# Submission

In your submitted report, you should perform the appropriate analyses and describe the different steps of the analyses, as described below. To present your analyses and conclusions you should write a **brief** introduction, **detailed** results section, and a **concise** discussion section, using the same format that would be expected in a journal article (i.e., **APA style**). You do not need to do any background reading related to the research topic and you do not need to include Method/Procedure sections. There is a **1500-word limit** for this assignment. Independent of the word limit, you may include a maximum of **four tables and/or figures** (any excess figures/tables will be ignored). Appendices are not permitted and will be ignored. References are **not required** but can be included to justify specific analytic decisions (these will not be included in the word count).

# Data set

These data come from a study of the correlates of delusion proneness in the general population. Participants provided demographic information (age, gender [0=female, 1=male], years of education) and completed a battery of questionnaires and behavioural tasks assessing the following:

1. delusion-proneness (dp; questionnaire, higher scores reflect greater delusion-proneness)
2. LW2 (a genetic polymorphism believed to be positively linked to delusion formation; 0=absent, 1=present)
3. perceptual distortions (pd; behavioural task; higher scores reflect greater perceptual distortions)
4. hallucination-proneness (hp; questionnaire; higher scores reflect greater hallucination-proneness)
5. causal reasoning (cr; questionnaire; lower scores reflect poorer causal reasoning)

The researchers are interested in whether (i) scores on the test battery can explain a significant amount of the variance in delusion-proneness; (ii) whether any significant effects are independent of demographic variables, which were considered to be nuisance variables; and (iii) whether causal reasoning mediates the relationship between LW2 and delusion-proneness. All the individual data have been screened and cleaned so that there are no missing data or miscodings; you can assume that data are normally distributed with no univariate or multivariate outliers.

# Research questions

Please perform a set of analyses on these data. In your write-up: (a) provide a brief introduction (**5 marks**); (b) detail the screening that was performed to ensure the data are suitable for these analyses (**10 marks**); (c) examine whether individual differences in delusion-proneness can be predicted by scores on the battery of scales and tasks (include information on descriptive statistics and correlations, inferential statistics and effect sizes for the full model and individual predictors, and full interpretation of the results) (**20 marks**); (d) repeat the analysis but examine whether the predictive utility of the set of significant predictors model is independent of the possible

relationship between the demographics variables, which the researchers consider nuisance variables, and delusion- proneness (include inferential statistics and effect sizes for the full model and individual predictors and full interpretation of the results) (**25 marks**); (e) test the mediation model proposed by the researchers (include inferential statistics and effect sizes for the full model and individual predictors and interpretation of the results) (**25 marks**); (f) present a brief discussion of the results (**10 marks**). All features of the report should be written according to APA style (**5 marks**).