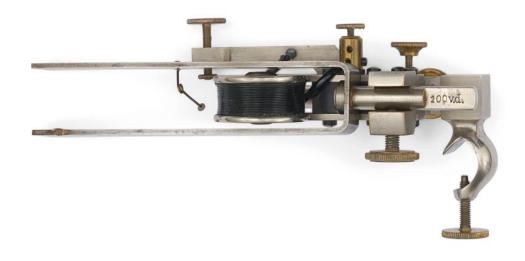
### XXVIII SCIENTIFIC CONFERENCE

# EMPIRICAL STUDIES IN PSYCHOLOGY

31st MARCH – 3rd APRIL, 2022. FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE



INSTITUTE OF PSYCHOLOGY LABORATORY FOR EXPERIMENTAL PSYCHOLOGY FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE

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misinformation detection, digital and scientific literacy as predictors and COVID-19 vaccination status as the outcome (F(3, 736) = 22.91, p < .001,  $R_{adj}^2 = .08$ ). The only significant predictor in the model was misinformation detection ability ( $\beta = .290$ , t(735) = 8.065, p < .001), which was related to higher vaccine uptake. Overall, the levels of scientific literacy we observed are comparable to levels previously reported for EU countries. The results suggest that information appraisal skills are more important than basic scientific knowledge in guiding health decision making.

**Keywords**: scientific literacy, misinformation susceptibility, digital literacy, media literacy, vaccination uptake

## COMBINING SCIENTIFIC FACTS WITH PERSONAL STORIES LEADS TO MORE PERSUASIVE VACCINATION COMMUNICATION: A PRELIMINARY SYSTEMATIC REVIEW

#### Aleksandra Lazić

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A popular approach to health communication is the deficit model, which emphasizes the repetition of objective scientific evidence to motivate people to change their beliefs and behaviors. Increasingly, however, health communicators are turning to narratives or the stories people tell. Narratives can be persuasive by fostering engagement with the story and its characters and by provoking an emotional response. Focusing on the domain of vaccination, we conducted a preliminary systematic review to explore how narrative communication compares to factual communication and whether it can influence vaccination outcomes. We identified primary studies through previous systematic reviews and meta-analyses. We additionally searched PubMed, Cochrane Library, Web of Science, and Google Scholar for articles published 2015-2019, with terms such as "story", "anecdote" or "immunization" in the title. We included experimental designs contrasting a pro-vaccine narrative to (a) a control/baseline condition and/or (b) facts-only and statistics-only (including risk) messages. We also included designs testing combined narrative and factual/statistical messages. The review included 17 eligible articles published 2005–2019. The studies were predominantly conducted in the US and concerned the human papillomavirus vaccine (11 articles, respectively). All narrative interventions featured a personal-experience story. We extracted 97 comparisons (k) of intervention groups and contrast groups. The most studied outcomes were vaccination intentions (k = 37), perceived disease risk (k = 18), and general vaccination attitudes and beliefs (k = 15). Compared to control/baseline, narrative-only messages tended to positively affect vaccination outcomes (k = 19/32), rarely backfiring (k = 4/32). Half of the time, narrative-only outperformed facts-/statistics-only messages (k = 23/45), while facts-/statistics-only messages were better in 14/45 instances. Combined interventions were better than the control/baseline (k = 8/8), statistics-only (k = 6/9), and narrative-only messages (k = 2/3). We conclude that a promising strategy in vaccination communication is combining scientific facts with personal stories tailored to the audience's sociocultural characteristics. We give recommendations for public communicators and directions for future research (e.g. larger samples for more precise effect size estimates, tackling conspiracy beliefs, and assessing effectiveness of interventions after a delay).

**Keywords**: science communication, health communication, narrative persuasion, vaccination, systematic review

### SCRUTINIZING STEREOTYPES ABOUT SCIENTISTS: SOCIAL EVALUATIONS OF SCIENTISTS AND THEIR IMPACT ON PROTOTYPICALITY AND TRUST

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Science and scientists are among the key drivers of societal changes. While research has demonstrated that, in the public view, science is heterogeneous, work on perceptions of scientists usually considers "scientists" as members of a homogeneous group. In the present research, we went beyond the general term and investigated differences in social evaluations of different types of scientists, and how these contribute to perceptions of prototypicality and trust. In Study 1a (N = 300, UK sample), we wanted to obtain a list of best-known scientific occupations. We asked participants to list all scientific occupations that come to their mind in five minutes. After cleaning the list (e.g., removing non-scientific occupations), we ended up with 34 scientific occupations. The most mentioned occupations were chemist, biologist, and physicist. In Study 1b (N = 411, UK sample), participants rated occupations from Study 1a on social evaluation dimensions (competence, sociability, morality) and on prototypicality, i.e. how good example of a scientist is a member of a given occupation. All scientific occupations were seen as highly competent, relatively moral, but only moderately sociable. However, we also found differences in levels of social evaluations, which can be captured in clusters of scientific occupations. Perceived prototypicality was based on competence ratings (t(29) = 5.015, p < .001), meaning that, in the public's view, to be a scientist means to be competent (intelligent, smart). Study 2 served as replication with the US sample, with the addition of trust in scientists. Study 2a (N = 303) returned an almost identical list as Study 1a, containing 35 occupations. In Study 2b (N = 427), participants rated scientific occupations on social dimensions and prototypicality (as in Study 1b), as well as on trust. Findings replicated Study 1b: similar clusters were corroborated, while perceived prototypicality was again based only on perceptions of competence (t(30) = 5.824, p < .001). Trust was higher for those occupations that were perceived as more competent and moral (ts(32) > 3.290, ps < .01). Overall, we demonstrate the importance of distinguishing between different types of scientists, and why studies should be careful about which occupations they take as prototypical of scientists. Finally, we bring new insights about one of the most challenging issues of today-trust in scientists, and how our findings relate to previously established models of trust.

**Keywords**: stereotypes of scientists; scientist perceptions; stereotypes; trust in scientists; science trust

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