

Special Editorial: Open science and the Journal of Child Psychology & Psychiatry – Next Steps?

The JCPP works at the cutting edge of clinical science to publish ground breaking research across the full range of topics in the field of child psychology and psychiatry. As JCPP editors, who are also active researcher's in our own right, we are conscious of the threat posed to our field by what has come to be known as the *reproducibility crisis* - the fact that many published findings, initially trumpeted as important developments in the field, cannot be replicated and are therefore likely to be spurious (Manufo et al., 2017). The JCPP is conscious of its responsibility to play its part in addressing this issue as best it can. The roots of the problem are complex and its causes multi-faceted. As one part of its response, the JCPP embraces the principles of open science and encourage pre-registration of study protocols. Furthermore, we are working towards implementing new systems to promote pre-registration with the hope of increasing scientific transparency and accountability and reducing the risks of selective reporting and post hoc rationalisation of findings (Sonuga-Barke et al., 2018).

As part of our ongoing process of improving the quality of science in an open and transparent way this editorial presents an update for authors and readers alike on the current state of play as we pursue this goal following our recent meeting of the JCPP Editorial Board in London February 2018. This meeting offered the board in full its first opportunity to have a wide-ranging and detailed discussion of how best to implement open science principles and support preregistration of studies. This is a discussion that will continue as we work to fully support the goals of advancing science, policy and clinical care through publication of rigorous and scholarly research, reviews, and other contributions. Below we describe some of the considerations that arose during our efforts to identify an optimal approach to achieving these aims.

The JCPP Editorial Board confirmed its support for the principle of pre-registration in general. More concretely, we decided to extend obligatory pre-registration of study protocols to all intervention trials - including those conducted by social work and educational researchers and those examining

the effects of therapeutic intervention on non-clinical outcomes, where pre-registration has not been the norm up to this point. We also decided to change the current *instruction to authors* to highlight our support for pre-registration of all studies, not just trials, on publicly accessible databases such as the *Open Science Framework*. Where this is the case the published paper will be specially badged to highlight its pre-registered status and an electronic link to the original protocol will be provided.

The discussion then turned to whether JCPP should itself provide a platform for the pre-registration of study protocols and whether that facility should be accompanied by a commitment to provide detailed reviews of protocols and to eventually publish the resulting paper. The strengths and weaknesses, from the journal's point of view, of various models were discussed. We considered a paper setting out the model currently implemented by *Developmental Science*, providing the option of pre-review and on-line publication of study protocols tethered to an in principle pre-acceptance of the resulting manuscript (so-called registered reports).

The editorial board acknowledged some potential benefits for the field of JCPP adopting such a system. However, the discussion also highlighted a number of associated practical (resource-related) and scientific challenges. We also considered more generally how best to coordinate JCPP processes with the other stake holders operating in the wider 'standards ecology' of science such as guidance bodies, funding agencies, ethics review, pre-registration open science sites, peer review etc. In this regard, the importance of the independence of the journal as an arbiter of scientific quality was highlighted as well as the potential conflicts that might arise if the journal was too closely tied into the conceptualization and design of studies they would potentially go on to publish.

From a practical point of view, the discussion highlighted the issue of additional work load for journal staff, editors and reviewers was highlighted as was the potential problems entailed in securing sufficient reviewers willing to review and comment on both the pre-registered study protocol and the manuscripts eventually submitted with the results of the study. If different people

reviewed the protocol and the submitted paper what would happen if there was a disagreement regarding the quality of the study design – with the latter arguing that there was a fundamental design flaw? Would there still be a pre-commitment to publish? Furthermore, how could we guarantee that authors would eventually submit the pre-accepted paper to the JCPP rather than to another “higher impact” journal if the findings of that paper turned out to be more ‘interesting’ than anticipated? In such a case the authors would, in effect, be using JCPP pre-registration as a form of academic under-writing - with the journal carrying all the risks.

In scientific terms, the discussion focused on the speed of methodological and scientific advance in fields relevant to child psychology and psychiatry. By tying itself to accepting papers on the basis of their peer-reviewed pre-published protocol the journal might end up being obliged to publish papers that no longer represented an important new lead for, or a major contribution to, the field (key criteria for acceptance currently) because, for example, they rely on now- outdated methods. Such a situation would be at odds with the journal’s mission. The Board also had concern that the intellectual ownership and authorship of a study might be unclear if editors and reviewers suggest substantial changes to the protocol during the pre-registration period and how these would be coordinated with the decision making processes of ethics review boards or of the decisions made by the funders and their review processes.

Although, based on their discussion, the Board were not yet ready to implement a pre-registration/pre-acceptance model in full at this stage we did, however, agree to continue to explore whether a feasible/sustainable model could be developed that was consistent with the journal’s mission and protected it against the risks identified above. To this end a working group of editors, including the editor-in-chief and the deputy editor-in-chief, were tasked with developing a prototype model for discussion and review by the editorship as a whole. Once agreed the next step would be to undertake market research amongst authors with regard to the attractiveness of such a model and then directly test its feasibility with a limited implementation.

We actively welcome feedback on these plans from all interested parties.

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