Conducting Qualitative Research Under Pandemic Restrictions – Considerations, Challenges, and Benefits

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Abstract

Background: The Covid-19 pandemic had a significant impact on professionals working in the medical area, resulting in a very high workload and tightened safety restrictions for physicians, nurses, caregivers, and patients. Medical professionals pose one of the main target groups in health services research. Their experiences contribute immensely to any research project aiming to improve delivery and quality of care. Furthermore, their input contributes significantly to gaining greater insight into the current handling of the pandemic and into what future improvements should be considered. In this paper, we discuss the challenges and benefits of conducting a qualitative research project under pandemic conditions by illustrating the progress of our research project ADAPTIVE.

Methods: ADAPTIVE started in March 2020 and ended in August 2021. For data collection, we asked 26 participants to take part in an interview about using a web-based program to facilitate the exchange of patient information in multidisciplinary teams. Unfortunately, due to emerging hygiene regulations, corona-related restrictions, and the ongoing workload of medical professionals, the recruiting and interviewing process was challenging. Because of that we had to modify the original study design.

Results: We discussed several adjustments for the data collection. However, the privacy policies of different clinics, professionals’ lack of experience with video calls, and participants’ poor internet connectivity eliminated the option of digital video interviewing. Alternatively, we interviewed participants by telephone. Nevertheless, telephone interviews come with limitations. Firstly, it may be difficult for participants to establish a trusting relationship with the interviewer. Secondly, non-verbal communication is lost during a telephone interview. Further, the focus group discussions initially planned had to be dismissed since a simultaneous gathering of the participants was not possible due several reasons.

Conclusions: Qualitative research offers greater flexibility when adapting study designs and can, therefore, be successful, even under pandemic conditions. However, recruitment and data collection showed to be more time-consuming than under non-pandemic circumstances, and some methodological instruments such as focus groups were not possible.

Trial registration: https://www.drks.de/drks_web/navigate.do?navigationId=trial.HTML&TRIAL_ID=DRKS00021603 (Registration: 02. July 2020)

Background

The COVID-19 pandemic affects all parts of society and leads to significant challenges at various levels of social life. Pandemic-related changes also prompt additional and specific challenges for health research. Particularly the health care sector is affected by massive transformations in everyday working life (e.g., contact restrictions or predominantly home-based work) as well as additional burdens due to increased patient volume and "lockdowns." Consequently, the health sector is also changing as a research subject, and this change creates challenges for research designs and methods. These challenges apply mainly to studies following a qualitative study design because they often require interpersonal
relationships in the sense of face-to-face interactions and field visits to ensure reliable and solid data collection [1]. Nevertheless, reliable and solid data collection is the foundation of every research project.

In this paper, we argue that the main characteristic of qualitative health research, such as flexibility and openness, offers considerable potential to be used and adapted under pandemic circumstances. We further illustrate – using the example of our study ADAPTIVE – how we incorporated the necessary adjustments under COVID-19 and argue for the importance of evaluating them during the research process and beyond.

In qualitative research focusing on health services, health care workers pose one of the main target groups. As a result of the pandemic, this target group suffered from further extended working hours, changed service models, shortage of protective wear, and fear for their patients’ safety and their own [2]. These conditions make it significantly more challenging for them to participate in studies to the same extent as before [3]. Furthermore, due to contact with various patients, they have to follow special safety measures to protect themselves and their patients and colleagues. Due to the close contact during, for example, face-to-face interviews, participating in a qualitative research project can bear a higher risk of infection [2, 4]. For this reason and because ongoing projects are usually limited in time and may not be extendable, we had to find alternative ways to successfully continue recruiting participants and ensure a safe and valid data collection.

So far, the challenges and difficulties faced by researchers in the process of qualitative research during the pandemic have often remained undisclosed, and modifications to research designs have seldom been discussed. In order to provide more information and transparency, this paper reports on the challenges and adaptations to the recruitment and interviewing process in the research project "ADAPTIVE - Impact of digital assistants on palliative care." The project started in March 2020, shortly before the first pandemic wave hit Germany. The goal was to investigate changes in everyday practices associated with using a digital information system for exchange between multi-professional teams in the field of palliative care. The evaluated system ISPC (Information System Palliative Care) aims to allow the various stakeholders to access medical data collected in the network, thus shortening potential communication delays in multi-professional teams.

**Methods**

At the beginning of the project, the planned strategy was to recruit participants in a local clinic. Within the selected clinic, the new software Information System Palliative Care (ISPC) had been recently implemented independently before ADAPTIVE started. We planned two points of data collection: T1 when participants first started using the software and T2 when participants were working with that particular software for a few months. The research team scheduled the first interview to take place in the summer of 2020 with the goal of providing initial insight into the use of the new software. A second interview with the same participants was supposed to follow in autumn, four months later, to determine if there were
changes in caregivers' daily work routine and the treatment and interaction with patients since the first interview.

We conducted all face-to-face interviews in the subjects' work environment.

Further, we planned a focus group in the summer of 2021, with all participants divided into three small groups (each n = 8 to 9), to add the group perspective to the individual perspective by stimulating a group discussion about the use of the software.

Due to infection occurrence, lockdowns, and increased workload in nursing professions, the planning had to be heavily modified. For example, face-to-face interviews were no longer possible, so we had to find an alternative. The decision came down to a choice between video calls and telephone interviews. In addition, it was unclear until the very end whether and to what extent the focus group discussions could take place.

Results

The timeframes of projects are often tight, and the opportunities to extend the financing of a project are often quite limited. Moreover, a pandemic affects these timetables in numerous ways and can delay the recruitment phase and data collection. Therefore, in our results section, we focus on the adaptations made to these two research phases in particular.

Phase I: Recruitment & Field Access

Establishing a trusting relationship with participants is vital in qualitative research. Qualitative researchers have developed elaborate strategies for successfully building a trusting relationship with their target groups. One strategy is to visit participants before the actual interview as a door opener. During the pandemic, we could no longer apply many of these strategies due to hygiene measures. However, a participant's lack of trust can lead to insufficient "[...] sensitization for the perspective of the narrator and the conscious perception and classification of the interview as a communication and interaction process" [5]. Therefore, a trusting relationship is of utmost importance to ensure the quality of the collected data and the validity of qualitative (interview) studies. With the pandemic and necessary safety measures, these strategies were no longer an option, and we had to apply a sensitive adjustment of the recruitment strategy for the study.

The relevant stakeholders for the study were physicians and nurses in various institutions such as hospices, outpatient nursing services, clinics, and pharmacies. The implications of using a digital information system in their work environment were to be investigated primarily in everyday practices, especially in their interaction with colleagues and patients.

At first, we planned to recruit 25 interviewees from a previously selected cooperating clinic, which had only recently implemented the software for web-based exchange in networks. Unfortunately, this strategy
proved to be ineffective - after contacting potential participants in July 2020 via e-mail, only four interested candidates responded. Correspondence with further potential participants was also very time-consuming, and, in some cases, it took several weeks to schedule an interview.

Reasons for the delay in response that the contacted health care providers gave included sickness (own and sickness of colleagues but unclear if because of Covid-19) and an increased workload due to Covid-19.

In order to overcome this obstacle and enhance the number of potential participants, we decided to broaden our target group beyond the clinic and established contact with a palliative care network. By doing so, we gained eleven interested participants from outpatient and inpatient care and private practices. Nevertheless, the correspondence was drawn out and very slow. Therefore, by October, we decided to send a second reminder to each interested participant. As was in the clinic, respondents reported an increased workload due to Covid-19 as the primary reason for their delayed communication and lack of feedback.

Since we had not met theoretical saturation with the participants interviewed from the clinic and the palliative network, we decided to broaden our target group further and recruit participants directly via the Information System Palliative Care (ISPC) software developer. Utilizing a request for participation by the software developers, about 4,000 users in Germany received a flyer with information about participation in the study. Twelve interested participants responded, with whom we could conduct telephone interviews within three weeks. In addition, the twelve participants from the group of ISPC users also shared the project information with colleagues, enabling three further participants to be recruited and interviewed using purposive sampling.

In conclusion, we recruited different participants than we would have recruited before Covid-19. New conditions in terms of accessibility and the willingness of the interviewees to participate changed the selected population. The change within the sample also impacts the results and needs to be reflected during the analysis. Transparency about and the disclosure of potential biases is crucial in the sense of the intersubjective comprehensibility of their results. For the ADAPTIVE project, this implies, in particular, that nurses from hospices and palliative care teams responded more quickly and were more willing to be interviewed, whereas physicians were more challenging to reach and accounted for only eight of 26 participants. In this sense, it was possible within the analysis framework to primarily address the changed working conditions of nurses, whereas new practices of physicians emerged less strongly in the analysis.

**Phase II: Data Collection**

As shown in the recruitment phase, a successful qualitative research project significantly depends on the motivation and willingness of potential interview partners to participate in the study. Unfortunately, both are lower during the pandemic due to workload, insecurity, and stress than the times before Covid-19.
Nevertheless, participants still stated a high level of interest in and cooperation with health care research projects.

For ADAPTIVE, we designed a semi-structured guideline with a high narrative component for the interviews. In order to accommodate participants' significantly limited time resources, we shortened the duration of each interview to 45 to 60 minutes (initially 60 to 90 minutes), and we added a part where participants could report on their hardships with the pandemic. Due to the Covid-19 restrictions, interviews had to be conducted in line with the current safety measures while also avoiding overstressing the respondent's time resources. Therefore, we streamlined the study design from the originally planned two interviews to only one interview per participant. Further, we initially planned to conduct the interviews at participants' workplaces – however, due to the pandemic, often interviewers were not allowed access to clinics any longer. To simplify the process of finding a suitable appointment for the participants and meeting all safety issues, we decided to offer participants a telephone interview. In this way, we avoided personal contact, and both interviewer and participants stayed safe. We resorted to telephone interviews in order to interview all possible participants since video calls could be found to be challenging due to a lack of technical equipment, lack of personal experience in the use of e.g. Zoom© or Skype©, weak internet connections, dropouts due to participants' insecurities regarding being on camera, or data protection guidelines in clinics. Telephone interviews further proved to be more comfortable for participants – especially with their tight time resources – since they did not need to sit down at a computer but could answer their phones almost anywhere.

Before the interview, we also offered participants an "off the record" call to develop trust with the interviewer and the study contents.

To ensure to arrange the appointments as smoothly and quickly as possible, we included slots for interviews and conducted them outside regular working hours. Most of the participants preferred a telephone interview, although, during some phases of the study, infection rates were low enough to conduct the interview face-to-face, e.g., at a participant's workplace. Similar to the study by Lum et al. [4], many participants were glad, in terms of time and safety, to have the option of a telephone interview. Three participants explicitly requested a telephone interview to ensure the highest degree of safety possible, aiming to avoid their infection with Covid-19 as well as the infection of their patients. One of these participants postponed an interview for two weeks due to increased workload and rescheduled the initially planned telephone conversation to her usual workplace. However, an increased incidence of infections led her to again change the interview format to a telephone call in fall. This example illustrates the necessary flexibility of researchers, which must also be considered structurally in the form of sufficient time and personnel resources in research projects during a pandemic. Furthermore, it shows how the uncertainty about the pandemic course is an important factor not only for researchers but also for participants.

Five participants preferred face-to-face interviews. They considered telephone calls to be sources of bias or just preferred to talk to someone personally. Most of these interviews took place before the renewed
increase in infection rates in October 2020 so that access to participants' workplaces was still possible. All interviews conducted in person took place in compliance with the distance and hygiene rules so that interviewer and participant took at least one and a half meters distance, and at least the interviewer wore a face mask. If it was possible to open a window, participants were allowed to remove the face mask to ensure better sound quality during the audio recording. Only one respondent indicated that the minimum distance in her consulting room was sufficient and implied to remove the face mask. While the wearing of a face mask reduced the recording quality, recordings still transcribed well.

Discussion

Through the iterative sequence of different phases of the research process, the sampling procedure (purposeful case selection), and the continuous revision of the survey instruments (e.g., interview guidelines), qualitative researchers can flexibly adapt their studies to changing research conditions [6, 7]. Thus, it is possible to respond more comprehensively than is the case in quantitative research, where once a random sample has been drawn, it can not be changed, and where researchers usually can not modify a research question during the quantitative research process [8]. In contrast, for qualitative research projects, it is more the rule rather than the exception to continuously adapt the theoretical sampling and quota plans [9], survey instruments, and research questions to new findings or changing conditions in the research field [10, 11]. Within ADAPTIVE, we found that qualitative research designs are crisis-proof due to their flexibility. In contrast, the classic quality criteria of quantitative research – objectivity, reliability, and validity – are significantly related to adherence to a linear research process. However, the potential for adherence to the specific quality criteria of qualitative research – subject adequacy, empirical saturation, textual performance, and originality [12] – showed to be much more robust in the necessary adjustments to research designs since March 2020.

How does this translate to qualitative research under pandemic conditions? As in many other areas of society, one of the most widespread coping strategies in the health care sector is the use of digital technologies both by health care professionals and health care researchers, i.e., health services research [13, 14]. Accordingly, there has also been a massive increase in "digital" data collection in health services research since spring 2020 [2, 4, 15, 16]. Field access strategies [17] had to be reconsidered and adapted, interviews [18] and focus groups [19] were conducted by video call or at least by telephone [20–22]. By switching to purely digital or at least hybrid communication, research projects could be continued and completed. However, due to the virtual circumstances and common technical problems, additional context information is often lost, i.e., such as facial expressions and gestures of participants [20]. Also, often other contextual factors are lost, which are crucial for qualitative research – their absence must be reflected upon in any case to deal with the new conditions methodically [23].

Further, it is essential to recognize that digital communication is neither comprehensive nor evenly distributed across society. For example, in Germany, small and medium-sized enterprises are significantly less digitized than large companies and younger, well-educated people still use digital technologies much more extensively and competently than older adults with lower education levels [24]. In this regard, the
researcher should consider the following questions: Who is structurally excluded or included from the sample by (not) having access to digital technology? Which groups of people are more likely to shy away from a digital interview, and which groups have an affinity for a video interview?

In response to these questions, within ADAPTIVE, we offered telephone interviews because we were not sure if all participants were familiar with video call technologies and if data protection policies in participating clinics forbid them. With this approach, we tried to avoid other significant problems in digital data collection such as weak internet connections, unfamiliarity with the technology on parts of the participants, dropouts due to possible insecurities regarding their being on camera, and the exclusion of specific clinics through their data protection concepts which would have again significantly reduced the basis for recruitment.

However, recruitment and scheduling of appointments proved to be consistently challenging due to the limited time capacities of potential interviewees. In order to make it easier for medical professionals to participate, we streamlined our study design down to only one shorter interview per participant and no focus groups. We also adapted the interview guidelines to save time and to include topics related to the pandemic. However, it might not always be feasible for all projects to dismiss work packages such as focus groups because, e.g., the funding partner may not agree to do so. Further, we agreed on telephone interviews. For ADAPTIVE, disadvantages of telephone data collection were offset by advantages in case selection. While there is a loss of nonverbal communication, respondents could be interviewed nationwide rather than in only one region, thus facilitating the recruitment of a sufficient number of participants. Further, participants always have their phones with them, so it was very time-saving and convenient to be interviewed this way, instead of, e.g., having to sit down at a computer for a video call. While video calls are also possible on smartphones, they often were not allowed in clinics due to concerns regarding data protection.

Nevertheless, Vindrola-Padros and colleagues [2] pose a crucial question about research in pandemic times: is it necessary and ethically justifiable to conduct research in pandemic times when caregivers are already under enormous pressure? The additional time and cognitive burden on healthcare staff must be ethically weighed against the benefits of the research results. While participation in the project was voluntary, 26 participants agreed to participate in a one-hour interview despite working extra hours, an increased workload in their daily work, and great professional and personal pressure. Their participation shows how valuable and necessary participants thought data collection during this time was and how useful they thought the data gathered would prove. By expanding the data collection to cover participants’ insights on their situation during the pandemic without necessarily prolonging the interviews, participants also had the opportunity to discuss their worries and illustrate their hardships of the last weeks and months. Participants very much appreciated this option, and it generated more valuable data on handling the pandemic. In this context, it was also possible to investigate the importance of digitization in medical settings. The trend towards digitization in the medical field seemed to accelerate as a result of Covid-19. Our results convey the importance of the resulting networking with additional providers to the participants. In the context of these considerations, we decided to continue the
study, to expand the guideline to include the experiences during the Covid-19 lockdown and the accompanying digitization measures, and to incorporate the resulting findings into the initial research question.

Like many analyses of the effects of new technologies in health care, exploratory research projects rely on collecting data "in the field" to gain a first impression of the field. Especially when analyzing the use of new technologies, such field visits (in the sense of ethnographic go-along) can help sharpen the researchers' focus of analysis. Also, in qualitative interview studies, there is usually the possibility of being shown the technologies under investigation by the users on-site or observing them in actual use. This possibility represents a critical (data) triangulation [25] in interview studies, which is not available in purely linguistic interview transcripts. This possibility decreases due to the pandemic-related restrictions and poses particular challenges for qualitative research focusing on health services and digitalization, such as ADAPTIVE.

Another challenge we had to overcome was how to collect data while (a) ensuring safety for participants and interviewers but also (b) ensuring high quality of the data. Within ADAPTIVE, we tried to combine masked face-to-face interviews with telephone interviews. However, as illustrated above, qualitative research is based on trust between interviewer and participant. An initial fear was that telephone interviews or wearing a face mask would result in a lack of legibility of nonverbal communication, resulting in difficulties in establishing a trusting relationship with the interviewer. Without a trust-based relationship, interviewees might not be as open and vulnerable with interviewers as they would be with a person they trust. The original research questions within ADAPTIVE only included participants' professional experience with digital technology and did not result in any particularly sensitive content. However, this may be a challenge to consider in studies with particularly sensitive interview content and research questions, and vulnerable target groups. We also feared unclear articulation due to wearing a face mask would result in unclear transcriptions of the interviews. This possibility should be considered for more detailed transcriptions, i.e., data preparation for hermeneutic evaluation (e.g., sequence analysis). For interviews conducted in ADAPTIVE, a verbatim transcription was sufficient, and all interviews, including those where interviewer and interviewee were wearing a mask, could be transcribed well.

**Conclusion**

Within ADAPTIVE, we draw the following conclusions concerning qualitative social research under pandemic conditions. Firstly, collecting robust qualitative data during a pandemic is very important. Our study participants also acknowledged this importance, and they voluntarily participated, although they were dealing with minimal time resources caused by their increased workload. Secondly, without the flexibility of the qualitative study design, we would not have been able to adapt our study design to collect robust data under pandemic conditions. Expedient adaptations that we made included: (a) broadening the recruitment strategy (Germany-wide instead of regional) and using various approaches such as gatekeepers, flyers, and newsletters, (b) streamlining the study design with only one instead of
two interviews per participant and no focus groups, (c) switching from face-to-face interviews to telephone interviews, (d) adding an option for participants to also talk about their hardships during the pandemic.

Thirdly, as for the discussion whether telephone interviews or video calls would be the better option, telephone interviews were preferred over video calls because (a) with already minimal time resources, participants found them more comfortable and time-saving than having to sit down at a computer for a video call, (b) insecurities with the use of e.g. Zoom© or Skype© as well as on being on camera were eliminated, (c) issues due to weak internet connections and (d) conflicts with clinics’ data protection policies were avoided.

Lastly, we think it is essential that all adaptations, their implications, and their effects on the collected data are being discussed and reflected upon thoroughly within the research team and are fully disclosed in publications.

**Abbreviations**

Not applicable.

**Declarations**

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**Authors’ contributions**

Study design and lead: IO; Recruitment and interview conduction: AS; Data analysis: AS, CG; Data interpretation: AS, CG, IO; Manuscript writing: AS, CG, HCV, IO, JH; Manuscript reviewing: AS, CG, HCV, IO, JH. The corresponding author attests that all authors have read and approved the manuscript. The corresponding author attests that all authors meet the ICMJE authorship criteria.

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**Availability of data and materials**

We are willing to make our data material evaluated in this study available to any researcher who wishes to retrace our findings. To do so, please contact the corresponding author.
Ethics approval and consent to participate

The Ethics Committee of the Medical Faculty of the Ruhr University Bochum approved this study (20-6948). All participants attended voluntarily and agreed to the publication of the results. All participants provided both verbal and written consent to participate in the study and to process the interviews. We confirm that all methods were carried out in accordance with relevant guidelines and regulations of the Ethics Committee of the Medical Faculty of the Ruhr University Bochum.

Consent for publication

All participants consented to the publication of content-related statements, provided that their data were pseudonymized. All quotes listed here were pseudonymized so that only the research team can attribute them to a specific person.

Competing interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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