

REVIEW PAPER

ADAPTING DATA COLLECTION TOOLS FOR QUALITATIVE RESEARCH IN TIMES OF COVID-19 PANDEMIC

¹Neha Jain , ²Katarina Brockova 

¹University of Applied Sciences Burgenland, Eisenstadt, Austria

²University of Economics, Bratislava, Slovakia

Correspondence concerning this article should be addressed to Neha Jain, University of Applied Sciences Burgenland, Eisenstadt, Austria. E-mail: 1819001115@fh-burgenland.at

ABSTRACT

Over the last decades, qualitative research had gained increasing acceptance in studying experience of individuals and groups, events, process in phenomenon in diverse field of study like anthropology, sociology, health, and nursing, organizational and management, to name a few. Qualitative research encouraged an interaction between the researcher and the subject of study, with the researcher acting as an instrument of research and investigating the real-life experiences of the subjects under study. Qualitative data collection tools like field study, focus group interviews, observation, required a closer interaction between the researcher and the subject of study. However, in times of COVID-19 pandemic following the year 2019, several social restrictions to personal meeting, travel, and field visits were in placed internationally. Qualitative researchers were therefore required, by the needs of the time, to adapt the data collection and observation methods. Following a content analysis of the available scientific literature digitally, this study analyzed the changing landscape of qualitative data collection tools. This paper attempts to highlight how qualitative data collection tools can be adapted to the times during and post COVID-19 pandemic. With the help of tools like online video calls, asynchronous interviews, virtual reality devices and camera tours, alternatives to the conventional qualitative data collection tools could be identified. With benefits of time and cost saving offered by these alternative qualitative data collection tools, the author puts forward the relevance of these alternative tools not only in times of the COVID-19 pandemic but also in post pandemic times.

Keywords: COVID-19, Qualitative Research, Data Collection, Pandemic



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Introduction

The Coronavirus Disease (COVID-19) disease, initially identified in the year 2019, and declared by the World Health Organization (WHO) to be pandemic in the year 2020, affected several spheres of the socioeconomic framework of global society. Individuals as well as organizations had to learn to adapt to working remotely, maintaining social distance, and adopting several measures to minimize the spread of the infectious disease. The field of qualitative research did not remain untouched by this pandemic. Face-to-face interaction with individuals and conducting field studies were restricted indefinitely. The qualitative researchers were left with two options, either postpone the qualitative research indefinitely or adapt the qualitative research projects to the changing times. Though a literature review of open-source publications, this paper aims to offer the challenges faced by the qualitative research in the times of COVID-19 pandemic and thereafter offers some suggestions for overcoming these challenges by adapting the data-collection tools to fit the needs of the time during and post the COVID-19 pandemic.

Background of the Study

This study was conducted in the middle of the COVID-19 pandemic, in the years 2020-2021, as a response to the social restrictions and their impact on qualitative research. The real objective of author's research at that time was to initiate a qualitative study, that involved collecting data from visits and face-to-face interviews. This required local and international travel as well as meeting research participants personally. However, when the original qualitative research was set to start, several social restrictions were in place across the globe as an attempt to curb the spread of the COVID-19 pandemic. Travelling, conducting field visits, meeting people personally became difficult. The qualitative researcher at this time had two options, either to postpone the study indefinitely or to adapt the research to the changing global situation. For lack of clarity regarding when the social restrictions would end, the latter option was chosen. However, to adapt the research to the changing global scenario, a better understanding of the qualitative data collection tools was needed. The current study is an attempt to address this issue. Through this study, the author aims to highlight the diverse data collection tools that qualitative research offers, and

how some of these qualitative data collection tools can be adapted to the changing global landscape.

The scientific contribution of this study is that it reflects the needs of the times surrounding the COVID-19 pandemic when this research was conducted. Through a literature study, the author aimed at collecting the experiences and recommendations of scientific qualitative researchers, as to how qualitative research could be adapted to the changing global situation, where travel and personal contact became restricted and unpredictable. The author, a qualitative researcher, takes the findings from the scientific literature and adds own viewpoints to highlight the need for adapting the qualitative data collection and making it fit for times during and post the COVID-19 pandemic. This study was relevant at the time of conducting the research as the global community was still in the midst of the pandemic and no clear end to the social restrictions was foreseeable. By adapting the qualitative research and data collection tools to the changing times, the qualitative researchers may prevent putting their qualitative research on hold for an indefinite period of time.

Research Questions

Research questions guide the research, and same was the case with this study. This study was guided by the following two research questions:

1. What are the challenges faced by the qualitative research in times of COVID-19 pandemic?
2. How can the qualitative research be adapted to fit the times during and after COVID-19 pandemic?

Research Methodology

This paper reviews the literature from the open-source publications over the period surrounding COVID-19 pandemic, where the global community still found itself struggling with the social and economic impacts of the pandemic.

Following a literature review, the author offers an insight into the real time problem of COVID-19 pandemic, its impact on the qualitative

research methodology, especially concerning the collection of data for qualitative research. Even in the short span of one year following the identification of the COVID-19 disease, in the year 2020, several researchers brought the attention of the scientific community towards the challenges of doing qualitative research in times of COVID-19 pandemic.

Through a systematic content analysis of the open-source scientific publications as well as global organizations like International Labor Organization (ILO), World Health Organization (WHO), Organisation for Economic Co-operation and Development (OECD), this paper attempts to add to the pool of scientific literature in the field of qualitative research. Content analysis is used to determine patterns and trends in large volume of documents and data (Stemler, 2000). Content analysis allows for data collection across diverse sources and forms, like scientific publications, blogs, newspapers, etc. (Stemler, 2015). During the time when the data for this study was collected, the social restrictions due to the COVID-19 pandemic were still in place. Therefore, digital, and online data sources were the prime means of collecting data. The relevant text or key themes from the collected data were identified (Weber, 1990). Repeating ideas were identified in the key themes. These repeating ideas were then clustered into categories that formed the result of the analysis.

Qualitative Research

Qualitative research aims to understand subjects and phenomena in their context specific setting (Walsh, 2015), focusing on generating insights based on real world settings (Golafshani, 2003). Denzin and Lincoln (2011, p.3.) stated that ‘...qualitative researchers study things in their natural settings, attempting to make sense of or interpret, phenomena in terms of the meanings people bring to them’. These definition highlights the significance of the interaction between the qualitative researcher and the subject of study. Being close to the subject of study has been the essence of qualitative research.

Qualitative research differentiates itself from quantitative research in multiple ways. Where quantitative research focuses on hypothesis testing, operationalization of variables, measuring and quantifying the phenomenon at hand, qualitative

research focuses on theory building, narrative interviewing coupled with observation, to generate a theoretical explanation for the phenomenon under study (Auerbach & Silverstein, 2003).

Over the last two decades, qualitative research has gained increasing acceptance in different fields like health (Duffy, 1985), organizational management (Klenke, Martin, & Wallace, 2016), anthropology and ethnography (Auerbach & Silverstein, 2003), to name a few. Different approaches to qualitative research allow for addressing a variety of research concerns and research groups. Creswell and Poth (2016) highlight five approaches to qualitative research, as shown in figure 1. The selection of the qualitative approach when planning and conducting qualitative research is guided by the research issue at hand and the subject under study (Creswell & Poth, 2016).

Figure 1:
Five approaches to qualitative enquiry



Source: Creswell & Poth (2016). Adapted by author to meet publication requirements.

Qualitative Data Collection Tools

‘Qualitative research consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self’ (Denzin & Lincoln, 2011, p.3). Qualitative research allows for a wide variety of data collection tools to capture the phenomenon under study. Some of the commonly used data collection tools for qualitative research include surveys, interviews, and field studies (Babbie, 2013). Although the use

of additional data collection tools like observations, memos, photographs, and other such documents is also possible in qualitative research, a majority of contemporary qualitative research tends to use interviews and observations as primary data collection tools (Creswell & Poth, 2016).

Most of the popular qualitative data collection tools involve a direct interaction between the subject of study and the researcher (Mayring, 2004). Where on one side data collection tools like surveys can be pursued remotely, face-to-face interviews and field studies require a direct contact between the researcher and the subject of the study in their natural setting (Klenke et al., 2016). Creswell & Poth (2016) highlighted some of the possible data collection tools as shown in figure 2.

Figure 2:
Qualitative data collection tools

QUALITATIVE DATA COLLECTION TOOLS			
Interviews > One on one interviews > Focus group interviews	Documents > Research journal or diary > Personal documents like letters, photographs > Public documents like memos, blogs, records, archival information > Organizational documents like charts, plans, medical records > Autobiographies & biographies	Observations > Observe as participant, or observer. Shift between observer and participant	Audiovisual material > Record and examine photographs, videos > Examine social media data > Collect and examine sounds > Examine phone or computer-based messages > Examining possessions or rituals objects

Source: Created by author, based on Creswell & Poth (2016)

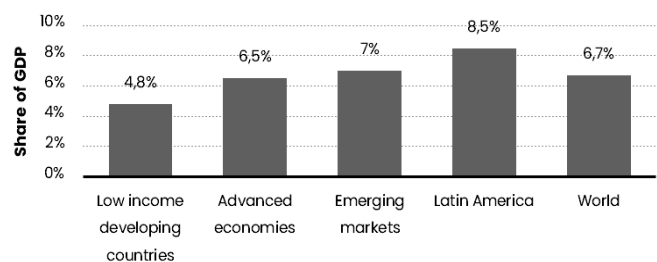
COVID-19 Pandemic

COVID-19 is the disease caused by a new coronavirus called SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2) that was first identified in 2019 (WHO, 2020). As of 21st of January 2022, a total of over 340.5 million cases of infection and a over 5,5 Million deaths were reported globally (WHO, 2021). COVID-19 was declared as a public health emergency of international concern on the 30th of January 2020 and was declared to be a pandemic on the 11th of March 2020 (Clift, 2020).

From the time of identification of the COVID-19 disease, within a few months the pandemic emerged not only as a health crisis but also as a global economic and social crisis (ILO & OECD, 2020). As the economies around the world

tried to find the best possible way of reducing the infection rate and still supporting the economy, several restrictions were placed on the movement of the global population around the world (Khudik et al., 2020). In their report published in the summit of intergovernmental forum comprising of 19 countries and the European Union (G20), ILO, and OECD (2020) highlighted the negative economic aspects of the pandemic, few of them being the reduced mobility of the individuals, decline in the industrial production, the negative impact on the employment due to reduction in the number of jobs as well as the working hours. The Gross Domestic Product (GDP) of the economies around the world suffered an unprecedented loss in the year 2020. Figure 3 shows the loss in GDP across selected geographical regions across the world (Statista, 2021). The path of global GDP recovery is faced by several challenges as the global society still grapples with the pandemic (ILO & OECD, 2020).

Figure 3:
GDP loss due to COVID-19, by economy, in the year 2020



Source: Statista (2021)

The COVID-19 pandemic not only restricted the global economic growth, but also affected various aspects of the human social life across the world. With the social restrictions in place, working and studying remotely became common (ILO & OECD, 2020). Although such measures offered protection from the disease and damped the spread of the virus, the negative side-effects of the social restriction measures also attracted the attention of the social scientists (Kuhfeld et. al, 2020; Patrick et. al, 2020; Pragholapati, 2020). The combined impact of the pandemic on the global social and economic fabric necessitated a collaborative response from diverse corners of the society to recover from the far-reaching effects that the global community was faced with.

Addressing the First Research Question – What are the challenges faced by the qualitative research in times of COVID-19 pandemic?

Qualitative research, by its very nature, involves an interaction between the researcher and the subject of the study, be it individuals or a location (Babbie, 2013; Reichardt & Rallis, 1994). Where on one side, interviews often requested a face-to-face, telephonic, or online interaction between the interviewer and the interviewee, on the other side, a field study required the researcher to observe or even participate in the happening on the location of study (Babbie, 2013). With the restriction placed on the mobility of the individuals around the globe (ILO & OECD, 2020), however, this direct interaction in the qualitative research suffered an initial setback. The researchers were not able to travel, face-to-face interviews were not possible and field studies were also restricted completely or delayed indefinitely (Jowett, 2020). The content analysis of the collected data showed that several concerns for the qualitative researchers could be identified, namely:

- Identification of suitable research participants: The researchers need to reconsider the list of research participants who could contribute to the research, be willing to share information, and available for the discussion despite the restrictions caused by the pandemic (Global expansion, 2020).
- Substituting face-to-face interviews and still collecting relevant information: The key aspect of the qualitative face-to-face interviews has been for the qualitative researcher the possibility to build a rapport with the interviewee and to read between the lines, (Babbie, 2013). As this possibility was taken away due to the social restrictions, the researchers risked losing some information that could otherwise be collected in the face-to-face interviews (Global expansion, 2020).
- Absence of face-to-face focus group studies: Creating group interviews and discussions also became difficult in the times surrounding the COVID-19 pandemic. Getting several people in one room, exchanging their views, building on the response of the group members has been one of the key advantages of the focus groups (Auerbach & Silverstein, 2003). This advantage was however lost for some researchers during the COVID-19 pandemic (Global expansion, 2020).
- Time constraints due to availability of participants owing to family and work-related restrictions: The COVID-19 pandemic started as a health crisis and evolved as a socio-economic crisis affecting different aspects of human lives. People were working from home, children were studying from home, unexpected quarantines had to be gone through, health workers faced emergency longer working hours, to name a few of such changes in the lives of the global population. In some cases, this meant that the research participants were no longer available for the research due to some changes in their private or professional life. This in turn acted as a roadblock for the qualitative researchers, who had to re-evaluate their data collection and research participants (Global expansion, 2020).
- Prioritizing health of all participants and avoiding any risk of infection: COVID-19 is a contagious disease (WHO, 2020). When pursuing the qualitative research, be it going out in the field, meeting research participants or collecting data, the qualitative researcher was bound by several rules and regulations in place to ensure human safety. This on one side risked making the research cumbersome or put the research indefinitely on hold (Global expansion, 2020).
- Risking a dead end to the research (Gardner, 2020): Researchers reported having to adapt their qualitative research subject in order to avoid a dead end to the research that was enforced by the COVID-19 pandemic (Gardner, 2020). In the times of social distancing, lockdown, and quarantine during the global efforts to curtail the spread of COVID-19, some researchers were also forced to question as well as reassess the validity and relevance of their research subject at hand (Gardner, 2020; Jowett, 2020). The use of online tools gained increased acceptance. On one side the online tools offered a substitute for face-to-face meetings on the other side a complete dependence on the online tools revealed the infrastructural limitations of internet connections in some regions as well as posed some initial hurdles due to the limited training and exposure of individuals

to the online tools in some regions (Jowett, 2020).

- Ethical issues in research: An additional challenge that is faced by the qualitative research in times of COVID-19 pandemic is that of the ethical nature (Gardner, 2020). The research participants, if already under stress due to the family, health, or work-related situation during the pandemic, need to be re-considered as research subjects or at least the data collection has to be postponed to a later time (Jowett, 2020). One example to highlight this case would be to consider a health professional working extra hours in care of COVID-19 patients and thereby having little or no time or interest for participation in research. The increasing dependence of the researchers on the online sources also poses some ethical issues. When researching online, extra care is to be taken concerning the source of information and whether the selected online information may be used for the research purpose (Salmons, 2015; Jowett, 2020). Some institutions have their own set of ethical guidelines when using internet mediated research and such guidelines may not be ignored, especially in the times of socially distant research (The British Psychological Society, 2017; Jowett, 2020).

Looking at the above arguments, it could be summarized that the COVID-19 pandemic had a negative impact on the pursuit of qualitative research. However, instead of putting qualitative research projects on hold for indefinite period of time, the need of the time was to evaluate the available data collection methods and to adapt the research to the changing times. This is discussed in the next sections.

Addressing the Second Research Question - How can the qualitative research be adapted to fit the times during and after COVID-19 pandemic?

Faced by the challenges of COVID-19 pandemic, the scientific community of qualitative researchers has come together to address these challenges together. With a diversification of data collection tools and by using remote data collection methods like voice and video calls, the initial hurdle may be overcome to a certain extent (Salmons, 2020). Some open-source or also known as crowd-source documents worked upon

by several researchers coming together to share their experience recommend an initial overview of all possible tools at one's disposal before starting distant research during the pandemic (Crowd1, 2020; Crowd2, 2020). Following the content analysis and literature study, the methods listed below for data collection and for overcoming the hurdles posed by the pandemic were identified:

- Online tools: the need of socially distant research gave an impulse to the use of online tools for data collection in qualitative research. With significant information available in the form of webinars, online tutorials, podcasts, etc., it is easier than ever before to get to know these tools better, get trained in them and to use them for the purpose of research (Salmons, 2020). Online tools may lack the personal aspect of meeting the research participants face-to-face or visiting the site for field study, but they do offer few benefits as well. With the use of online tools, data collection may be done remotely, reducing the physical and mental stress associated with travel. Additionally, the costs of travel can also be reduced. These benefits are especially prominent in research projects where significant travel is involved. The same is true with online trainings, webinars, etc. These are often free of travel costs and often also available in different time-zones, thereby overcoming the geographical time-zone barrier.
- Video calls as substitute for face-to-face interviews: Platforms such as Skype (2021), Zoom (2021), Microsoft Teams (2021) to name a few, offer the possibility of having video calls with users spread across different countries and time-zones. With the use of such tools increasing during the pandemic, they have gained increasing acceptance as data collection tools, reducing travel costs, increasing flexibility between time-zones and these benefits are expected to be valid even after the pandemic. In the times surrounding the COVID-19 pandemic, the product offering of such tools for video calls saw an improvement and the quality of the service also improved (Felder, 2020).
- Diaries and journals may be a useful tool as a substitute for field study: If the researcher is not able to visit the site or meet the research participants physically, diaries and journals may offer an alternative (Crowd1, 2020). The

research participants at the field may be requested to keep diaries or journals, adding the relevant information on a regular basis. These documents can then be shared with the researcher at certain time intervals to evaluate the quality and relevance of the information. These data collection tools may help to a certain extent in overcoming the absence of field studies. It may be noted that the ethical issues need to be considered in detail when considering this method of data collection. When using the data in the diaries or journals, all personal information that may be used to identify the research participants should be treated with care and in accordance with the ethical policy and laws applicable for the researcher as well as the research participant.

- Asynchronous interviews: As an alternative to synchronous face-to-face interviews, asynchronous interviews over tools like email, text messages etc. offer a possibility of overcoming the limitations of availability of research participants at the place and time of interview. Care must however be taken to keep the conversation going, not dropping off the links and documenting all emails and text messages exchanged with the research participants (Debenham, 2007; Ferguson, 2009). Asynchronous interviews may sometime prove to be cumbersome as compared to focus interviews as instead of collecting the info in one focus group interview, the data collection is spread over multiple chats, emails, messages, etc.
- Using wearable cameras – This method has also been suggested as a substitute for the field studies, however care needs to be taken by considering the ethical issues before starting the data collection. In this case, research participants go around their usual day with wearable cameras that record the happenings. The recorded photos or videos can then be used by the researcher as data for the analysis. The ethical issues are critical, for example in the European Union, the General Data Protection Regulation offers a detailed set of dos and do-nots in terms of person-specific data collection (The European Parliament and the Council of the European Union, 2016) and these need to be considered before the onset of the data-collection.
- Group audio or video calls as a substitute for focus groups: This is an addition to the individual audio or video calls. Platforms such as Skype (2021), Zoom (2021), Microsoft Teams (2021) to name a few, offer the options for live group audio and video chats. With careful planning, selection of relevant questions and by moderating the online group calls to allow everyone to express their views, the researcher may even benefit from this low-cost version of the data collection tool (Stewart & Williams, 2005; Tuttas, 2015). The online tools also offer the benefit of reduced costs and stress related to travel. Additionally, the time saved by reduced travels could be further invested in data collection and analysis.
- Online videos for training and observational studies: In the absence of field studies, online tools such as Youtube (Youtube, 2021) may be used for observational studies. In the times of the COVID-19 pandemic, where the ethnographic studies have been hampered, such platforms may also help the researchers in observing different aspects of the society like protests, interest, new trends, problems, etc. (Brown & Laurier, 2017; Laurier, 2013). Youtube as data source has been used by researchers in studying diverse social issues during the COVID-19 pandemic, from health (Szmuda et. al, 2020) to education (Irawan et. al, 2020). Researchers, however, advise exercising caution regarding the source and quality of data (Li et. al, 2020).
- Using platforms on social media for research and data collection: Over the last few years, several social media platforms offer the users with a common interest to come together and share their ideas, updates, etc. The use of data collected from such platforms have seen increasing acceptance in contemporary literature in diverse fields like sports (Filo, Lock, & Karg, 2015), dietary habits (Middha, 2018), etc. Care needs to be taken to select the relevant information and to avoid fake news that may negatively affect the research results (Jordan, 2018; Kumar & Shah, 2018). Ngai, Tao & Moon (2015) and Pearce (2020) offer the conceptual framework for research using social media platforms.
- Online surveys: Surveys via online tools have been used to collect data for several

decades (Babbie, 2013). Online surveys for qualitative research have also been used earlier but their relevance has increased for reaching out to the research participants remotely during the COVID-19 pandemic (Braun et. al, 2020). The debate between the suitability of qualitative surveys and face-to-face interviews has been conducted several times in the scientific community. Especially for explorative studies, face-to-face interviews were considered suitable as they offered the possibility of asking probing questions and building a rapport with the research participants (Babbie, 2013). However, as conducting physical meetings and face-to-face interviews was hindered during the pandemic, qualitative surveys gained increasing importance in terms of data collection. Qualitative researchers highlighted the suitability of using a series of open-ended questions for qualitative online surveys in order to collect research relevant information for the analysis (Braun et. al, 2020).

Conclusion

The social restrictions faced by the global socioeconomic community have affected the scientific community in its pursuit of qualitative research. The social distancing measures aiming to reduce the spread of the infectious COVID-19 disease prevent a direct personal face-to-face interaction between the researcher and the subject or research. However, with the changing times, by reviewing the vast variety of the data-collection tools for qualitative research available currently, a researcher may find a suitable alternative. This paper aimed to offer an insight into few of such data-collection tools for qualitative research that may, when used with care and with regard to the ethical considerations, may speed up the data-collection process or may even reduce the cost of research by avoiding travel and pursuing the research via remote data collection tools.

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