



Occupant Behaviour as a Fourth Driver of Fuel Poverty?

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Background: Current approach to Fuel Poverty

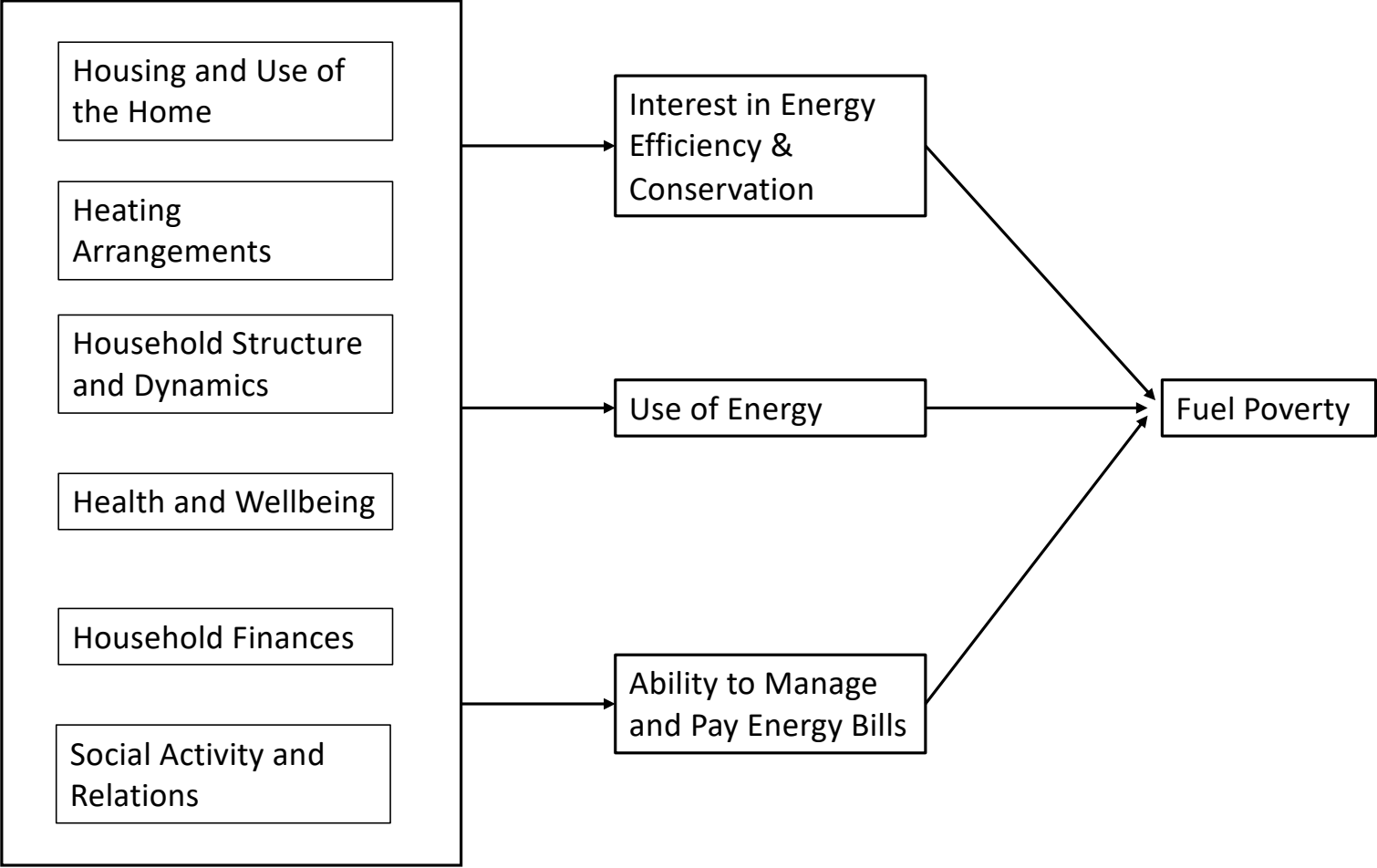
- Fuel poverty (FP) definitions and policy have relied upon a conceptual model comprising **3 drivers**: energy efficiency, energy prices and incomes (using modelled, required expenditures rather than actuals).
- **Occupant behaviour** has mainly featured in two ways:
 - Under-occupancy may result in a reduction in the required heating regime.
 - Any relative ineffectiveness of improvement works has been ascribed to either occupant inability to operate a new heating system or to the 'rebound effect'.
- More recently, an interest in '**vulnerability**' has been mainly interpreted in terms of the *posterior risks* of cold homes to older people or those with long-term health conditions or disabilities.

Pros and Cons of the Current Approach

- Enables targeting of assistance, though not very well.
- Identifies areas for policy intervention.
- Provides a framework for monitoring policy progress.

But:

- Does not aid understanding of all the causes of FP.
- Simplifies the complexity of people's circumstances.
- Removes human agency from the phenomenon: occupant behaviour as it affects household composition, context, circumstances and capability.
- Omits consideration of vulnerability in respect of *anterior susceptibilities* to fuel poverty arising from a multitude of factors, including poor mental health, use of the home, household instability etc. – vulnerability as a cause and consequence of circumstances and behaviour



GoWell Study

- A study of housing-led regeneration.
- Four waves of a household survey in 15 deprived communities over 10 years.
- Nested longitudinal sample of 3,477 cases of wave-paired interviews.
- Experiential measure of fuel poverty:
 - “How often do you find it difficult to meet the cost of gas, electricity or other fuel bills?”
 - Divided into (1) experience difficulty occasionally or often vs (2) never.
- Logistic regression modelling to predict:
 - Movements into fuel poverty over time (2,387 cases with no difficulty at T1)
 - Movements out of fuel poverty over time (910 cases with difficulty at T1)
- Independent variables (measured at T1, T2 or change from T1 to T2) were entered in four stages/domains: household characteristics; housing; employment and finances; social behaviours.

Results

- The experiential measure of FP was fairly stable from 2006 to 2011, and then fell. The official measure of FP was 7% higher by 2015.
- Around 60% of those with reported FP at T1, moved out of it by T2. Of those without FP at T1, around 20% entered FP by T2. The experience of FP fluctuates.
- Reported housing improvement works had no effect on movements into FP.
- Moving home lowered the odds of moving out of FP.
- Factors associated with higher odds of entering FP included: single parents; remaining out of work; having stress, anxiety or depression at T1 or T2; acquiring a long-term illness in the household; having difficulty paying for food, rent or council tax; infrequent contact (<monthly) with wider family members.
- Factors associated with higher odds of leaving FP included: older person households; living in a house; having no other budgeting difficulties; having regular contact with wider family members; not walking in the neighbourhood regularly; having a circulatory health condition at both time points; not having stress, anxiety or depression at either time point. No effect from gaining employment.

Policy and Research Implications

- Housing-led regeneration on its own, or as currently implemented, is not an effective FP intervention.
- Examine relations between technical and experiential measures of FP.
- Study movements out of FP as well as into FP.
- Consider vulnerability to and from FP, as both a cause and a consequence of individual and household behaviour, incorporating both health & wellbeing and social factors.
- Recognise occupant behaviour as a fourth driver of FP, affecting household composition, context, circumstances and capability.
- Identify the problem as “warmth and energy deprivation”, recognising the desired state as a product of affordability and attainability (justice and capability).



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