What do incoming university students believe about scientific practices in psychology?

Start of Block: Info sheet

Info What do incoming university students believe about scientific practices in psychology?   CONSENT INFORMATION STATEMENT **Principal Investigators** Dr. Jennifer Beaudry (Senior Lecturer, Department of Psychological Sciences, Faculty of Health, Arts and Design, Swinburne University of Technology), Dr Matt Williams (Lecturer, School of Psychology, Massey University), & Dr Michael Philipp (Senior Lecturer, School of Psychology, Massey University)   
 **Introduction to Project**  
 We invite you to participate in a study where we are investigating what incoming psychology students believe about scientific practices in psychology. We’re interested both in your beliefs about how research in psychology *is* currently done, and how it *should* be done. This study is being conducted by an international team led by Dr Jennifer Beaudry (Swinburne University of Technology, Australia), and Dr Michael Philipp and Dr Matt Williams (Massey University, New Zealand).  
   
 You must be at least 18 years of age to participate. Below is an explanation of the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation.  
   
 **About this Project**  
 In this study we will be recruiting participants from a number of universities around the world. To be eligible to participate, you must be at least 18 years old and **be starting your first unit of study in psychology at university within the next month**. By a “unit of study” we mean a single subject taught over the period of a term or semester (e.g., “psychology 101”); in some countries this would be called a “module” or a “course”. If you aren’t currently enrolled in a unit of study in psychology at university, have already completed one or more units of study in psychology at university, or are currently enrolled in a unit of study in psychology that has *already* started, you unfortunately are not eligible to participate.  
   
 If you choose to participate in this study, you will complete a brief anonymous online survey in which you will be asked a number of questions about what you think about scientific practices in psychology. We expect it will take you between 5 to 10 minutes to complete the survey.  
   
 **Participant Rights and Interests**  
   
 Risks of Participation  
 There are no known physical, psychological, economic or social risks associated with your participation in this study. Additionally, your participation is voluntary, you can refuse to answer any questions and you can discontinue your participation at any time.  
   
 Benefits of Participation  
 There are no direct individual benefits to you beyond the opportunity to learn first-hand what it is like to participate in a research study or to learn about some of the method involved in psychological research. A general benefit is that you will add to our knowledge of the research subject.  
   
 Payments  
 Participants will not be remunerated for their participation.  
   
 Withdrawal from participation  
 Your participation in this study should be completely voluntary. If you choose to participate, you have the right to withdraw at any time during the study without penalty or prejudice from the researchers. You are not obligated to answer any questions that you find objectionable. In the event that you do withdraw from this study, the information you have already provided will be kept in a confidential manner.  
   
 Privacy & Confidentiality  
 Your responses will be completely anonymous; you will be assigned a random string of characters and your personal identity will not be linked to your data. During data collection, the data will be accessible only by the project team. Once the data have been analysed, we will ensure that we remove from the data set any information that might inadvertently include any identifying information (e.g., if you entered the name of your teacher). We will then make this non-identifiable data available to other researchers and might post it to an online repository (e.g., a website such as the Open Science Framework) for reproducibility purposes. The data will remain in the repository indefinitely.  
   
 **Research output**  
 The results of this study may be presented, in the aggregate, for academic purposes at conferences, lectures, etc., and may be published in academic journals. Your responses will not be identifiable in any of these research outputs. If you would like a report of the final results, please contact any of the investigators (details below) in one year.  
   
 **Further information about the project**  
 If you would like further information about the project, please do not hesitate to contact:  
 Dr. Jennifer Beaudry ([jbeaudry@swin.edu.au](mailto:jbeaudry@swin.edu.au)), Dr. Matt Williams ([m.n.williams@massey.ac.nz](mailto:m.n.williams@massey.ac.nz)), or Dr Michael Philipp ([m.philipp@massey.ac.nz](mailto:m.philipp@massey.ac.nz)).  
   
 *This project has been approved by or on behalf of Swinburne’s Human Research Ethics Committee (SUHREC) in line with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints about the conduct of this project, you can contact:*  
 *Research Ethics Officer, Swinburne Research (H68),  
 Swinburne University of Technology, P O Box 218, HAWTHORN VIC 3122.  
 Tel (03) 9214 5218 or +61 3 9214 5218 or* [resethics@swin.edu.au](mailto:resethics@swin.edu.au)

Consent Having read the information above, do you consent to participate in this study?

* Yes (1)
* No (2)

End of Block: Info sheet

Start of Block: Age\_screening

Age What is your age?

* 0-17 years (1)
* 18-24 years (2)
* 25-34 years (3)
* 35-44 years (4)
* 45-54 years (5)
* 55-64 years (6)
* 65+ (7)

End of Block: Age\_screening

Start of Block: Screening

Eligibility Which of these best describes you?  
   
 Note. By a **unit of study,** we mean something like "Psychology 101". Depending on which country you're in, your university may call this a "course" or "module".

* I will start my **first** unit of study in psychology at a university within the next month (1)
* I am currently enrolled in a unit of study in psychology at a university, and the semester/term has *already* started. (2)
* I have previously completed at least one unit of study in psychology at a university (3)
* I have previously started a unit of study in psychology at a university, but did not complete it (4)
* I have *never* enrolled in a unit of study in psychology at a university (5)
* None of the above describe me (6)

End of Block: Screening

Start of Block: Study details

Uni Which university are you currently enrolled at?

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Degree What is the name of the qualification that you are enrolled in for 2020? (E.g., Bachelor of Arts, Graduate Diploma in Science, etc.)

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Major Which subject or subjects are you majoring in? (If you haven't decided yet, you can leave this blank)

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High\_school Which of these best describes you?

* I graduated from high school / secondary school (1)
* I completed some high school / secondary school (2)
* I did not attend high school / secondary school (3)

Display This Question:

If Which of these best describes you? != I did not attend high school / secondary school

Psych\_HS Did you complete any psychology subjects or courses in high school?

* Yes (1)
* No (2)

End of Block: Study details

Start of Block: Demographics

Gender What is your gender?

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Uni\_country Which country is your university located in?

▼ Afghanistan (1) ... Zimbabwe (1357)

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|  |

Q54 Which country is your university located in?

▼ Afghanistan (1) ... Zimbabwe (1357)

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Nationality What is your country of nationality (as shown on your passport)?

▼ Afghanistan (1) ... Zimbabwe (1357)

First\_gen Did either of your parents attend university?

* Yes (1)
* No (2)
* Don't know (3)

End of Block: Demographics

Start of Block: Scenario part 1

Scenario The next set of questions relate to the following scenario:  
   
 Imagine that Deborah is a psychology researcher who has designed a study to test a specific hypothesis.  
   
 Please indicate the extent to which you agree with the following statements. Some of the questions might appear similar, but please read each statement carefully and respond to it individually.

critical\_cnorm Deborah used previously published research to inform her research study. Deborah should accept the findings published in journals because journals would not publish research with errors.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

critical\_norm Deborah used previously published research to inform her research study. Deborah should be critical of the findings published in journals because published research can be wrong.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

Prereg\_norm Before collecting her data, Deborah should write down what her hypotheses are and how she plans to collect and analyse data. She should then save her plan in an online registry so others can tell what methods and analyses she will use to test her hypotheses after collecting data.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

Prereg\_cnorm Deborah should decide which data analyses are suitable to test her hypotheses only after looking at her data.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

RegReport\_norm Deborah should submit a plan for her study to a journal to be checked by experts (peer reviewed) *before* she collects and analyses data.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

RegReport\_cnorm Deborah should submit her study to a journal to be checked by experts (peer reviewed) only *after* she has finished collecting and analysing her data.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

phack\_cnorm It would be good scientific practice for Deborah to run many different analyses of her data, and report only those that produce interesting findings.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

phack\_norm Deborah should report the findings of all analyses of her data that she conducts.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

HARK\_cnorm Once Deborah has analysed her results, it would be good scientific practice for her to write her manuscript as if she predicted those results from the beginning.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

HARK\_norm Deborah should only describe her study as a test of a hypothesis if she decided on her hypothesis and how she would test it before she started collecting data.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

End of Block: Scenario part 1

Start of Block: Scenario part 2

Scenario\_remind Please continue to think about Deborah, who is a psychology researcher who has designed a study to test a specific hypothesis.  
   
 Please indicate the extent to which you agree with the following statements. Some of the questions might appear similar, but please read each statement carefully and respond to it individually.

InfoForRep\_norm When reporting the findings of her study, Deborah should describe how she completed the study in enough detail that another researcher could repeat her entire study without having to check any details with her - even if this means including lots of “boring” practical details in her report, or in an appendix.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

InfoForRep\_cnorm When reporting the findings of her study, it would be good scientific practice for Deborah to gloss over some of the practical details so she can tell a good story.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

Preprint\_norm Deborah should post a manuscript describing the findings of her study openly online as soon as it is complete, even if the manuscript has *not* yet been checked by experts (peer reviewed) and accepted for publication in a journal.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

Preprint\_cnorm Deborah should not post a manuscript describing the findings of her study online until after it has been checked by experts (peer reviewed) and accepted for publication in a journal.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

OpenMaterials\_norm Deborah should share the written materials and measures for her study openly online so that other researchers and members of the public can access and use them.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

OpenMaterials\_cnorm Deborah should keep the written materials and measures for her study protected, so that only she and her research team can access them.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

OpenData\_norm When Deborah publishes her study, she should post the anonymous responses from participants online so that anyone can access and use the responses in their own research.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

OpenData\_cnorm Deborah should keep the participants’ responses from her study protected, so that only she and her research team can access them.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

OpenAcc\_norm Once her study is complete, Deborah should publish her findings in a journal that is free for others to access.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

OpenAcc\_cnorm Once her study is complete, Deborah should publish the findings in the most prestigious journal she can, even if that journal charges others a fee to access the report.

* Strongly disagree (1)
* Somewhat disagree (2)
* Neither agree nor disagree (3)
* Somewhat agree (4)
* Strongly agree (5)

End of Block: Scenario part 2

Start of Block: Norms in practice

Practices In this section of the survey, we’re interested in finding out about your beliefs about the behaviour of researchers when conducting psychology studies.  
   
 When you consider **all** of the psychology studies conducted globally each year, what percentage of them would have the following characteristics?

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

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| --- | --- |
| The plan for collecting and analysing data for the study is posted in an online registry before data collection starts () |  |
| A plan for the study is submitted to a journal to be checked by experts (peer reviewed) *before* the data is collected and analysed () |  |
| The researchers run many different analyses of the data, and report only those that produce interesting findings () |  |
| The researchers describe their results as if they predicted those results from the beginning, even if that isn’t actually true () |  |
| The researchers provide enough practical detail in their written report that another researcher could fully repeat (replicate) their study without needing to ask any questions of the original researchers () |  |
| A manuscript describing the findings of the study is posted openly online as soon as it is complete, even if the manuscript has not yet been checked by experts (peer reviewed) and accepted for publication in a journal () |  |
| The written materials and measures for the study are posted openly online so that other researchers and members of the public can access and use them () |  |
| Once the study is published, the anonymous responses from participants are posted openly online so that anyone can access and use the responses in their own research () |  |
| Once the study is published, the anonymous responses from participants are available to other researchers on request () |  |
| The research report describing the study and its findings is published in a journal that is free for anyone to access () |  |

End of Block: Norms in practice

Start of Block: Replications

Rep\_perc Imagine that a set of researchers select 100 published studies about psychology, and repeat each study again, exactly how it was described in the original report but with a new set of participants. We call repeating a study like this a “replication study”. At a guess, how many of these replication studies do you think would produce the same conclusions as the original studies?

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

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End of Block: Replications

Start of Block: Replications2

Crisis Have you heard of something called “the replication crisis”?

* Yes (1)
* No (2)

Display This Question:

If Have you heard of something called “the replication crisis”? = Yes

Crisis\_text What do you think “the replication crisis” is?

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Display This Question:

If Have you heard of something called “the replication crisis”? = Yes

Crisis\_disc Which scientific disciplines do you think are most affected by the replication crisis?

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End of Block: Replications2

Start of Block: Fin

Comments Thank you for participating! Do you have any additional comments to make about the content of our survey?

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End of Block: Fin