15 Female Voices of Energy Deprivation

The Lived Experience of Energy Vulnerable Women in North Macedonia and Austria

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15.1 Introduction

The European Green Deal has opened a new chapter in the EU's energy transition. It aims to transform the process into a socially just one that takes into account disadvantaged locations and groups, including those affected by energy poverty. The Green Deal's most cited reference is its emphasis on leaving "no-one-behind." This concept is continuously being reinterpreted to consider various intersectional elements such as gender, ethnicity/migrant status, and others. Gender has received increased attention in energy poverty and energy justice academic debates. However, it has been disregarded in energy transition policies. The EU climate and energy transition policies, including the Green Deal, are gender-blind (Clancy & Feenstra, 2019; EIGE, 2020; European Commission, 2019). Research shows that women are disproportionately affected by energy poverty and energy injustices (Clancy & Feenstra, 2019; Feenstra & Özerol, 2021). Energy poverty, or the inability to satisfy the energy needs of the household, needs to be studied at an individual level (Robinson, 2019). Disregarding the gender dimension in the context of energy poverty can reinforce existing gender stereotypes (Tirado Herrero, 2020). Furthermore, energy-poor women are not a homogeneous group either (Listo, 2018). Social practice, a routinised type of behaviour involving bodily, mental, and emotional activities (Reckwitz, 2002), can expose gender roles in the household and beyond (Allen, 2022). There is a need to further explore the lived experience (Middlemiss & Gillard, 2015) of energy-poor women in households, to illustrate gendered household practices, energy use, and socio-cultural practices and how they reflect broader societal inequalities. The chapter contributes to developing the application of energy justice to energy poverty through a gender lens to inform about systematic gender inequalities. This is supported by two empirical case studies illustrating the lived experience of energy-vulnerable women and their coping strategies to manage their situation.

Energy injustice, defined as a lack of adequate access to sustainable, affordable, secure, and clean energy (Heffron & McCauley, 2014), has a clear gendered dimension. Women especially are struggling to have access to clean, sustainable, and affordable energy services, but this issue is less prominent in the Global North (Feenstra & Özerol, 2021). In the Global South, energy use is a highly gendered topic following a traditional division of labour that leaves women to attend to cooking and collecting fuelwood with all the associated health implications that arise from these activities (González-Eguino, 2015; Kaygusuz, 2011; Moniruzzaman & Day, 2020; Njenga et al., 2021). The link between energy poverty (or lack of energy access) and gender is global as expressed in the mutual reinforcement of SDG 7 (access to energy) and SDG 5 (gender equality). We observe that in Europe, a growing group of women suffer from energy deprivation, especially in the current and ongoing energy crisis with increasing energy prices for households. For example, not only are women more affected by energy poverty, but they also experience

DOI: 10.4324/9781003408536-18

greater severity of poverty, are prone to more persistent poverty, and face more barriers to lifting themselves out of poverty (Sánchez-Guevara Sánchez et al., 2020). Furthermore, power relations and institutions can discriminate against women, undermining their status and well-being (Pachauri & Rao, 2013). Due to societal, market, and personal lock-ins, households and women, in particular, engage in coping strategies that depend upon maximising energy savings, often underconsumption, and/or restricting oneself regarding other basic needs (Stojilovska et al., 2021). This kind of coping behaviour has adverse health impacts and entails an acceptance of these impacts (Stojilovska et al., 2023). To address and prevent these negative impacts and the widening of existing gender gaps in society, there is a call for policy efforts to be gender-sensitive and consider women's energy usage behaviour, needs, and rights (Chaudhry & Shafiullah, 2021; Räty & Carlsson-Kanyama, 2010; Vogiatzi et al., 2018).

To better understand gendered coping strategies to deal with energy service shortages, as well as the needs, experiences, and behaviours of women facing energy poverty, we approach the topic through an energy justice lens. We incorporate an intersectional gendered perspective, including elements like health, age, and ethnicity/migrant status, with a particular focus on coping mechanisms. We study energy poverty from a gender angle by considering the economic, biological, and socio-cultural perspectives of the issue (Clancy et al., 2017). Furthermore, we are guided by the understanding that studying energy poverty and its intersectionality is a question of recognition energy justice in which the needs of the energy users should be recognised (Feenstra, 2021a). We consider that other socio-demographic variables accompanying gender, such as health, material deprivation, migrant or minority status, and old age, can deepen the state of energy deprivation. We also incorporate the understanding that the low-carbon transition can magnify existing societal challenges and create new inequalities (Bouzarovski & Tirado Herrero, 2017; Clancy & Feenstra, 2019; Middlemiss, 2022) while considering that energy poverty is a result of distributive, recognition, and procedural injustices (Jenkins et al., 2016; Walker & Day, 2012). Finally, we operationalise our engendered approach to studying energy poverty as follows:

- Distributive gendered energy justice assesses how the socio-economic position of women shapes gendered socio-cultural practices.
- Procedural gendered energy justice explores how societal inequalities result in the limited agency of women in household decisions.
- Recognition gendered energy justice looks at how health, age, ethnicity/migrant status, and coping practices multiply the existing vulnerabilities of energy-poor women.
- Hidden gendered coping strategies reflect the societal and household injustices women in energy poverty experience.

This chapter aims to explore the experiences, challenges, and practices in the households of energy-vulnerable women in North Macedonia and Austria and to highlight how these issues are reflective of broader societal gender inequalities. We inspect these issues in two European countries with different path dependencies co-shaping energy poverty but similar gender equality indicators. We argue that energy-vulnerable women in both countries experience multiple inequalities at the household level, reflected in gendered coping strategies and socio-cultural practices. These gendered strategies and practices are informed by the disadvantaged socio-economic position and limited power of women and are magnified by other vulnerabilities such as health, age, and ethnicity. The experiences of female energy poverty at the household level only mirror existing gender inequalities in society.

15.2 Methods and materials

We explore gendered energy injustices at the household level through the lived experience of women in energy poverty in Austria and North Macedonia chosen following a maximum variation sampling (Miles et al., 2014). This means there is a large difference regarding the level of energy poverty as the key variable in the selected countries, as only 1.5% of households are in energy poverty in Austria in 2020 while 23.8% in North Macedonia, based on the EU-SILC indicator of the inability to keep households adequately warm (EUROSTAT, 2022). The difference in the extent of energy poverty can be explained by the post-socialist past of North Macedonia, which left it disadvantaged with low quality dwellings, increasing energy prices during the energy market liberalisation, and wide-spread material deprivation (Stojilovska, 2020). On the other hand, Austria has a strong social welfare system and liberalised energy markets, while material deprivation is low (Stojilovska et al., 2021). Austria and North Macedonia have, however, similar gender equality indicators based on the Global Gender Gap Index 2022 regarding economic participation and opportunity, educational attainment, and the health and survival of women (WEF, 2022). Austria scored better only regarding the political empowerment of women, leading to an overall 21st rank compared to the 69th rank for North Macedonia for 2022 (WEF, 2022). The socialist legacy of North Macedonia, similar to that of Bulgaria, which prioritised full labour participation and universal access to education, may have contributed to its good starting position in terms of gender equality (Feenstra, 2021b), despite its high levels of energy poverty and material deprivation. In sum, although the countries have different energy poverty outcomes and drivers, they illustrate the lived experience of energy-poor women and the conditions that perpetuate it. Finding commonalities in cases with significant differences (Miles et al., 2014), such as regarding the state of energy poverty, can foster the understanding of common experiences and drivers of female energy poverty in both European post-socialist and developed countries.

The case studies combine qualitative and quantitative data. A total of 219 online open-ended interviews with households nationwide in both countries were conducted using Limesurvey, which was sampled using purposive sampling. 300 phone surveys, including open-ended questions, with households in both countries in the capital cities were collected after they were randomly sampled. In both types of data, energy-poor and non-energy-poor households were included. For this chapter, the data were sub-sampled to include only the surveys and interviews given by female respondents, which included both single female and multiple-member households. This resulted in a total of 96 surveys in Vienna, 97 surveys in Skopje, and 37 interviews across North Macedonia. The sub-sampled data contains direct quotes from women in energy poverty, which provide valuable insights into their lived experiences. These personal stories offer a different kind of evidence because they have a different emphasis and can express emotions (Moezzi et al., 2017). The data was analysed following the steps of data condensation, data display, and conclusion drawing (Miles et al., 2014). We carried out a secondary analysis of primary empirical data to find answers to a new research question that differs from the question in the original studies and generate new knowledge (Hinds et al., 1997). That means we analysed the existing data on female respondents to explore gendered energy injustices and related coping strategies. The data was collected in 2017 in both countries, hence reflecting the status quo in lived energy poverty experiences before the COVID-19 pandemic and the energy crisis caused by the war in Ukraine in 2022. Because this data predates these major crisis events, it is reasonable to expect that the number of households in energy poverty has increased since then.

15.3 Results

Following our conceptual approach, this section is divided into four subsections to explore the gendered energy injustices of energy-vulnerable women in Austria and North Macedonia by applying the principles of distributive, procedural, and recognition justice. A separate section explores the hidden (gendered) coping strategies to mitigate energy deprivation. We use direct quotes to support the main findings about gendered energy injustices relevant to both countries.

15.3.1 Distributive gendered energy justice: determined by economic and socio-cultural perspectives

As a result of their socio-economic position in society, and involvement in gendered socio-cultural practices, women are more exposed to energy poverty. The key distributive gendered energy injustices driving female energy poverty in both countries include low incomes, the physical burden of using certain energy carriers, and the caretaker/caregiver role of women.

The link between energy poverty and gender can be explained by the insight that women more often have lower incomes than men, which impacts their ability to afford domestic energy costs. Evidence shows that single female pensioners on a minimal pension in Austria are a vulnerable group (Stojilovska, 2021). For example, one single female pensioner explains her inability to afford basic energy services: "*It is cold, I don't heat in April anymore in order to save, and now it's cold. It's too expensive, and my flat is cold*." (no. 15/V, Austria). Another single female pensioner on a minimal pension uses fuelwood to keep her costs low, but still doesn't always have optimal warmth: "*I heat upon need when it's cold. I don't heat in the night; I don't like warmth in the night. I have bought a fuelwood stove, I like fuelwood*." (no 37/V, Austria). The experiences of energy deprivation among single female pensioners receiving a minimal pension can be explained by the fact that they live alone and their minimal pension is very low. More female pensioners are affected by energy poverty due to the greater longevity of women and living alone at pensionable age (Clancy et al., 2017). The minimum pension in Austria is below the poverty line; thus, as a result, pensioners receiving a minimum pension are automatically income-poor (Stojilovska, 2021).

The link between energy poverty and gender also has biological aspects to consider. Elderly women, for instance, face greater challenges than men when it comes to the physical labour needed to cut and carry fuelwood, which limits their ability to use affordable fuel sources like fuelwood independently. An elderly widow in North Macedonia had to abandon using fuelwood due to her difficulties with the physical labour required, and as a result, she ended up using more expensive energy sources. She is using electricity for heating and explains: "*While my husband was alive, we heated with fuelwood, but he has passed away and I cannot chop the wood. I first pay the utility bills. I just paid and I'm left with 2000-3000 denar (33-49 EUR) for food (till the end of the month)*." (no.135/S, North Macedonia). Similar findings about the link between female biology and energy poverty in the literature show that women are more sensitive to ambient temperatures, especially when ageing because the ability of their bodies to self-regulate temperatures decreases (Clancy et al., 2017; Folkerts et al., 2022). Women prefer higher room temperatures than men and feel uncomfortably cold and uncomfortably hot more often than men (Karjalainen, 2007).

The socially constructed gender role of the caretaker can also explain how women are more exposed to energy poverty. In the capacity of this traditionally imposed domestic role of caretaker (Measham & Allen, 1994; Watkins, 2006), we found evidence of women sacrificing their comfort and health to keep their energy bills low. A retired woman living with her son uses

electricity for heating: "*I turn on and off (the heating). During the day when I'm alone, I turn it on only for half an hour-hour, and when it's very cold. I need a higher temperature, I am old. It's difficult to pay for the electricity for heating. Therefore, we economise. It does not pay off to heat all the time when I'm alone. We heat more in the evening when we are both home with my son*." (no. 95/S, North Macedonia). Research has shown that single-mother households living with children in Europe often lack sufficient financial resources, which makes them particularly vulnerable to energy poverty (Clancy et al., 2017). This is even observed when their child is an adult too but still lives with the mother.

15.3.2 Procedural gendered energy justice: reflected in the limited capacity to participate in household energy decision-making

Women are more affected by energy poverty due to a lack of sufficient resources. As a result, women have limited decision-making power or have experienced limited independence in pursuing their energy preferences. Procedural gendered energy injustices that contribute to female energy poverty include the limited agency of women to decide about energy matters in the household and their financial dependence on family members.

Some women have less decision-making power in the household regarding energy matters and depend on their male counterparts even when that means that they make a compromise and do not pursue their own energy needs. For example, an interviewee explains how she feels cold at home while her husband isn't: "*For me it's cold, but for my husband it's ok. This is a family question. I'm a bit cold. Personally, I need a higher temperature, but my husband wants to keep it lower. My husband takes care of financial matters*." (no.138/V, Austria). It is well documented that women have been disadvantaged in the job market due to lower employment rates, part-time employment, provision of unpaid care, and even precarious jobs, resulting in lower incomes (Bouzarovski, 2022; EIGE, 2020; Robinson, 2019). These conditions can limit the position of women in the household regarding decisions with financial implications.

In some cases, women rely on their family or social circle for financial support or to meet their basic energy needs. For example, a single pensioner on a minimal pension depends on her daughter's help to use fuelwood: "*Fuelwood is cheap and I get it from friends. My daughter carries the fuelwood from the basement*." (no. 38/V, Austria). Another interviewee, a single elderly woman without completed primary education, depends on the help of her grandchildren: "*I used to live in very poor housing. My nephew made two rooms in 2012 in which I live since. I don't have any income at all, I don't have a pension. My nephews pay for all of my costs. They supply and chop the fuelwood. I economise in order not to cause them costs.*" (no. 27/S, North Macedonia). In another example, a single female pensioner is dependent on her daughter to keep herself warm when she is ill: "*Last winter I was sick and I've spent part of the winter at my daughter's place and I finally got warm. Every cloud has a silver lining*." (no. 62/S, North Macedonia). These examples illustrate how women within a family employ gendered coping strategies, which can be emotionally draining as women bear the burden of rationing energy use (Petrova & Simcock, 2019).

15.3.3 Recognition gendered energy justice: amplified by multiple vulnerabilities

Female energy poverty is amplified by the presence of poor health, old age, minority or migrant status, and coping practices. Observed recognition gendered energy injustices refer to the lack of recognition that women living in energy poverty often experience health issues, as their situation is often even more severe due to other vulnerabilities, such as illness, old age, being a migrant, or being a minority.

Gender, health, and energy poverty are closely linked (Aristondo & Onaindia, 2018; Lacroix & Chaton, 2015; Stojilovska et al., 2021). We found evidence that women in energy poverty experience health deterioration directly linked to the use of certain fuels or the lack of sufficient warmth. One elderly woman in a multi-member family had health implications as a result of using fuelwood to make fire and therefore had to abandon it: "*We would make the fire, she (the pensioner) would only add (logs) … but she got a hernia (from lifting the logs). This was torture and my husband could not manage it anymore, he got back pain, so we said we would go for pellets*." (no. 1/I/MK, North Macedonia). Another pensioner shared that she experiences adverse health effects as a result of using electric heating: "*The air is dry and it causes issues with my eyes, I have a dry eye*." (no. 61/S, North Macedonia). A third respondent blames the exposure to cold indoor temperatures for having consequences for her health: "*Last winter I was freezing. But because of (the amount of) my pension, I have to economise. I have rheumatism*." (no. 98/S, North Macedonia). Rheumatism can be exacerbated by living in energy poverty, for example, by exposure to cold indoor environments (Oliveras et al., 2021). These examples showing the harmful health impacts of energy poverty on women have also been documented elsewhere in Europe. Clancy et al. (2017) found that even in Europe, women are exposed to smoke from domestic fuelwood use due to their major responsibility for cooking.

People with illness and disability are at a higher risk of experiencing energy poverty (Healy & Clinch, 2004; Snell et al., 2015). It is not only that energy poverty contributes to adverse health outcomes, but pre-existing health conditions can increase the likelihood of being in energy poverty because some illnesses require high room temperatures, while others require dependence on electricity to power medical equipment (Simcock et al., 2021b). Having an illness that requires a warmer indoor temperature, can put the individual at either additional financial exposure or the risk of further health deterioration. A single pensioner explains: "*I am ill and I need a lot of warmth. I would prefer to have it warmer because of the illness, but that would be too expensive for me*." (no. 88/V, Austria). Another pensioner living with her husband also prefers a higher indoor temperature due to health concerns but cannot afford it: "*We need it to be warmer, we are elderly. I have rheumatism. It's sad pensioners with higher education to live with restrictions*." (no. 61/S, North Macedonia). Hence, their dependency on energy services is higher with more limited income to afford them.

There is a strong link between old age, health, and energy poverty (Shortt & Rugkåsa, 2007; Wright, 2004). Elderly women are significantly more vulnerable to energy poverty (EIGE, 2016). Similarly, being a minority or a migrant can additionally increase the likelihood of being in energy poverty (Bouzarovski et al., 2022; Stojilovska, 2021). Elderly women report that they need to juggle between affording energy bills, medicine, and food. A pensioner with her husband using electricity for heating explains their struggles: "*First we pay the electricity bills in order not to get disconnected, on the second place is medicine, and at the end, we manage somehow for food. I use the washing machine at night and on Sunday when there is a cheap electricity tariff*." (no.5/S, North Macedonia). A single female pensioner of Roma ethnicity adds: "*What to prioritise (for paying) – bills or fuelwood or food or medicine?*" (no. 121/S, North Macedonia). Elderly women are more often in energy poverty due to their income gap compared to elderly men and also the demographic fact that women, in general, are living longer than men (Clancy et al., 2017). In addition to this, there is an increased need for warmth among the elderly due to an age-related decline in body temperature regulation and higher costs for necessities such as medicine. The situation requires developing coping strategies. Research suggests that the elderly in England experiencing energy poverty, for example, tend to use warmer clothes and economise on heating to afford their heating needs (Chard & Walker, 2016). Overall, the socio-economic and socio-cultural conditions that make women more energy vulnerable are doubled

or tripled if combined with other intersecting vulnerabilities, such as old age, minority background, single-parent status, or disability (EIGE, 2020).

15.3.4 Coping strategies: the gendered way of dealing with material deprivation is invisible

The gendered coping strategies, which are the practices women undertake to deal with energy poverty, are deemed invisible, hidden, or unrecognised, although they mirror the societal and household injustices women in energy poverty experience. We have identified that the hidden gendered coping strategies include economising energy when performing gendered household tasks and gendered caretaking responsibilities. In addition, denying being in energy poverty is a hidden gendered coping strategy that can have mental health impacts.

Energy-poor women are heavily engaged in coping strategies aimed at self-restriction and minimising energy and other basic needs, especially regarding energy costs that they control, such as those while performing gendered household tasks. The aim is to be able to afford the energy bills, which includes having them below a certain threshold or prioritising their payment. Cooking, cleaning, and washing are more common responsibilities for women. Therefore, many women use electricity during the cheap electricity tariff to reduce costs that can increase their workload (Carlsson-Kanyama & Lindén, 2007). An example of the use of a cheap electricity tariff: "*Whenever possible, I use cheap electricity tariff for all chores needing electricity, such as washing or similar.*" (no. 50/S, North Macedonia). The interviewed women reported that they use domestic energy services, often in areas of care traditionally associated with women, to maximise their coping activities. In the literature, we can observe that some household chores, such as cooking, are viewed by women as invested in maternal emotion, and a central component of their childcare (Kaplan et al., 2020).

As caretakers, women take it upon themselves to protect the elderly or children from being exposed to cold homes or try to avoid a greater threat to themselves and the family, such as losing their home (if renting, e.g., in Vienna) or experiencing disconnection (which comes with additional costs and fears for dealing with a monopoly utility, such as in Skopje). This makes the respondents involved partake in an interplay of various coping strategies with other conflicting goals, such as satisfying the need for warmth and keeping energy costs low. A single female pensioner in Vienna of Hungarian background on a minimal pension explains that affording energy services is a must: "*One has to afford these things, they will become more expensive, so I economise on other things*." (no. 71/V, Austria). An Albanian woman in a family with three children who use electric heating and can barely satisfy their basic needs clarifies the need to take care of her children: "*I cannot economise (the heating) because I have small children.*" (no. 3/MK, North Macedonia). In these coping practices by women, we can observe the element of carrying for and about the household, even at the expense of their own discomfort. The invisible work of care and household chores is socially constructed and expected of women, mothers, and grandmothers (Kaplan et al., 2020). The combination of the cognitive labour of family life – the thinking and organising of family members – and the emotional labour associated with this work, including the feelings of caring for and being responsible for family members, is creating an adverse mental load for women (Dean et al., 2022). This signals that governments should invest in caregiving infrastructure to reduce competing work and care demands (Dean et al., 2022).

Women often do not report that they are living in energy poverty but rather practice their hidden gendered coping strategies to manage the conditions of energy deprivation. In Figures 15.1 and 15.2, we can observe some of the most relevant coping strategies used by female respondents in Skopje and Vienna. These coping strategies are compared to whether

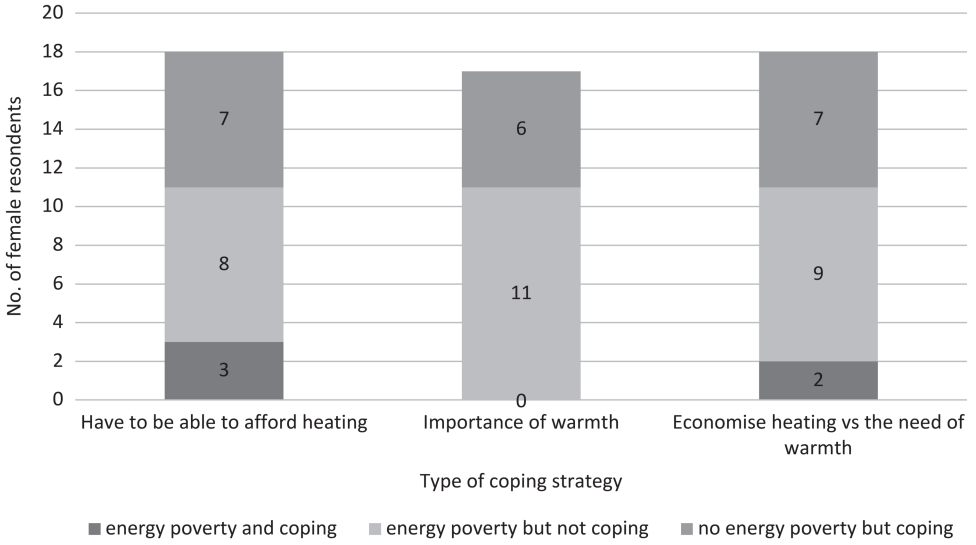

Figure 15.1 Interplay of energy poverty and coping strategies of female respondents in Vienna.
Source: Vienna survey dataset developed from (Stojilovska, 2021).

the female respondents self-report being in energy poverty, measured through their inability to keep their dwelling adequately warm. Both female respondents in Skopje and Vienna commonly prioritise warmth as a coping strategy. In the case of Vienna, female responders have indicated that it is as relevant to give priority to affording heat and express the tension arising between economising on heating and the need for warmth. In Skopje, female respondents reported tension between staying warm and affording the heating (pay vs. warmth tension);

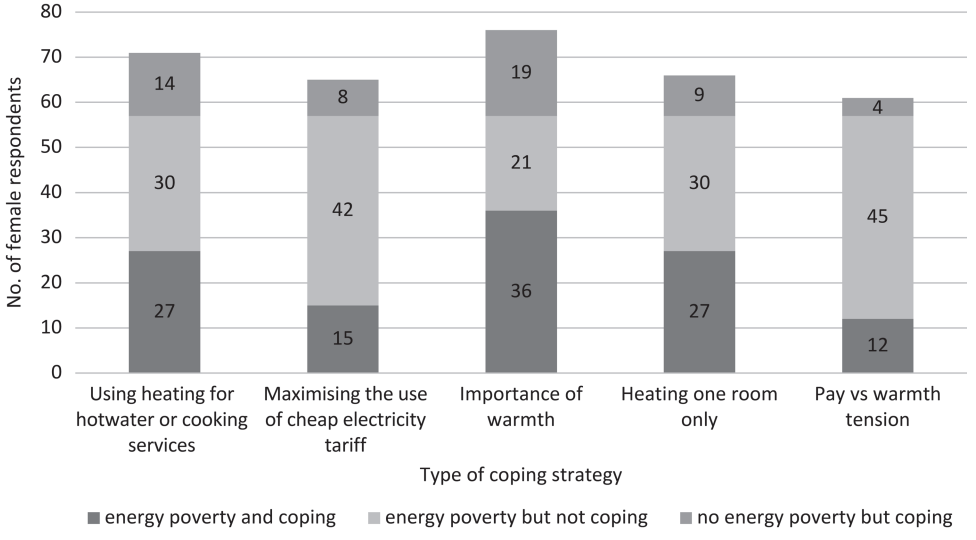

Figure 15.2 Interplay of energy poverty and coping strategies of female respondents in Skopje.
Source: Skopje survey dataset developed from (Stojilovska, 2021).

the use of heating for preparing hot water and cooking; maximising the use of the cheap electricity tariff; and heating one room only. There are three categories represented: women who reported energy poverty, and were engaged in coping, women who reported energy poverty but did not engage in coping, and the category of hidden energy poverty where women engaged in coping but did not report energy poverty. The phenomenon of hidden energy poverty is more pronounced in Vienna, possibly due to the overrepresentation of single female pensioners who prioritise energy bills over other essential needs. In Skopje, female respondents were more straightforward about their situation, but some were satisfied with the ability to minimise the energy costs related to their domestic duties. Figure 15.1 suggests that coping strategies in Vienna give female respondents a sense of control over their energy expenditures, allowing them to conceal energy poverty. Conversely, those who feel energy poor are less likely to be involved in coping mechanisms. In the case of Skopje in Figure 15.2, coping is an accompanying practice of co-experiencing energy poverty; however, not all energy-poor women are involved in coping strategies. Depending on the coping strategy, 6-25% of female respondents in energy poverty in Skopje do not acknowledge their energy poverty despite engaging in coping strategies that restrict energy usage and comfort.

These hidden coping strategies can be seen as gendered social practices aimed at managing material deprivation while performing gendered tasks such as managing household responsibilities and maintaining a sense of control over one's situation. Women experience a tension between satisfying their energy needs to carry out their domestic responsibilities and being able to afford them. This brings (female) energy poverty closer to material deprivation (Watson & Maitre, 2014). Experiencing energy poverty is linked to poorer mental health (Ballesteros-Arjona et al., 2022). This is because coping with energy poverty can adversely affect mental health (Mould & Baker, 2017). For instance, managing energy arrears can lead to anxiety (Fabbri, 2015). There is a stigma attached to those living in energy poverty, often expressed as embracement or shame (Hards, 2013; Longhurst & Hargreaves, 2019). Shame about energy poverty can lead individuals to keep their situation hidden and make coping strategies invisible. This may be explained by the underlying belief that deprivation is a result of the poor choices of individuals or households (Simcock et al., 2021a). Having to financially prioritise domestic energy services can leave women in energy poverty at risk of social exclusion as they may avoid social activities that may incur costs, such as inviting guests or other socialising activities (Maxim et al., 2016; Middlemiss et al., 2019).

15.4 Conclusions

We illustrated the experiences, challenges, and practices in the households of energy-vulnerable women in North Macedonia and Austria as a reflection of broader societal gender inequalities based on their lived experience. We argue that energy-vulnerable women in Austria and North Macedonia experience multiple inequalities at the household level reflected in gendered coping strategies and socio-cultural practices. These gendered strategies and practices are informed by the disadvantaged socio-economic position and limited power experienced by the majority of women and are magnified by other vulnerabilities such as health, age, and ethnicity. Female energy poverty at the household level only mirrors the existing gender inequalities in society.

We found similar gendered energy injustices that co-create energy poverty in a post-socialist country with high energy poverty, North Macedonia, and in a developed European country with a good standard of living, Austria. Although the extent of female energy poverty differs in the two case studies, we found similar experiences of distributive, procedural, and recognition gendered energy injustices, as well as hidden gendered coping strategies.

Women experience energy poverty due to low incomes, the physical burden of using outdated but affordable energy carriers, and their emotional and cognitive caretaker/caregiver role in the family. Women in energy poverty face limitations and dependence when it comes to making decisions about managing energy in their homes. The respondents are exposed to adverse health impacts as a result of living in energy poverty. If they are old, ill, minority, or migrant, energy-poor women's experiences of energy poverty are multiplied. Finally, gendered coping strategies often involve self-restriction and substandard satisfaction of basic needs. These strategies may not always be recognised as material deprivation by women and are thus rendered invisible. However, these strategies help women persist through their circumstances while performing gendered household tasks and caring for the family.

The energy transition provides an opportunity to align multiple social, health, and environmental policies with efforts to alleviate energy poverty (Stojilovska et al., 2022). To achieve a socially just energy transition, there is a need to recognise the female face of energy poverty. Exploring the often silenced stories of women facing energy poverty adds value to understanding the complexities of gendered material deprivation and broader domestic and societal inequalities. The case studies explored a pre-energy crisis context, and given the increasing energy prices and inflation across Europe, it is likely that the extent and severity of energy poverty and coping strategies have expanded. Finally, to render a socially just gendered approach to addressing energy poverty, it requires supporting the fair distribution of resources, tools, and opportunities for women, the meaningful participation of women and other vulnerable groups in the energy transition, and the recognition of gender as an indicator of social inequality.

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