S3: Perceived impact of scientific misconduct on research quality

S3-TableS1: Perceived frequency of scientific misconduct and impact thereof on research quality

This table displays the means of perceived frequency and impact on the respective quality criterion of each misbehaviour item (scale range: 1-5). The rank numbers are calculated in descending order. QC1 (Quality Criterion 1): “validity of the findings at hand”; QC2 (Quality Criterion 2): “the resulting paper's ability to convey the research appropriately”; QC3 (Quality Criterion 3): “impact on research diversity”

Item #	Type of Misbehaviour	Frequency	Frequency Rank	QC1	QC1 Rank	QC2	QC2 Rank	QC3	QC3 Rank
1	Inappropriate or careless peer review of papers or proposals	2.76	12	3.31	9	3.35	9		
2	Not ensuring easy reproducibility when writing a paper	3.19	9	3.51	7	3.46	7		
3	Spread study results over more papers than needed	3.30	6	2.61	16	2.99	15		
4	Inadequate monitoring of research projects due to work overload	3.42	3	3.40	8	3.37	8		
5	Cutting corners in a hurry to complete a project	3.23	8	3.66	6	3.52	6		
6	Not sharing ancillary or meta data	3.29	7	3.29	10	3.31	10		
7	Not sharing the reduction algorithm used for data analysis	3.40	5	3.22	11	3.21	11		
8	Propose study questions solely because they are considered a 'hot' topic	3.88	1	2.91	13	2.87	16	3.70	2
9	Not considering a study question because it isn't considered a 'hot' topic, even though it could be important for astronomy	3.40	4	3.05	12	3.08	13	3.79	1

10	Giving authorship credit to someone who has not contributed substantively to a manuscript	3.73	2	1.97	18	2.06	18		
11	Denying authorship credit to someone who has contributed substantively to a manuscript	2.05	17	2.53	17	2.67	17		
12	Intentionally overlooking others' use of flawed data or methods	2.48	16	3.74	5	3.61	5		
13	Data fabrication and/ or falsification	1.95	18	4.17	1	4.01	1		
14	Compromising the rigor of a study's design or methodology in response to (publication) pressure	2.93	11	3.80	4	3.64	4		
15	Using published ideas or phrases of others without referencing (Plagiarism)	2.61	13	2.82	14	3.18	12		
16	Using unpublished ideas or phrases of others without their permission	2.49	15	2.80	15	3.07	14		
17	Concealing results that contradict one's earlier findings or convictions	2.59	14	3.93	3	3.84	3		
18	Biased interpretation of data that distorts results	3.08	10	4.04	2	3.95	2		

S3-TableS2: Perceived impact of scientific misbehavior on research quality

This table displays the perceived impact for each of 18 types of misbehaviour as the product score of the means of perceived frequency of each misbehaviour and impact on the three aspects of research quality (numbers taken from *S3-Table1*). The rank number is calculated in descending order. Given that the answer scales range from 1 to 5; the results of perceived impact can range between 1 and 25.

Type of misbehaviour & Type of quality criterion	Perceived impact	Rank Number	Type of misbehaviour & Type of quality criterion	Perceived impact	Rank Number
"Propose study questions solely because they are considered a 'hot' topic" & QC3	14.33	1	"Not considering a study question because it isn't considered a 'hot' topic, even though it could be important for astronomy" & QC1	10.36	20
"Not considering a study question because it isn't considered a 'hot' topic, even though it could be important for astronomy" & QC3	12.89	2	"Concealing results that contradict one's earlier findings or convictions" & QC1	10.18	21
"Biased interpretation of data that distorts results" & QC1	12.47	3	"Concealing results that contradict one's earlier findings or convictions" & QC2	9.95	22
"Biased interpretation of data that distorts results" & QC2	12.17	4	"Spread study results over more papers than needed" & QC2	9.87	23
"Cutting corners in a hurry to complete a project" & QC1	11.80	5	"Intentionally overlooking others' use of flawed data or methods" & QC1	9.27	24
"Inadequate monitoring of research projects due to work overload" & QC1	11.61	6	"Inappropriate or careless peer review of papers or proposals" & QC2	9.24	25
"Inadequate monitoring of research projects due to work overload" & QC2	11.51	7	"Inappropriate or careless peer review of papers or proposals" & QC1	9.14	26
"Cutting corners in a hurry to complete a project" & QC2	11.37	8	"Intentionally overlooking others' use of flawed data or methods" & QC2	8.97	27
"Propose study questions solely because they are considered a 'hot' topic" & QC1	11.29	9	"Spread study results over more papers than needed" & QC1	8.61	28
"Not ensuring easy reproducibility when writing a paper" & QC1	11.2	10	"Using published ideas or phrases of others without referencing (Plagiarism)" & QC2	8.29	29
"Compromising the rigor of a study's design or methodology in response to (publication) pressure" & QC1	11.14	11	"Data fabrication and/ or falsification" & QC1	8.15	30

“Propose study questions solely because they are considered a 'hot' topic” & QC2	11.12	12	“Data fabrication and/ or falsification” & QC2	7.84	31
“Not ensuring easy reproducibility when writing a paper” & QC2	11.03	13	“Giving authorship credit to someone who has not contributed substantively to a manuscript” & QC2	7.67	32
“Not sharing the reduction algorithm used for data analysis” & QC1	10.93	14	“Using unpublished ideas or phrases of others without their permission” & QC2	7.65	33
“Not sharing the reduction algorithm used for data analysis” & QC2	10.92	15	“Using published ideas or phrases of others without referencing (Plagiarism)” & QC1	7.37	34
“Not sharing ancillary or meta data” & QC2	10.91	16	“Giving authorship credit to someone who has not contributed substantively to a manuscript” & QC1	7.34	35
“Not sharing ancillary or meta data” & QC1	10.82	17	“Using unpublished ideas or phrases of others without their permission” & QC1	6.96	36
“Compromising the rigor of a study’s design or methodology in response to (publication) pressure” & QC2	10.66	18	“Denying authorship credit to someone who has contributed substantively to a manuscript” & QC2	5.48	37
“Not considering a study question because it isn't considered a 'hot' topic, even though it could be important for astronomy” & QC2	10.47	19	“Denying authorship credit to someone who has contributed substantively to a manuscript” & QC1	5.19	38