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Power poses – where do we stand?

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As editors, reviewers, and authors, we are very pleased with the output of this Special Issue. We received a robust number of interesting and diverse submissions, and we were very lucky to convince one of the authors of the original effect, Dana Carney, to review all submissions and to give feedback from an insider's perspective. This is unique and linked to the preregistration format of this Special Issue, as this most likely would not have happened if all authors had independently approached the original researchers. Finally, the format of preregistration allowed us to run a meta-analysis across the individual studies without any file drawer bias (or the need to correct for it). In sum, we believe that peer-reviewed preregistration projects and associated meta-analyses form the gold standard for future similar endeavors. This format allows for the optimal use of resources and collaboration among original authors, new authors, and meta-analytic perspectives. Still, there is room for improvement and learning. Although we were able to coordinate the measure of felt power to be included across the studies in the special issue, further coordination of more dependent variables or similar designs could be beneficial. Such procedures can provide a more robust basis to judge where we stand with a research field.

While some colleagues have hoped that this Special Issue would provide the definitive answer on the replicability and evidence for or against power poses, we believe

that conclusions need to be appropriately tempered. Looking across the studies, it is clear that an effect on felt power was observed. What this *means*, in terms of whether this is more than just a demand characteristic, is still unclear and can use further investigation. Considering the preregistered predictions for the behavioral and hormonal measures, however, presents a clearer picture:

- Bailey, LaFrance, and Dovidio (2017) sought to investigate an interaction of power posing and participant gender. They did not replicate the effect of power poses on risky behavior.
- Bombari, Schmid Mast, and Pulfrey (2017) planned to test whether imagined or performed power poses had similar effects. They did not replicate the effect of power poses on risky behavior.
- Klaschinski, Schnabel, and Schröder-Abé (2017) wanted to replicate the effects of power posing on dominance and social sensitivity in an interview context, but they did not replicate the effects.
- Jackson, Nault, Richman, LaBelle, and Rohleder (2017) sought to test the effect of power posing on self-concept. Although a preliminary study obtained an interesting effect, they did not replicate this in the higher-powered, preregistered study.
- Keller, Johnson and Harder (2017) wanted to test whether effect awareness modulates the power pose effect. They did not replicate the effect.
- Latu, Duffy, Pardal, and Alger (2017) tested an interesting dependent variable in the context of power poses, persuasive messages. They did not observe any effect of power poses on persuasive message perception.
- Ronay, Tybur, van Huistee, and Morssinkhoff (2017) wanted to investigate the mediating role of testosterone on the link between power posing and risk taking, but they did not replicate the effect.

As can be seen, there was virtually zero effect of power poses on any of the behavioral or hormonal measures. However, a strong contribution of preregistration is evident in the exploratory analyses conducted across the different studies. Most of the studies did reveal some effects of power poses on non-preregistered, exploratory analyses. The preregistration format, rather than inhibiting scientific discovery or exploration, actually then points researchers to the next direction for their research, while at the same time

making it clear to the reader that such obtained effects were exploratory and *not* confirmatory.

Prior to our special issue, there were other attempts to replicate the power pose effect (Garrison, Tang, & Schmeichel, 2016; Ranehill, Dreber, Johannesson, Leiberg, Sul, Weber, 2015). Ranehill et al. could not replicate the effect on hormonal level, but found the manipulation to influence felt power. Garrison et al. also attempted to replicate the original effect and extend it with a dominance manipulation via eye gaze. They also could not find the effect on their dependent variable, an ultimatum game, and on felt power. Based on the papers in the special issue, and prior replication attempts, one could conclude that the power pose effect on behavioral outcomes does not replicate.

Next to these individual papers and replication attempts, it is relevant to take a more abstract view. We were able to conduct a Bayesian meta-analysis on the papers of the Special Issue that contained the felt power variable (Gronau, Erp, Heck, Cesario, Jonas, & Wagenmakers, 2017). In merely eye-balling the results of the studies in this Special Issue, we would have guessed that there was no overall effect. But we were surprised to find the (small) overall effect for felt power. Critical colleagues will remark that this finding says little about the actual power pose effect, because they see felt power as a manipulation check. Even if one would side with this argument, then there is a successful manipulation, which demands further analysis of its effects on a number of suggested and novel dependent variables and their boundary conditions. Jackson et al. (2017) identified cognitive flexibility, Bombari et al. (2017) participant gender, and Klaschinski et al. (2017) extraversion: This is where we believe future research should start off, and can help to contribute to unpacking the power pose effect. CRSP as a journal is happy to provide a platform for this.

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Plus all other references from the studies in the SI

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