Review of: "A step in the right direction: Billboard-style posters preferred overall at two conferences, but should include more methods and limitations"

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Potential competing interests: No potential competing interests to declare.

I review this article as an audience insight researcher, with an international marketing and psychology background.

These study elements are strong in my opinion, leading to interesting and useful findings:

- The authors chose to use naturalistic field studies, which can create higher environmental validity when compared to lab studies.
- The authors used two different research approaches, at two different conferences, one with all new design posters, and one with both old and new design posters, with similar results, which strengthened the reliability of the findings.
- Readers will benefit from the provided overview of (un)supported hypotheses between the 2 studies.

However, I would make one comment about the study's method:

- Using the old or new design was the presenters' choice, i.e. this was not randomised. It may be that those presenting a more complex study chose the original style (IMRAD), and those with a simpler study chose the new design (although I have no proof for this). An A-B test would have provided a stronger comparison. The same studies could have been presented in both designs, with different complexity levels (e.g. simple, medium, complex studies; ideally with quantification / standardisation of the complexity levels), to be compared by participants. The designs' viewing order could be randomised (e.g. half see the old design first, the other half the new design first). This could be done in a lab and/or in a naturalistic setting, as a useful addition to the current studies.

Suggestions for consideration, including for future studies:

- Could there be a novelty effect impacting the result of the new design being more interactive? An unexpected design might create attention / interest just by it being different. Also, were conference participants told anything about the new design and/or study before seeing the new designs, as this could have created interest, or was this not mentioned in any type of communication?
- For decades psychologists debated if behaviour was based on nature (genes, biology) or nurture (environment, upbringing). However, more recently the general agreement is that it is not nature OR nurture, but nature AND nurture. Coming back to poster designs, maybe poster style preference and usability can depend on the type of study (e.g. complexity and/or other factors). For example, for more complex studies the original method may be better as it may fill the reader's need for 'more details and rigor of the study', and for simpler studies the new design may be better as

there is less need for this, and more need to quickly 'get the main message'. In other words, where the authors' aim seems to be to create the best possible conference poster, this may not exist as 'best' may be situationally dependent. Even then, I agree that being able to recommend certain poster styles / design tactics for different levels of complexity (and/or other factors) would be helpful for the research community to disseminate their findings most effectively.

- The authors mention an interest in using mobile eye trackers and/or people counters in future studies, but mention this may be unfeasible, regarding ethics, research assistant (RA) and/or financial resources. Have they considered using cameras in a way that does not record faces (e.g. blurring them before a recording is made, although this may not be 100% accurate in practice), and/or only storing impersonal data e.g. viewing time data (rather than images of people)? An internal discussion with my colleagues at RHUL (StoryFutures) suggests that the latter could be feasible, using e.g. one Raspberry Pie with a lens, memory card and battery, per poster area. This could be used to create and record a time stamp when a viewer enters a poster area, and a second one when they leave the poster area, which can be used to calculate and store viewing time records. This could be done in real time, therefore not requiring any personal data (images) to be recorded. The authors could consider if this possible solution is feasible for their studies, including ethics, RA and financial resources.