

United Kingdom WP2-D6

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INTRODUCTION

The English House Condition Survey collects data on household income, required expenditure on all energy sources, the heating and insulation properties of the dwelling and the characteristics of the household occupants. This survey is the key source for data on fuel poverty in England based on the universally accepted definition of the need to spend more than 10% of household income in order to achieve an indoor temperature conducive to health and comfort.

Prior to the 1996 English House Condition Survey, data collection was limited and did not allow identification of fuel-poor households. In the absence of reliable data, fuel poverty campaigners used a series of proxy indicators to attempt to quantify the scale of the problem. Indicators employed were those that provided evidence of unaffordable energy costs and included:

- Households experiencing difficulty in paying energy bills – indicated by levels of fuel debt, disconnection from energy supply and use of prepayment gas and electricity meters
- Poor housing conditions indicative of cold and underheated properties – dampness and condensation
- The consequences of cold homes manifested in the scale of excess winter mortality in England

It is recognised that the United Kingdom is unique in collating data specifically on fuel poverty and that, in order to obtain meaningful comparisons with other partner countries, it is necessary to revert to common comparative data where feasible. The process to achieve this was to examine the most relevant data sets from the 'Living in Europe' source (SILC). The findings from this source would then be compared with findings from national surveys in order to verify (or contradict) the SILC data.

Clearly, not all national surveys cover exactly the same issues in the same way so there is inevitably some degree of disparity in the findings. Nevertheless the information does shed some light on the prevailing circumstances in the partner countries and does enable some conclusions to be drawn about the scale of energy-related problems. It should also be noted that the timing of the surveys can be crucial. From the opening of competitive energy markets in the mid-1990s trends in domestic energy prices were consistently downwards until 2003 when this trend began to reverse.

Fuel Poverty Indicators

In order to use the agreed fuel poverty formula utilised in England it is necessary to have detailed information on:

- Household income
- The energy efficiency characteristics of the dwelling – heating fuels used, efficiency of existing heating system and standards of thermal insulation

Whilst this level of information can be elicited from a major survey such as the English House Condition Survey, and subsequently supplemented and updated by interim modelling exercises, the information is of limited value in identifying individual households who encounter difficulty in meeting their energy costs. Before the English House Condition Survey data provided accurate assessments of the scale of fuel poverty a number of proxies were used for this purpose. These included data on the incidence of debt and disconnection and the use of prepayment meters and this type of information is still collated and published by the energy regulator, Ofgem, as a means of tracking trends in consumer problems with paying for fuel. The original data is now supplemented by additional indicators that are regularly updated and enable useful comparisons to be made. Data collated and published by Ofgem as part of its Social Action Plan reporting includes:

- Number of households in fuel poverty
- Number of customers using prepayment meters
- Domestic fuel debt
- Tariff and payment choice
- Disadvantaged customers and competition
- Disconnections
- Self-disconnections
- Effective energy efficiency advice
- Warm homes initiatives
- Customer satisfaction
- Prices

Variable HH050:

Ability to pay to keep home adequately warm

Comment

Data from the English House Condition Survey (EHCS) are not a perfect match with SILC data. The SILC data show lone parent households as the category most likely to experience cold homes whereas the EHCS suggests that the problem is most common amongst single pensioner households (a category that is surprisingly omitted from SILC data). That is not to say that SILC is inaccurate in this instance. Single parent families are more likely to be economically disadvantaged and are more likely than most other households to be fuel poor. In general, however, the SILC data appear to underestimate the extent of cold homes in the United Kingdom.

I : Analysis according to Household type

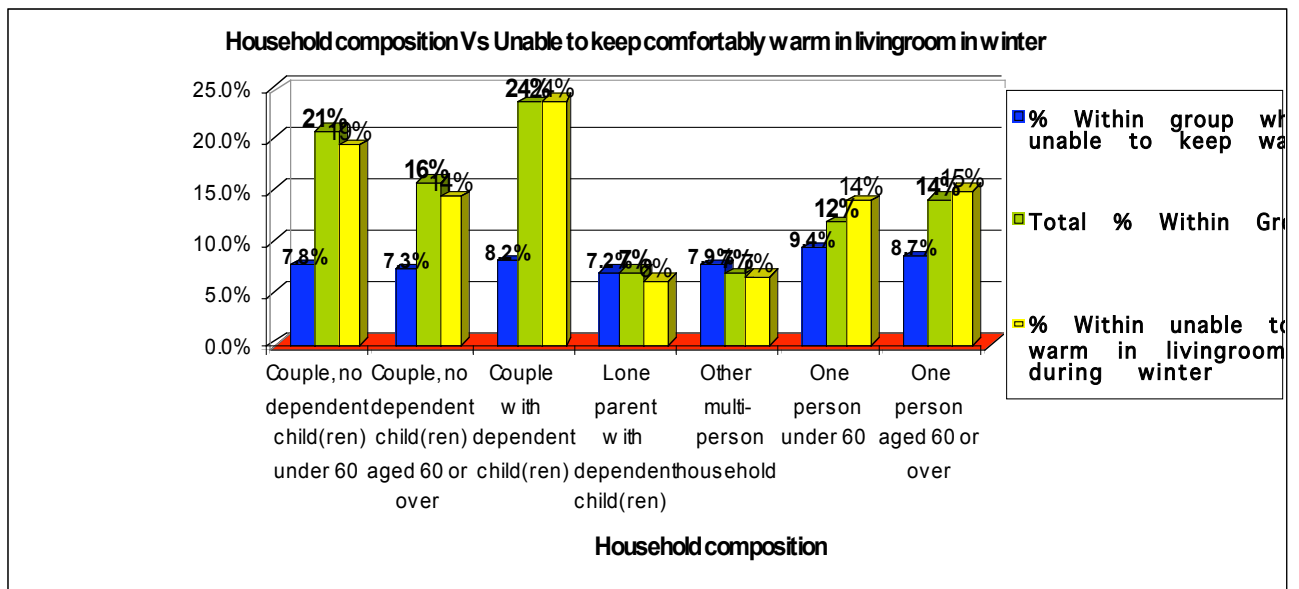


Chart: AI Household Composition Vs Unable to keep comfortably warm in living room in winter (source ?)

Able to keep accommodation warm	Yes	No
Base total answers	93.7	6.2
1 only person	90.5	9.0
2 adults, <65 years	95.1	4.8
2 adults, at least one > 65 years	95.6	4.4
Others without children	95.2	4.8
Mono parental with at least 1 child	87.8	12.2
2 adults, 1 child	96.7	3.3
2 adults, 2 children	96.7	3.3
2 adults, 3 children and	94.7	5.3
Others with children	94.0	6.0
Indeterminate	93.3	6.7

	Total % Within Group	% Within Household Composition	% Within Unable to keep warm in living room during winter
Couple, no dependent child(ren) under 60	20.1	7.8	19.4
Couple, no dependent child(ren) aged 60 or over	16.0	7.3	14.4
Couple with dependent child(ren)	23.6	8.2	23.9
Lone parent with dependent child(ren)	7.1	7.2	6.3
Other multi-person household	6.9	7.9	6.7
One person under 60	12.1	9.4	14.0
One person aged 60 or over	14.2	8.7	15.2
Total	100		100

Table A1: Household Composition Vs Unable to keep comfortably warm in living room during winter (Source: SILC ?)

The table below is derived from an analysis of household type, required fuel expenditure and household income.

Household composition - main analysis variable	% Households in Group		Number (1,000's) Households in Group		Total number of households (1,000s)	% Total fuel poor in group
	Not Fuel Poor	Fuel Poor	Not Fuel Poor	Fuel Poor		
couple, no dependent child(ren), under 60	97.4	2.6	4,092	108	4,200	8.7
couple, no dependent child(ren), aged 60 or over	96.0	4.0	3,223	134	3,356	10.8
couple with dependent child(ren)	98.9	1.1	4,872	54	4,926	4.4
lone parent with dependent child(ren)	93.9	6.1	1,398	91	1,490	7.4
other multi-person households	97.0	3.0	1,402	44	1,445	3.5
one person under 60	86.0	14.0	2,178	356	2,534	28.8
one person aged 60 or over	84.9	15.1	2,530	450	2,980	36.4
Total	94.1	5.9	19,695	1,236	20,931	100.0

Table A2: Household Composition Vs Unable to keep comfortably warm in living room during winter (Source: ?)

These data can then be compared with results from the use of fuel poverty proxies. It appears that the subjective data (self-reported inability to keep warm) is a poor match with the objective findings from the fuel poverty definition used in England. The mismatch is particularly evident in the case of couples with dependent children. There is greater consistency in identifying single person households of pensionable and non-pensionable age as likely to be in fuel poverty.

2 : Analysis according to Employment status

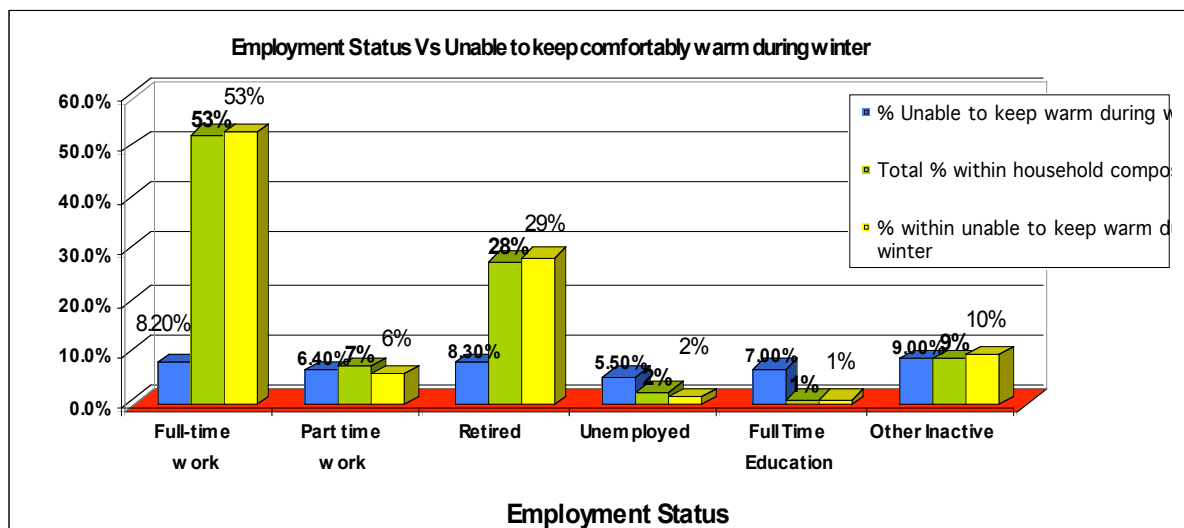


Chart A2: Employment Status Vs Unable to keep comfortably warm during winter (source ?)

	Total % Within Group	% Within employment status	% Within Unable to keep warm in living room during winter
Full-time work	52.6	8.2	53.4
Part time work	7.2	6.4	5.7
Retired	27.9	8.3	28.6
Unemployed	2.4	5.5	1.6
Full Time Education	1.1	7.0	1.0
Other Inactive	8.8	9.0	9.7
Total	100		100

Table A3 Employment status Vs Unable to keep comfortably warm in living room during winter (source ?)

Primary working status of HRP - 3 categories	% Households in Group		Number (1,000's) Households in Group		Total number of households (1,000s)	% Total fuel poor in group
	Not Fuel Poor	Fuel Poor	Not Fuel Poor	Fuel Poor		
Working	98.5	1.5	12,312	194	12,506	15.7
Unemployed	75.7	24.3	374	120	494	9.7
Inactive	88.4	11.6	7,008	923	7,931	74.6
Total	94.1	5.9	19,695	1,236	20,931	100.0

Table A4 Employment status Vs Fuel Poor Households (source ?)

Self-reported data (table A3 ?) on links between cold homes and employment status are surprising. It would be expected that unemployed households would have the highest, rather than one of the lowest, incidence of fuel poverty since their income is likely to be lowest of all (dependent on welfare benefits but without the fiscal support provided for pensioner households). One possible explanation is that a large number of economically inactive households may suffer from a permanent disability or long-term illness which entitles them to additional financial assistance. Students in full-time education face a similar level of risk of occupying cold homes but the temporary circumstances of their economic status and, possibly, poor living conditions generally removes them from any discussion of fuel poverty in the United Kingdom.

The fuel poverty analysis from the EHCS also contradicts the self-reported findings. Unemployed and other economically inactive households are the categories most likely to be fuel poor with a very small proportion of employed households reporting difficulty in keeping the home warm.

This is not an analysis that enables comparison with SILC findings.

3 : Analysis according to Degree of Urbanization

The English House Condition Survey findings on the urban/suburban/rural prevalence of cold homes is inconclusive. The conventional view of the geographical spread of fuel poverty in England is that it should be highest in rural areas for a number of reasons: lack of access to the cheapest domestic heating source (mains gas) and dwellings of older construction which are more likely to be of solid wall construction and therefore less likely to benefit from cavity wall insulation.

Neither survey reveals significant differences in the incidence of cold homes related to the urban/rural split of accommodation. The EHCS suggests rather lower levels of cold homes than SILC and also contradicts the finding that rural households are slightly more likely to experience cold homes.

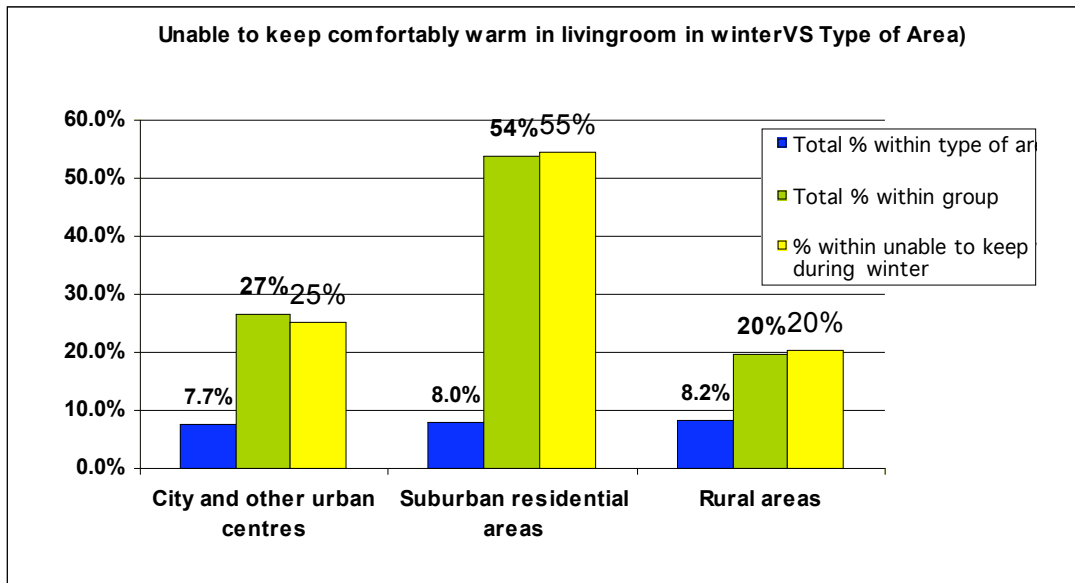


Chart A3: Type of Area Vs Unable to keep comfortably warm in living room during winter (Source : ??)

	Total % Within Group	% Within type of area	% Within Unable to keep warm in living room during winter
City and other urban centres	26	7.7	25.2
Suburban residential areas	54.2	8.0	54.6
Rural areas	19.8	8.2	20.2
Total	100		100

Table A5: Type of Area Vs Unable to keep comfortably warm in living room during winter (Source: EHCS)

Capacity to Keep Accommodation Warm Vs Type of Area	Yes	No
Total Respondents	89.1	10.9
Urban	89.3	10.7
Suburban	88.7	11.3
Rural	89.5	10.5
Other (Zone 4)	0.0	0.0

Table A6: Type of Area Vs Unable to keep comfortably warm in living room during winter (Source: SILC)

Type of area	% Households in Group		Number (1,000's) Households in Group		Total number of households (1,000s)	% Total fuel poor in group
	Not Fuel Poor	Fuel Poor	Not Fuel Poor	Fuel Poor		
urban	93.2	6.8	4,598	334	4,932	27.0
suburban	95.0	5.0	11,012	577	11,589	46.6
Rural	92.6	7.4	4,085	325	4,410	26.3
Total	94.1	5.9	19,695	1,236	20,931	100.0

Table A7: Type of Area Vs Fuel poor Households (Source ??)

Fuel poverty is fairly evenly distributed across rural, urban and suburban areas although the fuel poverty analysis does follow anticipated patterns. The more affluent suburbs have a lower incidence of fuel poverty than urban or rural areas. Fuel poverty in urban areas is generally considered a consequence of poor energy efficiency exacerbated by low household income; the same factors will apply to rural circumstances although the additional factor of expensive heating fuels (oil or LPG) are relevant.

4 : Analysis according to Dwelling Type

The English House Condition Survey data provides little information on cold homes by property type. It appears that occupation of a flat/maisonette is more likely to predispose to a cold home. However this would seem contrary to the conventional view that smaller urban properties are more affordable in terms of heating costs because of their generally smaller floor area. Consequently, inability to keep warm seems likely to relate to low household income – possibly reflected in the fact that many such properties will be occupied by social sector tenants, many of whom will be on a low household income. However the breakdown of dwelling types is too varied to allow informative comparisons although both surveys indicate that occupants of flats are more likely to have difficulty in maintaining a warm home.

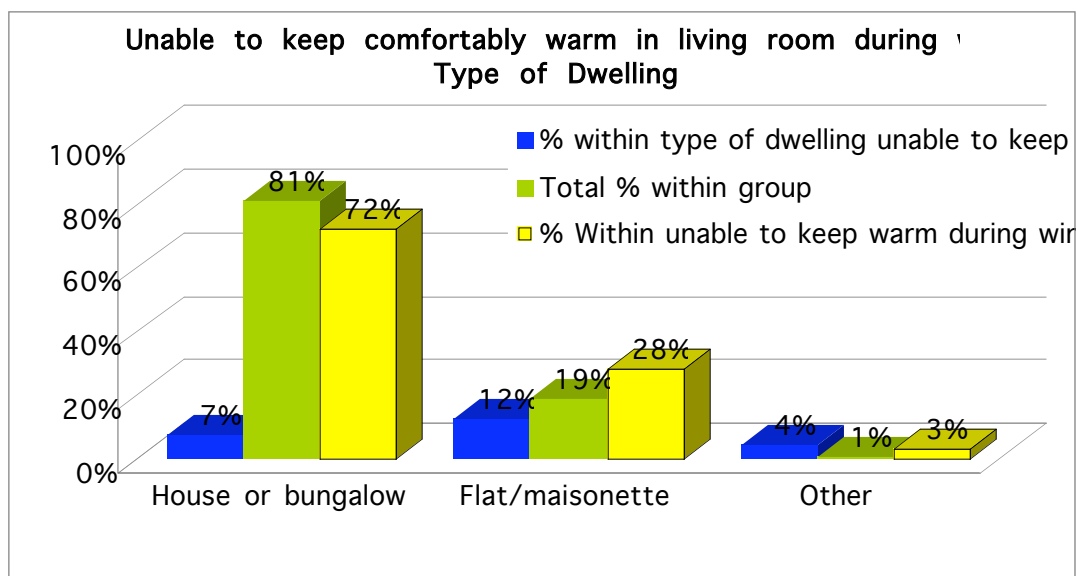


Chart A4: Type of Dwelling Vs Unable to keep comfortably warm in living room during winter (source ??)

	Total % Within Group	% Within Type of dwelling unable to keep warm	% Within Unable to keep warm in living room during winter
House or bungalow	80.9	7.2	71.7
Flat/maisonette	18.5	12.3	28.0
Other	.6	4.2	.3
Total	100		100

Dwelling Type Vs Capacity to keep the home warm	Yes	No
Total Respondents	94.1	5.7
Detached dwelling	97.0	2.8
Dwelling in group of properties	94.4	5.5
Flat in 1 building of - of 10 accommodation	89.0	11.0
Flat in 1 building of 10 accommodation and	91.9	7.6

Table A7 Type of Dwelling Vs Unable to keep comfortably warm in living room during winter (Source SILC)

Dwelling type (converted flats and non-residential grouped)	% Households in Group		Number (1,000's) Households in Group		Total number of households (1,000s)	% Total fuel poor in group
	Not Fuel Poor	Fuel Poor	Not Fuel Poor	Fuel Poor		
end terrace	91.7	8.3	1,865	169	2,034	13.6
mid terrace	94.4	5.6	3,919	234	4,154	19.0
semi-detached	93.9	6.1	6,188	399	6,587	32.3
detached	94.6	5.4	4,481	256	4,737	20.7
purpose built flat	95.8	4.2	2,691	119	2,810	9.6
converted flat	90.3	9.7	551	59	610	4.8
Total	94.1	5.9	19,695	1,236	20,931	100.0

Table A8: Dwelling Type Vs Fuel poor Households (Source ??)

Official fuel poverty data contradict the findings from the EHCS and appear logical. For example, occupants of end terrace properties live in less energy efficient properties, occupants of detached properties are more likely to be affluent and purpose built flats would be both more modern and more energy efficient than flat conversions.

No significant conclusion can be drawn from the relationship between the age of the property and the likelihood of a cold home. Thermal requirements within national Building Regulations were introduced in a basic form in 1964 and it may be assumed that the older the property the less likely it is to meet modern standards of housing quality. Since those occupying the oldest housing are seemingly least likely to report inability to afford a warm home there must be some doubt as to the value of self-reported and subjective views. This assumption is supported by objective analysis from the Fuel Poverty data derived from the English House Condition Survey which does identify a link between the age of the dwelling and the incidence of fuel poverty.

4b : Analysis according to Dwelling age

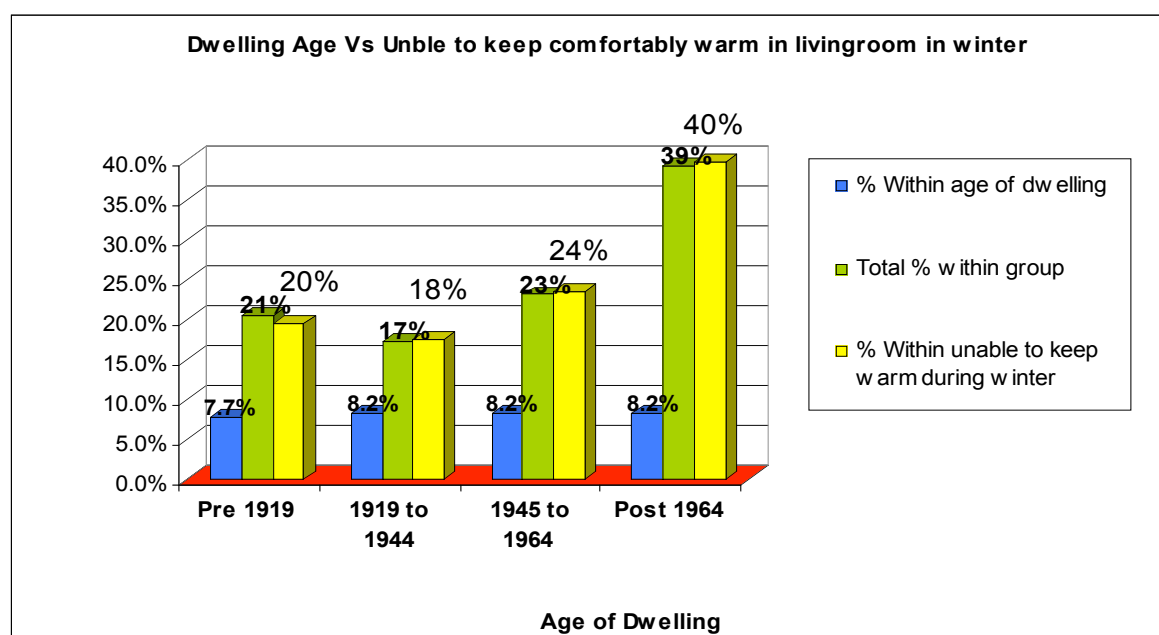


Chart A5: Dwelling Age Vs Unable to keep comfortably warm in living room during winter (source ??)

	Total % Within Group	% Within dwelling age	% Within Unable to keep warm in living room during winter
Pre 1919	20.5	7.7	19.5
1919 to 1944	17.2	8.2	17.5
1945 to 1964	23.1	8.2	23.5
Post 1964	39.2	8.2	39.6
Total	100		100

Table A9: Dwelling Age Vs Unable to keep comfortably warm during winter (source ??)

Age of dwelling (post 1975 dwellings grouped)	% Households in Group		Number (1,000's) Households in Group		Total number of households (1,000s)	% Total fuel poor in group
	Not Fuel Poor	Fuel Poor	Not Fuel Poor	Fuel Poor		
pre 1850	91.3	8.7	641	61	702	5.0
1850 to 1899	88.0	12.0	1,699	232	1,931	18.7
1900 to 1918	91.0	9.0	1,570	156	1,726	12.6
1919 to 1944	93.2	6.8	3,505	258	3,763	20.8
1945 to 1964	93.1	6.9	4,077	304	4,382	24.6
1965 to 1974	95.6	4.4	3,059	141	3,200	11.4
post 1975	98.4	1.6	5,144	84	5,228	6.8
Total	94.1	5.9	19,695	1,236	20,931	100.0

Table A10: Dwelling ages Vs Fuel poor Households (Source ??)

The more modern the dwelling the less likely that the occupant(s) will be fuel poor. The single exception is for pre-1850 properties where the assumption is that the occupants are highly affluent. Other than this exception the incidence of fuel poverty diminishes as properties become more modern.

No comparison with SILC data available.

5 : Analysis according to Total Disposal Household Income

Chart A6 illustrates the income distribution of English households taken from the EHCS 2004. Each income band was created using weekly income values of decile medians (before housing costs) and grossing them up to represent the annual income of households within each band.

As the chart below illustrates the income distribution between band 2 and 9 is relatively consistent, however there are a slightly higher proportion of households represented within the lowest and highest income bands.

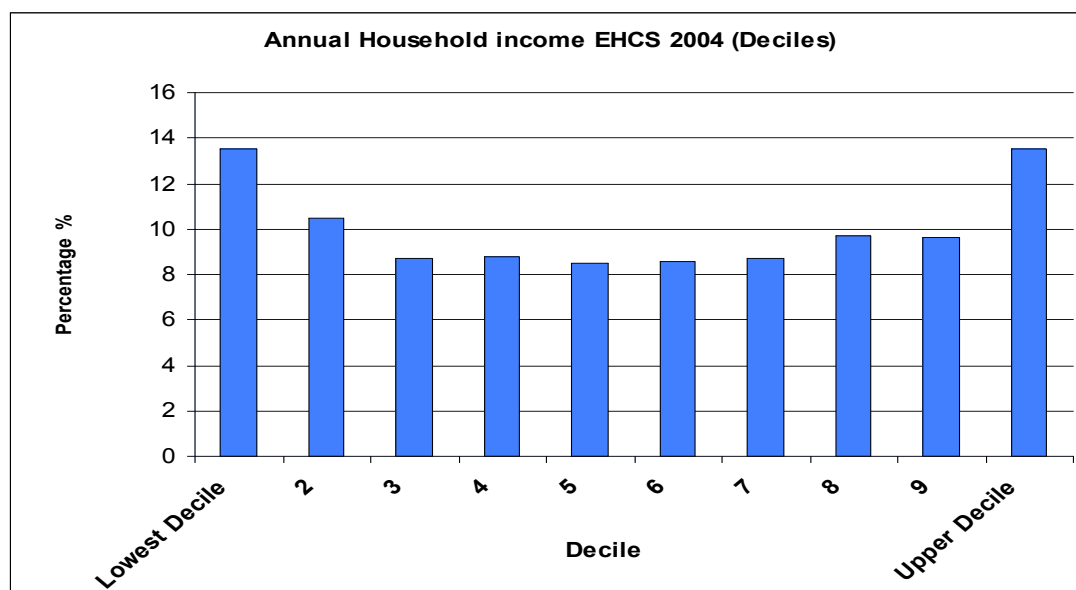


Chart A6 Income Distribution in England (EHCS 2004 Deciles)

Lowest Decile	13.5%
2	10.5%
3	8.7%
4	8.8%
5	8.8%
6	8.6%
7	8.7%
8	9.7%
9	9.6%
Highest Decile	14%

Table A11 Income Distribution (EHCS 2004 Deciles)

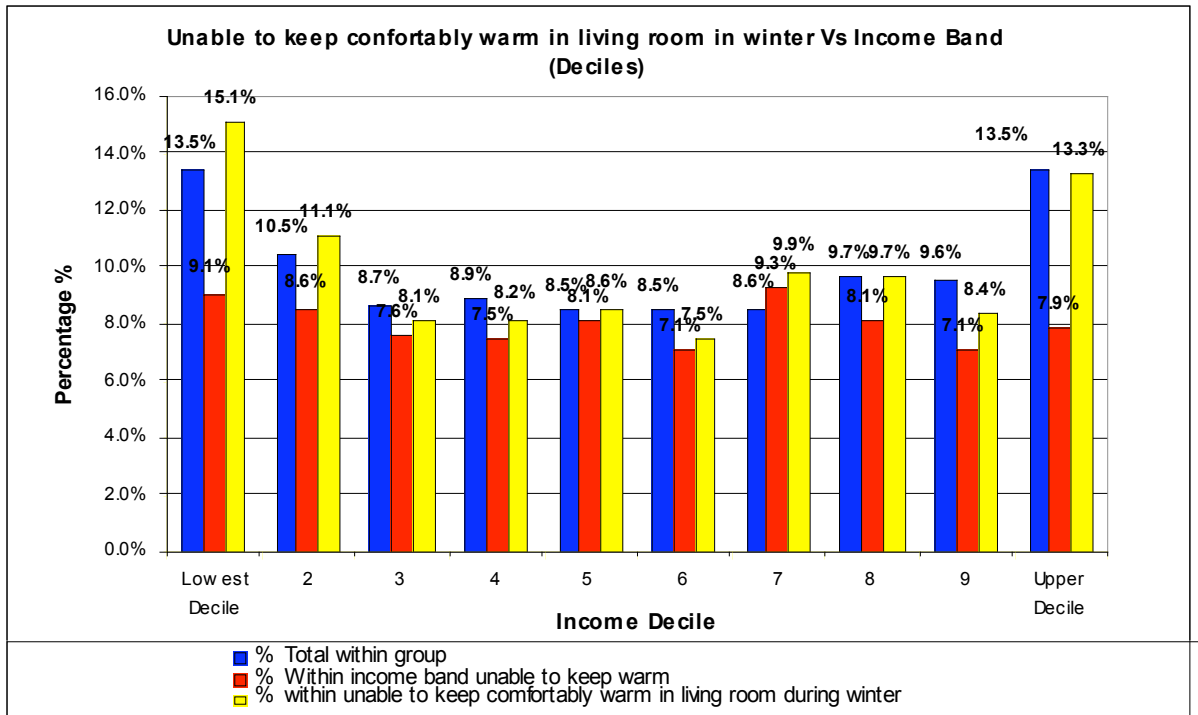


Chart A7 Unable to keep warm in living room in winter Vs Income (source ??)

Unable to keep warm in living room during winter Vs Income	% Total within decile	% Within income band unable to keep warm	% within Unable to keep warm
Lowest Decile	13.5%	9.1%	15.1%
2	10.5%	8.6%	11.1%
3	8.7%	7.6%	8.1%
4	8.9%	7.5%	8.2%
5	8.5%	8.1%	8.6%
6	8.5%	7.1%	7.5%
7	8.6%	9.3%	9.9%
8	9.7%	8.1%	9.7%
9	9.6%	7.1%	8.4%
Upper Decile	13.5%	7.9%	13.3%

Table A12 Unable to keep warm in living room during winter Vs Income (source ??)

SILC	Unable to keep Warm
Base total respondents	5.7
Lowest Income Decile	10.3
2	9.0
3	7.3
4	5.6
5	6.6
6	4.3
7	3.8
8	4.2
9	3.6
Highest Income Decile	2.5

Table A13 Unable to keep warm in living room during winter Vs Income (source SILC)

Variable HH040:

Leaking roof, damp walls/floors/foundation, or rot in window frames or floor

Comment

Consideration of dampness and/ or condensation in the housing stock generally seeks to distinguish between the two problems. Dampness is more generally understood as a matter of disrepair resulting from some problem with the fabric of the dwelling – penetrating damp through walls or leakage through the roof. In both cases the cause is generally external e.g. broken guttering. Condensation dampness, on the other hand, is generally thought of as a clearer manifestation of deprivation in that the dwelling is inadequately heated, insulated and ventilated.

Mildew rot and mould are more likely to result from poor levels of ventilation, heating and thermal insulation. The EHCS tables below generally show no clear pattern in terms of condensation dampness and household composition. SILC data indicate that the problem of damp housing is particularly concentrated in dwelling occupied by lone parents and families with children and that the problem is minimal in properties occupied by a household where at least one member is of pensionable age – this finding is not confirmed in the English House Condition Survey,

I : Analysis according to Household type

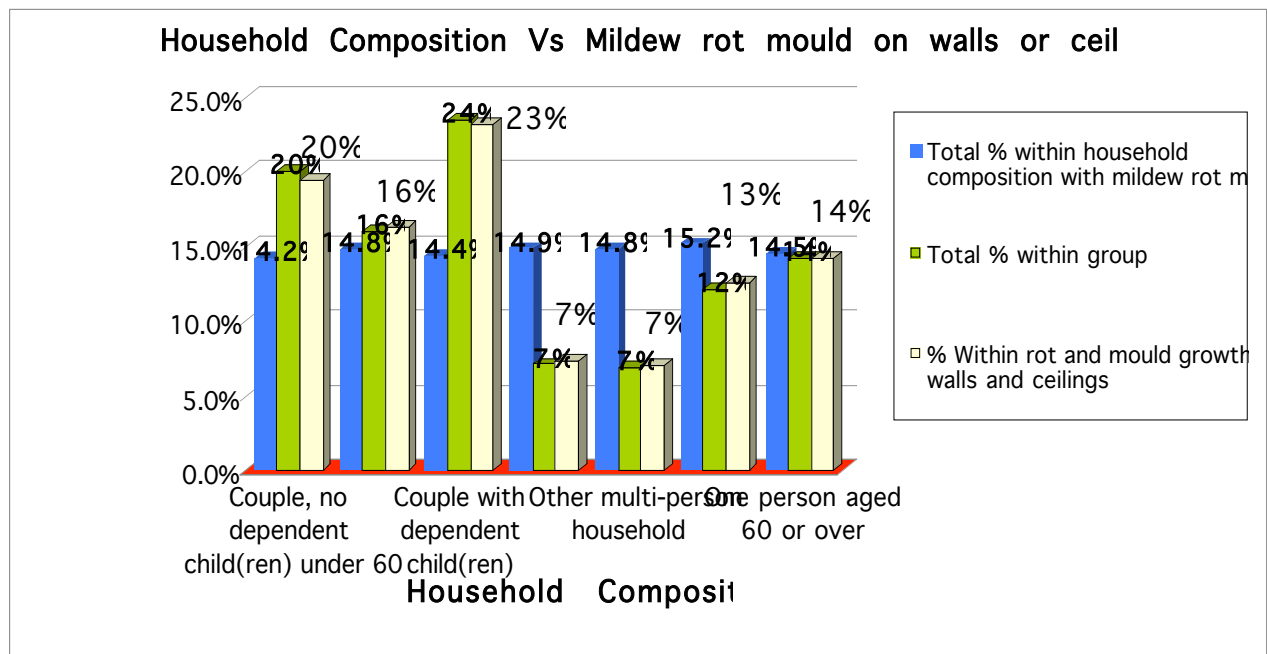


Chart BI Household Composition Vs Mildew Rot or Mould on Walls or Ceilings – Yes
(Source ??)

Problems Leaking Roof or damp Walls and Floors	Yes	No
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Total Responses	13.4	86.5
1 Person Household	12.0	87.9
2 Adults < 65	12.9	87.1
2 adults, at least one > 65 years	6.4	93.4
Others without children	16.6	83.4
Mono parental with at least 1 child	27.6	72.3
2 adults, 1 child	16.1	83.9
2 adults, 2 children	13.0	87.0
2 adults, 3 children and	17.1	82.9
Others with children	13.9	86.1
Indeterminate	12.6	87.4

Table BI Household Composition Vs Mildew Rot or Mould on Walls or Ceilings – Yes
(Source ??)

Table BI Household Composition Vs Mildew Rot or Mould on Walls or Ceilings
(Source: SILC)

	Total % Within Group	% Within Household Composition	% Within Rot and mould growth on Walls or Ceilings
Couple, no dependent child(ren) under 60	20.1	14.2	19.5
Couple, no dependent child(ren) aged 60 or over	16.0	14.8	16.3
Couple with dependent child(ren)	23.6	14.4	23.2
Lone parent with dependent child(ren)	7.1	14.9	7.3
Other multi-person household	6.9	14.8	7.0
One person under 60	12.1	15.2	12.6
One person aged 60 or over	14.2	14.5	14.2
Total	100		100

There is no strong correlation between apparent economic disadvantage and condensation dampness. The scale of the problem is broadly similar across all household types from those in full time work through those who are unemployed to those who are retired.

2 : Analysis according to Employment status

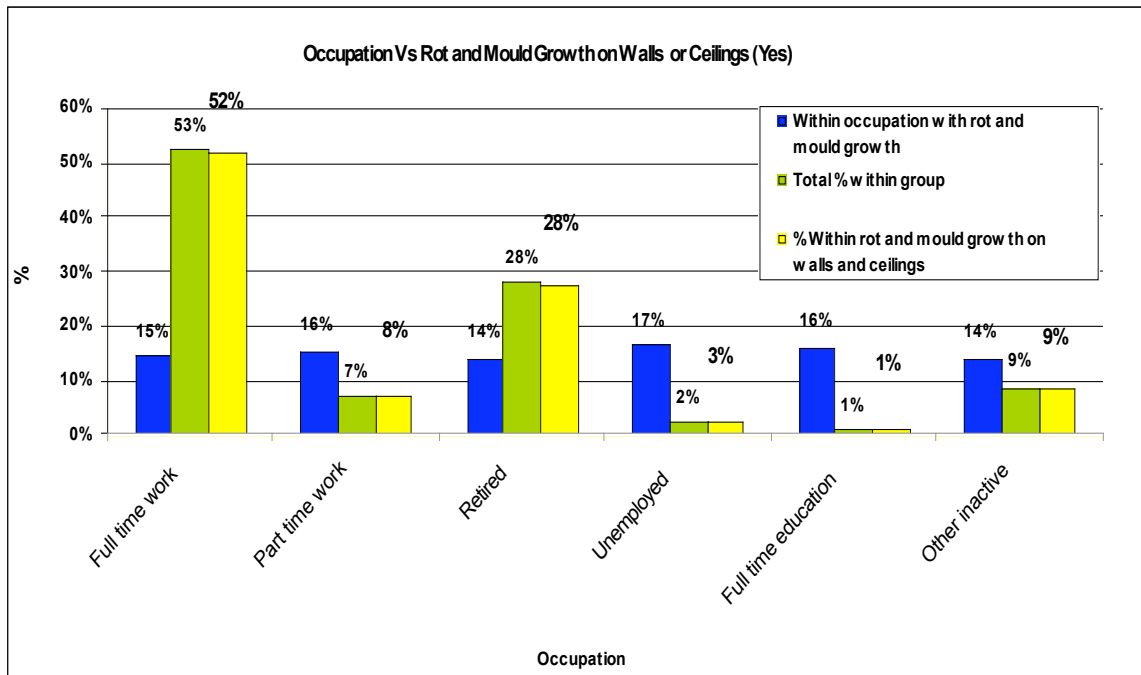


Chart B2 Occupation Vs Rot and Mould Growth on Walls or Ceilings (Yes)

	Total % Within Group	% Within Occupation	% Within Rot and mould growth on Walls or Ceilings
Full-time work	52.6	14.5	52.1
Part time work	7.2	15.5	7.6
Retired	27.9	14.4	27.7
Unemployed	2.4	16.5	2.7
Full Time Education	1.1	16.4	1.3
Other Inactive	8.8	14.4	8.6
	100		100

Table B2 Occupation Vs Rot and Mould Growth on Walls or Ceilings – Yes (Source ??)

No comparison available with SILC.

3 : Analysis according to Degree of Urbanization

In terms of geographical location there are no clear distinctions reported relating to the incidence of dampness condensation. The proportion of households reporting some form of problem is high – around 1 in 6 or 7 households but the report does not clarify the extent of the problem which could range from minor inconvenience to a significant health threat. There is a close match between the findings from the English House Condition Survey and SILC data.

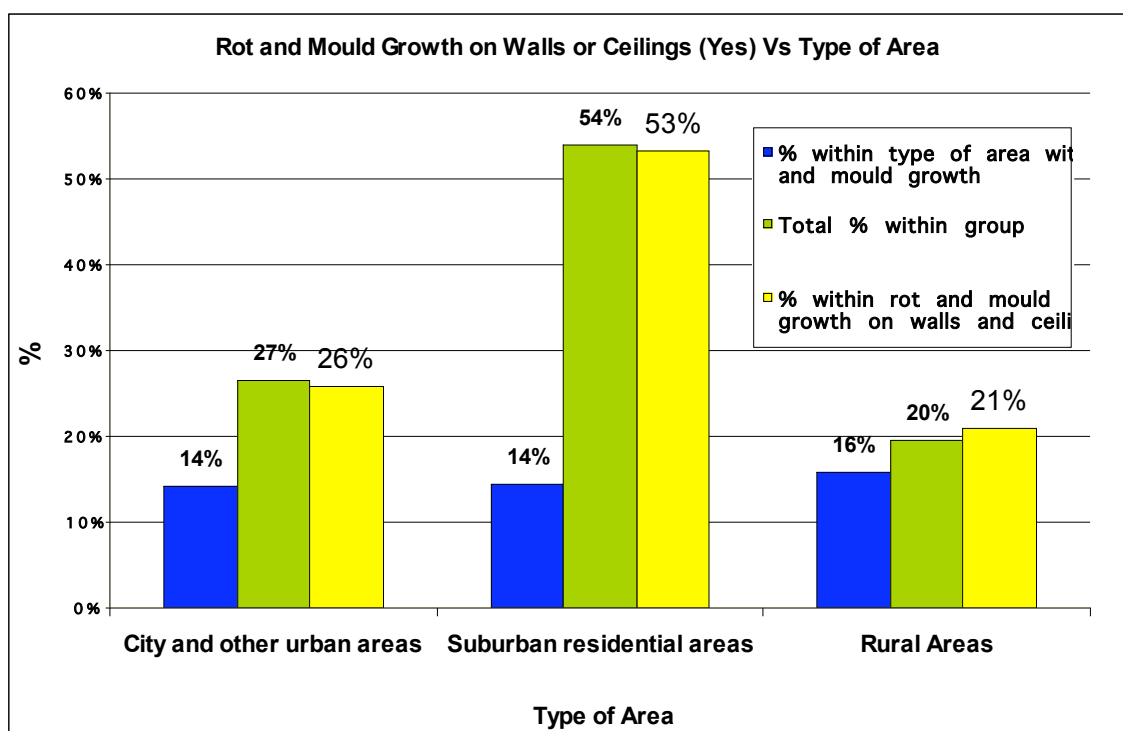


Chart B3 Type of Area Vs Rot and Mould Growth on Walls or Ceilings – Yes (source ??)

	Total % Within Group	% Within Type of Area	% Within Rot and Mould Growth on Walls or Ceilings
City and other urban centres	26.0	14.2	25.8
Suburban residential areas	54.2	14.4	53.2
Rural areas	19.8	15.7	21.0
	100		100

Table B3 Type of Area Vs Rot and Mould Growth on Walls or Ceilings – Yes (Source ??)

Problems with the roof, walls floors Vs Type of Area	YES	NO
Total Respondents	13.4	86.5
Urban	13.8	86.2
Sub-urban	11.2	88.8
Rural	16.1	83.9
Other (Zone 4)	13.5	86.5

Table B3 Type of Area Vs Rot and Mould Growth on Walls or Ceilings (Source: SILC)

4 : Analysis according to Dwelling Type

The English House Condition Survey identifies no significant predisposition to rot and mould growth by dwelling type. The scale of the problem is similar to that found in the house/bungalow category in English housing (the great majority of the housing stock). The EHCS does not support SILC findings that a higher proportion of flats/apartments are more likely to suffer from rot and/or mould.

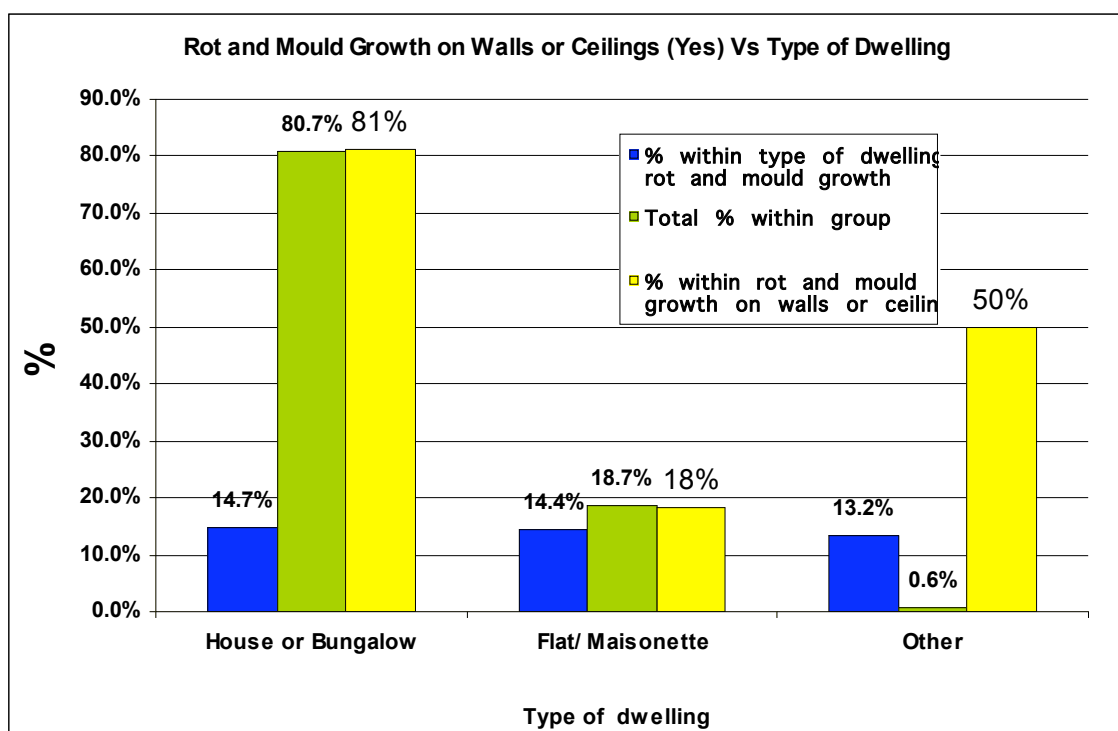


Chart B4 Type of Dwelling Vs Rot and Mould Growth on Walls or Ceilings (Source ??)

	Total % Within Group	% Within Type of Dwelling	% Within Rot and Mould Growth on Walls or Ceilings
House or bungalow	80.9	14.7	81.1
Flat/maisonette	18.5	14.4	18.4
Other	.6	13.2	.5
	100		

Table B4 Type of Dwelling Vs Rot and Mould Growth on Walls or Ceilings (Source ??)

	Yes	No
Total Respondents	13.4	86.5
Isolated dwellings	8.4	91.6
Dwellings in groups of accommodation	13.1	86.8
Flat in 1 building of - of 10 accommodation	20.5	79.5
Flat in 1 building of 10 accommodation and	19.6	80.3
Others	20.7	79.3

Table B4 Dwelling Type Vs Problems with roof, walls or floors (Source: SILC)

4b : Analysis according to Dwelling age

Dwelling age is not identified as a significant factor predisposing to rot and mould. The level of problem is consistent across dwellings of all ages. This finding contradicts expectations which would anticipate a higher incidence of problems in older dwellings. No comparison with SILC data is available here.

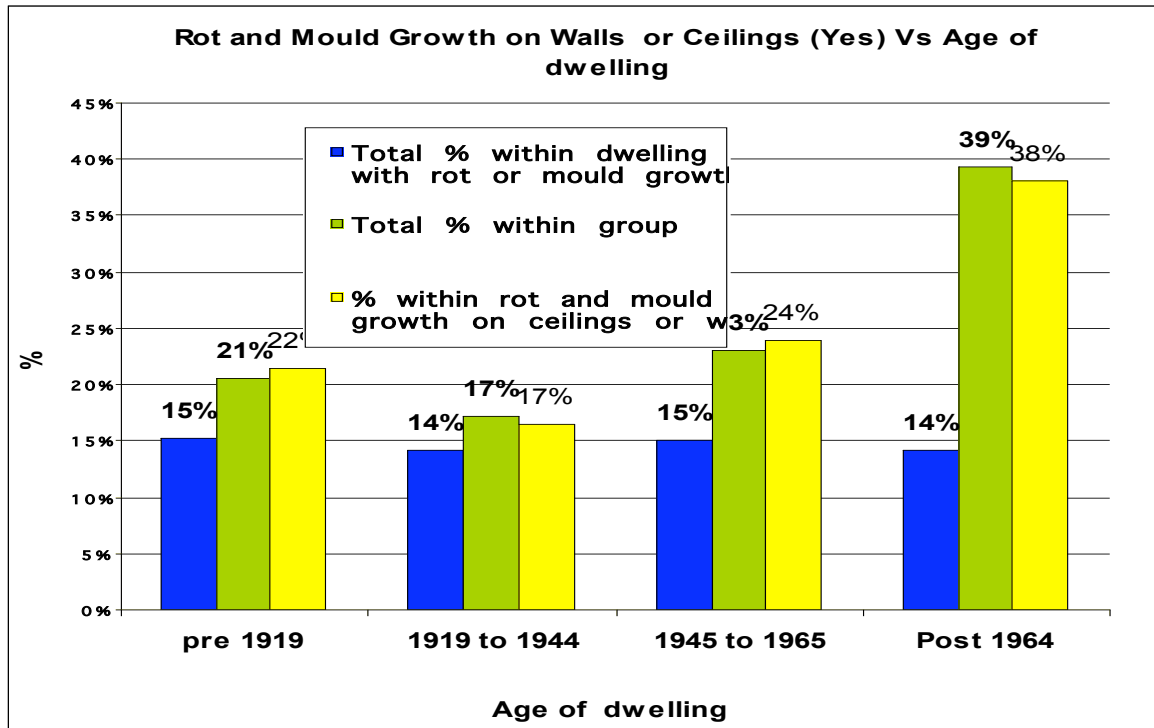


Chart B5 Age of Dwelling Vs Rot and Mould Growth on Walls or Ceilings

	Total % Within Group	% Within Dwelling Age	% Within Rot and Mould Growth on Ceilings or Walls
Pre 1919	20.5	15.3	21.5
1919 to 1944	17.2	14.1	16.5
1945 to 1964	23.1	15.1	23.9
Post 1964	39.2	14.1	38.1
	100		100

Table B5 Age of Dwelling Vs Rot and Mould Growth on Walls or Ceilings

5 : Analysis according to Total Disposal Household Income

Chart A6 illustrates the income distribution of English households taken from the EHCS 2004. Each income band was created using weekly income values of decile medians (before housing costs) and grossing them up to represent the annual income of households within each band.

As the chart below illustrates the income distribution between band 2 and 9 is relatively consistent, however there are a slightly higher proportion of households represented within the lowest and highest income bands.

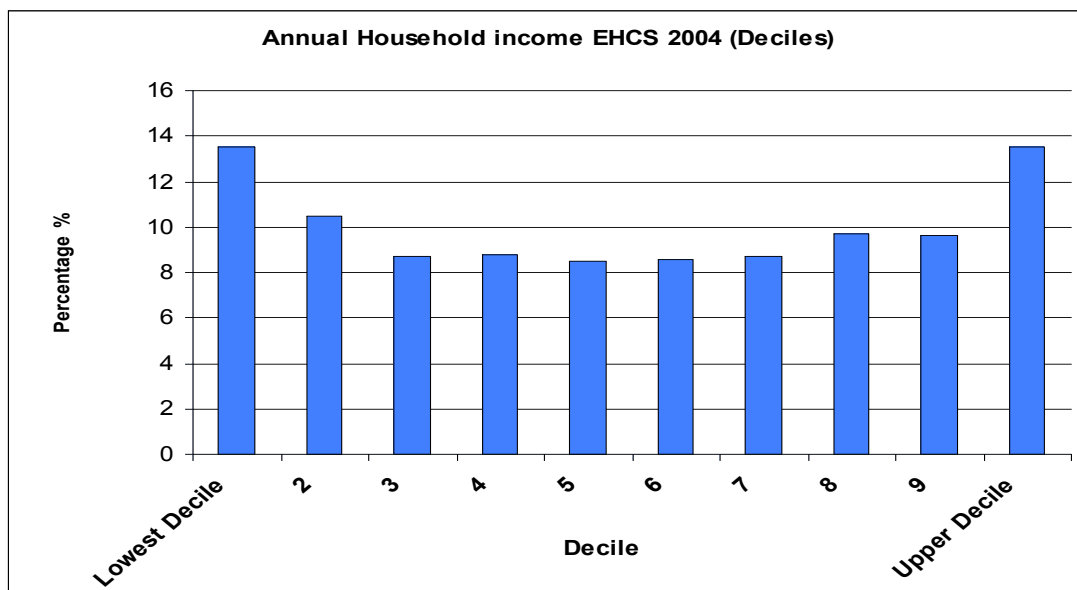


Chart A6 Income Distribution in England (EHCS 2004 Deciles)

Lowest Decile	13.5%
2	10.5%
3	8.7%
4	8.8%
5	8.8%
6	8.6%
7	8.7%
8	9.7%
9	9.6%
Highest Decile	14%

Table A11 Income Distribution (EHCS 2004 Deciles)

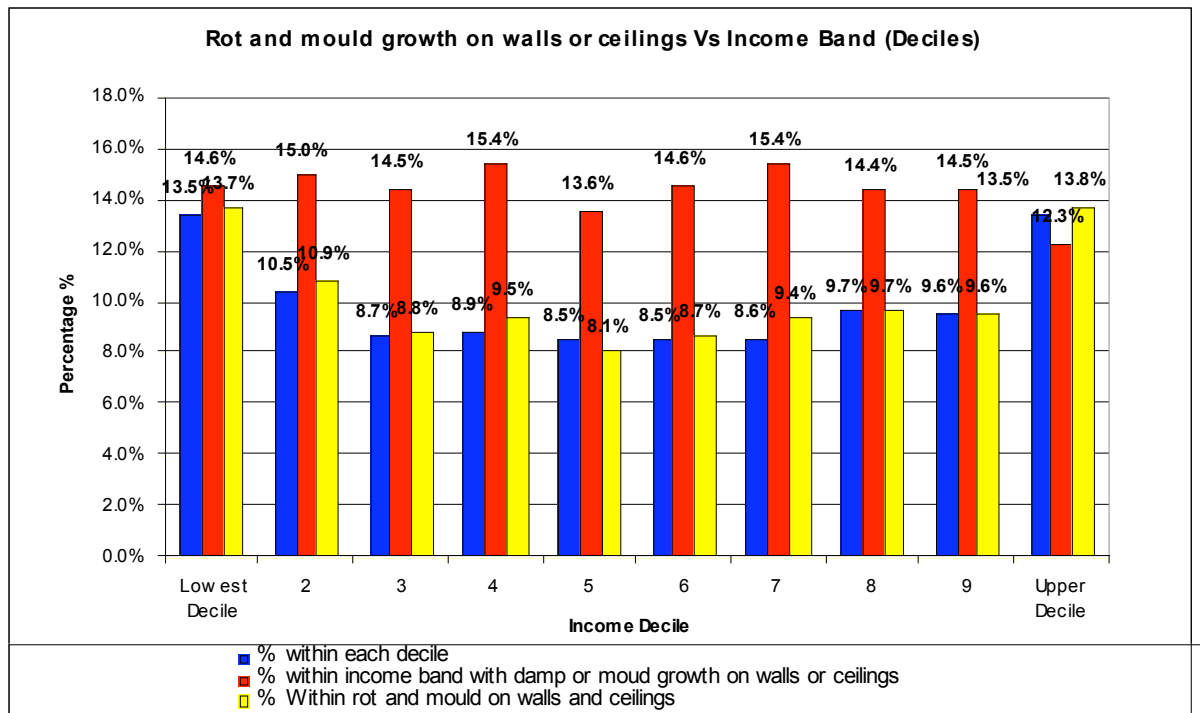


Chart C3 Rot and mould growth on walls and ceilings Vs Income (Source ??)

Rot and Mould Growth on Walls or Ceilings Vs Income (Yes)	Total % within group	% Within income banded	% within rot and mould growth on walls or ceilings
Lowest Decile	13.5%	14.6%	13.7%
2	10.5%	15.0%	10.9%
3	8.7%	14.5%	8.8%
4	8.9%	15.4%	9.5%
5	8.5%	13.6%	8.1%
6	8.5%	14.6%	8.7%
7	8.6%	15.4%	9.4%
8	9.7%	14.4%	9.7%
9	9.6%	14.5%	9.6%
Upper Decile	13.5%	12.3%	13.8%

Table C3 Rot and mould growth on walls and ceilings Vs Income (Source ??)

	Yes
Total	13.4
Lowest Income Decile	16.3
2	13.1
3	15.8
4	14.2
5	15.3
6	15.2
7	12.6
8	11.4
9	11.1
Highest Income Decile	9.5

Table C3 Rot and mould growth on walls and ceilings Vs Income (Source SILC)

Variable HS020:

Arrears on utility bills (electricity, water, gas)

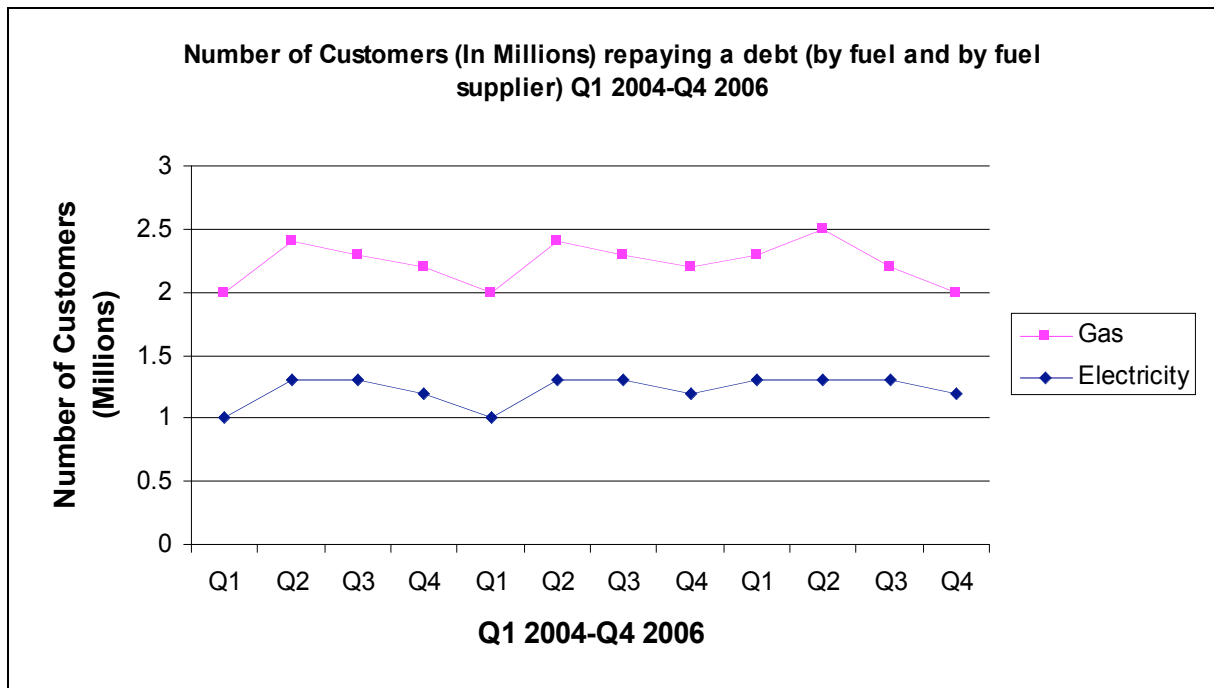
The main source of information on indebted energy consumers is data collected by Ofgem, the energy regulatory body for Great Britain. These data are collected on a three-monthly basis from the main energy supply companies and have the significant advantage of being both current and detailed. The analysis provided by the energy suppliers illustrates average levels of household debt for gas and electricity by main payment method. The main failing of the data is the absence of any additional socio-economic analysis of indebted consumers. Consequently there is no information on the profile of customers in debt, their income level or their household characteristics.

There are some additional sources of supplementary information including, for example the regular Families and Children Study. Although limited in its scope, since it excludes all households without dependent children, the study does allow some degree of debt analysis by household characteristic and socio-economic status. It is evident that lone parent status and low income are key factors in energy utility debt.

Families in arrears by source of debt and family characteristics¹		
Family type	Electricity bill	Gas bill
Lone parent	6%	8%
Lone mother	6%	8%
Lone father	3%	10%
couple	2%	2%
Income quintile		
Lowest quintile	6%	9%
Second quintile	5%	5%
Third quintile	2%	3%
Fourth quintile	1%	1%
Highest quintile	-%	-%
All families	3%	3%

There does tend to be a seasonal trend in debt figures with more customers falling into debt following the winter months as energy usage increases. As can be seen from (Graph 1) below the number of customers in debt has been relatively stable over recent years. Graph 1 below illustrates that in 2006 gas debt followed a different pattern with a high peak in Q2 followed by a drop in the last 2 quarters.

¹ Families and Children in Britain: Findings from the 2002 Families and Children Study (FACS), Research Report No. 206, National Centre for Social Research and the Department for Work and Pensions, 2004



**Graph I – Number of customers repaying a debt (Gas & Electricity)
(Source Ofgem 2006)**

SILC Data

It is clear that, in this instance, the SILC data do not reflect the reality of utility debt in the United Kingdom. The data suggest that there is a minimal incidence of households in the United Kingdom who are unable to pay gas and/or electricity bills. The objective data collated by Ofgem categorically contradict this survey finding.

Ability to keep comfortably warm in winter

The English House Condition Survey questionnaire contains a variable asking households about their ability to keep comfortably warm during the winter period. The imprecise nature of this question can lead to some degree of confusion since it could refer to the capacity of the heating system to provide sufficient warmth or to the ability of the household to afford the level of expenditure required to maintain a warm and healthy living environment. However, the specific survey question does relate to the household's ability to pay for their heating needs.

Chart A1 considers the socio-economic circumstances of those unable to afford to keep the home warm during winter. As would be expected, a high proportion of households experiencing difficulty in maintaining a warm home comprise single pensioner households. This would be expected for a number of reasons: the low household income of a single retired person, the need for a higher standard of warmth in the elderly population and the tendency to spend longer periods of the day in the home.

Perhaps more surprising is the even higher proportion of single adults under retirement age who cannot keep their home warm. It may be surmised that this group includes many households on extremely low income since the social security system is less generous to

households who are deemed not to be vulnerable. Across other household types there is a fairly even distribution of 'unaffordable warmth'.

Final Conclusion - Fuel Poverty Profile

The Profile of Occupants of Cold Homes

A number of factors contribute to the distribution of cold dwellings. Clearly the most important factor is expected to be low household income but there are a number of associated issues including the location of the dwelling and the type and age of the property. Rural dwellers are more likely to have no access to mains gas (the most economic method of whole-house heating) they are also more likely to live in a property that is not amenable to the most cost-effective thermal insulation measures e.g. dwellings with solid walls.

In general the most financially disadvantaged are likely to be older households of pensionable age and low-income families with children, particularly lone parent families.

The age of the dwelling also seems likely to be an important factor since many older properties will pre-date the introduction of any Building Regulations relating to thermal efficiency.

Table E1 – Fuel Poverty By Region

The table below illustrates there are currently 2.5 million households in fuel poverty in England. As the table illustrates there tends to be a higher proportion of fuel poor households in the North of England than the south.

Fuel Poverty Region	Number of Fuel Poor Households 2003	% of Households In Fuel Poverty 2003	Number of Fuel Poor Households 2007	% of Households In Fuel Poverty 2007
North East	95,000	8.7	208,000	19.1
Yorkshire & Humber	180,000	8.6	336,000	15.9
West Midlands	146,000	6.7	298,000	13.6
South West	139,000	6.5	263,000	12.1
East Midlands	112,000	6.3	237,000	13.4
North West	178,000	6.3	403,000	14.1
Eastern	115,000	5.1	241,000	10.5
South East	149,000	4.4	267,000	7.9
London	108,000	3.6	225,000	7.4
England	1,220,000	5.9	2,478,000	11.8

Table E2 – Fuel Poverty By Household Composition (Source: NEA)

As the table illustrates it's perhaps no surprise that single households aged 60 or over have the highest (34%) of households in fuel poverty, followed by single household under 60 (23%).

Fuel Poverty By Household Composition	In Fuel Poverty 2004 (nhh)	In Fuel Poverty Oct 2007 (nhh)	% HH In Fuel Poverty October 2007	Ratio 2004:2007
One Person under 60	355,993	569,940	23%	1.6
Couple, no dependent child(ren) under 60	107,697	181,637	7%	1.7
One person aged 60 or over	450,059	849,954	34%	1.9
Couple, no dependent child(ren) aged 60 or over	133,624	348,407	14%	2.6
Lone Parent with dependent child(ren)	91,426	250,278	10%	2.7
Couple with dependent child(ren)	53,930	151,158	6%	2.8
Other multi-person household	43,542	126,378	5%	2.9
All households	1,236,271	2,477,752		

Source: NEA

Profile (Other Facts)

- 26% of households in England have solid walls this equates to approximately 5,560,000 households
- 13% of households in England have no access to gas, this equates to approximately: 2,730,000 households.
- 3.9% of households in England have no access to mains gas and have solid walls. These households are deemed hardest to treat.

Characteristics of fuel poor households:

Fuel poor households are not a homogenous group. It is therefore sometimes necessary to consider the particular needs of specific groups within the 'fuel poverty population'. There are a number of ways in which different sub groups can be identified:

Fuel Poverty By household type:

The Government refers to 'vulnerable households': older households, families with young children (particularly lone parents) and disabled households on low incomes.

'Non vulnerable or healthy adult' households: single or couple working age households on low incomes with no children or who are not disabled.

Households from minority ethnic groups are also more likely to live in fuel poverty.

Fuel Poverty By fuel consumption:

- Households that ration fuel use and therefore prone to cold and/or damp homes (more common among moderate/low income older households)
- Households that consumer adequate amounts of fuel but either go into fuel debt or cut back on other essential necessities (most common amongst low income families)
- Households that both ration fuel use and cut back on other essential necessities (most common among very low income older households).

Fuel Poverty By property characteristics

Low income households living in properties with adequate energy efficiency standards (some of these may still live in fuel poverty in which case non energy efficiency interventions are required e.g. income maximisation measures)

Low income households living in properties that can be cost effectively improved to adequate energy efficiency standards e.g a SAP 65.

Low income households living in properties which are hard to treat at low cost, i.e. off-gas, solid walled, non traditional construction.

By fuel tariff (use of more expensive fuel payment methods):

Prepayment meter (less common among older households, more common among low income families and working age single households)