

The Warmer Kiwis Study

An Evaluation of the EECA Warmer Kiwi Homes Heat Pump Subsidy Programme

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Study Design

A cohort study based on an opportunistic sample of up to 200 households, clustered in three locations:

Auckland and Waikato

Wellington

Christchurch

that had applied for a heat pump through the Warmer Kiwi Homes Insulation Subsidy Programme.

Recruitment began in April 2021 and monitoring was conducted over the period June – September 2021.



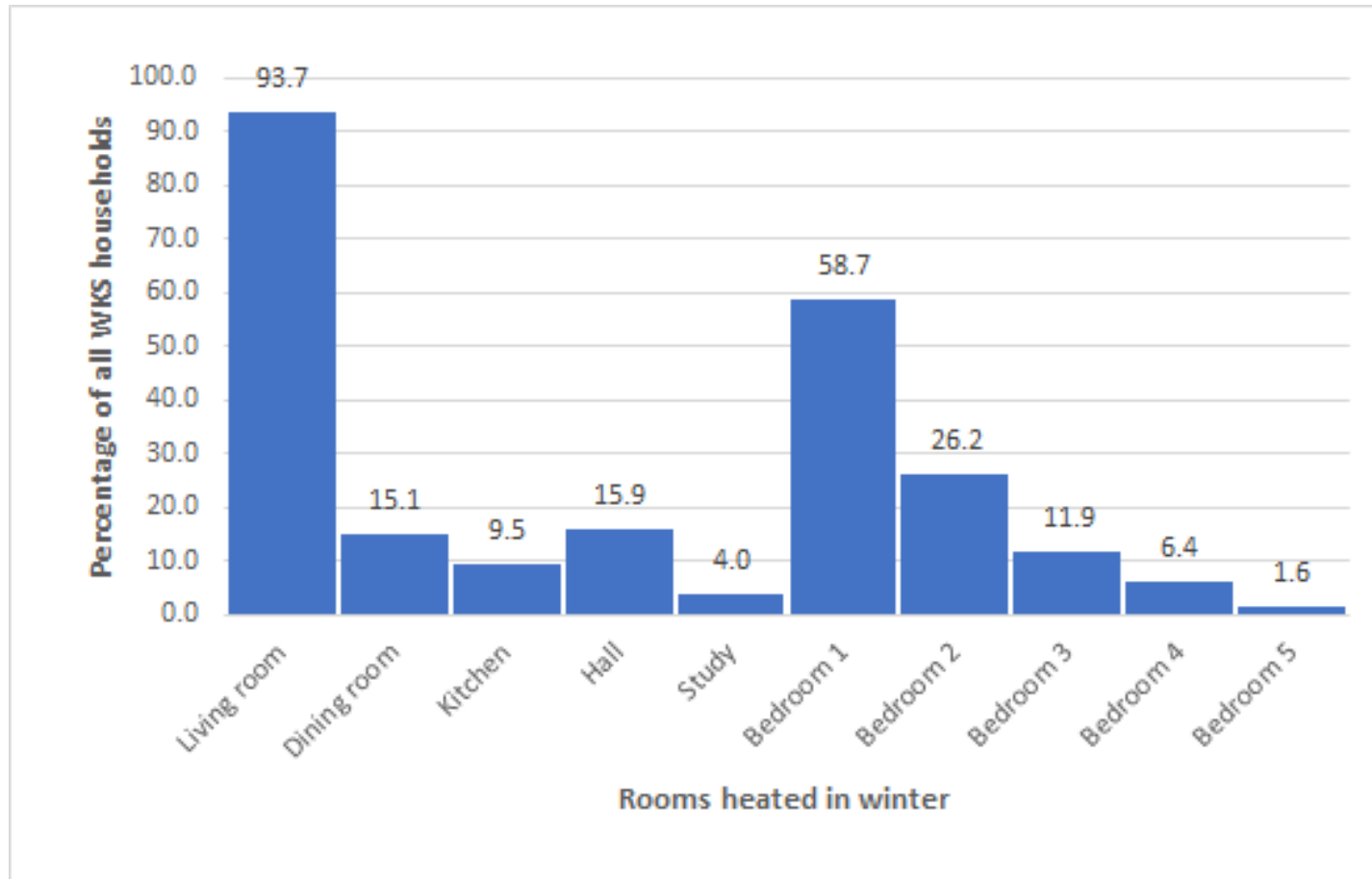
Study components

1. A qualitative before and after survey with questions on wellbeing and heating behaviour
2. A house condition survey
3. A comparative analysis of energy records (using a control group) for winter 2021
4. Indoor air quality monitoring: including temperature and humidity
5. Electricity flow monitoring of the heat pump
6. A cost benefit analysis based on the New Zealand Treasury Living Standards Framework

Outcomes

- 127 households (337 people) were recruited across the three clusters
 - 65 (51.2%) in Auckland and the Waikato
 - 37 (29.1%) in Wellington
 - 25 (19.7%) in Christchurch
- Follow-up interviews were conducted by telephone with 115 households
- By the time of their follow-up interview 91 (85.8%) households had their heat pumps installed
- Final recruitment was suspended due to the community spread of the COVID19 Delta variant
- Supply chain issues meant that not all households had their heat pump installed by September 2021
- Households varied from 1-8 people, with most (72%) having been in their home for over two years
- There was a socio-demographic mix of households, but with regional variations

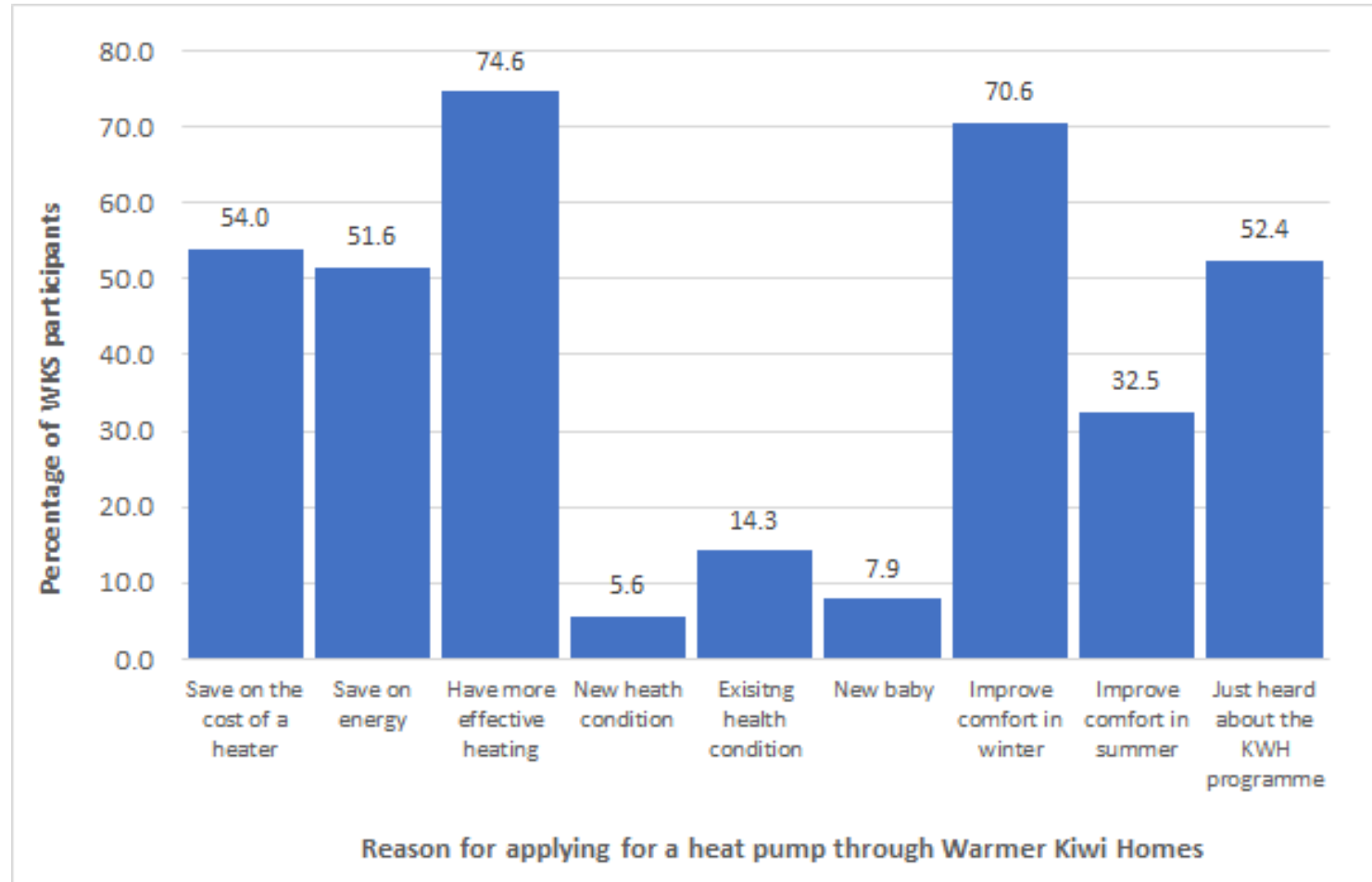
Heating behaviour



Living area heating

- Electric heater – 81.6%
- Unflued gas heater – 8.0%
- Flued gas heater - 6.4%
- Heat pump* - 2.4%
- Solid fuel burner – 1.6%

Motivation for getting a heat pump



“because my kid getting cold”

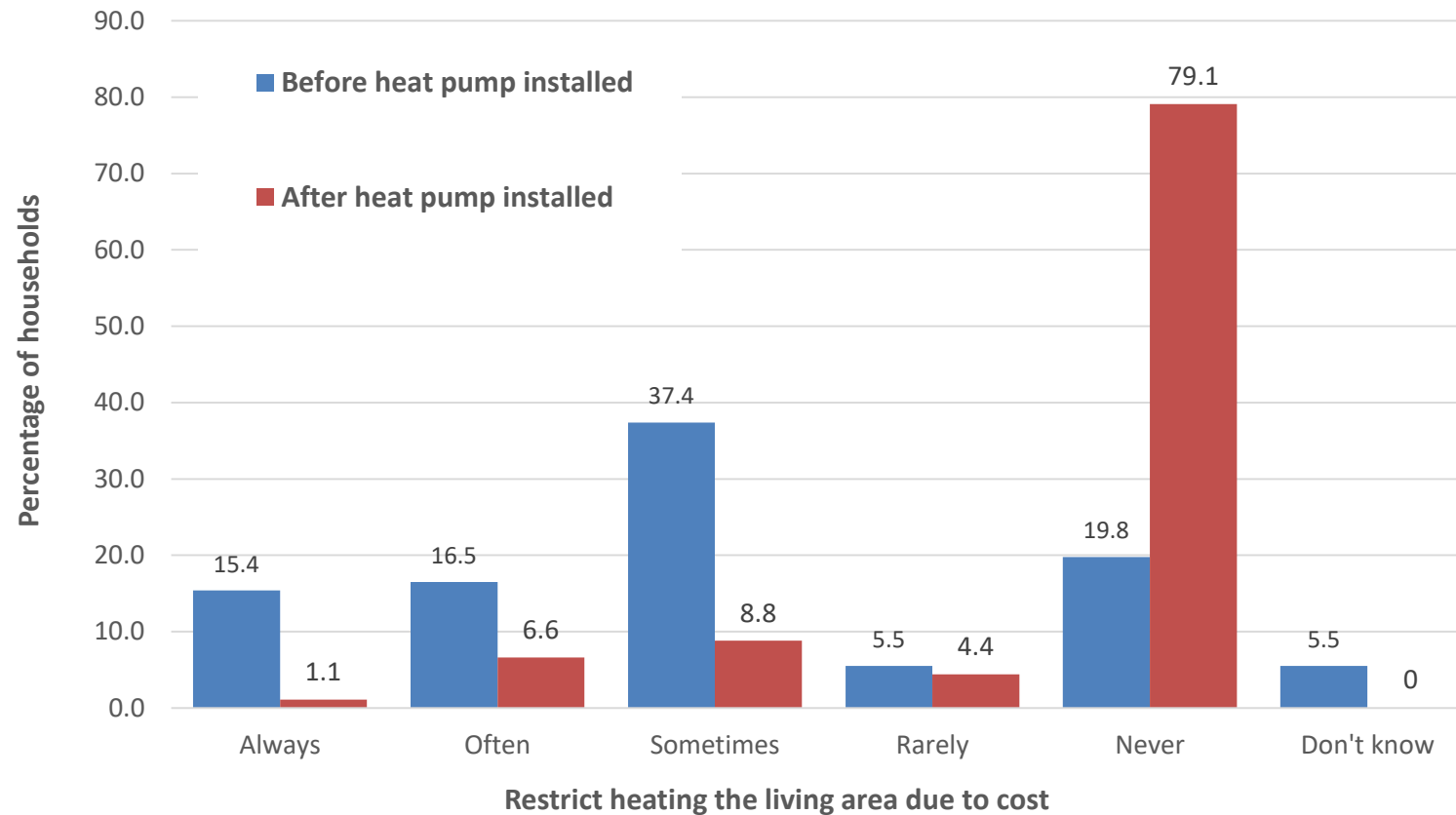
“old people need it for their health”

“because of the winter energy payment, I feel I can afford a heat pump”.

“a hairdresser came round and said why are you sitting in front of that wee bar heater when you have a heat pump . I told her it hadn’t been going for 3 years.”

“We found out about it through friends who had a lovely warm home and they told us about the subsidy so then we applied for it.”

Restrict heating due to cost



Challenges and Opportunities

- Technical issues meant that the electricity flow meters could not be used in the analysis.
- Recruitment was disrupted the COVID19 Delta variant.
- Due to supply chain issues, some households did not received their heat pump
- Follow-up was restricted to a telephone interview

- The study been extended to cover winter 2022, with most participants agreeing to stay on.
- We have a randomised control population against which to measure outcomes.
- We will install an alternative electricity flow meter on the heat pump in new households.



Comments on comfort and satisfaction

"We love our home anyway, but we are definitely more happy that people aren't complaining about how cold it is anymore. Guests are more comfortable."

"Could not be in lounge because it was too cold. Grandchildren would not visit because of this. Now they do"

"I'm like yay I've got a heat pump"

"Looking forward to next winter. Not scared of winter now."

"We are so much better, the house feels better, and it's improved my son's health exponentially."

"I just feel happy and grateful. Feel like I want to be home and look forward to being home. On the first day it was a horrible cold wet day I was out relieving while it was installed. The good fairies installed it and left it on and everything tidy and when I walked in it was warm and I nearly cried with gratitude."

"Definitely - more comfortable and now we realised we can keep house at a comfortable temperature we are a lot happier living here. Before we wondered what we had done, buying such a cold house."

"Easy to warm up in the evening and can stay up a bit later because its comfortable."

"We use the living room a lot more in the evenings because we can heat it better."

"We use the heat pump when we have guest or family over, because they like living in the tropics."

"I had a long wait and was as cold as when flatted in Dunedin as a student. It was bone chilling, so made a huge difference."