Cogent Healthcare

Primacy Effects – Not (or even) By the Experts!

There is ample evidence that positioning of items in a list biases the responses to a survey question in various research areas, from political opinion polls to self-reported health. The most common order bias effect, also referred to as 'primacy effect', is observed when items presented at the beginning of a list are chosen more often than when presented later. Interestingly, the magnitude of primacy effects was found to depend on several factors, such as the education level of the respondents – with low education respondents being more prone to primacy effects.

However, we conduct market research in a highly specialized pharmaceutical arena, dealing with highly educated medical experts. We are interested in treatment decisions, prescription of medications, etc., topics, where positioning effects and bias should play less of a role. So one would think!

To test this hypothesis, we analyzed the results of a recent survey. In a question about expected future preference shares of a pharmaceutical product currently in development, we altered the relative positions of the items on the list. As shown in the Figure for the top-rated product, the market share allocated to the product was a function of its position on the list. On average (all positions on the list combined), the product received 29% market share. However, placing it in 1st position on the list caused respondents to assign nearly twice the shares, a staggering 48%. Listing it 2nd or 3rd led to continuously decreasing

shares, and the 4th position resulted in a mere 16% market share. However, placing it last on the list generated a somewhat higher share than position 4, possibly indicative of another order bias, called recency effect.

Overall, the difference in shares allocated to the product varied by a factor of 3 – depending on its position on the list. And this was not a single result: similar effects were found for all products tested – from the top-rated product to the product which received the lowest rating overall.



Not an easy task for marketing executives to build a business-case or a forecast on these results – do you expect shares in the mid-teens or closer to closer to 50%? The truth may be somewhere in between!

The bottom line: Pay attention to answer option order bias – even highly educated medical specialists are not immune to psychological phenomena! As shown, the effects are quite substantial, and warrant changing the listing of the items in a survey. This exploratory study with a small sample size was not intended to provide scientific evidence to the phenomenon of response-order. However, it should raise our awareness that bias factors may also affect surveys addressing medical specialists with above average cognitive skills and ability to reflect upon the responses and presumably interest in the field of research.

If you would like to discuss how to conduct PMR that you can be confident in, please contact us at <u>info@cogent-hc.com</u>