The effect of question order on outcomes in the ORBITAL Core Outcome Set for Alcohol Brief Interventions among online help-seekers

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Introduction: Comparisons across trials of alcohol brief interventions (ABI), and evidence synthesis of outcomes, are limited because of the high variety of outcome measures used, despite interventions being similar. To overcome this issue, the ORBITAL (Outcome Reporting in Brief Intervention Trials: Alcohol) project was established to develop an international, consensus-derived, core outcome set (COS). This study aimed to estimate order effects for the 10 outcome measures in the COS.

Method: Individuals aged 18 or older who searched online for alcohol-related help were invited to complete the COS. The order of questions was randomised following a factorial design. Primary outcomes were order effects among the COS items and patterns of attrition.

Results: We randomised 7,334 participants, of which 5,256 responded to at least one question and were available for analyses. Median completion time for the COS was 4.3 minutes. We found evidence of higher self-reported average consumption and odds of harmful and hazardous drinking among those who first answered questions on recent consumption and impact of alcohol use. Lower self-reported recent consumption was found among those first asked about average consumption. Quality of life (QoL) was reported lower among those who first responded to questions on impact of alcohol use, which in turn was lower among those who first answered questions on when average consumption and QoL were asked first. Attrition was lowest when average consumption was asked first, and highest when QoL or impact of alcohol use was asked first.

Discussions and Conclusions: Question order affects outcomes and attrition. If the aim is to minimize attrition, consumption measures should be asked before QoL and impact of alcohol use; however, this order impacts self-reported alcohol consumption and so researchers should be guided by study priorities. At a minimum, all participants should be asked the same questions in the same order.

Disclosure of Interest Statement: *MB* owns a private company (Alexit AB) which develops and distributes digital lifestyle interventions to the general public and for use in health care settings. Alexit AB had no part in funding, planning, or execution of this trial. GWS was the lead researcher on the development of the ORBITAL effectiveness and efficacy outcome set. CG has done paid consultancy work for the behaviour change and lifestyle organization, 'One Year No Beer', providing fact checking for blog posts. PT declares no conflicting interests.