

A Cross-National, Cross-Field Study of Researcher Personality and Questionable Research Practices

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OUR RESEARCH QUESTION

Do personality traits influence questionable research practices (QRPs)?

Personality traits: "Broad, stable psychological characteristics" (Gerber et al., 2011: 266)

- Tijdink et al. (2016): "The influence of personality traits on scientific practice is understudied."

Personality traits influences misconduct both in general and in educational settings:

- Simha & Parboteeah (2019): "We found that conscientiousness and agreeableness were both negatively associated with willingness to justify unethical behavior" in the World Value Survey.
- Giluk & Postlethwaite (2015): "Our results indicate that conscientiousness and agreeableness are the strongest Big Five predictors, with both factors negatively related to academic dishonesty" among high-school and college students.

QRPS AND THE BIG FIVE INVENTORY

Tijdink et al. (2016): "Machiavellianism may be a risk factor for research misbehaviour" among Dutch biomedical scientists.

The Big Five Inventory is the standard inventory in personality psychology

Captures most personality variation within the typical range (e.g., McCrae & Costa, 1997)

O – openness to experience	(-) → need to confirm your views
C – conscientiousness	(-) → sloppiness
E – extraversion	(+) → seeking recognition
A – agreeableness	(-) → pursuit of self-interest
N – neuroticism	(+) → external pressure (positions, publications, grants etc.)

DATA: THE "PRINT" PROJECT

Multi-national, cross-field survey about questionable research practices

Sample

- All Danish universities (total of 8)
- 10 foreign universities in 4 countries: Austria, United Kingdom, Croatia and United States
- All researchers above PhD level

Danish part: 3402 "full" responses = 22% rate

International part (for replication): 1308 "full" responses = 4% rate

MEASURES & ANALYSES

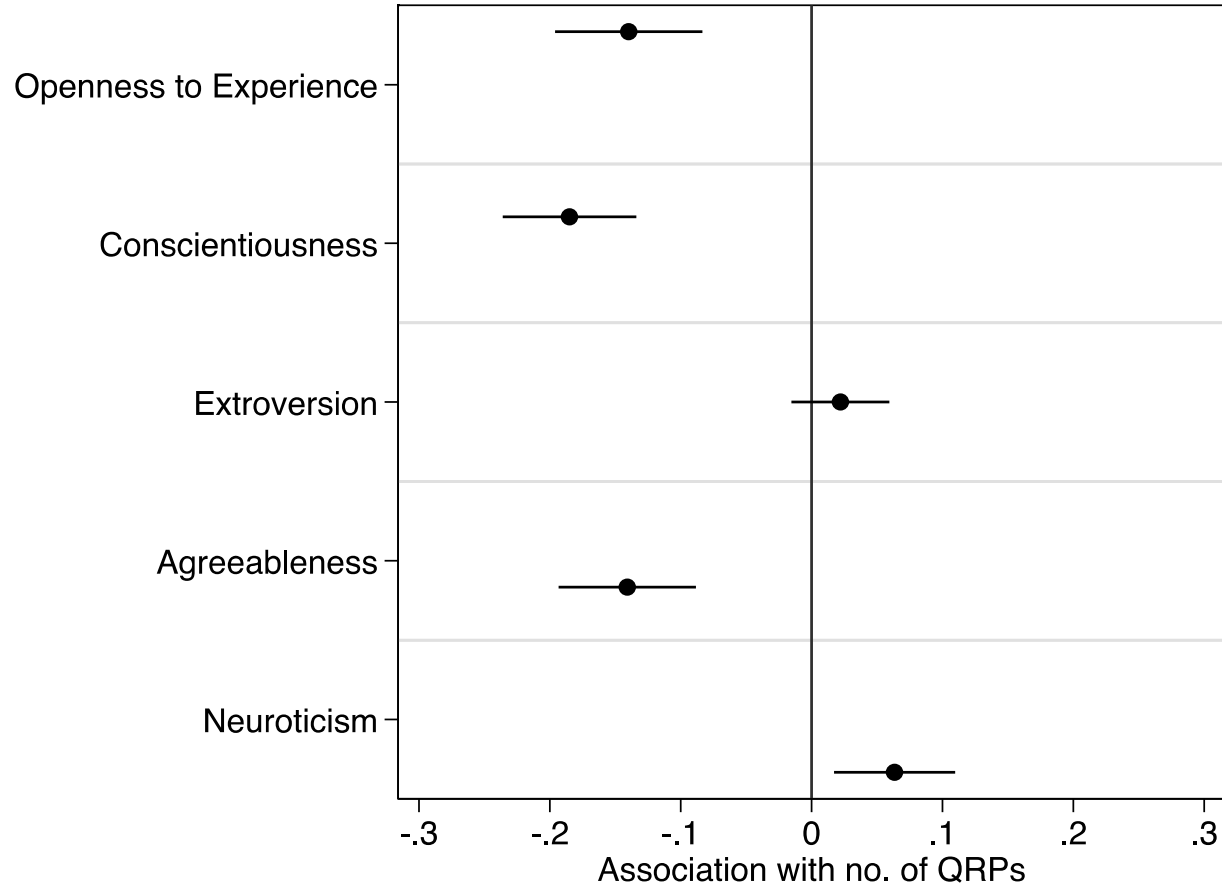
Personality: TIPI Big Five Inventory (Gosling et al., 2003)

QRPs: Count of questionable research practices related to authorship, selective analysis, undisclosed recycling, selective citing, selective reporting and reviewing (total of 9)

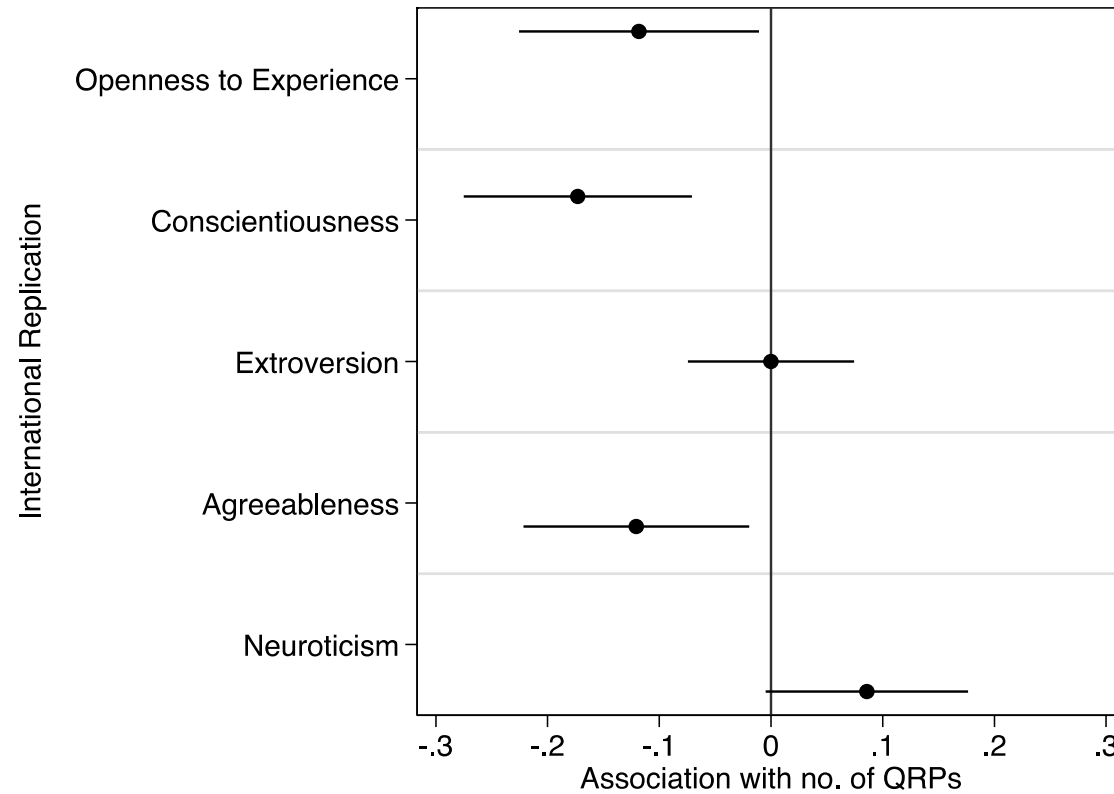
Control variables: (1) Gender, (2) Main field, (3) Year of Phd, (4) Position

Analyses: OLS regression with all measures rescaled to vary between 0 and 1

RESULTS: BIG-5 AND QRPS



RESULTS: INTERNATIONAL REPLICATION



N = 734

Control variables:

1. Gender
2. Main field
3. Year of Phd
4. Country

REDUCING THE ROLE OF PERSONALITY?

Exploratory analysis: Does the local institutional environment condition the effect of personality traits?

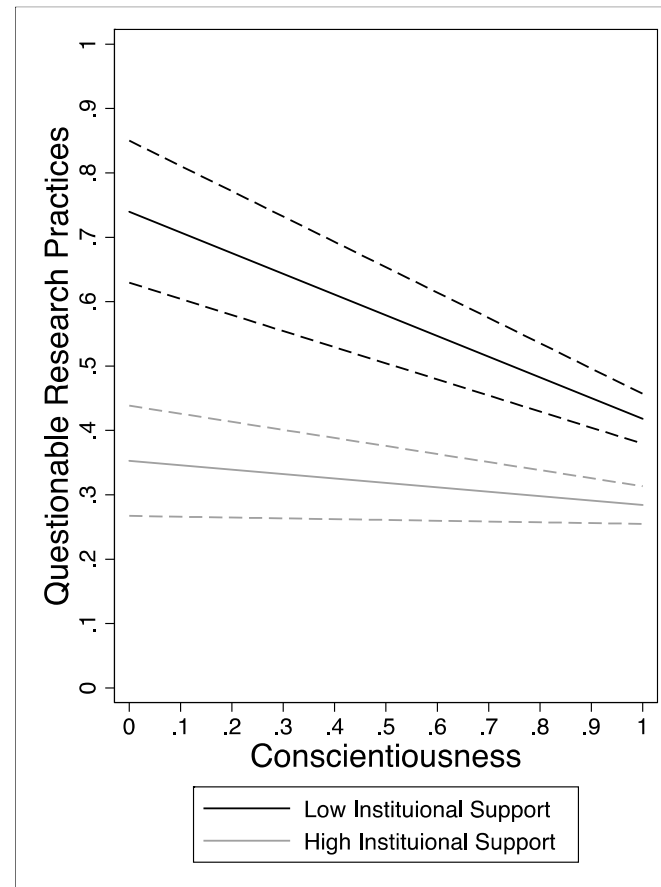
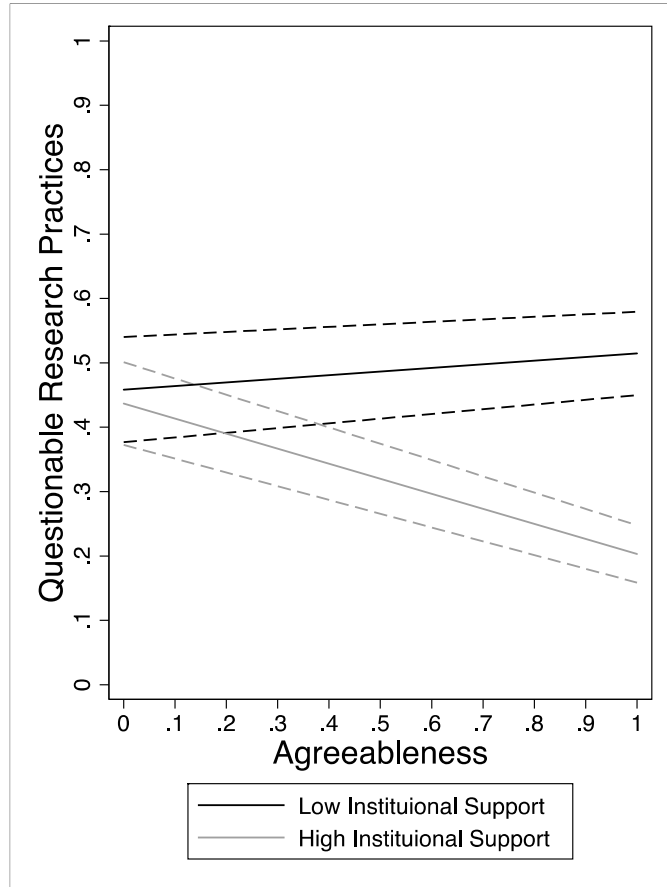
Scale of institutional support for rigorous research ($\alpha=.82$):

1. "The reward system at my department or centre encourages me to carry out the most rigorous and solid research possible"
2. "The local leadership at my department or centre are role models in terms of upholding research integrity"
3. "The most prominent researchers at my department are role models in terms of upholding research integrity"
4. "The peer culture within my department or centre functions as a safe guard against questionable research practices"

Models

- QRPs regressed on interactions between personality and institutional support
- Plot interaction effects with $p < .05$

RESULTS: BIG-5 AND INSTITUTIONAL SUPPORT



Caution is needed!

Effects do not replicate in the international sample

More analyses needed to examine robustness

CONCLUSIONS

First cross-field, multi-national analysis of the personality correlates of QRPs

1. QRPs are especially prominent among those low in Openness, low in Agreeableness and low in Conscientiousness
2. Associations with Agreeableness and Conscientiousness are in line with findings in other domains: Sloppiness and selfishness are central drivers of QRPs
3. Association with Openness is specific for QRPs: The psychological costs of being wrong
4. Some evidence that institutions interact with personality
 1. If local institutions support rigorous research there is no difference between those high and low in Conscientiousness
 2. Institutional support does not motivate those low in Agreeableness to refrain from QRPs: Underscores the need for improved detection rather just improved norms

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