**Appendix**

**S1** Explanations of and details for the Kalichman 13 items scale, General attitude sub-scale, Personal sub-scale, Whistleblowing sub-scale, and Punishment sub-scale

|  |  |  |  |
| --- | --- | --- | --- |
| **Statement** (Scored on 5 point Likert scale 1-5 from “Completely disagree” to “Completely agree”)  ***In forming the scale item 7 and 8 are reverse scored*** | **Mean** | **SD** |  |
| Q1. It is never appropriate to report experimental data that have been created without actually having conducted the experiment. | 4.55 | 1.02 | General attitude towards misconduct scale  Score = 26.5  SD = 3.58 |
| Q2. It is never appropriate to alter experimental data to make an experiment look better than it actually was. | 4.77 | .571 |
| Q 3. It is never appropriate to try a variety of different methods of analysis until one is found that yields a result that is statistically significant. | 3.71 | 1.02 |
| Q4. It is never appropriate to take credit for the words or writing of someone else. | 4.59 | .771 |
| Q5. It is never appropriate to take credit for the data generated by someone else. | 4.42 | .919 |
| Q6. It is never appropriate to take credit for the ideas generated by someone else. | 4.40 | .907 |
| Q7. If you are confident of your findings, it is acceptable to selectively omit contradictory results to expedite publication. | 1.97 | 1.20 | Attitude to personal misconduct scale (*reverse scored)*  Score = 3.59  SD = 2.33 |
| Q8. If you are confident of your findings, it is acceptable to falsify or fabricate data to expedite publication. | 1.62 | 1.28 |
| Q9. It is more important that data reporting be completely truthful in a publication than in a grant application. | 2.87 | 1.32 | Excluded |
| Q10. If you witness someone committing research misconduct, you have an ethical obligation to act. | 4.17 | .812 | Whistleblowing scale  Score = 11.9  SD = 2.21 |
| Q11. If you had witnessed a co-worker or peer committing research misconduct, you would be willing to report that misconduct to a responsible official. | 3.91 | .817 |
| Q12. If you had witnessed a supervisor or principal investigator committing research misconduct, you would be willing to report that misconduct to a responsible official. | 3.84 | .839 |
| Q13. If fabricated data are discovered in a published paper, all co-authors must equally share in the blame. | 3.56 | 1.04 | Punishment scale  Mean = 6.40  SD = 1.91 |
| Q14. If fabricated data are discovered in a published paper, all co-authors must get the same punishment. | 2.84 | 1.07 |

**Table S2 Results for the Research Misbehavior Severity Score for each behavior**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Behavior** | **0 times** | **Once** | **Multiple times** | **Regularly** | **Always** |
| 1. Fabricated data? | 146 | 2 |  |  |  |
| 2. To confirm a hypothesis, selectively deleted or changing data after performing data analysis? | 143 | 2 | 1 |  |  |
| 3. Deleted data before performing data analysis? | 142 | 3 | 1 | 2 |  |
| 4. Concealed results that contradicted previous research you published? | 146 | 1 |  |  |  |
| 5. Used phrases or ideas of others without their permission? | 136 | 6 | 5 |  |  |
| 6. Used/ing phrases or ideas of others without citation? | 136 | 5 | 6 |  |  |
| 7. Turned a blind eye to colleagues’ use of flawed data or questionable interpretation of data? | 127 | 14 | 2 |  |  |
| 8. Modified the results or conclusions of a study under pressure from an organization that (co-) funded the research? | 137 | 5 | 2 |  |  |
| 9. Not published (part of) the results of a study? | 130 | 7 | 5 | 1 |  |
| 10. Deliberately not mentioned an organization that funded your research in the publication of your study? | 141 | 3 |  |  |  |
| 11. Added one or more authors to a report who did not qualify for authorship (honorary author)? | 119 | 20 | 6 |  |  |
| 12. Selectively modified data after performing data analysis to confirm a hypothesis? | 136 | 6 | 1 |  |  |
| 13. Reported/ing a downwardly rounded p value (e.g. reporting that a p value of .054 is less than .05)? | 140 | 3 | 1 |  |  |
| 14. Reported an unexpected finding as having been hypothesized from the start? | 128 | 12 | 2 | 1 |  |
| 15. Decided whether to exclude data after looking at the impact of doing so on the results? | 134 | 7 | 4 |  |  |
| 16. Decided to collect more data after seeing that the results were almost statistically significant? | 127 | 9 | 4 | 3 | 1 |
| 17. Omitted a contributor who deserved authorship from the author's list? | 141 | 2 | 1 |  |  |
| 18. Stopped collecting data earlier than planned because the result at hand already reached statistical significance without formal stopping rules? | 140 | 1 | 3 |  |  |
| 19. Deliberately failed to mention important aspects of the study in the paper? | 141 | 1 | 2 |  |  |
| 20. Not disclosed a relevant financial or intellectual conflict of interest? | 141 | 2 | 1 |  |  |
| 21. Spread results over more papers than needed to publish more papers (‘salami slicing’)? | 139 | 4 | 2 |  |  |
| 22. Used confidential reviewer information for own research or publications? | 144 | 1 |  |  |  |

**Table S3** Results for actions and knowledge

|  |  |  |  |
| --- | --- | --- | --- |
| Have you yourself during the last 12 months been the object of pressure to | **Yes** | **No** | **Uncertain** |
| * Fabricate data | 0 | 149 | 0 |
| * Falsify data | 2 | 147 | 0 |
| * Plagiarise data | 1 | 148 | 0 |
| * Plagiarise publications (in whole or in part) | 1 | 148 | 0 |
| * Present results in some other misleading way | 2 | 125 | 9 |
| Have you yourself during the last 12 months ever |  |  |  |
| * Fabricated data | 1 | 148 | 0 |
| * Falsified data | 1 | 148 | 0 |
| * Plagiarised data | 0 | 149 | 0 |
| * Plagiarised publications (in whole or in part) | 0 | 147 | 2 |
| * Presented results in some other misleading way | 1 | 135 | 4 |
| Do you know about anyone in your department who during the last 12 months has |  |  |  |
| * Fabricated data | 1 | 146 | 2 |
| * Falsified data | 2 | 142 | 3 |
| * Plagiarised (in any way) | 2 | 146 | 1 |
| * Presented results in some other misleading way | 3 | 138 | 6 |
| Have you during the last 12 months been exposed to unethical pressure concerning |  |  |  |
| * Inclusion or ordering of authors | 15 | 126 | 7 |
| * Design/method | 0 | 144 | 5 |
| * Analysis | 2 | 143 | 4 |
| * Results | 3 | 142 | 4 |