Article:
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Commentaries and Response to: Robinson, Bevelander, Field, and Jones (2018) "Methodological and reporting quality in laboratory studies of human eating behavior"

In their article on laboratory studies of human eating, Robinson and colleagues (2018) have identified basic methodological and reporting practices which they describe as "sub-optimal". The authors examined 140 studies from 120 papers published during 2016 and found that although most provided basic information relating to participants and procedures, there were omissions in reporting or in the methods themselves which raised questions about replication and reliability of findings. For example, using small samples sizes, not reporting on how sample size was determined and not blinding participants to the aim of the study. These authors go on to propose that such sub-optimal methods may influence the validity and replicability of research in the field of eating behaviour.

The take home message from this paper is particularly problematic since psychology as a discipline has experienced a replication crisis, with many attempts to reproduce the results from classic studies ending in failure. In addition, some questionable research practices (QRPs) have been identified including selective reporting or partial publication of data, nonpublication of data (file drawer effect) and post-hoc exploratory analyses.

Therefore, in the current climate, the paper by Robinson et al (2018) presents a challenge to researchers to follow a more rigorous process in designing studies of human eating behaviour. The authors make a series of recommendations to improve methodological rigour and how these studies are then reported including: standardising appetite before the study; minimising demand characteristics; conducting then reporting power analyses to inform sample size; checking appropriateness of sample sizes used for secondary or exploratory analyses; pre-registering the study and reporting deviations from planned analyses; and reporting all aspects of the study methods within the body of the publication or as supplementary material.

In response to this article, a series of commentaries have been written which broadly support the recommendations laid out by Robinson et al (2018) but which question the need to standardise appetite (Meule, 2018; Best et al. 2018), challenge the extent to which laboratories can reveal authentic (Best et al., 2018) or natural eating patterns (Stubbs & Finlayson, 2018) and propose additional ways to improve methodological rigour if the laboratory is used as the setting for eating behaviour research (Buckland & Dalton, 2018; Hetherington & Rolls, 2018; Stubbs & Finlayson, 2018). The commentaries recognise the limitations of the laboratory for eating behaviour studies but provide practical suggestions based on theoretical considerations. In one case, the authors offer a novel way to optimise data collection using Bayesian analyses (Best et al., 2018).

Taken together, these commentaries add to the suggestions made by Robinson et al (2018); and while accepting the limitations of the contrived laboratory setting, these papers set out the means to prepare for studies of human eating behaviour which counter sub-optimal and questionable research practices.

Marion M Hetherington (Editor)

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