lincoln (2011) and Green and Thorogood (2009b) offer in depth chapters regarding methodological and ethical debate around interviewing but make no comment about the use of the telephone.

Overall, few studies have comprehensively compared qualitative face-to-face and telephone interview and those that do typically focus on the interviewer (Shuy 2001). King and Horrocks (2010) confirm that the available literature on the telephone as a data collection tool in its own right is sparse, although they do offer practical advice when considering this approach. For us, as for Holt (2010), the tacit assumption that face-to-face is the best option for the qualitative interview was evident from the lack of comment in technical texts. However, recent literature comments on the growing popularity of the telephone for semistructured interview and prompts the question: to what degree is the telephone interview useful for data collection in a grounded theory study (Burke & Miller 2001, Stephens 2007, Holt 2010, Block & Erskine 2012, Trier-Bieniek 2012, Mealer & Jones 2014)?

Telephone interview in grounded theory

We conducted a literature search via science direct, Google scholar and web of science to determine the extent of telephone interviewing as a method in grounded theory studies. The search terms 'telephone interview' and 'grounded theory' and limiting between 1990 - 2014 yielded nineteen grounded theory studies that had used the telephone to interview their participants. Ten of these studies employed grounded theory methods to develop a descriptive or thematic analysis only and were discarded. Table 1 outlines the remaining nine studies.

Table 1: Grounded theory studies using telephone interview

Author(s)	Methodology as described	Number and duration of interviews		Rationale for using telephone
		Face-to-face	Via telephone	
Armentrout, 2007	Grounded theory (GT) study. *Tenets of GT described, saturation not mentioned.	8	7, Duration not stated	Participants choice
Chetpakdeechit, Hallberg et al., 2009	GT approach. Tenets of GT described.	0	12, Up to 45 minutes	Participants geographically dispersed and time constrained.
Duggleby, Penz et al., 2010	GT approach. Tenets of GT described.	7	20, plus 4 focus groups, 50-70 minutes	Access to geographically dispersed participants.
Highet, Stevenson et al., 2014	GT model. Tenets of GT described.	24	4, 30-120 minutes	Not stated
Kylmä, Vehviläinen-Julkunen et al., 2001	GT design. Tenets of GT described, saturation not mentioned.	32	Number and duration not stated	Telephone used for follow-up.
Mottram, 2011	GT study. Tenets of GT described, unclear if saturation achieved.	245	Number and duration not stated	Telephone used for follow-up.
Penz & Duggleby, 2011	GT study. Tenets of GT described.	0	27, 45-75 minutes 9 journals were also collected	Access to geographically dispersed participants.
Schreiber & MacDonald, 2010	GT study. Tenets of GT described.	22	11, Duration not stated	Telephone used for follow-up.
Simms, 1981	GT study. Tenets of GT described, saturation not mentioned.	0	23, Duration not stated	Not stated.

*Tenets of GT described includes: Constant comparison, concurrent data collection and analysis, theoretical sampling, theoretical saturation and theory generation (Glaser & Strauss 1967, Corbin & Strauss 2008, Birks & Mills 2011b, Charmaz 2014a).

Of these nine studies, only Simms (1981) and Chetpakdeechit *et al*. (2009) used telephone interview as a first line choice, with only the latter giving a rationale for this choice of geographically dispersed participants. We identified an additional six studies that examined the effect of telephone interview on qualitative data or survey data finding results comparable with face-to-face interview (Refer to Minnick & Young 1999, Greenfield *et al.* 2000, Sturges & Hanrahan 2004, Stephens 2007, Irvine *et al.* 2013, Mealer & Jones 2014). Holt (2010) also used telephone to conduct narrative interviews and reported that participants viewed the experience positively, although data pertaining to telephone interview was not thematically analysed. The lack of literature about telephone interviewing in grounded theory is incongruent with the rise of telephone use globally. Accordingly, previous research has highlighted the pertinence of exploring interviewees' experiences of the telephone interview (Shuy 2001, Holt 2010, Irvine *et al.* 2013).

THE STUDY

Aim

The aim of the study was to draw on interviewees' reflections on semistructured interviewing via telephone. In so doing, we offer a unique contribution to the evolving debate around the use of the telephone during qualitative interview.

Design

A grounded theory study was the design of choice for a main study where this study was nested (Corbin & Strauss 2008, Birks & Mills 2011b, Charmaz 2014a). Telephone interviews were conducted. Data pertaining to the use of the telephone were drawn from the larger grounded theory study and analysed thematically (Braun & Clarke 2006). We used the consolidated criteria framework for reporting qualitative studies (COREQ) (Tong *et al.* 2007).

Participants

Seventeen in depth, semistructured interviews were conducted with sixteen participants (nine men and seven women) recruited through a respiratory outpatients' clinic in the Auckland region of New Zealand. Criteria for inclusion were adults, aged eighteen years and over that were either prescribed night-time CPAP via face or nasal mask for obstructive sleep apnoea, or were the spouse of someone prescribed night-time CPAP for sleep apnoea. Participants prescribed CPAP were regular users, where regular included not all night or not every night. People under the age of eighteen years or who used CPAP for other conditions were excluded

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from the study. Purposive sampling of participants occurred at the outset of the study, with subsequent theoretical sampling adopted until theoretical saturation of the main body of data occurred (Charmaz 2014a).

Ethical considerations

Ethical approval to conduct the study was obtained from a national ethics committee and the host organisation (reference NTX/11/06/048/AMO2) and each participant was sent an information sheet and consent to complete prior to their interview. The participant information sheet outlined that each interview would be conducted by telephone and take approximately one hour. Cultural protocol required that interviews be offered in person to Mäori and Pacific Island participants if preferred, to foster culturally safe communication. However, no participants chose this option. Once a signed consent was received, each participant was contacted via telephone to arrange a mutually suitable time for an interview. At no point did the interviewer and participants meet face-to-face.

Data collection

At the close of each semistructured interview, KW invited participants to comment about the experience of interview over the telephone. Prompts included, what was it like not seeing the interviewer's face and did they believe they had disclosed more or less than if the interviewer had been physically present? The data were collected during four consecutive months in 2011 and six consecutive months in 2014. The average interview duration was 52 minutes, the shortest being 24 minutes and the longest 82 minutes. All interviews were conducted by KW and were audio recorded and transcribed verbatim.

Data analysis

Data pertaining to this article was drawn from a grounded theory study, but analysed thematically. KW used an inductive approach where the content of the data directed coding and theme development (Braun & Clarke 2006). Transcripts of participants' comments about telephone interview were coded to identify initial themes. Coding enabled grouping of data and tabulation, using Microsoft Word, for further sorting and identification of common themes around experiences of telephone interview (Braun & Clarke 2006, Green & Thorogood 2009a). Themes were refined and are presented below supported by participant quotations.

Rigour

Tactics to assure rigour occurred throughout data collection and analysis. KW transcribed all interviews verbatim and rechecked transcription for accuracy (Braun & Clarke 2006). MG and KH reviewed tabulated data and reached consensus regarding relevant extracts for each theme (Holloway & Wheeler 2010a). Memoing and discussion with co-authors allowed KW to clarify and refine themes as analysis progressed and provided an audit trail of thematic development (Corbin & Strauss 2008, Birks & Mills 2011b, Charmaz 2014a). KW described themes to participants during later interviews. Participants comments helped refine themes with resonance, eliminate incongruous themes and confirmed that analysis agreed with their experience (Bryman 2008, Holloway & Wheeler 2010a, Charmaz 2014b).

FINDINGS

The sixteen participants in this study were aged between twenty-eight and seventy years. Three female participants and one male were spouses of CPAP users. At the time of interview, participants had used CPAP for sleep apnoea for between two months to seven years. Overall, participants reported a positive experience of telephone interviewing. Only one participant stated a preference for face-to-face conversation, but concluded that the telephone interview had been 'pretty good.' From each participants reports we identified four themes from the data: being 'phone savvy; concentrating on voice instead of your face; easy rapport; and not being judged or feeling inhibited. A pseudonym identifies each participant.

Theme: Being 'phone savvy

The participants in this study identified themselves as habitual telephone users, claiming to 'do a lot of 'phone stuff' in their work. Molly described previous telephone interviews and that being interviewed this way was 'good because I don't have to go out and sit in [an] office.' Felicity concurred:

> I'm quite relaxed sitting out here on my porch outside with my feet up. In my own environment, ... it hasn't made me less relaxed than it would be. It's quite easy just being at home and waiting for the 'phone to ring.

Participants described doing 'a lot of talking on the 'phone,' and being able to 'talk easily for an hour.' Similarly, Ian felt being interviewed on the telephone had 'been fine; as you can tell I don't have problems talking!'

Although interviews were offered in person to Māori and Pacific Island participants, they declined, indicating a willingness and comfort with the medium of telephone interview and lack of concern about not being face-to-face. Molly said:

> You will have some [Māori] people that will be concerned about this kind of thing, culture and all this, but no not me. I was brought up in the Māori environment, yeh, but that wasn't thrown in our faces all the time. We mix with all cultures, my parents, you know, they wanted us to mix with all cultures, it didn't really bother us.

Theme: Concentrating on Voice Instead of Your Face.

Participants in the study were asked how they found being unable to read the interviewer's facial expression or body language. Not being physically present was described as useful '[because] you can concentrate on the person's voice and what their emphases are.' Lily added that, 'I think it just seems more like a conversation, more than an interview, when it's on the 'phone,' claiming that the advantage to telephone for her was that 'it actually makes you think [more] carefully about the answers than if you were face-to-face.' Ed considered that if he were able to see KW, the interviewer, he would have judged by her facial expression that he was talking too much. He added:

> Sometimes judgments come across on the face and no one likes to be judged. It doesn't matter what kind of judgment it is. If someone thinks they've been judged on something they've said then they'll clamp up. And that doesn't very often come across verbally but it will come across facially, so I think the telephone interviews are just as good.

Others echoed this sentiment: Felicity said, '[be]cause of the way you are speaking you don't sound like you're pulling faces.' Ian agreed and elaborated by saying that if KW were 'it [would not] matter 'cause I don't know and I'll just rabbit on.' Only one participant expressed concern that not being able to see each other during the interview might cause misunderstanding. However, he concluded we 'understood each other quite well.'

Theme: Easy rapport

Being unable to see KW, the interviewer, appeared to have no negative impact on establishing rapport. Gina stated that because she received written information about the study it did not 'matter that I didn't see your face: I know who I'm talking to.' Arthur identified with KW's role as a professional and his belief that he was 'talking to a person who's really … working

on why people are using a CPAP machine.' Ian believed he might be intimidated face-to-face from knowing KW was a professional but that this was mitigated by using the telephone: 'there [are worries] you might be more qualified than me, or I might be more intimidated or something like that, but over the 'phone it's just a conversation.' No participant reported holding back information because of discomfort during the telephone interview.

Theme: Not being judged or feeling inhibited

On commencing each telephone interview participants were assured there were no right or wrong answers to any of the questions asked and were invited to talk freely about their experiences with CPAP. On closing, six participants made comments specific to not being judged: that not seeing KWs face meant they were unable to assume KW was judging their comments and therefore did not feel judged in any way about what they were saying. Barry said:

> Looking at a person's face, like, you might be thinking of something and I can [mis]interpret it. ... you might look away and I might think 'oh she's not interested,' as an example. Whereas this way you're just asking questions and I'm talking, so I don't have any preconceptions.

Being unable to see KW meant that participants reported feeling more relaxed and able to be open and honest in their disclosures. Lily commented:

> I am in a familiar space that I feel comfortable in. So, I'm being quite real about it, rather than putting on an act that might happen in an interview situation. … I think it's quite good because I think you can be really honest because you can't see me and I can't see you. ... There's not that judgment of face-to-face.

Ian agreed, 'I think I will probably be more reserved if I was in front of you, ... it's easier for me to talk on the 'phone.' Both Gina and Molly reported they had disclosed as much information, if not more, than they would have in a face-to-face interview. Despite divulgence of deeply personal information being unanticipated, topics such as sexual activity and orientation were brought up by the participants. While Hal and Olive said being face-to-face would have made little difference to what they disclosed others believed the relative anonymity of the telephone reduced inhibitions. Ed stated:

People will say things over the telephone that they won't say face to face definitely. It would have been more difficult face to face I think. Yeh, I think so, especially talking about

relationship stuff. I'm a man, we don't talk about that sort of stuff . . . even if it is with a gay man. I think I would have had more issues talking to you face to face about it, than I would have on the telephone.

DISCUSSION

This article is the first to report participant opinions about telephone interview in the context of a grounded theory study. Overall, participants were very positive about their experience of being interviewed over the telephone, supporting the findings of the only other study in this field (Holt 2010). Offering valuable reflections on this approach addresses an underexplored area in the grounded theory literature and contributes to wider debate.

The theme 'being 'phone savvy' illustrates the confidence participants had communicating by telephone. Shuy (2001) suggests that face-to-face interviews deliver more accurate responses because of the 'contextual naturalness' of being mutually present (p.9). We contend that the prominence of telephone and the confidence of users in contemporary society might well render it contextually natural. The International Telecommunications Union (2014) estimates that 95.5% of the global population subscribe to a mobile cellular network indicative of a contemporary 'phone savvy' social landscape. Nonetheless, Holloway and Wheeler (2010b) recommend that telephone interview be shorter and more structured than face-to-face interview. However, this is at odds with our findings and the studies in Table 1.

People are accustomed to using the telephone not just to talk, but also to email, text message and to find information. For our participants being 'phone savvy meant they were comfortable using the telephone in daily life and reported that participating in an interview by telephone was convenient. Not only were they saving time, but being in a familiar environment also meant they were able to feel comfortable in their interaction. Moreover, participants identifying as Mäori or Pacific Island agreed. Offering face-to-face interview to Mäori and Pacific Island participants is culturally appropriate and ensures inclusion of potential participants (Health Research Council of New Zealand 2010). However, it is important to acknowledge the willingness of cultural populations to embrace modern day communication modes. We argue, therefore, that the popularity and contextual naturalness of the telephone make it a user-friendly tool for semistructured interview.

There are also practical reasons why telephone interviewing might be preferred. For example, conducting fieldwork and interviewing in person is considered one of the more time consuming and resource intense activities during qualitative research (Shuy 2001).

Interviewing face-to-face impacts on the participant's time and can incur travel costs or limit access to geographically dispersed participants. Circumventing time related costs by interviewing via telephone might be a pragmatic alternative as reflected by the rationales of three studies in Table 1 (Musselwhite *et al.* 2007, Holt 2010). As Kira *et al.* (2009) found, being able to control their own spaces was also an advantage for our participants. For example, Ned was able to double up activities and prepare for an outing during his telephone interview. Negotiating a time to talk when other family members were not around has also been described as a practical advantage (Sturges & Hanrahan 2004, Holt 2010).

The inability to 'read' visual cues has rendered telephone interview a less traditional method of qualitative data collection. During qualitative research and grounded theory research in particular, visual cues provided by facial expression and body language are considered important (Nagy *et al.* 2010). The theme 'concentrating on voice instead of your face' offers an alternate view. Consider the intimate nature of having another person's voice close against one's ear; each breath, sigh, hesitation and intonation or emotion easily heard. Such nonvisual paralinguistic cues can be as useful as facial expression and body language (Opdenakker 2006, Novick 2008). Both Novick and Opdenakker argue that the absence of supporting hand gestures and visual cues provide an opportunity to clarify the meaning of a sigh or pause, rather than misinterpreting the meaning of a gesture. Participant responses reported under the theme 'concentrating on voice' aligned with this view and supported Musselwhite *et al.*'s (2007) suggestion that telephone interview moderates response bias. Therefore, the addition of a variety of paralinguistic prompts mitigates the absence of visual cues during telephone interview.

Not being face-to-face with the interviewee is also linked to poorer rapport with interviewees (Carr & Worth 2001, Stephens 2007). Participants in our study refuted this as illustrated by the theme 'easy rapport.' What the participants said suggested that good rapport was not reliant specifically on being physically present, but on the social context and on identification with the interviewer/ee. Knowing KW as a nurse might also have supported rapport although this was implied. Holt (2010) considers that not intruding into the participant's physical space frees the participant from another's surveillance. Such freedom from surveillance seemed congruent with mitigating our participants' experiences of CPAP use monitoring by respiratory clinic nurses. We agree with Mealer and Jones' (2014), that the relative anonymity of telephone interview might have allowed respondents to feel more relaxed leading to an enhanced interviewer/ee relationship.

Owing to the perceived difficulty building rapport during telephone interview concerns exist regarding the honesty and depth of disclosure by interviewees (Carr & Worth 2001, Stephens 2007). Participants' reflections, themed 'not being judged or feeling inhibited,' supports the view that the anonymity afforded by telephone interview might reduce transference, prejudice, or misjudgement on the part of the participant, or interviewer. Sturges and Hanrahan (2004) suggest personal disclosure is easier face-to-face. Polit and Beck (2006) agree, suggesting that although telephone interview might have advantages, it might be less effective when the interviewer is unknown to the participant or when a participant is asked to share deeply sensitive information. However, others contend that it is easier to disclose personal information from a stance of relative anonymity (Fenig *et al.* 1993, Greenfield *et al.* 2000). Also argued, is that such anonymity further frees the participant to disclose sensitive information (Novick 2008, Knox & Burkard 2009, Holt 2010). The findings of this study support freer, more relaxed disclosures. Participant responses did not reflect a reluctance to share personal information and contradict Shuy's (2001) contention that face-to-face provides a better forum for sensitive questions. Moreover, our participants' responses resonate with Trier-Bieniek's (2012) findings that exploring sensitive topics via telephone might produce more honest data.

We recognise that using the telephone for research is increasing internationally due to the resource intense nature of in-person interviews. Researchers experienced in qualitative methodologies may hold to the view that face-to-face is the best method for qualitative interviewing (Novick 2008, Nagy *et al.* 2010). However, the rising use of social media indicates a need in research to engage with changing technologies, such as blogs, telephone and web based conferencing to optimise inclusion of participants (King & Horrocks 2010). Accordingly, we offer points for consideration for researchers contemplating using the telephone to conduct semistructured interviews (Table 2). Considerations are additional to that provided on qualitative interviewing in the many available texts on the topic.

Table 2: Practical considerations for qualitative interviewing by telephone

Considerations	Rationale
Prior to the interview	
Signal anticipated interview duration and the depth of discussion expected.	To prevent misperceptions that the interview is an informal chat.
On obtaining written consent make an initial phone call to introduce the researcher and gain verbal consent.	To promote rapport.
Agree upon a time of day suitable for the interview and re-confirm consent verbally at each step.	To protect the right to have time to consider participating and protect confidentiality.
Encourage participants to take the call in a private location and plan to make the call in a private location.	To reduce risk of interruption.
Ensure the recording device is compatible with the phone used and test the set-up.	To ensure no data is inadvertently lost.
Be alert to hearing impairments, mobility issues or language difficulties.	To mitigate for these prior to commencing interviews.
Use a head-set if available.	For researcher comfort and to free hands for note taking.
Attend to the pace of speech, practice if it needs to change.	To enable clarity for the participant, e.g. swift speech is harder to follow in the absence of lip reading.
During the interview	
Confirm you are talking to the correct person.	To protect confidentiality and the integrity of the data.
Re-introduce yourself and remind your participant who you are. Review the aims of the interview. Briefly describe the researcher's setting, invite the participant to do the same.	To situate the researcher in the mind of the participant and promote rapport.
Confirm that your scheduled interview time remains convenient.	To ensure a reschedule is unnecessary.
Remind your participant the interview will be recorded and that the call is confidential.	The visual cue to audio-recording will be absent.
Signal depth of discussion expected and likely duration at the start of the interview.	To mitigate expectations that the interview will be task focused or a chat.
Be prepared to probe ambiguities, pauses, sighs or assumptions, e.g. *you know*.	To resolve ambiguities in the absence of visual cues.
Master the pregnant pause.	To reduce the risk of inappropriate interjection when the participant needs time to think.
Use vocal acknowledgements such as *mmm, aha, OK*.	To ensure your participant can hear that you are still listening.

Adapted from our experiences during this study and King & Horrocks (2010), Burke & Miller (2001), Carr & Worth (2001), Holt (2010), Mealer & Jones (2014), Musselwhite *et al*. (2007) and Stephens (2007).

Limitations

This study was nested in a larger grounded theory study within which established principles of grounded theory were followed. However, sampling specific to the larger study's requirements meant informants were restricted to CPAP-users and their partners. We were also unable to sample based on previous experience with face-to-face interviewing, although four participants described previous involvement in face-to-face interviews and focus groups. Recruitment for this study was via a clinic and, according to ethical requirements, participants were able to self-select independent of the researcher. Although the participant information sheet outlined the provision of a face-to-face interview to those that preferred, it is not possible to know whether those that chose not to participate did so because of the telephone interview. Participants came from one region of New Zealand. Therefore, future research should include qualitative studies using different informant populations and a larger dataset.

CONCLUSION

As part of our grounded theory study, we chose to conduct semistructured interviews by telephone. Participants were able to reflect on their experiences of semistructured interview via telephone and contribute to currently scant information on the approach. Counter to the tacit assumption face-to-face is best for semistructured interview, our participants viewed being interviewed via telephone as a favourable experience. Exploring participants' experiences of qualitative telephone interview in our grounded theory study provides insight into an untapped avenue of data collection along with ideas for future research practice and methodological debate. Accordingly, further research needs to address comparisons made between experiences of face-to-face and telephone interview in the same study. Additionally, to engage with changing technologies in GT research, studies incorporating telephone, blogs and other social media should be considered.

That the above research participants viewed the medium of telephone for interview positively supports the view that the telephone is a user-friendly interview tool. Given the global popularity of the telephone as a means to communicate, interviewing via this medium in contemporary society appears pragmatic. We argue that the value of intonation, hesitation and other paralinguistic cues amplified via the telephone should not be overlooked. Equally, the freedom of the relative anonymity of the telephone is useful when exploring potentially sensitive topics. The value of face-to-face interview is not disputed. However, for research participants accustomed to using the telephone, we contend that the tool need not be relegated

to a second best option on the basis of geographical or resource constraint during qualitative and grounded theory research.

Conflicts of interest

No conflict of interest has been declared by the author(s).

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REFERENCES

Armentrout, D.C. (2007). Holding a Place: Parents' Lives Following Removal of Infant Life Support. *Newborn and Infant Nursing Reviews,* **7**(1), e4-e11. Available at http://dx.doi.org/10.1053/j.nainr.2006.12.009

Birks, M. & Mills, J. (2011a) Data generation and collection, In *Grounded theory: a practical guide* (Birks, M. and Mills, J. eds.). Sage publications, Los Angeles, pp. 65-87.

Birks, M. & Mills, J. (2011b) *Grounded theory: a practical guide.* Sage Publications, Los Angeles.

Block, E.S. & Erskine, L. (2012) Interviewing by Telephone: Specific Considerations, Opportunities and Challenges. *International Journal of Qualitative Methods,* **11**(4), 428-445.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology,* **3**(2), 77-101. Available at http://dx.doi.org/10.1191/1478088706qp063oa

Bryman, A. (2008) The nature of qualitative research, In *Social research methods* (Bryman, A. ed.) 3rd ed. Oxford University Press, Oxford, pp. 365-399.

Buetow, S. (2007) Health research methods: a tabular presentation. Nova Biomedical, New York.

Burke, L.A. & Miller, M.K. (2001). Phone Interviewing as a Means of Data Collection: Lessons Learned and Practical Recommendations. *Forum: Qualitative Social Research,* **2**(2). Available at http://nbn-resolving.de/urn:nbn:de:0114-fqs010271

Carr, E.C.J. & Worth, A. (2001). The use of the telephone interview for research. *Nursing Times Research,* **6**(1), 511-524. Available at http://dx.doi.org/10.1177/136140960100600107

Charmaz, K. (2001) Qualitative Interviewing and Grounded Theory Analysis In *Handbook of Interview Research* (Gubrium, J. F. and Holstein, J. A. eds.) SAGE Publications, Thousand Oaks, California, pp. 675-695. Available at http://dx.doi.org/10.4135/9781412973588.d39

Charmaz, K. (2014a) *Constructing grounded theory.* 2nd ed. Sage publications, Thousand Oaks, California.

Charmaz, K. (2014b) Theoretical sampling, saturation and sorting, In *Constructing grounded theory.*(Charmaz, K. ed.) 2nd ed. Sage publications, Thousand Oaks, California, pp. 192-224.

Chetpakdeechit, W., Hallberg, U., Hagberg, C. & Mohlin, B. (2009). Social life aspects of young adults with cleft lip and palate: grounded theory approach. *Acta Odontologica Scandinavica,* **67**(2), 122-128. Available at http://informahealthcare.com/doi/abs/10.1080/00016350902720888

Cook, L.S., White, J.L., Stuart, G.C.E. & Magliocco, A.M. (2003). The reliability of telephone interviews compared with in-person interviews using memory aids. *Annals of Epidemiology,* **13**(7), 495-501. Available at http://dx.doi.org/10.1016/S1047-2797(03)00039-5

Corbin, J. & Strauss, A. (2008) Basics of qualitative research: techniques and procedures for developing grounded theory. 3rd ed. Sage Publications, Newbury Park, California.

Denzin, N.K. & Lincoln, Y.S. (2011) *The Sage handbook of qualitative research.* 4th ed. Sage publications, Thousand Oaks, California.

Duggleby, W.D., Penz, K.L., Goodridge, D.M., Wilson, D.M., Leipert, B.D., Berry, P.H., Keall, S.R. & Justice, C.J. (2010). The transition experience of rural older persons with advanced cancer and their families: a grounded theory study. *BMC Palliative Care,* **9**(5), 1-9. Available at http://www.biomedcentral.com/1472-684X/9/5

Fenig, S., Levav, I., Kohn, R. & Yelin, N. (1993) Telephone vs. face-to-face interviewing in a community psychiatric survey. *American Journal of Public Health,* **83**(6), 896-898. 10.2105/AJPH.83.6.896

Glaser, B. & Strauss, A. (1967) The discovery of grounded theory: strategies for qualitative research. Aldine, Chicago.

Green, J. & Thorogood, N. (2009a) Analysing qualitative data, In *Qualitative methods for health research* (Green, J. and Thorogood, N. eds.) 2nd ed. Sage Publications, London, pp. 195-228.

Green, J. & Thorogood, N. (2009b) *Qualitative methods for health research.* 2nd ed. Sage Publications, London.

Greenfield, T.K., Midanik, L.T. & Rogers, J.D. (2000) Effects of telephone versus face-to-face interview modes on reports of alcohol consumption. *Addiction,* **95**(2), 277-284 10.1046/j.1360-0443.2000.95227714.x

Health Research Council of New Zealand (2010) Guidelines for Researchers on Health Research Involving Mäori. Health Research Council of New Zealand, Auckland, New Zealand.

Highet, N., Stevenson, A.L., Purtell, C. & Coo, S. (2014). Qualitative insights into women's personal experiences of perinatal depression and anxiety. *Women and Birth,* **27**(3), 179-184. Available at http://dx.doi.org/10.1016/j.wombi.2014.05.003

Holloway, I. & Wheeler, S. (2010a) Establishing quality: Trustworthiness or validity, In *Qualitative Research in Nursing and Healthcare* (Holloway, I. and Wheeler, S. eds.) 3rd ed. Wiley-Blackwell Publishing, West Sussex, United Kingdom, pp. 297-314.

Holloway, I. & Wheeler, S. (2010b) Interviewing, In *Qualitative Research in Nursing and Healthcare* (Holloway, I. and Wheeler, S. eds.) 3rd ed. Wiley-Blackwell Publishing, West Sussex, United Kingdom, pp. 87-106.

Holloway, I. & Wheeler, S. (2010c) *Qualitative Research in Nursing and Healthcare.* 3rd ed. Wiley-Blackwell Publishing, West Sussex, United Kingdom.

Holt, A. (2010). Using the telephone for narrative interviewing: a research note. *Qualitative Research,* **10**(1), 113-121. Available at http://dx.doi.org/10.1177/1468794109348686

International Telecommunication Union (2014) *The World in 2014: ICT Facts and Figures.* ITU Telecommunication Development Bureau Geneva, Switzerland. Available at http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2014-e.pdf

Irvine, A., Drew, P. & Sainsbury, R. (2013). 'Am I not answering your questions properly?' Clarification, adequacy and responsiveness in semi-structured telephone and face-to-face interviews. *Qualitative Research,* **13**(1), 87-106. Available at http://dx.doi.org/10.1177/1468794112439086

King, N. & Horrocks, C. (2010) Remote interviewing, In *Interviews in qualitative research* (Horrocks, C. ed.). Sage publications, Los Angeles.

Kira, A., Nichols, D.M. & Apperley, M. (2009). Human communication in customer-agent-computer interaction: face-to-face versus over telephone. *Computers in Human Behavior,* **25**(1), 8-20. Available at http://dx.doi.org/10.1016/j.chb.2008.05.013

Knox, S. & Burkard, A.W. (2009). Qualitative research interviews. *Psychotherapy Research,* **19**(4-5), 566-575. Available at http://dx.doi.org/10.1080/10503300802702105

Kvale, S. & Brinkmann, S. (2009a) Interview variations, In *InterViews: learning the craft of qualitative research interviewing* (Brinkmann, S. ed.) 2nd ed. Sage Publications, Los Angeles, pp. 143-160.

Kvale, S. & Brinkmann, S. (2009b) *InterViews: learning the craft of qualitative research interviewing.* 2nd ed. Sage Publications, Los Angeles.

Kylmä, J., Vehviläinen-Julkunen, K. & Lähdevirta, J. (2001). Hope, despair and hopelessness in living with HIV/AIDS: a grounded theory study. *Journal of Advanced Nursing,* **33**(6), 764-775. Available at http://dx.doi.org/10.1046/j.1365-2648.2001.01712.x

Mealer, M. & Jones, J. (2014). Methodological and ethical issues related to qualitative telephone interviews on sensitive topics. *Nurse Researcher,* **21**(4), 32-37. Available at http://dx.doi.org/10.7748/nr2014.03.21.4.32.e1229

Minnick, A. & Young, W.B. (1999) Comparison between reports of care obtained by postdischarge telephone interview and predischarge personal interview. *Outcomes management for nursing practice,* **3**(1), 32-37.

Mottram, A. (2011). 'They are marvellous with you whilst you are in but the aftercare is rubbish': a grounded theory study of patients' and their carers' experiences after discharge following day surgery. *Journal of Clinical Nursing,* **20**(21-22), 3143-3151. Available at http://dx.doi.org/10.1111/j.1365-2702.2011.03763.x

Musselwhite, K., Cuff, L., McGregor, L. & King, K.M. (2007). The telephone interview is an effective method of data collection in clinical nursing research: A discussion paper. *International Journal of Nursing Studies,* **44**(6), 1064-1070. Available at http://dx.doi.org/10.1016/j.ijnurstu.2006.05.014

Nagy, S., Mills, J., Waters, D. & Birks, M. (2010) *Using research in healthcare practice.* Lippincott, Williams and Wilkins, Broadway, NSW, Australia.

Novick, G. (2008). Is there a bias against telephone interviews in qualitative research? *Research in Nursing & Health,* **31**(4), 391-398. Available at http://dx.doi.org/10.1002/nur.20259

Opdenakker, R. (2006). Advantages and Disadvantages of Four Interview Techniques in Qualitative Research *Forum: Qualitative Social Research,* **7**(4), 11. Available at http://www.qualitative-research.net/index.php/fqs/article/view/175

Penz, K. & Duggleby, W. (2011). Harmonizing hope: A grounded theory study of the experience of hope of registered nurses who provide palliative care in community settings. *Palliative & Supportive Care,* **9**(3), 281-294. Available at http://dx.doi.org/10.1017/s147895151100023x

Platt, J. (2001) The History of the Interview, In *Handbook of Interview Research* (Gubrium, J. F. and Holstein, J. A. eds.) Sage Publications, Thousand Oaks, California, pp. 33-55. Available at http://dx.doi.org/10.4135/9781412973588.d4.

Polit, D.F. & Beck, C.T. (2006) *Essentials of nursing research: methods, appraisals and utilization.* Lippincott Williams & Wilkins, Philadelphia.

Schreiber, R. & MacDonald, M. (2010). Keeping Vigil over the Patient: a grounded theory of nurse anaesthesia practice. *Journal of Advanced Nursing,* **66**(3), 552-561. Available at http://dx.doi.org/10.1111/j.1365-2648.2009.05207.x

Shuy, R.W. (2001) In-Person Versus Telephone Interviewing, In *Handbook of Interview Research.*(Gubrium, J. F. and Holstein, J. A. eds.) Sage Publications, Thousand Oaks, California, pp. 536-556. Available at http://dx.doi.org/10.4135/9781412973588.d32

Simms, L.M. (1981) The grounded theory approach in nursing research. *Nursing research,* **30**(6), 356-359.

Stephens, N. (2007). Collecting data from elites and ultra elites: telephone and face-to-face interviews with macroeconomists. *Qualitative Research,* **7**(2), 203-216. Available at http://dx.doi.org/10.1177/1468794107076020

Sturges, J.E. & Hanrahan, K.J. (2004). Comparing Telephone and Face-to-Face Qualitative Interviewing: a Research Note. *Qualitative Research,* **4**(1), 107-118. Available at http://dx.doi.org/10.1177/1468794104041110

Tong, A., Sainsbury, P. & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. **19**, 349-357. Available at http://intqhc.oxfordjournals.org/intqhc/19/6/349.full.pdf

Trier-Bieniek, A. (2012). Framing the telephone interview as a participant-centred tool for qualitative research: a methodological discussion. *Qualitative Research,* **12**(6), 630-644. Available at http://dx.doi.org/10.1177/1468794112439005

Warren, C. (2001) Qualitative Interviewing, In *Handbook of Interview Research* (Gubrium, J. F. and Holstein, J. A. eds.) Sage Publications, Thousand Oaks, California, pp. 83-103. Available at http://dx.doi.org/10.4135/9781412973588.d7

Wilson, K., Roe, B. & Wright, L. (1998). Telephone or face-to-face interviews?: A decision made on the basis of a pilot study. *International Journal of Nursing Studies,* **35**(6), 314-321. Available at http://dx.doi.org/10.1016/S0020-7489(98)00044-3

Table 2: Practical considerations for qualitative interviewing by telephone

Considerations	Rationale
Prior to the interview	
Signal anticipated interview duration and the depth of discussion expected.	To prevent misperceptions that the interview is an informal chat.
On obtaining written consent make an initial phone call to introduce the researcher and gain verbal consent.	To promote rapport.
Agree upon a time of day suitable for the interview and re-confirm consent verbally at each step.	To protect the right to have time to consider participating and protect confidentiality.
Encourage participants to take the call in a private location and plan to make the call in a private location.	To reduce risk of interruption.
Ensure the recording device is compatible with the phone used and test the set-up.	To ensure no data is inadvertently lost.
Be alert to hearing impairments, mobility issues or language difficulties.	To mitigate for these prior to commencing interviews.
Use a head-set if available.	For researcher comfort and to free hands for note taking.
Attend to the pace of speech, practice if it needs to change.	To enable clarity for the participant, e.g. swift speech is harder to follow in the absence of lip reading.
During the interview	
Confirm you are talking to the correct person.	To protect confidentiality and the integrity of the data.
Re-introduce yourself and remind your participant who you are. Review the aims of the interview. Briefly describe the researcher's setting, invite the participant to do the same.	To situate the researcher in the mind of the participant and promote rapport.
Confirm that your scheduled interview time remains convenient.	To ensure a reschedule is unnecessary.
Remind your participant the interview will be recorded and that the call is confidential.	The visual cue to audio-recording will be absent.
Signal depth of discussion expected and likely duration at the start of the interview.	To mitigate expectations that the interview will be task focused or a chat.
Be prepared to probe ambiguities, pauses, sighs or assumptions, e.g. *you know*.	To resolve ambiguities in the absence of visual cues.
Master the pregnant pause.	To reduce the risk of inappropriate interjection when the participant needs time to think.
Use vocal acknowledgements such as *mmm, aha, OK*.	To ensure your participant can hear that you are still listening.

Adapted from our experiences during this study and King & Horrocks (2010), Burke & Miller (2001), Carr & Worth (2001), Holt (2010), Mealer & Jones (2014), Musselwhite *et al*. (2007) and Stephens (2007).