

Identification of universal design elements for the development of inclusive kitchens

A. T. Gbogbo

Purpose Social developments such as demographic change and the increasing deficit of healthcare professionals (Bundesministerium für Wirtschaft und Klimaschutz, 2023), together with the desire of many people to live in their own familiar homes (Bundesministerium für Bildung und Forschung, 2023), are fuelling interest in designing the physical environment, and in particular kitchens as an important place for self-care, in such a way that a self-determined life is possible into the elderly. Inclusive kitchens are intended to enable people of all ages and abilities to perform the tasks of self-care in the kitchen more safely and independently. The aim of this research is to identify inclusive design elements, including the necessary technology for kitchens, based on an analysis of people, kitchen occupations, and the kitchen as an environment, to contribute to making kitchens more inclusive in general in the long term. **Method** Based on systematic literature research on existing kitchen design solutions that are likely to be inclusive and the criteria derived from them, as well as the definition of the construct of "inclusive kitchen design" (Figure 1), a questionnaire was developed for which 'inclusive kitchen design features' were operationalised. Finally, an empirical cross-sectional study was conducted using the developed quantitative online questionnaire based on the Kano method (Sauerwein, 2000). The survey analysed (customer) satisfaction with 52 selected kitchen design features and the composition of the sample. Based on the assumption that the positive effect on (customer) satisfaction in a heterogeneous sample is an indicator of 'inclusivity', kitchen design features were considered 'inclusive' if they were rated as 'positive' to 'neutral' in terms of (customer) satisfaction by 100% of the heterogeneous sample in terms of age, gender identity and disability. Using the terminology of the Kano method (Sauerwein, 2000, pp. 28–29), the kitchen design feature must be rated by all respondents as "Attractive", "One-dimensional", "Must-be" or "Indifferent" in their answers to the questionnaire to count as inclusive. This means that for none of the sample the respective feature is represented as "Reverse" or "Questionable" according to the criteria of the Kano method. **Results and discussion** 198 people between the ages of 18 and 88 took part in the study. 23.23% of respondents stated that they had one or more disabilities and/or chronic illnesses (these were physical, sensory, cognitive, and mental), and 152 (76.76%) stated that they had none. The sample is a non-probabilistic sample of adults (>18 years) that is as heterogeneous as possible and was recruited using a snowball system. In the scope of this study, four kitchen design features met the predefined criteria for an inclusive kitchen design feature and were successfully identified. These were non-slip floor coverings, work surfaces next to hobs and sinks, and the quietest possible operating noises from appliances. In addition, it was found that the non-disabled respondents rated only five kitchen design features as positive to neutral in terms of satisfaction, whereas the disabled respondents rated 18 kitchen design features as completely positive to neutral. The results of this study show that the assumption that 'barrier-free' kitchen designs are automatically inclusive should be viewed with caution. Furthermore, it is recommended to conduct an experimental study with a kitchen prototype based on these results. With its holistic approach (Figure 1) and its heterogeneous sample, this research contributes to the development of inclusive kitchens and can help to advance the paradigm shift from the segregating status quo (accessible and non-accessible kitchen design) to inclusive kitchen design.

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Affiliation: Social Work and Health, Frankfurt University of Applied Sciences, Germany

Email: akpenegbogbo@googlemail.com; **ORCID ID:** 0009-0008-6994-6917

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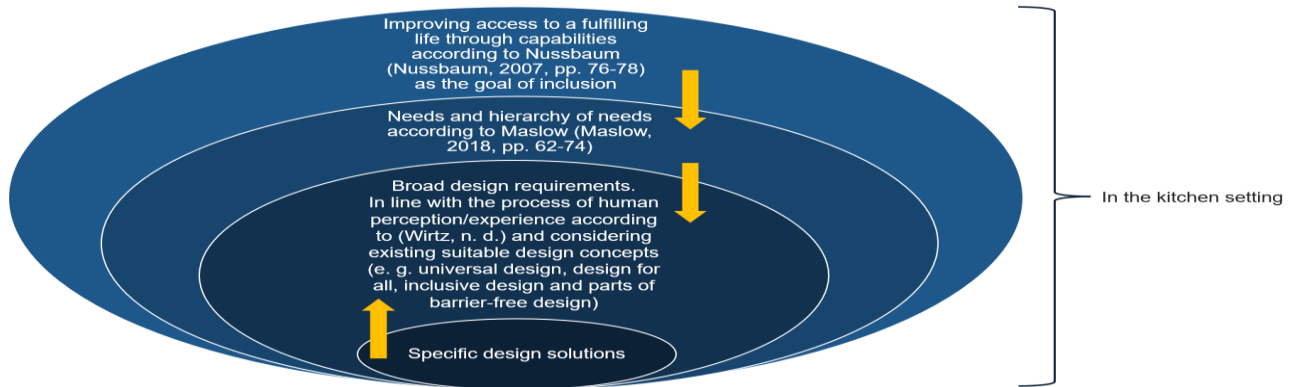


Figure 1. Theory behind inclusive kitchen design