

## Designing for Attribute-Level Best-Worst Choice Experiments

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In a traditional discrete choice experiment, respondents indicate which one of a set of products (services or profiles) they think is best, and they usually do this for a number of sets. However this does not allow the experimenter to gain any information about the relative contribution to the utility of each of the levels in a profile. To rectify this deficiency, researchers can show respondents a profile, described by the levels of a number of attributes, and ask each respondent to choose the best and the worst feature (attribute-level) of the profile. Such a task is called an attribute-level best-worst choice task. Using the D-optimality criterion, we show that resolution 3 fractional factorial designs perform as well as the complete factorial design in attribute-level best-worst choice experiments, assuming both that all attribute levels are equally attractive and that only main effects of attribute levels are to be used to explain the results. We close by describing an attribute-level best-worst choice experiment which was given to both a sample of women of reproductive age and to a sample of GP providers to compare how they value particular features of contraceptive products. Simulation results indicate that the chosen design was adequate to return consistent estimates in this attribute-level best-worst choice experiment.

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