**Hansen, A.R., Gram-Hanssen, K. and Knudsen, H.N. (2017). How building design and technologies influence heat-related habits. *Building Research & Information.***

**Supplemental data**

**Appendix 1: UserTEC survey questionnaire**

The UserTEC survey was conducted during winter 2015 in February and March. The questionnaire was written in Danish and was only translated into English to give partners of the UserTEC an idea of the questions asked. The translation was performed by a student assistant and not by a professional. Consequently, the translated questionnaire is not comprehensively translated, but still it gives an idea of the questions asked.

Headlines and text written in *italics* or underlined are added to facilitate understanding of the questions/variables, and therefore not a part of the questionnaire. The text written in **bold** are names of variables. The results are displayed in percentages with the number in parentheses. The number before the response categories is the coding of the variable, which is the original coding made by Statistics Denmark who conducted the survey. Missing values are not given any code here but, in Stata, these are recorded as:

Percentage is calculated from all observations including missing values. This means that all tables sum to 1,216. The numbers in this questionnaire follow Danish (and European) punctuation, which means that decimal commas (,) and thousand point (.) are used.

Background

|  |  |  |
| --- | --- | --- |
|  | 1. Telephone | 2. Web |
| Data collection method[[1]](#footnote-1) |  |  |

First, some background questions

|  |  |  |
| --- | --- | --- |
|  | 1. Male | 2. Female |
| Are you male or female? |  |  |

|  |  |
| --- | --- |
| What is your year of birth? |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1. Rent | 2. Owner-occupied | 9. Don't know |
| Do you rent or own your home |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1. Before 1981 | 2. 1981-2006 | 3. After 2006 | 4. Don't know | Missing |
| In what year was the residence built? |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1. Yes | 2. No | Missing |
| Does your home have a basement? |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1. Yes | 2. No | Missing |
| Do you live with a spouse or partner? |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1. Yes | 2. No | Missing |
| Do you have children living at home who are over 10 years old? |  |  |  |

Blok A – Heating

Now there is some question about the heating in your home.

Heating in the living room

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Radiator with Thermostat | 2. Radiator without Thermostat | 3. Under-floor heating with thermostat | 4. Other (please note which type) | Missing |
| **A1\_11** | Which type of heating is to be found in the living-room? (1ST OPTION) [[2]](#footnote-2) |  |  |  |  |  |
| **A1\_12** | Which type of heating is to be found in the living-room? (2ND OPTION) |  |  |  |  |  |
| **A1\_13** | Which type of heating is to be found in the living-room? (3RD OPTION) |  |  |  |  |  |
| **A1\_14** | Which type of heating is to be found in the living-room? (4TH OPTION) |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Which type of heating is to be found in the living-room? | | 1. selected | 2. not selected |
| **A1\_11\_ELM\_1**[[3]](#footnote-3) | Radiator with Thermostat |  |  |
| **A1\_11\_ELM\_2** | Radiator without Thermostat |  |  |
| **A1\_11\_ELM\_3** | Under-floor heating with thermostat |  |  |
| **A1\_11\_ELM\_4** | Other |  |  |
| **A1\_1a** | Other – please note witch type | *Open response* | |

Heating in Bedroom

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Radiator with Thermostat | 2 Radiator without Thermostat | 3. Under-floor heating with thermostat | 4. Other – please note witch type | Missing |
| **A1\_21** | Which type of heating is to be found in the bedroom? (1ST OPTION) [[4]](#footnote-4) |  |  |  |  |  |
| **A1\_22** | Which type of heating is to be found in the bedroom? (2ND OPTION) |  |  |  |  |  |
| **A1\_23** | Which type of heating is to be found in the bedroom? (3RD OPTION) |  |  |  |  |  |
| **A1\_24** | Which type of heating is to be found in the bedroom? (4TH OPTION) |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Which type of heating is to be found in the bedroom? | | 1. Selected | 2. Not Selected |
| **A1\_21\_ELM\_1**[[5]](#footnote-5) | Radiator with Thermostat |  |  |
| **A1\_21\_ELM\_2** | Radiator without Thermostat |  |  |
| **A1\_21\_ELM\_3** | Under-floor heating with thermostat |  |  |
| **A1\_21\_ELM\_4** | Other |  |  |
| **A1\_2a** | Please note which type | *Open response* | |

Heating in the Bathroom

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Radiator with Thermostat | 2. Radiator without Thermostat | 3. Under-floor heating with thermostat | 4. Other – please note witch type | Missing |
| **A1\_31** | Which type of heating is to be found in the bathroom? (1ST OPTION) [[6]](#footnote-6) |  |  |  |  |  |
| **A1\_32** | Which type of heating is to be found in the bathroom? (2ND OPTION) |  |  |  |  |  |
| **A1\_33** | Which type of heating is to be found in the bathroom? (3RD OPTION) |  |  |  |  |  |
| **A1\_34** | Which type of heating is to be found in the bathroom? (4TH OPTION) |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Which type of heating is to be found in the bathroom | | 1. selected | 2. not selected |
| **A1\_31\_ELM\_1**[[7]](#footnote-7) | Radiator with Thermostat |  |  |
| **A1\_31\_ELM\_2** | Radiator without Thermostat |  |  |
| **A1\_31\_ELM\_3** | Under-floor heating with thermostat |  |  |
| **A1\_31\_ELM\_4** | Other |  |  |
| **A1\_3a** | Please note which type | *Open response* | |

The next question you need to answer based on what you do - not what other residents do

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Several times a day | 2. Once or several times weekly | 3. Once or several times monthly | 4. I haven’t regulated the heat | 5. Unable to regulate the heat | Missing |
| **A2\_1** | How often during the last month have you adjusted to heat on the radiators or underfloor heating in the living room? |  |  |  |  |  |  |
| **A2\_2** | How often during the last month have you adjusted to heat on the radiators or underfloor heating in the bedroom? |  |  |  |  |  |  |
| **A2\_3** | How often during the last month have you adjusted to heat on the radiators or underfloor heating in the bath room?? |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | 4. Not possible or relevant | Missing |
| **A3\_0** | Was there any time last summer, the heat was completely off in the house, but still have hot water in the taps? |  |  |  |  |  |
| **A3\_1** | Was there any time last summer the heat was completely shut down in the living room ? |  |  |  |  |  |
| **A3\_2** | Was there any time last summer the heat was completely shut down in the Bedroom? |  |  |  |  |  |
| **A3\_3** | Was there any time last summer the heat was completely shut down in the Bathroom? |  |  |  |  |  |
| **A3\_4** | Was there any time last summer the heat was completely shut down in the basement? |  |  |  |  |  |

Blok B - Indoor temperature

Questions related to the indoor temperature in your home.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | Missing |
| **B4\_1** | Is there a thermometer to measure the inside temperature in the house? |  |  |  |
| **B4\_2** | Is there fairly the same temperature level in all heated rooms? |  |  |  |
| **B4\_3** | Are you trying to keep different temperatures in different heated rooms? |  |  |  |

*B4\_3a1 til B4\_3a0 is only answered by respondents who answered B4\_3 = 1. Yes*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. To be able to sleep chillier | 2. To save heat in the room, I / we live in | 3. Other | Missing |
| **B4\_3a1** | Why do you or I different temperatures in different rooms? *(1st option)* [[8]](#footnote-8) |  |  |  |  |
| **B4\_3a2** | Why do you or I different temperatures in different rooms ?*(2nd option)* |  |  |  |  |
| **B4\_3a3** | Why do you or I different temperatures in different rooms? *(3rd option)* |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Why do you or I different temperatures in different rooms? | | 1. Selected | 2. Not Selected |
| **B4\_3a1\_ELM\_1** | To be able to sleep chillier |  |  |
| **B4\_3a1\_ELM\_2** | To save heat in the room, I / we live in |  |  |
| **B4\_3a1\_ELM\_3** | Other |  |  |
| **B4\_3a0** | Other – please note | *Open response* | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Colder | 2. the same | 3. warmer | 4. Don’t know | Missing |
| **B5** | In winter - How do you feel your indoor temperature compared to others? |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. below 20° Celsius | 2. 20°- 22° Celsius | 3. above 22° Celsius | 4. Don’t know | Missing |
| **B6\_1** | What temperature do you assess that generally is in the living room during the winter? |  |  |  |  |  |
| **B6\_2** | What temperature do you assess that generally is in the bedroom during the winter? |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| **B7** | How many rooms for residential is not heated in your home this winter? If all rooms heated, write 0 | *Count* |

*B7\_1 is only answered by respondents who answered =1. Yes*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. Partly | 3. No | 4. Don’t know | Missing |
| **B7\_1** | Is your basement heated during winter? |  |  |  |  |  |

The next question you need to answer based on what you do - not what other residents do

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | Missing |
| **B8** | Do you regulate the heat more often in the autumn months than in the winter months, for example by adjusting the thermostats? |  |  |  |  |

Do you have the ability to regulate the heat in your home, so it can be used more efficiently through large cooling of the district heating water?

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. not at all | 2 To a minor extent | 3 To some extent | 4. To a large extent | 5. Don’t know | 6. Doesn't have district heating | Missing |
| **B10** | To what degree do you adjust the heat in your home in a way that ensures as much cooling of the district heating water as possible? |  |  |  |  |  |  |  |

Blok C – D

Now comes some questions about your clothing.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | Missing |
| **C11\_1** | Have you wear warmer clothes indoors during the winter compared to the rest of the year? |  |  |  |
| **C11\_2** | Do you use more often slippers or thick socks during the winter? |  |  |  |
| **C11\_3** | Do you more frequently use a blanket during the winter when you sit quietly? |  |  |  |

|  |  |  |
| --- | --- | --- |
| C12 | Which of the following descriptions best match the clothes you are wearing right now? (check only one) |  |
| 1. Short-sleeved shirt or T-shirt | |  |
| 2. Long sleeved shirt or blouse | |  |
| 3. Warm hoodie on other clothes | |  |
| 4. Other | |  |
| Missing | |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | Missing |
| **C12\_1** | Are you wearing undershirt? |  |  |  |  |

Blok D - district heating consumption

Questions related to district heating consumption.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Doesn't have district heating | 4. Don’t know | Missing |
| **D13** | Do you know roughly how much consumption of district heating your home has |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | Missing |
| **D14** | Do you have the ability to monitor your district heating consumption thug web portal or app on your smartphone? |  |  |  |  |

The next question you need to answer based on what you do - not what other residents do

*D14\_a is only answered by respondents who answered D14=1. Yes*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. One or several times a month | 2. Several times a year | 3. Once a year | 4. Less frequently or never | Missing |
| **D14\_a** | How often do you read your district heating consumption on the web or smartphone? |  |  |  |  |  |

D14\_b til D14\_d *is only answered by respondents who answered* D14=2. No or 3. don’t know

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 9. don’t know | Missing |
| **D14\_b** | Are you interested in being able to follow your heat consumption on the Internet |  |  |  |  |
| **D14\_c** | Are you interested in being able to follow your heat consumption on your smartphone? |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Once or several times monthly | 2. Several times yearly | 3. Once a year | 4. Less frequently or never | 5. Doesn’t have a consumption meter in the house | 9. Don’t know | Missing |
| **D14\_d** | How often do you read the district heating consumption meter in the house? |  |  |  |  |  |  |  |

Blok E - Ventilation

Questions regarding your airing and ventilation of your home.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | Missing |
| **E16** | Is there mechanical ventilation with heat recovery in the housing so that the heat is transferred from the air drawn out of the house, to the cool air that is blown into the house from the outside? |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | Missing |
| **E17** | Is there extractor in the kitchen? |  |  |  |

*E17\_a til E17\_c is only answered by respondents who answered E17=1. Yes*

|  |  |  |
| --- | --- | --- |
| **E17\_a** | How many days a week do you used the extractor in the kitchen? | *Count* |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Less than 15 minutes | 2. 15-29 minutes | 3. 30 minutes to 1 hour | 4. More than 1 hour | 5. don’t know | Missing |
| **E17\_aa** | How many minutes per. Today do you use extractor? Average |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Never | 2. rarely | 3. often | 4. always | 9. don’t know | Missing |
| **E17\_b** | How often is there cooked hot food at the stove without extractor switched on? |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 9. Don’t Know | Missing |
| **E17\_c** | Used extractor in situations other than the cooking? |  |  |  |  |
| **E17\_cc** | Which case? | *Open response* | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | Missing |
| **E18** | Is there mechanical ventilation or mechanical extraction in bathrooms, toilet or utility room? |  |  |  |  |

*E18\_antal til E19 is only answered by respondents who answered E18=1. Yes*

|  |  |  |
| --- | --- | --- |
| E18\_antal | In how many rooms is there mechanical ventilation or mechanical extraction except possible extractor in the kitchen? | *Count* |
| **E18\_a** | In how many of these rooms is ventilation or mechanical extraction controlled automatically? For example by moisture, light or activity | *Count* |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Less than 15 minutes | 2. 15-29 minutes | 3. 30 minutes to 1 hour | 4. More than 1 hour | 5. don’t know | Missing |
| **E19** | How long is the mechanical ventilation or mechanical extraction operating daily? If there are several rooms with mechanical ventilation or exhaust, please indicate the total time. |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | Missing |
| **E20** | Is there one or more windows in the house slightly open all the time during winter? |  |  |  |  |
| **E21** | One or more airing grates, airing valve or damper always open? |  |  |  |  |

Blok F – Ventilation

Try to think back to how you in the last weeks have aired out in your home. Just answer based on what you do by yourself.

We are aware that the vent can have multiple reasons. But try if you can separate reasons apart.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| How often do you have in the past two weeks aired by opening windows or doors | | 1. Several times daily | 2. Once a day | 3. Several times weekly | 4. Once a week | 5. Once every 2 weeks | 6. Not at all | 9. Don’t know | Missing |
| **F22\_1\_1** | … to get fresh air? |  |  |  |  |  |  |  |  |
| **F22\_2** | ... in relation to cooking? |  |  |  |  |  |  |  |  |
| **F22\_3** | ... in relation to bathing? |  |  |  |  |  |  |  |  |
| **F22\_9** | ... in order to lower the inside temperature? |  |  |  |  |  |  |  |  |
| **F22\_7** | ... because there was dew on the windows?? |  |  |  |  |  |  |  |  |
| **F22\_8** | ... during cleaning? |  |  |  |  |  |  |  |  |
| **F22\_9\_1** | ... related with smoking? |  |  |  |  |  |  |  |  |
| **F22\_9\_2** | ... to shut animal in and out? |  |  |  |  |  |  |  |  |
| **F22\_10** | ... related allergy in the family? |  |  |  |  |  |  |  |  |

*In the following questions battery, the Respondent replied only from the types of airing the respondent has specified in the previous question battery. For example, respondents is only ask to answer F23\_1\_1 if they have answered 1, 2, 3 eller 4 in question F22\_1\_1.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| How long are you airing out | | | | | | | |
|  | | 1. Under 5 minutes | 2. 5-14 minutes | 3. 15-29 minutes | 4. 30 minutes or more | 9. Don’t know | Missing |
| **F23\_1\_1** | … to get fresh air? |  |  |  |  |  |  |
| **F23\_2** | ... in relation to cooking? |  |  |  |  |  |  |
| **F23\_3** | ... in relation to bathing? |  |  |  |  |  |  |
| **F23\_9** | ... in order to lower the inside temperature? |  |  |  |  |  |  |
| **F23\_7** | ... because there was dew on the windows?? |  |  |  |  |  |  |
| **F23\_8** | ... during cleaning? |  |  |  |  |  |  |
| **F23\_9\_1** | ... related with smoking? |  |  |  |  |  |  |
| **F23\_9\_2** | ... to shut animal in and out? |  |  |  |  |  |  |
| **F23\_10** | ... related allergy in the family? |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 1. By opening doors | 2. By opening windows | 3. By opening both | 4. No airing | 9. Don’t know | Missing |
| **F24\_a\_1** | How do you airing out, windows or door or both? |  |  |  |  |  |  |

*F24\_d is only answered by respondents who answered F24\_a\_1=2 or 3*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | Missing |
| **F24\_d** | Airing you typically by sleeping with the window open in winter? |  |  |  |

|  |  |
| --- | --- |
| F24\_e | Which of the following statements fits your way of airing best? (only one answer) |
| 1. I am airing after a routine (eg. At particular times each day) |  |
| I do not have a fixed routine for airing, but airing out more when I think there is using for it |  |
| 3. Don’t know |  |
| 8. Refuse to answer |  |
| Missing |  |

|  |  |  |
| --- | --- | --- |
| **F25** | If the previous questions don’t reflect your way to Airing, you can add a comment about how you do it: | *Open response* |

Blok G – The presence in the house

A few questions about how often the house is completely empty

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Under two hours | 2. 2-5 hours | 3. 6-9 hours | 4. More than 9 hours | 9. Don’t know | Missing |
| **G26\_1** | On weekdays, how many hours a day is the house completely empty, without any people at home? |  |  |  |  |  |  |
| **G26\_2** | On weekends, how many hours a day is the house completely empty, without any people at home? |  |  |  |  |  |  |

Blok H – household members practice

Some statements related the ventilation and heating of the house

*H27\_1 til H27\_5 is only answered by respondents who answered Partner=1. Yes*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| How agree or disagree with the following statements? | | 1. totally disagree | 2. slightly disagree | 2. Neither agree or disagree | 4. slightly agree | 5. . totally agree | Missing |
| **H27\_1** | I would like to have a higher indoor temperatures than my partner |  |  |  |  |  |  |
| **H27\_2** | I am more careful to save energy than my partner |  |  |  |  |  |  |
| **H27\_3** | I regulates the heat more often than my partner |  |  |  |  |  |  |
| **H27\_4** | I am airing more often than my partner |  |  |  |  |  |  |
| **H27\_5** | I am warmer clothed indoors than my partner |  |  |  |  |  |  |

*H27\_1 til H27\_5 is only answered by respondents who answered Born=1. Yes*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| How agree or disagree with the following statements? | | 1. totally disagree | 2. slightly disagree | 2. Neither agree or disagree | 4. slightly agree | 5. . totally agree | 9. Don’t know | Missing |
| **H28\_1** | I would like to have a lower indoor temperature than one or more of my children |  |  |  |  |  |  |  |
| **H28\_2** | One or more of my children also regulates the heat |  |  |  |  |  |  |  |
| **H28\_3** | I have often warmer clothes indoors than one or more of my children |  |  |  |  |  |  |  |

Blok J – Attitude to heating and ventilation

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| How agree or disagree with the following statements? | | 1. totally disagree | 2. slightly disagree | 2. Neither agree or disagree | 4. slightly agree | 5. . totally agree | 8. refuses to answer | 9. Don’t know | Missing |
| **J29\_2** | My home is cozy when it is warm |  |  |  |  |  |  |  |  |
| **J29\_3** | My home is comfortable right after that there have been aired out |  |  |  |  |  |  |  |  |
| **J29\_5** | Temperatures inside is not something I usually think about |  |  |  |  |  |  |  |  |
| **J29\_6** | It does not matter if the during the winter it is sometimes slightly cold inside |  |  |  |  |  |  |  |  |
| **J29\_7** | To save energy heats I reduce the warm during the winter |  |  |  |  |  |  |  |  |
| **J29\_7\_1** | My home's indoor air quality, for example. temperature and air quality is an important component of to take care of myself or my family |  |  |  |  |  |  |  |  |
| **J29\_8** | When I have guests, I am more aware of the temperature in my home |  |  |  |  |  |  |  |  |
| **J29\_9** | When I have guests, I am more aware of the air quality in my home |  |  |  |  |  |  |  |  |
| **J29\_10** | I demand more to my home's temperature now than I have done in the past |  |  |  |  |  |  |  |  |
| **J29\_11** | It is important to conserve heat for the environment |  |  |  |  |  |  |  |  |
| **J29\_12** | It is important to conserve heat for reasons of economy |  |  |  |  |  |  |  |  |

Questions related what is important for you to feel comfortable in your home

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| In your home, how important that is…. | | 1. Not important | 2. Slightly important | 3. Fairly important | 4. Very important | 9. Don’t know | Missing |
| **J30\_2** | ... That it is safe for you and feels comfortable? |  |  |  |  |  |  |
| **J30\_3** | ... It is easy to regulate the heat so that you feel comfortable? |  |  |  |  |  |  |
| **J30\_4** | ... that is tidy, that you feel comfortable? |  |  |  |  |  |  |
| **J30\_5** | ... That is clean, to help you feel comfortable? |  |  |  |  |  |  |
| **J30\_6** | ... There is a comfortable temperature for you to feel comfortable? |  |  |  |  |  |  |
| **J30\_5\_6** | ... There is a good daylight, to help you feel comfortable? |  |  |  |  |  |  |
| **J30\_8** | ... There is no noise from eg ventilation or traffic to help you feel comfortable? |  |  |  |  |  |  |
| **J30\_9** | ... There is fresh air, you feel comfortable? |  |  |  |  |  |  |
| **J30\_10** | ... your home is functional for you to feel comfortable? |  |  |  |  |  |  |

Questions about the degree to which your home lives up to your desires

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| To what degree do you feel that your home meets your desires with regard to | | 1. lesser degree | 2. To some degree | 3. To a high degree | 9. Don’t know | Missing |
| **J31\_1** | ... Indoor temperature? |  |  |  |  |  |
| **J31\_2** | ... air quality? |  |  |  |  |  |
| **J31\_3** | … daylight? |  |  |  |  |  |
| **J31\_4** | ... noise? |  |  |  |  |  |
| **J31\_5** | ... the ability to control the temperature? |  |  |  |  |  |

Blok K – Renovation of the house

*The intro is only answered by respondents who answered Bygaar=1,2 or 4*

Now, there are some questions about the renovation of the house.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Within the past 10 years | 2. more than 10 years ago | 3. Not been changed | 9. Don’t know | Missing |
| **K32\_01** | Are some of the windows been replaced within the last 10 years, later or never? (1st option) |  |  |  |  |  |
| **K32\_02** | Are some of the windows been replaced within the last 10 years, later or never? (2nd option) |  |  |  |  |  |
| **K32\_03** | Are some of the windows been replaced within the last 10 years, later or never? (3rd option) |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | 1. selected | 2. not selected | 9. Don’t know |
| **K32\_01\_ELM\_1** | within the past 10 years |  |  |  |
| **K32\_01\_ELM\_2** | More than 10 years ago |  |  |  |
| **K32\_01\_ELM\_3** | Not been replaced |  |  |  |

*K32\_a 5 is only answered by respondents who answered K32\_01\_ELM\_1=1.* Within the past 10 years

*And K32\_b is only answered by respondents who answered K32\_01\_ELM\_2=1.* more than 10 years ago

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. non | 2. Under 25 % | 3. 25 – 75 % | 4. Over 75 % | 5. All | 6. Don’t know | Missing |
| **K32\_a** | What amounts of the windows or the glass are changed within the last 10 years? |  |  |  |  |  |  |  |
| **K32\_b** | What amounts of the windows or the glass are changed for more than 10 years ago? |  |  |  |  |  |  |  |

*K32\_c is only answered by respondents who answered K32\_01\_ELM\_3=1. Not been replaced*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 1. All have been replaced | 2. Under 25 % | 3. 25 – 75 % | 4. Over 75 % | 5. Don’t know | Missing |
| **K32\_c** | How many percent of the windows is or glass have never been replaced |  |  |  |  |  |  |

*K32\_ca til K33 is only answered by respondents who answered K32\_01\_ELM\_1=1.* within the last 10 years*or**K32\_01\_ELM\_2=1.* for more than 10 years ago

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. non | 2. Under 25 % | 3. 25 – 75 % | 4. Over 75 % | 5. All | 6. Don’t know | Missing |
| K32\_ca | What percent of the windows, which have never been changed, has removable windows? |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Under 10 % | 2. 10 – 25 % | 3. 26 – 75 % | 4. Over 75 % | 5. Don’t know | Missing |
| **K33** | What percentage of the windows have been sealed? |  |  |  |  |  |  |

*K34 er K33 is only answered by respondents who answered Bygaar=1,2 or 4*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | Missing |
| **K34** | Was the insulation improved after the house was built? |  |  |  |  |

*K34\_a is only answered by respondents who answered K34=1. Yes*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Under 10 cm | 2. 10 – 20 cm | 3. more than 20 cm | 4. Don’t know | Missing |
| **K34\_a** | How much insulation is now in the attic now? |  |  |  |  |  |

*K35 til K36 is only answered by respondents who answered Bygaar=1,2 or 4*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t know | Missing |
| **K35** | Are exterior walls insulated, eg improvement in the insulation in the cavity wall, since the house was built? |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. No | 2. Insulation of the floor | 3. Insulation of the socket | 4. other | 9. Don’t know | Missing |
| **K36** | Has there been any change in the insulation material, such as change in the isolation of the floor or the socket? |  |  |  |  |  |  |
| **K36\_1** | Which? | *Open response* | | | | | |

Blok L – Secondary heating

Now some questions about other heating sources.

|  |  |
| --- | --- |
| L37 | Is there a fireplace or wood burning stove in the house? |
| 1. Fireplace |  |
| 2. Wood burning stove |  |
| 3. Both |  |
| 4. Non |  |
| Missing |  |

*K37\_a is only answered by respondents who answered L37=1, 2 or 3*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Under 5 % | 2. 5 – 25 % | 3. 26 – 75 % | 4. More than 75 % | 5. Don’t know | Missing |
| **L37\_a** | How much contribute the fireplace or stove for heating during the winter? |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 1. Yes | 2. No | 3. Don’t have district heating | 9. Don’t know | Missing |
| **L39** | Is the district heating supplemented by other energy supply for heating and hot water? eg instance direct electric heating, hot water heating with electricity, solar heating systems for DHW or heat pump |  |  |  |  |  |

*K39\_a is only answered by respondents who answered L39=1. Yes*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | 1. less than 25 % | 2. 25 - 50 % | 3. 51 – 75 % | 4. more than 75 % | 5. Don’t know | Missing |
| **L39\_a** | How much the heating will you estimate the other energy contribute with? |  |  |  |  |  |  |

Blok M – Use of domestic hot water

Finally a few questions regarding the use of domestic hot water

|  |  |  |
| --- | --- | --- |
| M41 | How many times per week do you shower at home? | *Count* |
| **M42** | The total number of showers in your household per week | *Count* |

|  |  |  |
| --- | --- | --- |
| **M43** | If you have comments or clarifications to some of the questions about your home, you can add them now: | *Open response* |

1. Not a question in the questionnaire [↑](#footnote-ref-1)
2. This is a multiple choice question, where it is possible to giver several answers to the same questions. Therefore is shown which an independent variable for 1 to 4 option in the question. [↑](#footnote-ref-2)
3. In the tables reproduced the response of multiple-choice question above each answer. [↑](#footnote-ref-3)
4. This is a multiple choice question, where it is possible to giver several answers to the same questions. Therefore is shown which an independent variable for 1 to 4 option in the question. [↑](#footnote-ref-4)
5. In the tables reproduced the response of multiple-choice question above each answer. [↑](#footnote-ref-5)
6. This is a multiple choice questions, where it is possible to giver several answers to the same questions. Therefore is shown which an independent variable for 1 to 4 option in the question. [↑](#footnote-ref-6)
7. In the tables reproduced the response of multiple-choice question above each answer. [↑](#footnote-ref-7)
8. This is a multiple choice questions, where it is possible to giver several answers to the same questions. Therefore is shown which an independent variable for 1 to 4 option in the question. [↑](#footnote-ref-8)