# **Introductory text**

**Welcome to the Nature Research Group PhD Student Survey 2019!**

This survey aims to explore PhD students' career intentions and programme satisfaction. The results will help become part of a feature article later this year. We’ll also use the findings in other editorial content and for marketing products. This survey includes demographic questions to help us contextualise your answers. We will also be touching on sensitive subjects such as mental health and discrimination. You can opt-out of taking part at any time. Please note that your responses are strictly confidential and anonymous. If you are interested in entering the prize draw, we will require your personal contact information however this will not be linked to your responses.

Thanks again for your help!

Please click the button below to start the survey.

# **Questionnaire**

| **Question no.** | **Question and options** | **Type of question** | **Mandatory Y/N?** | **Routing** | **Notes** |  |
| --- | --- | --- | --- | --- | --- | --- |
| About you **To start the survey, we’d like to learn a little bit about you. This section asks about your current PhD programme** | | | | | | |
| Thank you **Thank you very much for your time. Unfortunately, the rest of the questions in this survey are aimed at those who are currently PhD students. If you would like to provide further feedback please email us at audienceresearch@nature.com.** | | | | | | |
| Q2 | Which was the most important reason you decided to enrol in a PhD programme?   1. I want to pursue an academic career 2. I want to pursue a non-academic career 3. No job I want is available without a PhD 4. Personal interest in my subject of choice 5. I wanted to continue pursuing my research 6. I wanted to live in another country 7. Other, please specify | Single choice | Y | Ask to all |  |  |
| Q3 | Are you studying in the country you grew up in?   1. Yes 2. No | Single choice | Y | Ask to all |  |  |
| Q4 | Where do you currently live?   1. Asia (including Middle East) 2. Australasia 3. Africa 4. Europe 5. North or Central America 6. South America | Single choice | Y | Ask to all |  |  |
| Q12 | Do you have a job alongside your studies?   1. Yes 2. No | Single choice | Y | Ask to all |  |  |
| Q13 | What is your main reason for having a job?   1. To help make ends meet 2. To make myself more attractive to future employers 3. To develop additional skills 4. To broaden my contacts 5. Other, please specify | Single choice  Same page as above | Y | Ask if have second job (Q12=yes) |  |  |
| PhD highs and lows | | | | | | |
| Q14 | What concerns you the most since you started your PhD?  *Please drag the options which are applicable to you and drop them into the grey box, which is next to or below the question depending on screen size.*  *You can then rank these in order, where 1st = your biggest concern.*     1. The difficulty of getting funding / low success rates for grant applications 2. Inability to finish my studies in the time period I had set out to 3. Impact of a poor relationship with my supervisor/PI 4. The number of available faculty research jobs beyond postdoc 5. The high numbers of PhD holders who are doing or have done multiple postdocs 6. The difficulty of maintaining a work/life balance 7. Uncertainty about the value of a PhD 8. Uncertainty about my job/career prospects 9. Student debt during my PhD· 10. Financial worries after my PhD (cost of living, inability to save for a house, children, retirement) 11. Political landscape 12. Impostor syndrome 13. Concern about my mental health as a result of PhD study 14. Poor support and acknowledgement of my parenting/elder care responsibilities | Drag and drop  Multiple choice  Ranking question | N | Ask to all |  |  |
| Q15 | Overall, what do you enjoy most about life as a PhD student?   1. Intellectual challenge 2. Working with interesting and bright people 3. Social life 4. University/academic environment 5. Knowing I have a chance for a permanent academic research post 6. Knowing I will have a chance for a non-academic research job 7. Knowing I will have a chance to use my skills in a non-research science job 8. Creativity 9. A chance to consider professional options 10. Other, please specify | Single choice  Randomise | Y | Ask to all |  |  |
| Q16 | How satisfied are you with your decision to pursue a PhD?   1. Very dissatisfied 2. Somewhat dissatisfied 3. Neither satisfied nor dissatisfied 4. Somewhat satisfied 5. Very satisfied | Grid question  5 point scale | Y | Ask to all |  |  |
| Satisfaction with your PhD experience | | | | | | |
| Q17 | How satisfied are you with your PhD experience?  1=Not at all satisfied, 4 = neither satisfied nor dissatisfied, 7 = Extremely satisfied | Grid question  7-point scale | Y | Ask to all |  | Possible for KDA  Scale changed from last year, 10 point |
| Q18 | Since the very start of your graduate school experience, would you say your level of satisfaction has:   1. Significantly worsened 2. Worsened a little 3. Stayed the same 4. Improved slightly 5. Improved greatly | Single choice | Y | Ask to all |  |  |
| Q19.a: Q19.s | How satisfied are you with each of the following attributes or aspects of your PhD?   1. Availability of funding 2. Hours worked 3. Social environment 4. Degree of independence 5. Recognition from supervisor/PI 6. Overall relationship with supervisor/PI 7. Opportunities to collaborate 8. Number of publications 9. Stipend / financial support 10. Vacation time 11. Benefits (health care, leave, etc.) 12. Teaching duties 13. Guidance received from adviser in lab/research 14. Guidance received from other mentors in lab/research 15. Ability to attend meetings and conferences 16. Ability to present research at conferences 17. Work-life balance 18. Career pathway guidance and advice | Grid question  7 point scale  1=Not at all satisfied, 4 = neither satisfied nor dissatisfied, 7 = Extremely satisfied, N/A | Y | Ask to all |  | Possible for KDA  Scale changed from last year, 10 point |
| Q20 | To what extent does your PhD programme compare to your original expectations?   1. Does not meet original expectations 2. Meets original expectations 3. Exceeds original expectations | Single choice | Y | Ask to all |  |  |
| Your programme | | | | | | |
| Q21 | On average, how many hours a week do you typically spend on your PhD programme?   1. Less than 11 hours 2. 11-20 hours 3. 21-30 hours 4. 31-40 hours 5. 41-50 hours 6. 51-60 hours 7. 61-70 hours 8. 71-80 hours 9. More than 80 hours | Single choice | Y | Ask to all |  |  |
| Q22 | On average, how much one-on-one contact time do you spend with your supervisor each week?   1. Less than an hour 2. Between one and three hours 3. More than three hours 4. Other, please specify | Single choice | Y | Ask to all |  |  |
| Q24.a:Q24.f | To what extent do you agree or disagree with the following statements regarding other faculty members or scientists in your department?   1. Members of my department make time for frank conversations about my career 2. Members of my department are open to the idea of me pursuing a career outside academia 3. Members of my department have useful advice for careers outside academia 4. Members of my department have contacted potential employees on my behalf 5. Members of my department have encouraged me to attend career-promoting training and events 6. Members of my department have discouraged me from attending career promoting training and events | Grid question  5 point scale   * Strongly disagree * Disagree * Neither agree nor disagree * Agree * Strongly agree * Unsure/Not applicable | Y | Ask to all | Recoded to strongly disagree=1,  Strongly agree =5 |  |
| Mental health and discrimination **We understand the following questions are sensitive issues, so please only answer if you feel comfortable doing so. Again, all your responses are anonymous.** | | | | | | |
| Q25 | Have you ever sought help for anxiety or depression caused by PhD study?   1. Yes 2. No 3. Prefer not to say | Single choice | N | Ask to all |  |  |
| Q26 | Did you seek help for anxiety or depression within your institution?   1. Yes, it was helpful 2. Yes, but I didn’t feel supported 3. No, I sought help elsewhere 4. I wanted to, but there was none available 5. I didn’t seek help 6. Other, please specify 7. Prefer not to say | Single choice  Sam  e page as above | N | Ask if Q25=yes (sought help for anxiety or depression) |  |  |
| Q27.a:Q27.f | To what extent do you agree or disagree with the following statements?   1. Mental health and wellbeing services in my university are tailored and appropriate to the needs of PhD students 2. My supervisor/PI has a good awareness of support services and was able to signpost me to them if needed 3. My university offers adequate one-to-one mental health support 4. My university offers different types of support to promote mental health and wellbeing beyond one-to-one support (e.g. workshops, seminars, activities) 5. My university supports good work-life balance 6. There is a long-hours culture at my university, including sometimes working through the night | Grid question  5-point scale  Strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree, Prefer not to say | N | Ask to all | Recoded 1=strongly disagree, 5 = strongly agree |  |
| Q28 | Do you feel that you have experienced bullying in your PhD program?   1. Yes 2. No 3. Prefer not to say | Single choice | N | Ask to all |  |  |
| Q30 | Do you feel that you have experienced discrimination or harassment in your PhD program?   1. Yes 2. No 3. Prefer not to say | Single choice | N | Ask to all |  |  |
| Future career plans **Thanks for your answers. We now want to find out about your career plans and expectations.** | | | | | | |
| Q32 | How much do you expect your PhD to improve your job prospects?   1. Not at all 2. Barely 3. Somewhat 4. Substantially 5. Dramatically 6. Unsure | Grid question  5 point scale | Y | Ask to all |  |  |
| Q33.a: Q33.e | Which of the following sectors would you most like to work in (beyond a postdoc) when you complete your degree?  *Please rank these sectors in order of appeal, where 1st = most like to work in, by dragging and dropping them into the grey box.*   1. Academia 2. Industry 3. Government 4. Non-profit 5. Medical | Drag and drop  Ranking question | N | Ask to all |  |  |
| Q34.a:Q34.g | Please use the scale below to indicate how likely you are to pursue one of these career paths upon completion of your programme.   1. Research in academia 2. Research in industry 3. Research within government or non-profit 4. Non-research in academia 5. Medical research 6. Non-research in industry 7. Non-research in government or non-profit | Grid question  5 point scale  ·         Not likely at all  ·         Not very likely  ·         Neither likely nor unlikely  ·         Likely  ·         Very likely  ·         Unsure | Y | Ask to all | Not likely at all = 1  Very likely = 5 |  |
| Career expectations | | | | | | |
| Q38 | After completing your PhD, how long do you think it will take you to find a permanent (non-trainee) position?   1. Less than a year 2. 1 to 2 years 3. 2 to 3 years 4. 3 to 6 years 5. More than 6 years 6. Unsure | Single choice | Y | Ask to all |  |  |
| Q39.a | How much more likely are you now to pursue a research career than when you launched your PhD programme?   1. Much less likely 2. Somewhat less likely 3. Equally likely 4. Somewhat more likely 5. Much more likely 6. Unsure | Grid question | Y | Ask to all |  |  |
| Careers support **Thanks for your answers so far. Only a few more sections to go!** | | | | | | |
| Q46.a:Q46.m | How well is your programme preparing you to carry out each of the following activities?   1. Collecting data 2. Analysing data 3. Designing robust reproducible experiments 4. Writing a paper for publication in a peer-reviewed journal 5. Developing  resilience to manage rejection by a peer review panel 6. Presenting findings to a specialist audience 7. Presenting findings to a non-specialist (public) audience 8. Applying for funding 9. Finding a satisfying career 10. Managing complex projects 11. Developing a business plan 12. Managing people 13. Managing a large operational budget | Grid question  5 point scale   * Very badly * Badly * Neither well nor badly * Well * Very well * Unsure/Not applicable | Y | Ask to all | Very badly=1  Very well = 5 |  |
| Q47.a:Q47.c | To what extent do you agree or disagree with the following statements?     1. "I feel that my programme is preparing me well for a research career" 2. "I feel that my programme is preparing me well for a non-research science-related career" 3. “I feel that my programme is preparing me well for a career that straddles both industry and academia” | Grid question  5 point scale   * Strongly disagree * Disagree * Neither agree nor disagree * Agree * Strongly agree * I don't know | Y | Ask to all | 1= strongly agree,  5=strongly disagree |  |
| Reflection **We’re almost finished!** | | | | | | |
| Final questions **We have a few questions we’d like to ask about you to finish off the survey.** | | | | | | |
| Q52 | What is your age?   1. Under 18 2. 18 - 24 3. 25 - 34 4. 35 - 44 5. 45 - 54 6. 55 - 64 7. 65 or over 8. Prefer not to say | Single choice | Y | Ask to all |  |  |
| Q53 | Are you…   1. Male (including trans male) 2. Female (including trans female) 3. Gender queer / Non binary 4. Prefer not to say | Single choice  Same page as above | Y | Ask to all |  |  |
| Q55 | Do you have any caring responsibilities?   1. Yes, to child/children under 12 2. Yes, to child/children over 12 3. Yes, to an adult(s) 4. No 5. Other, please specify | Multiple choice  No exclusive  Same page as above | Y | Ask to all | Simplified to Yes / No |  |
| Thank you | | | | | | |

# **Final text**

We have now come to the end of the survey. Many thanks for filling out our survey, your responses are extremely valuable and useful for *Nature.*

Please click the button below to submit your answers.