EVIDENCE REVIEW: THE LIVED EXPERIENCE OF FUEL POVERTY IN SCOTLAND

PEOPLE, COMMUNITIES AND PLACES

social research

Evidence review: the lived experience of fuel poverty in Scotland

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1. Introduction

This paper provides an overview of the current state of knowledge on the lived experience of fuel poverty in Scotland, drawing on both academic and grey literature. The review begins by exploring the definition of 'fuel poverty' and 'lived experience' and presents a brief assessment of the evidence base. It then discusses the evidence by four key themes:

- drivers and influencing factors
- coping strategies
- support
- how different policies impact on people, and what changes people think will make a difference

The paper concludes by presenting key findings from the review, and discusses further research possibilities.

1.1 Understanding fuel poverty

Approaches to studying fuel poverty vary but the concept of 'fuel poverty' is generally understood to mean the inability of certain households to acquire the energy services needed to live a decent and healthy life (Middlemiss & Gillard 2015).

1.1.1 Measurement and definitions

The Scottish Government uses the Scottish House Condition Survey (SHCS) to measure the level of fuel poverty in Scotland according to a technical definition, and to identify key characteristics of fuel poor households. This survey is the Scottish Government's main source of evidence on fuel poverty at national and local authority levels. Further insight is provided via the Advisory Panel and Partnership Forum that comprise various expert and stakeholder organisations including those that work with client groups in or risk of fuel poverty and that have members with direct experience of poverty. Two independent working groups, the Scottish Fuel Poverty Strategic Working Group and the Scottish Rural Fuel Poverty Task Force, previously looked at the issues of fuel poverty and made recommendations to Ministers. One of the high level recommendations related to the definition of fuel poverty, and as a consequence an independent academic review was commissioned and a new technical definition proposed. This definition was debated in Parliament as part of the Fuel Poverty Bill. The Bill was passed by the Scottish Parliament on 11th June 2019, and The Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act received Royal Assent on 18 July 2019.

The previous statutory definition of fuel poverty designates a household as being in fuel poverty if, in order to maintain a satisfactory heating regime, it would be required to spend more than 10% of its income (including Housing Benefit or Income Support for Mortgage Interest) on all household fuel use. This is known as the 10% definition. The new Act defines a household to be in fuel poverty if more than 10% of its net income (after housing costs) is required to heat the home and pay for fuel costs, AND if after deducting fuel and childcare costs and disregarding the value of specified benefits which are received for care need or disability, the remaining net income is insufficient to maintain an acceptable standard of living for the members of

the household, defined as 90% of the UK Minimum Income Standard (MIS). There is a MIS uplift for remote rural and island areas to take into account their higher cost of living. If more than 20% of net income is needed, the household is defined as being in *extreme fuel poverty*.

The Bill provides for three enhanced heating regimes for households likely to be most affected by the adverse outcomes of living in a colder home: one with higher temperatures, one with longer heating hours, and one with both. The Scottish Government is currently consulting[1] on which households these heating regimes should be applied to when calculating levels of fuel poverty.

1.1.2 Drivers

Extending Boardman's (1991) original work, the Scottish Government recognises four main drivers of fuel poverty: energy prices, income, energy efficiency of the home, and how energy is used in the home. Most of the knowledge about these drivers comes from technical data and quantitative household surveys. However, fuel poverty is increasingly recognised to be not a technical problem but a multi-dimensional complex phenomenon (Baker et al 2018). Other factors such as mental health and social relations influence how energy is used in the home and how finances are managed, and households also move in and out of fuel poverty as conditions and circumstances change (Middlemiss & Gillard 2015; Kearns et al 2019). These other aspects are less amenable to investigation using quantitative methods and are consequently less well understood.

1.1.3 Qualitative approach

Qualitative research investigates what life is like for people in fuel poverty, and how they can be best supported. Such research can help us understand results in quantitative data. For example, the SHCS 2017 finds that only 17% of households identified as fuel poor according to the previous definition[2] regard keeping warm enough in winter as either a bit of a problem or a serious problem, with only 5% stating that the reason heating the home is difficult is because they can't afford it. Qualitative research finds that people may have different understandings of the survey questions (Citizen's Advice Scotland 2018a), or that they think about the condition of fuel poverty in a way that does not match the framings of the technical definition (Middlemiss & Gillard 2015). For example, although not Scotland-specific, there is evidence from one fuel poverty study that young adult participants did not conceive of themselves as experiencing any form of energy vulnerability and indeed often seemed to reject a sense of vulnerability (Butler & Sherriff 2017). A study with older people also found they preferred not to be seen as a passive victim unable to deal with the cold (Middlemiss & Gillard 2015).

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[1] https://www.gov.scot/publications/consultation-enhanced-heating-regimes-within-new-definition-fuel-poverty/pages/7/

[2] SHCS models required energy consumption and fuel costs for each household to achieve the recommended heating regime, based on information available about the dwelling and household characteristics as well as temperature, solar radiation and wind speed in the regional location of the property. This data, along with survey information about household income, housing and childcare costs, is used to determine whether the household is fuel poor, along with the corresponding depth or fuel poverty gap.

This concept of energy vulnerability is increasingly being used in qualitative research on fuel poverty because it allows for a broader range of factors to be studied than just cost of fuel and levels of income and energy efficiency (Butler & Sheriff 2017; Longhurst & Hargreaves 2019). Whilst there is some variation in definition, 'energy vulnerability' can be understood as referring to the likelihood of a household being subject to fuel poverty, the sensitivity of that household to fuel poverty, and the capacity that household has to adapt to changes in fuel poverty - all of which are subject to structural constraints and enablers (Middlemiss & Gillard 2015).

The evidence from qualitative research reveals that even if people have very similar housing and household characteristics they will not all experience fuel poverty in the same way; there are multiple interacting factors influencing sensitivity and capacity to cope and adapt to changes.

1.2   Taking account of lived experience

The amount of qualitative research on fuel poverty has increased in recent years but it is still in the minority despite the multidisciplinary nature of the research community (Ambrose & Marchant 2017). However, the need for more qualitative research is recognised in research and policy communities. In response to feedback that the Scottish Government could improve its approach to tackling fuel poverty by taking account of those with lived experience of fuel poverty, the long term strategy will consult with people with lived experience of fuel poverty when making any regulations under the new Fuel Poverty Act (Fuel Poverty Strategy for Scotland 2018). These regulations should be informed by evidence. This review supports that aim by setting out what we currently know about the lived experience of fuel poverty in Scotland and identifying gaps in knowledge that can be addressed by new primary research.

2.   The Evidence Base

As already noted, the literature on fuel poverty draws heavily on quantitative research (Middlemiss & Gillard 2015), which means the body of literature using qualitative approaches is relatively small. This review focusses on qualitative or mixed methods studies only, where some or all of the research participants lived in Scotland. Occasional reference is made to England-based studies where findings are additional to those discussed in the Scottish studies but are likely to be relevant. References and a summary of methodology is provided in the Appendix.

Lived experience research has its origins in phenomenology. It is concerned with how an individual experiences and makes sense of a given phenomenon, and how they respond to such experiences. Lived experience is embodied and situated, and rooted in the everyday, and research into lived experience requires an in-depth qualitative approach that takes account of its complexity and nuance. See Appendix for more information on the philosophy and methodology of lived experience research.

2.1   Type of research

Qualitative studies operationalise the construct of fuel poverty in various ways, with researchers recruiting participants using proxies such as low income, or targeting groups deemed to be 'at risk' or households identified by third parties such as social landlords as being fuel poor. A summary is provided in the Appendix for the research reviewed in this paper. Few qualitative researchers use the official measure in recruiting and selecting participants due to the fact that gaining accurate information about income and household costs is both intrusive and time-consuming (Butler & Sheriff 2017).

In the literature reviewed for this paper, the profile of research participants varied considerably - some studies focussed on particular groups such as women, refugees, older people or households with members with disability or long-term health condition. Some studies also conducted research with energy advisors, landlords and other stakeholders. Study samples included specific geographical communities in Scotland, members of particular groups from across Scotland, and Scotland-based participants in wider UK studies. With the latter, it is not always possible to extract Scotland-specific findings. Some studies focussed on households with particular fuel types or dwelling types generally regarded as difficult to heat or to treat with regards to improving energy efficiency. Within the literature, there are also studies that investigate poverty or energy efficiency more generally, with fuel poverty as one aspect of the research.

The studies are mostly cross-sectional (data gathered at one specific point in time) but there is also some longitudinal research.

A variety of techniques were used to recruit participants including use of 'trusted intermediaries' such as community-based energy advocacy services (e.g. Baker et al 2019; De Haro & Koslowski 2013), and housing associations or health workers (e.g. Middlemiss & Gillard 2015). One study recruited sample from respondents to the SHCS (Ipsos MORI & Sheldrick 2017).

One study used people from the local community with lived experience of fuel poverty to conduct interviews in their community. The interviewers, who received training and were remunerated for their work, also served as key gatekeepers, recruiting participants to the study. They also inputted to development of the interview schedule and to the subsequent analysis (De Haro & Koslowski 2013). The community-based interviewers were recruited by a local intermediary organisation.

2.2   Limitations and assumptions

As with all qualitative research, the findings are not intended to be generalizable to the whole population. However, there is an assumption that themes and issues that affect participants are likely to be a reflection of wider concerns.

Some individual studies have methodological limitations such as time of year when the interviews were conducted. In summer months, participants may not talk about issues relating to cold and damp as much, however this does allow for energy practices other than heating, such as cooking, cleaning and entertainment, to have

more prominence. A few of the studies are fairly old e.g. 2004 and as there have been some changes in the policy and social context since then, some findings may no longer apply. As previously noted, three studies have been included that are not based on research undertaken in Scotland, and although the findings are likely to be relevant it is possible that they do not apply in the Scottish context.

3. Findings

3.1 Drivers and influencing factors

The Scottish Government recognises four main drivers of fuel poverty: energy prices, income, energy efficiency of the home, and how energy is used in the home.

3.1.1 Energy prices
Across all the studies, concerns were voiced about high and rising cost of fuel, worry about being able to afford to heat the home (Green 2007), and difficulties reported in keeping track of usage particularly for those with electric heating and/or lived in rural areas (Ipsos MORI & Sheldrick 2017). In the GoWell study, there was a preference for pre-paid gas and electricity meters because the households could see what they are using, even though these meters are comparatively more expensive (Trevisan et al 2014). For some participants, the rising cost of fuel made it difficult to afford other necessities such as food (Green 2007). In a study in the Western Isles, the cost of heating was found to be significantly higher than on the UK mainland, indicating that participants paid a premium for their remoteness. (Sherriff et al 2019). A study with refugees found that they lacked knowledge about the cost of fuel (Lindsey et al 2010).

The high cost of electric heating is one of the most pressing concerns of households that rely on it, with a perception that high costs are unavoidable and inevitable. Disengagement from the energy market is a major and consistent problem faced by those using electric heating, due in part to a complex and often confusing tariff market, misconceptions around the benefits of switching, difficulties making price comparisons, and problems around dispute resolution (Citizen's Advice Scotland 2018b). There was a poor relationship and lack of trust with energy suppliers in a study with young adult households in England (Butler & Sherriff 2017).

3.1.2 Income and debt
The Ipsos MORI & Sheldrick (2017) study found low financial resilience amongst participants, with some reporting that they would struggle if faced with unexpected expenses or a drop in income. This finding was echoed in other research, which found that fuel poor participants were more concerned about the *stability* of their income than the actual level of their income (Middlemiss & Gillard 2015).

Debt was incurred in various ways: by large fuel bills based on estimates not actual readings (Green 2007), due to errors with charges made by the energy supplier, general poor financial management by the householder, or because of the need for longer and higher heating regimes due to disability (Mould & Baker 2017). In remote areas, supplier mistakes and inaccuracy with billing and breakdown of supplier-

customer relations was found to be a considerable part of energy advice service workload (Darby 2017).

The study with refugees reported that asylum seekers receive lower levels of benefits than the general population and some did not understand how much of their expenditure would be taken up by utility bills when they changed status from asylum seeker to refugee (Lindsey et al 2010).

In the GoWell study in Glasgow, changes in benefits and sanctions were associated with periods of extreme financial hardship and intense stress for participants (Trevisan 2014). Almost half of the participants reporting increased financial difficulties expressed concern about changes to ways in which benefits would be administered, in particular the monthly frequency of Universal Credit and plans to make recipients directly responsible for rent and council tax payments. These participants also had difficulties scheduling bill payments as they tended to budget on a daily or weekly basis. Concerns about spending Universal Credit payments meant for rent on other things was also noted in other studies (Middlemiss & Gillard 2015).

One elderly participant in a UK study reported not being able to afford to pay for installation of central heating but was also not eligible for a grant because of a small occupational pension (Wright 2004). Most of the participants in another UK study would not consider borrowing money to increase the energy efficiency of their homes, with debt seen as a last resort (Middlemiss & Gillard 2015).

3.1.3 Energy efficiency

A study with people on benefits found enthusiasm for energy efficiency programmes (Green 2007). In the Ipsos MORI & Sheldrick (2017) study with SHCS respondents classed as being in fuel poverty, there was general awareness amongst participants that making home energy efficiency improvements is a potential means of reducing fuel bills, with most owner-occupier participants installing double glazing, loft or cavity wall insulation – both self-funded and grant aided. Most had not been proactive but had been contacted directly about schemes by their provider, local authority or government agency, which they appreciated. However, most of those accessing the schemes did not regard affording their fuel bills as a difficulty. There was also uncertainty and in some cases scepticism about the actual impact of the installed measures on the warmth of their homes and on their fuel bills. Those who had not installed measure tended to believe their home was already energy efficient although this judgement was only rarely based on expert evaluation.

Many of the elderly clients supported by an energy advocacy service had persevered for many years without any home improvements, even though they met the qualifying criteria of funded schemes (Mould & Baker 2017).

For council tenants, maintaining a good relationship with council housing officers was important for getting renovation and repair work done, however these relationships were strained at times, with energy advisors seeing themselves as bridging a gap between housing officers and tenants to some extent (Darby 2017). Amongst those who had bought their council home, there was still a wish for the council as a trusted authority to arrange retrofit works.

In a study of council tenants with electric heating, many participants reported having old, broken, poor quality or poor functioning storage heaters. They were also living in poor quality dwellings with damp, cracks and draughts which made their homes difficult to keep warm[3]. They also lacked knowledge about how to use the electric heaters correctly (De Haro & Koslowski 2013).

A study in the Western Isles identified low quality of existing housing stock as a key barrier to improving energy efficiency. Much of the housing stock had been built with loans during the 1940s and 50s, which required homes to be built to a particular design. This design was regarded as one in which it was particularly difficult to improve energy performance. In this context, remoteness was also found to have an impact on the participant's ability to have work done on their houses, with difficulty in finding tradespeople commonly cited as an issue. (Sherriff et al 2019)

A UK study identified various barriers to improving the energy efficiency of homes including a requirement to make financial contributions to enable retrofit work to go ahead. Some households expressed feelings of frustration and powerlessness as they found it difficult to know where to go for energy efficiency information, and where different sources existed not knowing which sources to trust. There was generally less trust with private sector energy companies and installers, and higher levels of trust with public and third sector organisations. The capacity to access and understand advice was problematic for some. Additionally, households in the private rented sector (PRS) in particular tended to hold the perception that they were not eligible for energy efficiency interventions due to not owning their home, and households in low paid work often assumed that support for energy efficiency measures was only targeted at people not in work. Others in the study were reluctant or unable to share personal information with scheme providers and missed out on the intervention as a result (Snell et al 2018).

There was some frustration for households in the social rented sector at lack of autonomy over choice of fuel type (Darby 2017).

In the study by Snell et al (2018), low income families and households with disabled members taking the first steps towards retrofit measures described various concerns that deterred them from undertaking the work:
- fears about damage and mess,
- disruption to household and energy routines,
- upfront costs or uncertainty about hidden costs such as redecoration,
- provision of information that was difficult or impossible to collect (e.g. householder with disability unable to access loft to measure amount of loft insulation and unable to pay someone else to do it for her),
- amount of time involved (especially for those in employment, young children, or restrictive health conditions),
- uncertainty about extent of physical disruption (especially for those with strict medical routine and/or energy dependent equipment).

[3] The Scottish Housing Regulator National Report on the Scottish Social Housing Charter 2017/18 states that 94% of homes meet the Scottish Housing Quality Standard, and 80% of homes are compliant with EESSH.

For some of the participants with health conditions, actually completing the application process was a deterrent (e.g. those on strong painkillers that affected ability to think clearly). The process of proving eligibility and liaising with different organisations was described by disabled participants as draining. Participants with fluctuating health conditions also expressed concerns about the impact of this on being able to manage the installation. Some of the participants that did receive energy efficiency measures reported that the impact of these measures was negated by the effects of other ongoing problems with their homes such as draughts, damp and rotten windows. Some other participants reported feeling warmer but did not see any significant reduction in fuel bills (Snell et al 2018)

A study with households in the PRS in Hackney and Rotherham found that the stress of finding somewhere to live meant that few participants took the energy efficiency of a property into account and had limited engagement with energy performance certificates (Ambrose et al 2016). However, young adult households in Salford took a pro-active approach to avoid renting properties with damp and mould. These interviewees regarded estate agents as dishonest and untrustworthy, and they described searching inside cupboards and looking behind furniture for tell-tale signs. Viewing properties in the summer made avoiding issues of damp and mould more difficult (Butler & Sherriff 2017).

3.1.4 Energy use

There was a feeling with disabled research participants in one study that their additional needs were not being taken into account. For example, longer heating times because of immobility due to disability, and extra fuel used for powering stair lifts or recharging electric wheelchairs (Green 2007). Some participants in another study reported that they were unable to secure formal recognition that their health condition merited help. One participant for example reported that her son suffers from a health condition that requires him to keep warm, which means the household has extensive energy needs, but her son was not registered disabled (Middlemiss & Gillard 2015).

Across the studies, many participants did not know how to use their heating systems effectively. In a study involving low income families and households with disabled members, some of the participants reported that after installation of energy efficiency measures they were unclear about how to use the new systems (e.g. new boilers), and that they had not been given enough information or support about how to use it appropriately (Snell et al 2018). Lack of knowledge about how to use electric heating systems was a major problem for many households in the Citizen's Advice Scotland (2018b) study, and in the study by De Haro & Koslowski (2013). Furthermore, some participants reported a lack of available information on how smart meters can save money (Melone 2019).

Although research on energy use often focusses on winter as the heating season, one study that focused on households with electric heating in high-rise flats exposed to severe weather conditions due to proximity to the North Sea, found that keeping warm in a cold home was a problem not just in winter but also in summer (De Haro & Koslowski 2013).

There was a general feeling with participants in a study focussing on households reliant on electric heating that electric storage heaters are expensive to run, as well as ineffective in heating the room. However, the participants were unaware of how to use the controls to benefit from Economy 7[4], and were instead using alternative forms of heating such as halogen, oil, calor gas, fan heaters or electric fires, over which they reported feeling more in control in terms of timing and location of heating. One participant found the smell of the air heated by the electric heater affected their breathing and did not use it for that reason (De Haro & Koslowski 2013). The respondents also displayed lack of understanding about how to heat and ventilate the room effectively to reduce damp and condensation. Most of these respondents were at home during the day due to unemployment, retirement, disability or childcare.

There is some evidence of gendered energy use, for example Melone (2019) found that women used the washing machine, which a highly energy intensive appliance, more than men. Households with children also reported using the washing machine a lot. Whilst single men in the study tended to only switch lights on when needed, households with young children used lights more, to welcome children home from activities and for night-lights and multiple lamps in children's bedrooms (Melone 2019). Female participants had generally less knowledge about the energy efficiency of their appliances than the male participants (Melone 2019).

In a UK study of older people that included Scotland-based participants, male participants were far more likely than female participants to say that they never felt cold. Elderly married couples commonly reported tensions over how warm to heat the home in winter, with the husband turning it down and the wife turning it up. Several respondents aged over 80 reported being far more sensitive to the cold with as they got older (Wright 2004). In another Scottish study across adult age groups, perceptions of comfort ranged from 15 to 25 degrees, with female participants tending to prefer higher temperatures (Melone 2019).

Tensions within households were also reported with regards to use of energy-intensive technology. Households with teenagers had the double financial cost of buying the latest gadgets that their children want, and then paying the energy costs of these technologies that their children are dependent on for their social lives (Middlemiss & Gillard 2015). A study of lived experience of fuel poverty of young adult households in England found a fear of disconnection from energy services was linked to a fear of social disconnection – being unable to charge mobile phones and access the internet. This made paying electricity bills a priority. The study also found tensions about laundry practices with regards to use of heating for drying. Perceptions of social approval and disapproval influenced choices about buying appliances such as tumble dryers to avoid having clothes hanging everywhere indoors, which has consequences for energy use (Butler & Sherriff 2017). Access to outdoor space for hanging clothes is not always available.

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[4] Economy 7 is a type of electricity tariff that has a different price per kWh based on your time of use and is used with an Economy 7 meter. It's usually based around day and night-time usage, with the price/kWh being cheaper at night.

Disabled people and parents of disabled children described a variety of factors that led to additional energy use: need for higher temperatures and/or longer heating periods, using energy-intensive equipment such as stair lifts, hoists, electric wheelchairs, medical equipment, and additional washing and drying requirements. These needs increased energy costs, and the risks associated with disconnection are high, which was a particular concern for those with pre-payment meters. One participant living off-gas grid in a rural area reported she was no longer fit enough to cut peat for her range (Snell et al 2018).

For young adults in an England-based study who lived in a shared house with shared bills, there was a worry of instability of energy bills – the 'unexpected bill' that is higher than anticipated due to other householders energy use (Butler & Sherriff 2017).

3.1.5 Other drivers

In their study of energy vulnerability, Middlemiss & Gillard (2015) identify six challenges for the fuel poor.

Two of the challenges, energy costs and supply issues, and stability of household income, fall under the categories of drivers discussed above, i.e. energy prices, and income and debt. A third, quality of dwelling fabric, is mentioned as part of energy efficiency but is not considered by Scottish Government to be a driver in its own right. However the other three challenges are additional: tenancy relations, social relations inside and outside the household, and ill health. Tenancy relations overlaps with quality of dwelling fabric with regards to resolving maintenance/repair issues, but also refers to limitation in choice of home in the social rented sector, and concerns about impermanence of tenancy. Social relations refers to households needs, social capital and support networks. Social support is covered in the next section on coping strategies. Lastly, ill health. Several other studies find that poor mental and physical health is both a contributing factor to fuel poverty and an outcome of it (Sherriff et al 2019; SAMH 2014; Mould & Baker 2017; De Haro & Koslowski 2013). Health, as well as learning difficulties, can affect a person's capacity to earn money, manage their finances including debt, understand bills, and use their heating systems effectively (Mould & Baker 2017).

In their analysis, Middlemiss & Gillard (2015) find that the above six challenges can either impede or empower the agency of the fuel poor by trapping households in current states of deprivation and leaving them vulnerable to future shocks, or by facilitating a pathway out of fuel poverty. Generally however, people who are energy vulnerable have limited agency to reduce their own vulnerability because of structural and institutional factors such as housing providers, housing stock, the benefits system and energy market (Middlemiss & Gillard 2015).

In a study focussing on the lived experience of women, situations were identified where women may be more at risk of fuel poverty. These were when having children, being a lone parent, and having a disability (Malone 2019).

3.2   Coping strategies

There are a wide variety of ways that research participants coped with their situation, psychologically and behaviourally.

In the Ipsos MORI & Sheldrick (2017) study with SHCS respondents, the researchers noticed a tendency to downplay difficulties they had mentioned earlier in the interview, perhaps from sense of shame or embarrassment. The participants reported they were 'managing' to afford their household bills as a result of careful financial planning and prudent use of fuel: limiting heating hours, and heating only the rooms used most often. Most participants did not plan their spending through use of a household budget, and had not switched provider in last 3 years. This was largely because they felt they were on a good enough tariff already, but some had limited or no awareness of providers other than the Big Six[5], and had lack of awareness or understanding about how to switch. Some regarded a positive relationship with existing supplier as more important than being on the cheapest tariff. Some tenants in PRS and SRS held the belief that the landlord had control over choice of supplier. Those with pre-payment meters tended to regard changing provider as a 'hassle' because it would require buying and activating new keys for their meter. Participants who had switched reported mixed experiences of the process, with some believing they were now paying more due to unanticipated fees associated with the changeover. Those with very positive experiences of considerable savings and effortless process had atypical detailed knowledge of the process and benefits of switching (Ipsos MORI & Sheldrick 2017).

Across a range of household profiles (lone parents, unemployed people, retired people, families), under-heating the home was a common practice to cope with not being able to afford their heating needs, with often only the living room and perhaps one bedroom heated for a few hours a day. In some cases the heating was turned off as the householder did not know how to use the timer (Melone 2019). Other coping strategies for keeping warm included putting on more clothes, sitting under a duvet, staying in bed, taking extra showers, turning on the oven, sleeping and living in one room, going out for example to the library or to other people's houses (De Haro & Koslowski 2013). However, the use of coping strategies was not necessarily perceived as negative. On the contrary, in the England-based study with young adult householders, the thought of slipping under their favourite blanket was a pleasant idea and a positive experience (Butler & Sherriff 2017).

There was a tendency to prioritise fuel bills over other areas of expenditure such as leisure activities and holidays, and reports of cutting back or going without food (Ipsos MORI & Sheldrick 2017; Trevisan et al 2014). A common dilemma due to tight budgets was making a choice between heating and food. Increases in food prices sometimes led to participants eating less as well as using less heating. Other choices related to spend on transport, clothing for children, and pet care (De Haro & Koslowski 2013). Expenditure was generally concentrated on those perceived as most 'in need' within the household - usually children, with adults skipping meals or not buying new clothes for themselves (Trevisan et al 20140. Sharing of food was a

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[5] These are: British Gas, EDF Energy, E.ON UK, npower, Scottish Power and SSE

common coping strategy amongst refugees and asylum seekers (Lindsey et al 2010).

In an UK study on fuel poverty, older people regarded keeping warm as essential, yet their culture contributed to their living in cold homes. They lived frugally and usually turned heating off in daylight hours during winter. This was partly to keep fuel bills down but also due to a perception that economising on heating was a virtue, and that they could put on an extra jumper or wrap up in a blanket if necessary. The expectation that they could cope in this way came from experience of childhood and early adulthood spent in homes without central heating. It was also common practice to sleep in an unheated bedroom during winter and to keep windows open at night. For reasons of safety, ground floor bedroom windows would be shut, but reluctantly. There was a perception of generational difference in temperature preferences, with some participants worrying that their children keep their homes too warm. However, to avoid recriminations and arguments they would often turn up the heating when visits from children or grandchildren were expected. (Wright 2004). Similar findings emerged in a study in the Western Isles where participants took pride in their resilience toward cold conditions, with participants having memories of growing up in very cold houses and viewing that as the norm (Sherriff et al 2019). There was some conflicting evidence regarding age differences in energy awareness and behaviours: another study found younger single people were more likely to wear warm clothes, layer up and adapt their behaviours to stay warm than older participants (Malone 2019).

Low-income participants with children were very conscious of the importance of providing a warm home. Several noted that having children made them more conscious about housing conditions and made them more prepared to seek help. They described strict heating regimes that maximised children's warmth, for example heating the home according to the presence/absence of children in the home, around school hours, or at visiting times. The participants noted the additional fuel costs associated with having children (Snell et al 2018).

One study found some evidence of financial support from family members outside the household, for example borrowing money to help pay energy bills in the winter, and exchanging energy services with friends and family in times of need, for example washing and drying clothes at their house, or visiting them often to reduce their own heating costs (Middlemiss & Gillard 2015).

A study of young adult households in Salford found that participants described two psychological coping strategies. The first was framing undesirable or negative experiences as impermanent. An example was a student in shared accommodation who felt powerless to make changes to poor housing conditions. The second coping strategy was making efforts to maintain a positive and optimistic outlook with regards to present and future home life. (Butler & Sherriff 2017).

3.3   Support

A general finding was that households that have the greatest need for support are often those who are not accessing it (Citizen's Advice Scotland 2018a; Snell et al 2018). For example, disabled people and families often live in the poorest quality houses and have additional needs that require support throughout the retrofit

process. As this can make it more expensive for scheme providers and installers, these households tend to get sidelined (Snell et al 2018).

Participants who reported struggling financially cited additional support needs such as direct financial support to increase income or lower bills. Groups more likely to report struggling financially or have problems heating their homes and who were likely to express a greater need for support were: households in PRS and SRS, in rural areas, those reliant on electric heating, and with working-age occupants (Citizen's Advice Scotland 2018b).

Low income and/or households with disabled members broadly fitted into four categories when it came to engaging with information and support services (Snell et al 2018):

- those who actively sought out information, advice or support
- those who respond to publicity
- those who come across it through social networks
- those who are directly referred

The importance of social networks and personal relationships was another key theme. Friends and neighbours can make difficult living conditions feel more tolerable but there were issues that a householder may not want to talk about with others, or it may be a technical problem that their networks were not knowledgeable about. In these situations, it could take extraordinary hardship before a householder sought professional help, with long periods during which they did not have the support to which they were entitled e.g. free installation of gas central heating (Darby 2017). Personal relationships were also developed with professional advisors. One elderly participant with failing eyesight and memory loss was heavily dependent on an energy advice centre to manage her heating systems and bills. The study found that these personal relationships were very important in the absence of other social support. (Darby 2017).

Around half the participants in the Ipsos MORI & Sheldrick (2017) study had sought or received advice or support in relation to fuel bills: typically informal help from family or friends, financial support from Government, advice from suppliers. There was occasional mention of energy efficiency agencies such as Energy Savings Trust or Warmworks. Almost all reported positive experiences. Several of those who had not sought or received support stated they would not know where/who to approach – these participants were also those who reported greatest difficulty in affording their bills. Most participants in the study stated they would welcome support, advice or guidance in relation to their fuel bills e.g. to reduce bills by switching tariff or supplier, using heating more efficiently, or changing fuel type (those in rural areas off-gas grid).

In the study with refugees, the participants reported having a good understanding of how to access advice on dealing with fuel suppliers. Those experiencing difficulties with fuel bills had sought advice and most had been supported by money advice services to arrange suitable payment terms with utility companies (Lindsey et al 2010).

Not all participants in the studies reported positive experiences of receiving support. For example, householders with electric heating who had accessed energy advice

reported inconsistencies in the messages promoted, and in some cases contradictory views on the appropriateness of tariff products (Citizen's Advice Scotland 2018b; Energy Action Scotland 2018). In a study of council tenants with electric heating, some research participants stated that the heaters had not been serviced in years and that the council was not keeping on top of necessary repairs, both to the fabric of the building and to the heaters themselves (De Haro & Koslowski 2013)

There were contradictory findings around the best method for support. In the Ipsos MORI & Sheldrick (2017) study the preferred methods of receiving or accessing support were online or by post. However, a summary of case evidence from across the Citizen's Advice network in Scotland found that complex issues related to electric heating, in conjunction with householder vulnerabilities, were judged to be best resolved with face-to-face and in-home advice by 'trusted intermediaries' (Energy Action Scotland 2018; Citizen's Advice Scotland 2018b). This point was made in other studies. A preference for face-to-face advice to discuss their specific needs was expressed by participants in the study with low income households and those with disabled members (Snell et al 2018). The personal rapport and trust that is developed between client and advocate was found to be a critical element in realising further benefits such as clients becoming more empowered (Baker et al 2019). Positive relationships like these were regarded in the Western Isles study as a catalyst in helping the project to progress: islanders referred their neighbours as participants in the project, based on a relationship of trust, thus widening the project's reach (Sherriff et al 2019).

There were reports of gaining peace of mind and satisfaction from knowing they could call upon the energy advice service at any time (Darby 2017). Greater understanding of bills and heating systems with the support of advisors in some instances had a dramatic positive impact on the participants' confidence and sense of agency and feeling of being able to cope with future problems (Darby 2017).

3.4   Impact of policies, and changes that will make a difference

Households in need are not always eligible for help. For example, disabled people who have not been able to access the disability benefits used as eligibility criteria, elderly people with small occupational pensions, and self-employed people who struggled to prove eligibility in circumstances where their income fluctuated significantly by month and year (Snell et al 2018; Wright 2004).

Elderly participants tended to be unable to distinguish between the different grant programmes, and assumed that if they had been unsuccessful in their application for one programme there was no point applying for another, even if the grant was for a different type of support and had different criteria (Wright 2004). Some participants in the Snell et al study also held the view that failed attempts to get energy efficiency support in the past due to ineligibility meant that there was no point in applying to current schemes, even if their circumstances had changed or the eligibility criteria had changed (Snell et al 2018).

The study with refugees noted that once asylum seekers have leave to remain, new refugees have 28 days to vacate UKBA accommodation and access mainstream

benefits and services. A negative aspect of the transition from asylum seeker to refugee status is the short time between having utility bills covered by the UKBA support package to having responsibility for utility bills in their new accommodation. Most of the research participants felt there could be more support during this time to help people understand that their fuel bills would be a significant part of their expenditure (Lindsey et al 2010).

In the study of young adult households in England, the research participants frequently seemed to reject a sense of vulnerability, situating negative experiences in the past, and framing their present and future circumstances in a positive and optimistic way. The researchers suggest that policy approaches directed at this demographic that reflect the way in which they conceptualise their experience, and that strategies that shift the focus away from vulnerability and towards empowerment, may be more effective (Butler & Sherriff 2017).

4. Conclusions

The lived experience of fuel poverty and energy vulnerability is an embodied *emotional* experience. How people feel about their situation, and how they regulate those emotions, influences not just their health and wellbeing but also their behavioural responses. As the findings above show, emotions such as worry, fear and shame, and also care and concern for other household members including pets, shape how people think about and manage their energy use and whether and how they seek and receive support.

4.1 Key findings

These experiences are situated in the specificities of particular contexts and social relationships and cannot be neatly segmented by demographics. However, there are some patterns across the studies that impact on the ability to 'acquire the energy services needed to live a decent and healthy life':

- households with the greatest need are often not asking for, not eligible for, or are not getting support. There are also difficulties with accessing and making sense of energy-related information

- instability of income and unexpected bills is more of a concern for some than the actual level of income or bill, hence a preference for pre-payments meters which provide immediate and transparent feedback about energy usage in an easy-to-understand way

- tendency for low financial resilience and short-term financial management

- general lack of knowledge about how to use heating systems, particularly electric heating, effectively

- additional energy and support needs of disabled people are often not recognised. These additional needs also make these households more costly for service providers to support

- specific circumstances of refugees that mean they are not well prepared for managing their energy use and bills

- gendered and generational differences in perception of warmth and comfort, and tensions between household members about energy use

- importance of social networks and personal relationships for support with coping and dealing with problems

- tendency for there to be distrust or difficult relationships with housing providers/landlords and private energy companies, and relationships of trust with intermediaries such as energy advisors.

- preference to think of oneself as coping well. Some strategies for keeping warm are not perceived as negative

4.2   Further research

The findings discussed above are drawn from a small number of studies, most of which focus on particular subgroups of people experiencing fuel poverty. The findings offer a picture of what life is like for the research participants, and although insightful it is a partial view and there are many aspects that could be explored in greater depth to enrich our understanding of how certain households certain households are hindered and how they are facilitated in acquiring the energy services needed to live a 'decent and healthy life'. The broader range of challenges or drivers identified by Middlemiss & Gifford (2015) could be a useful framing for future primary research, as is the concept of energy vulnerability.

Appendix

1. Literature reviewed

Reference	Type of study	Scotland data
Ambrose, A. et al (2016) *Energy (in)efficiency: what tenants expect and endure in private rented housing*. Eaga Charitable Trust.	Survey with 1800 low income PRS households 48 in-depth interviews with PRS tenants	England (Hackney & Rotherham)
Baker, K. et al. (2019). Never try and face the journey alone: Exploring the face-to-face advocacy needs of fuel poor householders in the United Kingdom. *Energy Research & Social Science*. 51, 210-219.	Semi-structured interviews with 11 clients accessing energy advocacy services, senior energy officer, and local HA community support worker	Glasgow
Butler, D. & Sherriff, G. (2017). 'It's normal to have damp': Using a qualitative psychological approach to analyse the lived experience of energy vulnerability among young adult households. *Indoor and Built Environment.* 26(7), 964-979.	6 in-depth semi-structured interviews. Interpretative Phenomenological Analysis methodology	England (Salford)
Citizen's Advice Scotland (2018a). *Speaking up - understanding fuel poverty support needs.* Consumer Futures Unit, Citizen's Advice Scotland.	Policy recommendations based on Ipsos MORI & Sheldrick (2017)	Scotland
Citizen's Advice Scotland (2018b). *Hard-wired problems - delivering effective support to households with electric heating.* Consumer Futures Unit, Citizen's Advice Scotland.	4 deliberative workshops conducted by Energy Action Scotland & Glasgow Caledonian University with electric heating users in mixed urban/rural, remote rural, island areas (see Energy Action Scotland 2018) Survey with support agencies stakeholder workshop. Interviews with 4 industry reps	Renfrewshire Western Isles Argyll & Bute Kyle of Sutherland
Darby, S. (2017). Coal fires, steel houses and the man in the moon: local experiences of energy transition. *Energy*	Interviews and observations with low income householders and their energy advisers	central Scotland - West Lothian

Reference	Type of study	Scotland data
Research & Social Science. 31, 120-127.		
De Haro, M.T. & Koslowski, A. (2013) Fuel poverty and high-rise living: using community-based interviewers to investigate tenants' inability to keep warm in their homes. *Journal of Poverty and Social Justice.* 21(2), 109-121.	Case study of block of flats, 101 structured interviews with residents. Trained community-based interviewers, many of whom had lived experience of fuel poverty.	Edinburgh
Energy Action Scotland (2018). *Research into support and advice services for households in Scotland reliant on electric heating.* Consumer Futures Unit, Citizen's Advice Scotland.	See Citizen's Advice Scotland (2018b)	Renfrewshire Western Isles Argyll & Bute Kyle of Sutherland
Green, M. (2007). *Voices of people experiencing poverty in Scotland.* Joseph Rowntree Foundation.	Focus group study with 10 focus groups in first stage with different groups in areas across Scotland & 7 focus groups that Save the Children conducted with children and young people. Second stage with 1 focus group with selection of participants from stage 1.	Scotland
Ipsos MORI & Sheldrick, B. (2017). *Support needs of those in fuel poverty – research report.* Ipsos MORI Scotland.	25 in-depth interviews with sample purposively identified from SHCS recontact database	Scotland
Lindsey, K. et al. (2010). *Refugees' Experiences and Views of Poverty in Scotland.* Scottish Poverty Information Unit, Glasgow Caledonian University.	Key informant interviews with staff from organisations working with refugees Focus groups with 12 refugees	Scotland
Longhurst, N. & Hargreaves, T. (2019). The emotions of fuel poverty: Energy vulnerability and the lived experience of social housing tenants in the United Kingdom. In press	16 semi-structured interviews with social housing tenants, 10 interviews & focus group with Housing Association employees	England (Norwich)
Melone, H. (2019). *Gender-based perspectives of fuel poverty in Scotland.*	Cross-sectional collective case studies. 7 semi-structured interviews.	Glasgow Kirkcaldy Fife Renfrewshire

Reference	Type of study	Scotland data
MREs dissertation. Glasgow Caledonian University.	Stratified purposeful sampling using gatekeeper organisations	Western Isles Argyll, Lomond and the Islands
Middlemiss, L. & Gillard, R. (2015). Fuel poverty from the bottom-up: characterising household energy vulnerability through the lived experience of the fuel poor. *Energy Research & Social Science*. 6, 146-154.	17 in-depth interviews with 15 households. Cohort 1 in 2010 with 7 participants. Cohort 2 in 2013 with 10 participants including 2 from Cohort 1.	Edinburgh Dunbar England
Mould, K. & Baker, R. (2017). Documenting fuel poverty from the householders' perspective. *Energy & Social Sciences*. 31, 21-31.	Observational ethnographics 15 illustrative case studies - referral forms from Energy Advocacy Service	Renfrewshire
Sheriff, G. et al. (2019). *Fuel Poverty in the Western Isles: 10 Lessons, Interim Report of the Moving Together Project.* Sustainable Housing & Urban Studies Unit, University of Salford.	19 semi-structured interviews, with Tighean Innse Gall staff, householders, a member of NHS staff, and stakeholders involved in the Moving Together project. 2 stakeholder workshops held in Stornoway and Benbecula in Sept 2019.	Western Isles
Snell, C. et al. (2018). *Working Paper - Policy Pathways to Justice in Energy Efficiency*. UK Energy Research Centre	Qualitative interviews with: • stakeholders working on policy development, • practitioners involved in delivery of EE schemes, households eligible for or received EE	Scotland England, Wales, Northern Ireland
Trevisan, F. et al. (2014). *The recession, austerity measures and health*. GoWell.	GoWell project with 15 study communities 25 semi-structured interviews	Glasgow
Wright, F. (2004). Old and Cold: Older People and Policies Failing to Address Fuel Poverty. *Social Policy & Administration*. 38(5), 488-503.	Questionnaire & in-depth interview with sample of 58 older homeowners and 6 private renters	Scotland England, Wales

2. Lived experience research

In psychology, experience refers to internal interactions between the mind, body and behaviour. Awareness of such interactions turns experience into 'an experience'. Lived experience research is interested in how an individual experiences and makes sense of a given phenomenon and how they respond to these experiences (Willig & Stainton-Rogers 2010; McIntosh & Wright 2018). The 'lived' aspect of lived experience refers to way that people *live through* an experience with unfolding subjective states of consciousness, and to the way in which lived experience is rooted in the everyday.

Lived experience research has its origins in the field of phenomenology. Although it is not a fixed construct and continues to evolve in different ways in related fields and methodologies, it is underpinned by particular philosophical understandings, concerns and methodological features.

Key understandings:
- focussed on the individual, involving detailed examination of the research participant as a particular unique individual (idiographic focus)
- embodied - involving emotions, feelings, the physical body and senses, as well as thoughts
- situated - an individual's experience is context-specific and cannot be meaningfully separated from internal and external factors influencing that experience (psycho-social, cultural, historical, political, physical/environmental)
- does not produce objective truth about a phenomenon, separate from the individual's thoughts and feelings about it. An individual's account is not "incontestable evidence" (McIntosh & Wright 2018)
- the researcher cannot access the individual's experience itself. All attempts to understand other people's experience are "necessarily interpretative" in a double hermeneutic: the researcher is "trying to make sense of the participant trying to make sense of what is happening to them" (Smith, Flowers & Larkin 2009)

Key concerns:
- research approach that is empathetic, sensitive and responsive
- 'giving voice' to the research participants through a contextualised discussion of the research findings that draws on quotes from interview transcripts
- reflexivity - entanglement of the researcher with the participant and with the sense-making process is recognised and worked with

Methodological features:
- research participants are selected on the basis that they grant access to a particular perspective on the phenomena under study (purposive homogenous sampling)
- in-depth qualitative and inductive approach that engages with the complexity and nuance of situated lived experience e.g. through longitudinal and ethnographic methods such as in-depth interviews, diaries, and observation.

- close engagement with the details and particularities of the research participant's situated experience
- construction of a highly textured and detailed narrative about the research participants' experiences
- critical hermeneutic interpretation - people are not necessarily consciously aware of all the processes involved in their cognition and behaviour (Willig & Stainton-Rogers 2010). This means that taking the self-reported account at face value is most likely inadequate for gaining a deep understanding, and the researcher will want to go beyond a merely descriptive analysis to developing alternative narratives informed by existing theory.

Whilst lived experience research is focussed on the unique individual, it can reveal something meaningful and significant about the phenomenon under study. All lived experiences are subjective but they are also *intersubjective*: the individual is embedded in a social world where lives are talked about, shared meanings are constructed and commonalities in experience emerge (which may be referred to as the "shared typical"). Cross-case analysis is performed to identify convergences and divergences between cases. There is an idea that a particular constellation of feelings may characterise a certain historical era or generation of people, often referred to as a "structure of feeling". A related concept is "abiding affects" which refers to feelings that endure over shorter timescales and are specific to particular social groups that have a set of experiences in common (Hoggett 2009).

3. Further references

Hoggett, P. (2009). Collective feelings and the politics of affect and emotion. *International Journal of Work Organisation and Emotion*, 3(2).

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Willig, C. & Stainton-Rogers, W. (2010). Introduction. In C. Willig & W. Stainton-Rogers (Eds), *The SAGE Handbook of Qualitative Research in Psychology*. London: Sage, pp. 1-13.