

Patterns of Water Consumption

Understanding the way that people use water is becoming increasingly important in the UK. Despite this, there is limited understanding of how people in the UK currently use water in their homes, and even less insight into the factors that influence future water use. Water policy deals in average per capita consumption, which obscures the diversity and variety of daily practices and limits understanding of social drivers of domestic water demand. The key to understanding domestic water use involves a focus on everyday practices related to laundry, washing/bathing/showering, toilets, gardening, car washing, cleaning, food consumption, recycling, drinking water and kitchen use. To close this knowledge gap we conducted a survey of 1,800 people in households across the south and south east of England, as well as 22 qualitative interviews. This allowed us to explore the diverse patterns of practices that use water.

Insights

- | The innovative use of quantitative methods for the study of everyday water-using practices enabled us to identify clusters of variation in actual practices in personal hygiene, laundry, garden watering, kitchen use and vehicle cleaning. For example, we identified six distinct variants of laundry practice, including one, accounting for 17% of the survey respondents, where people run their washing machines only partly full and almost never change machine settings; and another, representing 16% of respondents, where people always run their washing machines full and often use dry cleaners.
- | Such cluster analysis techniques suggest, for example, that policies like hosepipe bans may be less relevant to supply management than is often thought. Only about a quarter of gardeners, and only 16% of all households—regularly use hosepipes and sprinklers. Most gardeners only use watering cans or buckets.
- | We found that practice membership varied by age. For the ‘low frequency showering’ practice a sizeable proportion of ‘performers’ were 75+. The ‘out and about washing’ practice had younger cohorts of performers. The analysis raises interesting questions about processes of change, specifically, whether patterns of water-use change with the generations and/or across an individual’s lifecourse?

Significance

- | Taking practices as the unit of analysis when exploring water-use—rather than attitudes, behaviours or simply ‘litres used’—allows for a deeper understanding of the routines and habits of everyday life that lead to domestic water consumption.
- | Current models used to analyse and predict overall household water demands are based on socio-demographic or attitudinal characteristics. Yet how a person performs a particular practice is, at most, only weakly related to their socio-demographic characteristics or environmental values. Consequently, current models fail to adequately account for the complex social reality of how water is used in everyday life and offer little to intervention beyond providing ‘averaged’ customers with technology (like water-efficient shower heads) and social marketing.
- | A practice approach highlights the diversity of dynamics shaping domestic water demand. Developing a comprehensive picture of the pattern of current water demand is important for forecasting, to inform demand management interventions and water efficiency programmes.
- | Diversity of water use is usually only captured through small-scale qualitative methodologies. By developing a quantitative methodology to reveal the diversity of practices that lead to intensive forms of water consumption, this research has made the critical initial steps in developing a new evidence-base for policy makers.

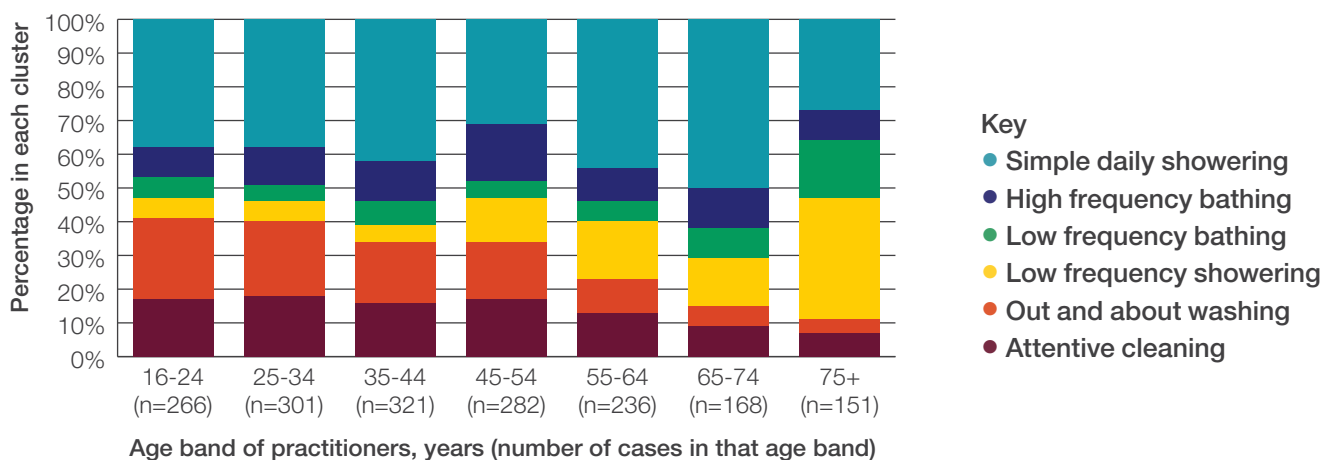
Implications for Policy and Practice

- | Segmentation approaches to enhance companies’ understanding of what customers do, and why, will become increasingly important through the forthcoming Water Bill (affecting England, Wales and to a smaller extent Scotland). These segmentation approaches will be used to help companies grow and retain clients, tailor water efficiency interventions, and understand current, and forecast future, water demand.
- | The water industry has already identified the work of the Patterns of Water project as offering an alternative perspective to customer segmentation, based on understandings of social practices. Application of such a practice-based cluster analysis offers similarly instructive insights into understanding demand in other areas of consumption, such as household energy use.
- | Linking future research on patterns of practice to actual consumption data would enable a usage-driven customer segmentation model. This approach could be used to target future interventions for water sustainability at the household and population levels, underpin a suite of monitoring tools to understand how practices and common variants of water use change in a population over time, and assist in understanding future consumption patterns in the context of social, technological and climatic change.

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Variation in percentages of cluster membership by age

(n = 1,725, weighted by respondent)



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