7 What Energy Poverty Looks Like

Methodological Insights from a Study in the Republic of Georgia

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7.1 Introduction

The lived experience of energy poverty is a context-dependent phenomenon influenced by geographic, historical, social, cultural, and economic factors (González-Eguino, 2015; Sovacool et al., 2012). Understanding the complex nature of the lived experience of energy poverty is important for developing effective solutions to this problem. Therefore, the question of *how* to document and study the lived experience of energy poverty gains importance.

In studying and assessing energy poverty, quantitative methods seem to be the dominant methodological choice. For example, scholars recently noted the absence of detailed qualitative research to study energy poverty in Latin America and the Caribbean (Thomson et al., 2022). The studies that do use qualitative methods seem to be mostly using conventional research methods, such as interviews, document analysis, and observations (e.g., see McKague et al., 2016; Mould & Baker, 2017). Yet more recently, calls have been made to adopt relatively newer methods such as video ethnography since video footage serves as a record of a "multi-sensorial and multi-modal experience" (Pink, 2008, p. 190) that text alone is not able to convey.

This chapter outlines the process of investigating the lived experience of energy poverty in the Republic of Georgia using video ethnography. The methodological design of this research can be considered an experimental one. As restrictions due to the COVID-19 pandemic disrupted my travel plans, I decided to use the photovoice method (Wang & Burris, 1997) to engage study participants in data collection process. However, instead of taking photos, I asked study participants to depict on video energy poverty as they saw and experienced it. In this chapter, I will describe the research process, outline the methodological implications of this experience, and discuss the need for diversifying the methodological toolkit applied to studying and documenting energy poverty.

7.2 Methodological approaches to studying energy poverty

Discussions on the lived experience of energy poverty have spanned various aspects of this topic in different parts of the world (Ambrose et al., 2021; Cao & Frigo, 2021; Furszyfer Del Rio & Sovacool, 2023; Porto Valente et al., 2022; Yip et al., 2020). From the methodological perspective, these studies mostly rely on interviews, study visits, participant observations, and quantitative surveys (Ambrosio-Albala et al., 2020; Furszyfer Del Rio & Sovacool, 2023; Porto Valente et al., 2022; Yoon & Saurí, 2019). In this diversity of methodological approaches, the application of visual methods is relatively limited. A Scopus search with the combination of keywords "visual"/"video"/"visual ethnography"/"visual method" AND "energy poverty" resulted only in three results. Two papers were about modelling (Vasconcelos et al., 2021) and cost equation

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(Majhi et al., 2021) and therefore were not relevant to this research. One more paper explored energy-vulnerable households in Greece; however, it did not use visual methods to explore the lived experience of energy poverty (Kaliampakou et al., 2021). In this study, video was used for survey interviews because of the inability to conduct them in person due to the on-going COVID-19 pandemic. I next searched for the papers with the keyword "video ethnography" without specifying "energy poverty" as a keyword. This search resulted in 42 results, but most were not about energy consumption or poverty. I found one study by Pink and Mackley (2012), in which the authors document the use of video ethnography to study domestic energy consumption. The lack of studies using visual methods to explore the lived experience of energy poverty, and video ethnography in particular, is a noteworthy gap as visual methods can contribute much to documenting, studying, and understanding the lived experience of energy poverty.

Scholars studying energy poverty can draw on literature discussing and describing video ethnography as one of the research methods (e.g., Vannini, 2020). Of particular interest for this book chapter are the studies in which videos are recorded not by scientists, but by citizens. Jones and Raymond (2012) refer to such videos *as third-party videos*, when recordings are made by nonscientists or nonresearchers, but are used for social science research. In their article, Jones and Raymond (2012) describe how they used video recordings of police-citizen interactions created by neighbourhood residents. In this case, the videos were not intended to be used in the research project initially; rather, they became data afterward. In our study, videos were created by nonscientists; however, they were recorded with the intention of being used as data. In the following sections, I describe how we engaged study participants in creating videos and how we used these videos to study energy poverty in the Republic of Georgia.

7.3 Using video to study the lived experience of energy poverty in the Republic of Georgia: the description of the process

The study aimed to investigate and document the manifestations of energy poverty in Georgia. According to the initial research design, my initial plan was to travel to Georgia during the summer of 2021 and winter of 2021–2022 to collect data through in-person video ethnography and interviews. While thinking about redesigning the study without me requiring to travel, I was inspired by the photovoice method (Wang & Burris, 1997), which enables study participants to identify and document issues of their concern and interest. As Sutton-Brown explains (2014, p. 170), "photovoice interrogates contextually based meanings from an insider perspective as a means to generate new insights into our socially constructed realities and cultures. It oscillates between private and public worlds in its attempt to publicize and politicize personal struggle via photography, narratives, critical dialogue, and social action." Instead of asking them to take photos of energy poverty around them, I asked study participants to depict on video energy poverty as they saw and experienced it. In what follows, I explain the key stages of conducting this study.

7.3.1 Recruiting study participants

The first step was to recruit study participants who would be interested and willing to collect the data through videos and engage in conversations about energy poverty. My collaborator, who lives and works in Georgia, helped reach out to possible participants. However, the most effective method was posting the request on my Facebook account. It should be noted that Facebook is very actively used in Georgia, and most of the societal and political discussions are unfolding on Facebook. After posting the invitation on my Facebook page, several people reached

out to me. After initial exchanges, three of them decided to participate in the project. All three participants were female, in their 20s or 30s, and lived in different parts of Georgia. I had an online conversation, using the video conferencing platform Zoom, with each study participant to explain the expectations of participation and answer any questions they had. These conversations were very useful in getting to know each other and for establishing expectations and procedures relating to the research. In particular, we discussed the ethical implications of the research and the required ethics protocols to follow (please see the section below for more details). I also clarified that study participants would have the possibility to comment on the edited video. In fact, during the interviews that I conducted after the data was collected, I consulted with the study participants about which themes they thought were dominant in their videos and why. Study participants were offered GBP 50 honorarium for participating during the summer and winter (i.e., they were offered GBP 100 if they participated both in the summer and winter periods). The honorarium was offered to compensate for their time and efforts and to reimburse any costs they might have incurred (e.g., transportation).

7.3.2 Data collection

Study participants collected video data during two periods: August–September 2021 and January–February 2022. The study design gave them full freedom in choosing locations, topics, and how they wanted to record the videos. During our initial Zoom meeting, we discussed the concept of energy poverty and what it implies. For example, I highlighted that the lived experience of energy poverty could be visually depicted not only at home but also in such spaces as libraries, for example, as well as in relation to transportation and conditions of working and studying (especially given the need for teleworking and remote learning during the COVID-19 pandemic). The participants were asked to shoot videos with a total length of about 20 minutes per three-week period in winter and again in summer (a total of 40 min). It was up to the study participants how long each video would last (e.g., they could choose to create four 5-minute-long videos or several videos of various lengths). All participants drew on their personal experiences and immediate surroundings. As a result, the produced video essays depict energy poverty experiences in different parts of the country. Participants also had different approaches while editing (or not editing) their videos.

7.3.3 Debrief and production of video essays

After the data collection was completed, I conducted a second Zoom interview with each participant. During these interviews, we discussed their impressions/observations of the energy poverty around them, why and how they collected the data (e.g., why they chose to record the specific video footage), and anything beyond the collected data that they thought was important to consider in this study. As this process was new and interesting for me, I asked the study participants about their experiences and impressions of the data collection process. All of them noted that they found the process not only interesting but also enjoyable. They noted that the videos provide an immersive experience because the viewer can imagine themselves in the depicted places and can see what the lived experience looks like. Some also noted that videos helped them remember details that they may have forgotten or pay attention to nuances that they may have otherwise ignored.

Next, I edited collected video footage and added titles and captions where needed. I shared edited video essays with study participants to receive their comments and approval prior to uploading them online and sharing them with a broader audience. In the information letter and

consent form, it was clarified that the videos could be shared through social media after the study participants reviewed and approved the videos. As a result, eight video essays were produced.[1]

7.3.4 Receiving approval from the research ethics board to conduct research

Two separate applications were submitted to the University of Prince Edward Island Ethics Review Board to receive approval to conduct the research. The first application was related to the recruitment of the study participants and their engagement in the data collection process. Below is an excerpt from the information letter to the study participants that details what participants are expected to do should they choose to collaborate on this project:

> Participation in this study is voluntary. During the two three-week periods in summer 2021 and winter 2021, you will be asked to create video diaries (using a smartphone or any other video recording device of your choosing) that depicts your observations of energy poverty around you. The total length of the video diaries per three-week period should be about 20 min. It is up to you how long each video diary may last (for example, you may choose to create four 5-min-long video diaries, or several video diaries of various lengths). The locations, settings, and any other details relating to the video recordings are up to you. If you decide to record certain people or/and their private property, you will need to ask for written informed consent from them. I have enclosed these forms in this information letter. If you decide to participate in this study, we will set up a Zoom meeting where I will provide more information about this process and will answer any questions that you may have.

Study participants could depict energy poverty in their immediate surroundings (e.g., in their homes) or in other spaces (e.g., on the street). In case study participants decided to record certain people and/or their private property, they needed to obtain written informed consent.

The second application was submitted to receive permission to conduct interviews with the study participants after the data collection phase was completed. The interviews were conducted individually with each study participant via Zoom and lasted for about 40–60 minutes.

In both applications, recruitment and information letters, as well as consent forms, were produced both in English and Georgian.

7.4 The lived experience of energy poverty as depicted in the videos

The study participants decided to depict the manifestations of energy poverty in different locations. One study participant documented energy poverty-related issues in a rural area; one participant focused on a city; and the third participant shot videos both in urban and rural locations. Two study participants depicting rural areas took videos in two different villages. Although these villages are located in different parts of the country, they are both located at high elevations and share some similarities concerning the lived experience of energy poverty. For example, in both places, the electricity supply is not reliable, there is a lack of access to the natural gas network, and as a result, residents heavily rely on firewood for cooking and heating. The images below are taken from the video essays depicting energy poverty during the winter months in the village of Ushguli in Western Georgia and the village of Patara Mitarbi in Eastern Georgia.

The first image (Figure 7.1) shows local residents using a wood stove to heat water in Ushguli. The amount of water heated on the wood stove suggests that water is heated for multiple

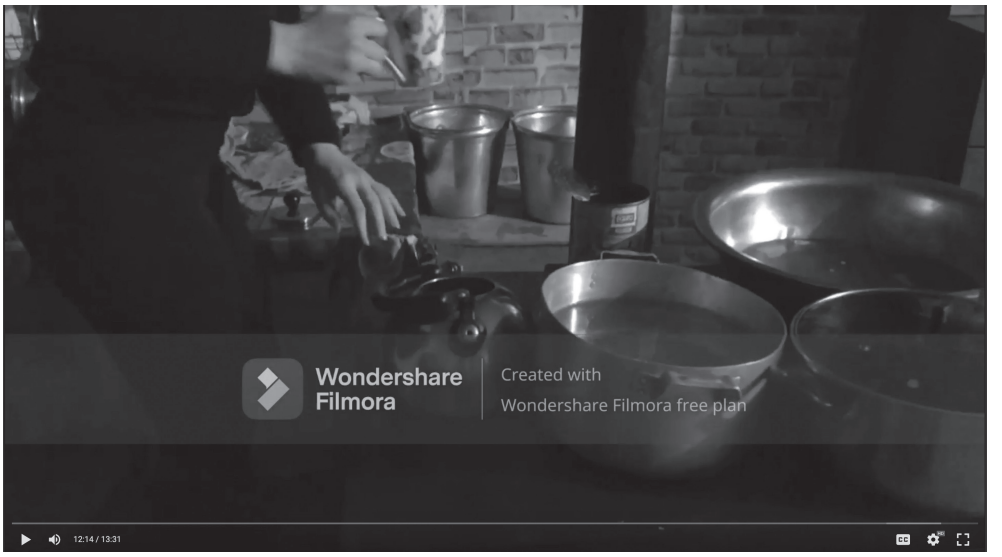

Figure 7.1 Heating water on a wood stove in Ushguli.

purposes: washing dishes, doing laundry, and cooking. The second image (Figure 7.2) depicts a similar woodstove in Patara Mitarbi, where firewood is also used for heating and cooking.

Other important challenges depicted in the videos relate to mobility issues and the lack of access to the Internet and telecommunication networks. Regarding mobility, rural areas lack safe and well-maintained roads, which makes it very difficult—and at times impossible—to travel to and from these villages, especially in winter. The lack of transportation is particularly important,

Figure 7.2 Wood stove used for heating in winter in Patara Mitarbi.

as the residents of rural areas must travel to the nearest towns and cities for various purposes, including medical care.

These rural areas also lack access to the internet and phone connectivity year-round. For example, during the COVID-19 pandemic when most higher education institutions and schools transitioned to remote learning, the lack of access to the internet put students from rural areas at a disadvantage.

The study participant who depicted energy poverty in the urban area paid attention to the lived experience of those who work outdoors year-round. She chose to depict the working conditions of street vendors and small traders in open markets and street shops. These settings are usually not equipped with air conditioning in the summer or heating in the winter. When asked why she chose to focus on street vendors, the participant explained that these people earn very little and are often ignored by the authorities and the public. According to the study participant, street vendors are everywhere and you can see them as you walk; on the other hand, their problems and harsh working conditions remain beyond the attention of many (see more on street vendors in Georgia in Polese et al., 2016; Rekhviashvili, 2015). The images below are taken from the video essay depicting the experiences of street vendors and small traders during the summer months in Tbilisi. The first image (Figure 7.3) shows a small shop where the only cooling method is a fan. The second image (Figure 7.4) is taken from the video footage of a flea market with little shade.

Another study participant documented the electricity infrastructure in the capital city of Tbilisi, especially the networks of illegal electricity cables, which can be noticed on almost any street. Figure 7.5 shows one such example.

Finally, study participants paid attention to the travel conditions relating to public transit (mainly intercity transit), especially during the summer months, when the temperatures may reach 40 degrees Celsius and when most of the vehicles either do not have functioning air conditioning systems or do not turn them on to save fuel.

Figure 7.3 A small shop selling food in Tbilisi in summer.

Figure 7.4 A flea market in summer in Tbilisi.

Table 7.1 summarises the key topics raised in the video essays.

Most of the topics raised in the video essays are discussed in energy poverty literature. For example, studies explore the lack of access to basic energy services such as cooking, heating, and lighting (Harrison & Popke, 2011; Jiang et al., 2020). This is particularly relevant to rural areas—a conclusion that was confirmed in this study as well. In relation to other topics raised in the video essays, there is discussion about mobility and specifically the lack of well-maintained road networks and limited options for transportation (Sovacool et al., 2012). Our findings reveal

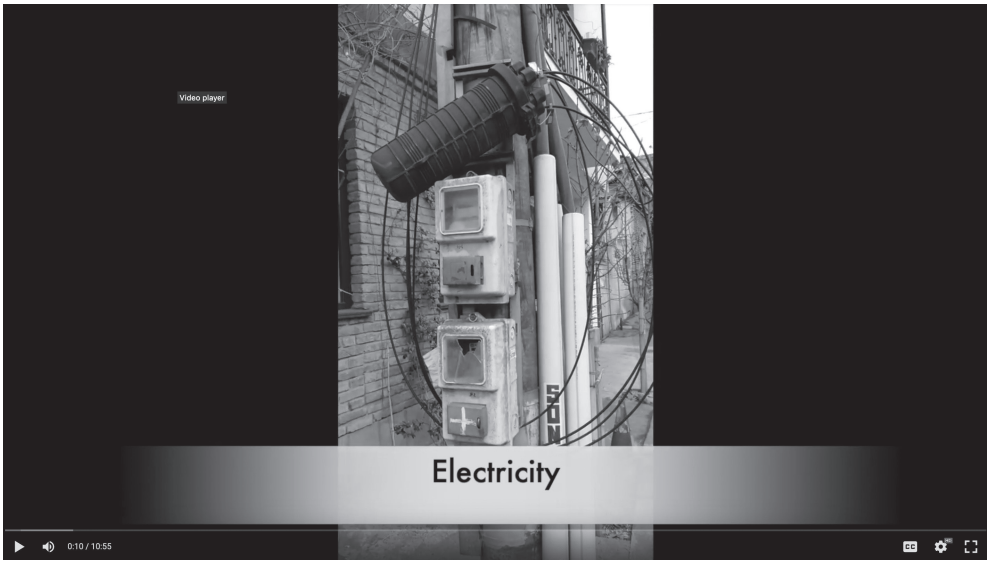

Figure 7.5 Electricity cables on Tbilisi street.

Table 7.1 The summary of topics depicted in video essays

Location	*Season*	*Topics depicted in the video essays*
Rural		
Patara Mitarbi	Summer	• Damaged and dangerous road network • Lack of access to natural gas • Lack of access to communication services (Internet, TV networks, etc.) • Use of firewood for cooking • Poorly developed water supply network
	Winter	• Not maintained (snow is not cleaned) and dangerous road network • Lack of access to communication services (Internet, TV networks, etc.) • Use of firewood for cooking, heating • Electricity with low voltage, inability to use home appliances (e.g., washing machine) • Poorly developed water supply network
Ushguli	Summer	• Electricity supply is not reliable • Lack of access to communication services (Internet, TV networks, etc.) • Use of firewood for cooking • Working outside on the farm without mechanical power (e.g., tractor)
	Winter	• Road and street network not cleaned after heavy snowfall • Roads that are not maintained and cleaned after a rock slide • Electricity supply is not reliable • Use of firewood for cooking, heating, washing
Urban		
Rustavi	Summer	• Insufficient intercity transportation • Lack of air conditioning in intercity transport
Tbilisi	Winter	• Problems with electricity cable network, especially illegal electricity extensions • Natural gas network in the city, especially makeshift natural gas networks in houses that may not meet safety standards • Working conditions of street vendors and small trades in winter, lack of heating
	Summer	• Working conditions of street vendors and small trades in summer, lack of cooling

that mobility problems are relevant to both rural and urban areas, although they manifest themselves differently. There are several topics in video essays that are not as actively discussed in energy poverty literature, for example, the working conditions of those who work outdoors year-round. There is also relatively limited discussion on access to communication services such as the internet, TV networks, and so forth (Ochoa & Graizbord, 2016).

Overall, there is very limited literature on energy poverty in Georgia. It is also noteworthy that in consulted reports about energy poverty in Georgia (Kvaratskhelia et al., 2019; WeResearch, 2020), the issues associated with mechanical energy, mobility, or access to the internet and telecommunications are not discussed. The lack of literature on energy poverty in Georgia aligns with a more general trend in academic literature: studies that explore energy poverty in Central and Eastern Europe are relatively rare, and Georgia is not explored in any of them (Buzar, 2016; Karpinska & Śmiech, 2020; Mazurkiewicz & Lis, 2018). Going beyond documenting the Western European experiences of energy poverty is an important scholarly endeavour, as these experiences vary and are embedded in broader historical, political, cultural, socioeconomic, and geographical contexts.

7.5 Considerations for future research to study the lived experience of energy poverty

In this section I discuss some of the key considerations relevant to studying the lived experience of energy poverty using video ethnography and close collaboration with study participants. The discussion below draws on my experience of conducting this research and hopefully will motivate scholars to pursue this line of inquiry.

7.5.1 Research participants as collaborators

In our research, study participants were coproducers of knowledge. They were not treated as subjects of inquiry but rather as full-fledged collaborators who had control over data collection choices and who largely shaped the study findings.

Research designs similar to the one described in this chapter may change researcher-study participant relationships and their roles during the research process. Such methodological approaches encourage a more inclusive, participatory research process and, to some extent, challenge the superiority of the researcher's "expert" knowledge. In this case, study participants are free to collect data on the topics they consider important. Therefore, asking participants to depict the lived experience of energy poverty the way they see and experience it has epistemological implications, as "the acknowledgment of, and willingness to share, authorship gives agency to your project participants" (Garrett (2011, p. 529). The knowledge is generated with the participation of those for whom energy poverty is part of their everyday lives, either directly experienced, directly observed, or both. Such an approach aligns with what Pink et al. (2017, p. 372) describe as creating *empathetic encounters* with the experiences of others by using video "to access and understand participants' experience within the unspoken, mundane, routine, and unstopping flow of everyday life (by inviting them to attend to and, in collaboration with the researcher, account for this through co-documentation)." This research process is also similar to what Garrett (2011) describes as the creation of a *participatory video*, which is when study participants are actively coproducing research. Depending on the level of engagement in the research project, study participants can become coauthors of written outputs or academic presentations.

It is noteworthy that all three study participants approached the task of shooting and editing videos differently (they were also given full freedom in this regard). Two participants decided to edit their videos. One of them created video stories with extensive narration and interviews, while the second participant edited videos without narration and used background music. The third participant collected video clips, which I edited after the data collection was completed. All study participants used their cell phones to record and edit video footage. During interviews, those study participants who edited videos noted that they found the editing process creative and enjoyable, especially when they saw their stories coming together. Two study participants decided to shoot videos in colour, and one study participant decided to use a black-and-white filter.

From a practical perspective, participatory research design may require more time to recruit and engage study participants, as well as discuss study aims and procedures. In addition, study participants may incur additional costs, such as transportation expenses, if they want to travel to specific locations to shoot videos. Such involvement also requires time and commitment. The question of who can effectively record their experiences and observations on video is also relevant. The ability to produce video recordings will depend on access to video recording devices (e.g., cell phones, video cameras) and the knowledge required to use them. These issues need to be considered while designing a research project (e.g., consider

including honorarium expenses in the budget) and clearly articulated and discussed when recruiting study participants.

7.5.2 A trade-off between structure and flexibility during the data collection process

I found it important to provide full freedom to the study participants during the data collection process. As discussed above, I explained general expectations (e.g., timeframes, length of videos, etc.); otherwise, more creative details were up to the study participants. For all study participants in our project, shooting videos for a research project was a new experience, and they all approached it in a way that made them feel comfortable and confident. This point speaks to the need for built-in flexibility in designing similar research. Certain expectations will be in place, for example, in terms of timeframes and procedures; however, within these expectations, study participants can be given room for creativity and experimentation.

7.5.3 Ethical considerations

One of the aspects of the research that requires more structure relates to ethical procedures. As described above, I sought ethics approval for data collection and interviews in two separate applications. Once I received approval from the Research Ethics Board for the data collection stage and after I recruited study participants, I discussed with them the importance and need to follow ethics procedures. I provided information letters and consent forms in the native language of the study participants and answered questions they had. This is an important stage of the research and may require slowing down to make sure that study participants are aware of and fully understand ethics-related procedures.

7.6 Conclusion

In this chapter, I described the use of the video ethnographic method to study the lived experience of energy poverty. Visual methods more generally, and video ethnography in particular offer much promise in producing a rich and nuanced understanding of the lived experience of energy poverty in different parts of the world. This is particularly true in the countries that are understudied in the current academic literature on energy poverty, such as Georgia. This chapter paid particular attention to how study participants were actively involved in the research process, especially during the data collection method.

To conclude, this chapter calls for scholars to diversify the methodological toolkit applied to studying and documenting energy poverty. The lived experience of energy poverty is a complex phenomenon, and having multiple ways of studying and analysing it is important, both from a scholarly and a practical standpoint. Hopefully, this chapter will provide some ideas and encourage scholars to explore the possibility of using video in their research.

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Note

1 The video essays can be viewed at this link: https://drive.google.com/drive/folders/17pdM1TVNTNdvG4Jkc3DOXib6DS-yH1Yb?usp=sharing

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