

Ineffective group dynamics play a role in poor research reporting

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Ineffective group dynamics within research groups and research collaborations contribute to the unrealistic picture of the data generated in scientific research, according to Judith Rosmalen and Albertine Oldehinkel from the University of Groningen in The Netherlands. In an Essay published in this week's *PLoS Medicine*, these researchers say: "We feel it is time for scientists to also critically evaluate their own role, and acknowledge that group dynamics within research groups and collaborations might contribute to the persistence of problematic scientific practices."

In a previously published provocative <u>PLoS Medicine</u> Essay entitled "Why Current Publication Practices May Distort Science," John Ioannidis and colleagues applied economic principles to argue that the current system of publication in <u>biomedical research</u> provides a distorted view of the reality of scientific data that are generated in the laboratory and clinic. In this current Essay, Rosmalen and Oldehinkel say: "we believe that the problems [Ioannidis and colleagues] discussed arise not only at this macro level, but also at a lower aggregation level, that is, within research consortia."

They continue: "macro-level processes are hard to change because that requires action from anonymous others outside our sphere of influence. Micro-level processes are more malleable, and changes at this level can be implemented right away."

The authors say: "we wish to emphasize the potentially biasing effects of



internal group dynamics, as opposed to the faulty publication practices that are more often discussed in the literature."

By analysing the group dynamics at play in a research consortium that both researchers were involved with, the Tracking Adolescents' Individual Lives Survey (TRAILS), the authors admit that despite their best efforts, "in hindsight, we realize these procedures have not precluded publication of partly confusing and possibly irreproducible research findings, which have not significantly advanced our knowledge of the phenomenon under study."

In their Essay, Rosmalen and Oldehinkel make the case for improving problematic scientific practices by having clearly defined overall goals, explicitly described roles and responsibilities for all co-authors, and a rational choice of methodological strategies. Furthermore, the authors stress that all researchers should recognize that the overarching task of any research is to address scientifically relevant issues, not necessarily to write and publish research papers. The

The authors conclude: "We hope our analysis will stimulate a broader discussion of problematic scientific practices, which include not only faulty publication practices but also the potentially biasing effects of internal group dynamics. In the end, both the system and the consortia are our own products and thus our shared but also individual responsibility."

More information: Rosmalen JGM, Oldehinkel AJ (2011) The Role of Group Dynamics in Scientific Inconsistencies: A Case Study of a Research Consortium. PLoS Med 8(12): e1001143. doi:10.1371/journal.pmed.1001143



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