

Energy poverty Training module

















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Overview of Module 1: Energy poverty

Learning objectives

- Become familiar with the characteristics of people living in energy poverty situation
- Be able to detect a energy poverty situation
- Learn the consequences of energy poverty
- Learn the difference between a energy poverty situation and a unhealthiness situation
- Be able to identify a security risk in a household

Contents

- What is energy poverty?
- Causes of energy poverty
- Consequences of energy poverty
- Identifying people in energy poverty situation

1 What is energy poverty ?

Adequate warmth, cooling, lighting and the energy to power appliances are essential services needed to guarantee a decent standard of living and health. Access to these energy services enables people to fulfil their potential and enhances social inclusion.

Energy poor households experience inadequate levels of these essential energy services, due to a combination of high energy expenditure, low household incomes, inefficient buildings and appliances, and specific household energy needs. Energy poverty can be seen as situation in which a household lacks a socially and materially necessitated level of energy services in the home.

Estimates show that in Europe 57 million people cannot keep their homes warm during winter, 104 million people cannot keep their homes comfortable during summer, 52 million people face delays in paying their energy bills and 10 million people need to walk more than 30 minutes to access to public transport facilities. All these people are affected by energy poverty in different formats.

Energy poverty is a distinct form of poverty associated with a range of adverse consequences for people's health and wellbeing – with respiratory and cardiac illnesses, and mental health, exacerbated due to low temperatures and stress associated with unaffordable energy bills. In fact, energy poverty has an indirect effect on many policy areas - including health, environment and productivity. Addressing energy poverty has the potential to bring multiple benefits, including less money spent by governments on health, reduced air pollution, better comfort and wellbeing, improved household budgets, and improved social inclusion.

2 Causes of energy poverty

Energy poverty may be caused by the convergence of the following key factors, which are often closely related with each other:

- Low income, which is often linked to general poverty
- High energy prices, including the use of relatively expensive fuel sources (depending on the country energy structure it can be electricity domestic fuel...)
- Poor energy efficiency of a home, e.g. through low levels of insulation and old or inefficient heating systems or appliances.

However, there are many other factors that contribute to energy poverty



Figure 1: Drivers of energy poverty (Thomson and Snell, 2016, p. 52)

3 Consequences of energy poverty

Impacts of energy poverty are numerous and diverse and it needs to be stressed that the presented impacts can often reinforce each other, leading to continuous vicious circles that can affect more generations.



Figure 2: Outcomes/effects of energy poverty (Thomson and Snell, 2016, p. 52)

Poor dwelling condition

When one cannot adequately warm the dwelling, several consequences can be noted on the dwelling. An under-heated dwelling will be wet. Also nn under-ventilated housing will be wet and unhealthy. Wet housing will deteriorate further, enable the development of mould and eventually lead to unsanitary conditions.

Indebtedness

As people on low incomes are faced with high energy bills, they often cannot keep up with the payments, resulting in accumulating debt. Payment policies of many energy companies can aggravate these problems, by issuing bills based on assessment of use, instead of based on real consumption. Households often get even into greater difficulties when they try to obtain expensive loans to pay the utility companies. In such situations, households prioritize energy use and tend to neglect other important items, such as food.

Cut offs and evictions

Debt for energy bills can lead to cut offs and evictions. When energy companies cut off supply of energy, households face increasing difficulties with their housing and risk eviction. In some Member States, people who have faced problems with paying energy bills are blacklisted, so that they cannot get new rental or utility contracts.

Deteriorating physical health

More and more studies show that energy poverty can have an important adverse impact on the health of people. Many adverse health and well-being impacts are either caused or

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worsened by cold weather and living in cold and damp homes. A cold environment is not by itself a factor of diseases, but generates a number of negative consequences. To maintain its internal temperature in a cold environment, the body has to work harder, which is a source of exhaustion. Cold promotes vasomotor reactions, sneezing, runny nose, which can encourage the transmission of pathogens. It is estimated that energy poverty leads to almost 40,000 excess winter deaths in 11 European countries each year. The key direct health impacts of cold weather and a cold home are: heart attack, stroke, cardiovascular diseases, arthitis, respiratory diseases, influenza, falls and injuries and hypothermia. Moreover, devices producing hot water, use of space heating, such as oil space heating, especially if they are old or defective, can cause carbon monoxide fumes which are harmful to health. Combined with poor ventilation housing, these fumes can expose to risks of intoxication, even lead to death.

Deteriorating psychological health and mental wellbeing

The link between a cold home and mental health can work in two directions. Mental illness can on one side make people more vulnerable to cold related harm. On the other side, living in a cold home can increase the risk of deteriorating mental health (e.g. anxiety, depression) or decrease mental wellbeing (e.g. more stress and worry about debt and finances).

Social marginalisation and isolation

Social relations and networks are key in improving negative health impacts of a cold home. People, who are well integrated in society, but energy vulnerable, are more likely to get help by others (practically, financially, advice and information). People can disconnect from the society because of difficulties caused by living in a cold home, or because of being ashamed of the consequences. The loneliness can have further adverse impacts on health, often also leading to failure to notice if someone slips from struggling to crisis.

Other relevant impacts

Energy poverty negatively affects children's educational achievements and also their emotional well-being and resilience. Energy poverty can also adversely impact employment, as energy poverty related health problems can lead to more sick leaves. Also if people are not able to have hot showers, or wash their clothes, this can affect their ability to get or stay in a job. Finally, the energy poverty impact can lead to further social and economic costs. UK studies show that impacts of energy poverty have a further enormous economic impact, such as the cost of treating winter-related diseases.

4 Identifying people in energy poverty

Households that are affected by energy poverty are unlikely to identify themselves as living in energy poverty, particularly as it is a stigmatising term. Instead, energy poverty should be identified using proxy indicators.

Signs to look for

Common signs of a household affected by energy poverty include:

- Low income
- Household struggling to pay energy and/or water bills
- Home cold in winter or very hot in summer
- Old dwelling that has not been renovated, (eg. deteriorated windows, no insulation)
- Inefficient heating or cooling system or complete lack thereof
- Lack of insulation
- Household living in one room or area of the house
- Condensation, damp and mould present in the house
- Household spending more time in warm (during cold weather) or cold (during hot weather) public areas, such as shopping centres or libraries
- Reluctance to have visitors
- Over-equipment or overheating/overcooling leading to high energy consumption
- Accommodation too large compared to occupants number, leading to high consumption
- A continued presence in the house, causing an higher consumption
- Old and inefficient appliances in the household

Questions to ask

Questions that can be asked:

- Do you have any of the following problems with your dwelling: a leaking roof, damp walls/floors/foundation, rot in window frames or floor?
- During the cold winter weather, can you normally keep comfortably warm in your home? Can you at least keep one room comfortably warm?
- Is your dwelling comfortably cool during summer time? Can you keep at least one room comfortably cool? Is the cooling system efficient enough to keep the dwelling cool?
- How easy or difficult is it for you to meet your heating/fuel costs?
- How easy or difficult is it for you to cover your electricity and water bills?
- Is your dwelling equipped with air conditioning?
- Are all of your appliances functional or would you need to fix or change some of them?

Indicators to look at

If we look at the indicators of energy poverty, it is often looked into from the perspective of the following key indicators:

- Inability to keep home adequately warm: This indictor captures self-reported ability/affordability to keep home adequately warm.
- Arrears on utility bills: This indicator includes some utility expenses other than energy, but it is still an important indicator because when households are not able to regularly pay their energy bills, they may be disconnected from supply.
- High share of energy expenditure in income: This indicator presents the population whose share of energy expenditure in income is more than twice the national median share.

Hidden energy poverty: This indicator presents the population whose absolute energy expenditure is below half the national median, that is, very low. This can be due to high energy efficiency, but it is also indicative of households dangerously under-consuming energy.

However, as often these indicators are not measured and reported, a number of other indicators can be used to describe energy poverty situations. There secondary indicators are relevant in the context of energy poverty, but are not directly indicators of energy poverty itself:

- Fuel prices: Average household prices per kWh generated from fuel oil, biomass, coal
- Household electricity prices: Electricity prices for household consumers, band DC 2500-5000 kWh/yr consumption, all taxes and levies included
- District heating prices: Average household prices per kWh from district heating
- Household gas prices: Natural gas prices for household consumers, band 20-200GJ consumption, all taxes and levies included
- Summertime issues: Summertime energy poverty, mostly related to difficulties in cooling of dwellings, is a rather under-explored aspect of energy poverty in Europe, yet becoming a more and more visible issue. This indicator shows share of population that can affirmatively answer questions, such as "Is the cooling system efficient enough to keep the dwelling cool?" and/or "Is the dwelling sufficiently insulated against the warm?"
- Equipped with air conditioning: Share of population living in a dwelling equipped with air conditioning facilities
- Dwelling comfortably warm during winter time: Share of population, based on question "Is the heating system efficient enough to keep the dwelling warm?" and "Is the dwelling sufficiently insulated against the cold?"
- Equipped with heating: Share of population living in a dwelling equipped with heating facilities
- Poverty risk: People at risk of poverty or social exclusion (% of population): This can be an interesting indicator to use. Nevertheless, energy poverty often affects people that might not consider themselves in poverty or might not even be counted on certain statistics. Many people who are not able to pay their bills are not users of social services.
- Excess winter mortality/deaths: Share of excess winter mortality/deaths
- Presence of leak, damp, rot: Share of population with leak, damp or rot in their dwelling

Literature

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Energy poverty

Training module



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- Identifying people in energy poverty situation





What is energy poverty?

- Energy poverty can be seen as situation in which a household lacks a socially and materially necessitated level of energy services in the home.
- People affected by energy povety experience inadequate levels of essential energy services, due to a combination of high energy expenditure, low household incomes, inefficient buildings and appliances, and specific household energy needs.





What is energy poverty?

Energy poverty occurs when a household cannot achieve the minimum level of domestic energy consumption required for satisfying basic needs and for an effective participation in society.

- Households affected by energy poverty may experience inadequate levels of essential energy services (e.g., indoor thermal discomfort), disproportionate energy expenses forcing them into undesirable decisions (e.g., the 'heat or eat' dilemma), or precarious access to energy (i.e., depending on unstable, insecure supply).
- Energy poverty results from structural inequalities in income distribution and access to quality housing, inadequate energy pricing and vulnerable consumer support policies, and diverse household energy needs and practices. It is a distinct form of material deprivation with an explicit gender dimension and demonstrated impacts on physical and mental health.





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Extent of energy poverty in Europe

Estimates show that in Europe

- 57 million people cannot keep their homes warm during winter,
- 104 million people cannot keep their homes comfortable during summer,
- 52 million people face delays in paying their energy bills and
- 10 million people need to walk more than 30 minutes to access to public transport facilities.

All these people are affected by energy poverty in different formats.





Causes of energy poverty

Key factors, which are often closely related with each other:

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- Poor energy efficiency of a home, e.g. through low levels of insulation and old or inefficient heating systems or appliances





Consequences of energy poverty

Impacts can often reinforce each other, leading to vicious circles for generations:

- Poor dwelling condition
- Indebtedness and financial issues
- Cut offs and evictions
- Deteriorating physical health
- Deteriorating psychological health and mental wellbeing
- Social marginalisation and isolation
- Other relevant impacts: poor educational achievements of children, poor emotional well-being and resilience; unemployment; social and economic costs





Identifying people in energy poverty

Common signs of a household affected by energy poverty include:

- Low income and struggling to pay energy and/or water bills
- Home cold in winter or very hot in summer
- Old dwelling that has not been renovated
- Household living in one room or area of the house or spending more time in warm public areas, such as shopping centres or libraries, during cold or hot weather
- Condensation, damp and mould present in the house
- Reluctance to have visitors
- Over-equipment or overheating leading to high energy consumption
- Accommodation too large compared to occupants, leading to high consumption
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THANK YOU !





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