

Convenient tools and social norms: The effectiveness of an intervention to diminish household food waste

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Reducing food waste is one of the key sustainability targets, and food waste in households constitutes a substantial part of the issue. Effective interventions that decrease household food waste are urgently needed, and these could target various underlying behaviours such as planning, storing, preparing and consuming. However, theory-driven research testing such interventions are rare, and studies comparing different intervention options are especially lacking. Moreover, in testing the effectiveness of such interventions, possible influences caused by the measurement of food waste needs to be considered.

To address the calls for more intervention testing, and especially for testing interventions using a variety of information tools, we test the effectiveness of a tool package that includes tools targeting different stages of the food management process. Drawing upon the Motivation-Opportunity-Ability (MOA) framework, we expect that the effects of this tool-based intervention can be improved upon by the addition of motivational elements. The MOA framework claims that abilities, opportunities and motivations all need to be sufficiently present to spur behavioral change. Whereas the tool package directly addresses ability and opportunity barriers, motivational barriers may persist if not also addressed. Specifically, the current study examines the addition of social norm messages in the intervention, to test if effects are stronger when this element is present as well.

In addition to testing the tool package (with and without motivational messages), in a second study, we assess to what extent effects may be due to the action of measurement itself. Self-reported food waste measurements may increase the awareness of participants about the food that they waste, and may in and by itself potentially decrease food waste. Empirical evidence for such effects, however, is scarce.

We test our hypotheses in two experiments, where households receive a tool package and report food management behaviors and amount of food waste. Experiment 1 (n=150) had a 2-group design (tool package vs. tool package with social norm message, with pre- and post-measurement. Experiment 2 (n=279) used a Solomon four group design, manipulating the presence/absence of a pre-measurement and the presence/absence of the tool package. Findings of the studies show that the tool package significantly improves food management behaviours, and decreases self-reported food waste substantially. Effects on waste-preventing food management behaviours are stronger when social norm elements are added in the intervention. Results of the second study indicate that the effects are not due to measurement. Our results provide insights to policy makers about the effectiveness of interventions, and the added benefit of including social norm messages. Furthermore, our results indicate that the self-report survey measurement is suitable to assess the effects of interventions without having its own influence on food waste levels.