

Occupational Psychology (ECPS5001)

2,000 word research report – General feedback and guidance for good practice

Please use this guidance along with guidance you have received from previous submissions of research reports that includes information regarding formatting, presentation, referencing, etc.

Abstract

You should aim to write an abstract in a single paragraph and no more than 150 words. The abstract should summarise the whole report and include key/relevant/important information from each section of the report.

- Include some brief important information that justifies why you are conducting this study. Refer to past studies, what has been found and how this relates/why you have chosen to conduct this particular study.
- The specific hypotheses of the study which should explain how you expect your IV's (predictor variables) to predict/relate to scores on the DV.
- The design of the study. Keep in mind the type of analysis you are running and word this design appropriately.
- Main findings. Did the model as a whole (i.e., the two IV's combined) predict scores? Which of the two IV's emerged as the strongest predictor?
- End the abstract with a concluding sentence that explains the theoretical implications of the study.

E.g.,

"It has long been suggested that personality variables are able to predict individual's performance at work (e.g., Chamorro-Premuzic & Furnham, 2003; Poropat, 2009). This study aimed to determine whether the traits of conscientiousness and extraversion, specifically, were able to predict performance on a stress-inducing cognitive task in undergraduate students. Forty-five psychology students completed relevant sub-scales of the Big Five Inventory (BFI; John, Donahue & Kentle, 1991) as well as a mathematical reasoning task to assess cognitive performance. The model as a whole did not predict performance, however conscientiousness emerged as a significant unique predictor ($\beta = .60, p = .02$). These findings support occupational literature advocating that conscientiousness can be used as a valid predictor of work performance. Limitations of the study are discussed in terms of a potential confound of maths anxiety." – 133 words.

Introduction

You were looking for/at three things in this study; (1) personality trait 1 [IV], (2) personality trait 2 [IV], and (3) a stress-inducing task to use to assess levels of cognitive performance [DV]. Therefore, you should have included the following information in the introduction (indicative only):

- Literature on the personality traits you have chosen. For this report you have all chosen to use different traits (for different reasons) – and the reasons you have for choosing these traits should be clearly justified through the use of previous studies

and empirical literature. For example, yes we know that conscientiousness is consistently reported as a strong predictor of job performance across all occupations, whereas there is less consistent evidence at present regarding extraversion. Neuroticism, however, holds negative relationships with performance. But how do we know this? Because we have looked at and read research studies that has provided us with this information. The information you provide and the claims you make should be backed up/supported by/with literature (studies, references, findings, etc) and should eventually lead nicely on to your hypotheses.

- Information regarding the type of task you have chosen to measure cognitive performance (where possible). What is it about stress-inducing tasks that means this is what has been chosen to ultimately measure cognitive performance? You're writing this report for an Occupational Psychology module; therefore, is stress-induction part-and-parcel of the occupational world? And, if so, can we now justify why the task aimed to be stress-inducing? This information was omitted from many (if not all) of these reports. In addition to this, then, include information about what the literature says about the link between cognitive performance (and stress-inducing tasks) and personality traits (the ones you have chosen to measure and use in your analysis).
- Always remember to explain concepts or findings in a way that the reader will understand. This can include some methodological information to help the reader make sense of the findings, but don't include unnecessary information and 'waste' words.
- Your introduction should end with clear and justified hypotheses. Do you expect, for example, conscientiousness and extraversion to significantly predict scores on the stress-inducing task? Which one of these traits do you think will be the strongest predictor and why? (remember this information should come from the literature in your introduction). The hypotheses should be worded in accordance with the specific design of your study. There were a lot of hypotheses in these reports that mentioned correlations, but failed to mention 'relationship' and 'prediction' – and these are the things a regression analysis looks at.

Method

Should include the four relevant sub-headings and should include enough detail that any other researcher could come and replicate your study exactly as you carried it out, using exactly the same measures in exactly the same way.

Participants:

This section should include information on where you recruited your participants from, how many there were, how many males and females, the age range, the mean and standard deviation of age, and any other information that may have excluded them from the study. (e.g., if using a mathematical reasoning task, ensuring that participants did not suffer with dyscalculia?)

Design:

This section should include information on your IV's and DV. Remember to bear in mind the type of analysis you are using on the data that you collect - for a multiple regression you are using continuous scores for your IV's and a continuous score for your DV. The two IV's (or

predictor variables) for this report should have been your two personality traits, and your DV was the SCORE on whatever task you had participants take part in.

Materials:

Overall, this section was well written and included a very good level of detail to explain/describe the measure used to measure your respective personality traits. What was missing, however, was information relating to the stress-inducing task that you had used to measure cognitive performance. This was a very important part of your study so it should have been considered and described in the same way as the measure of personality.

Procedure:

This section should include information from the moment the participants begins to take part in your study to the moment they are given the debrief form. Also remember that any ethical information belongs in this section.

Results

First of all, and in general, results sections were presented relatively well and the tables were good (see additional information below).

The results section should always begin with your descriptive statistics (i.e., means and standard deviations for each of the variables you have used in the study). You can either display this information in a table (this is sometimes easier and less 'messy' when you have a lot of data to present) or summarise it in a paragraph. If you do one, don't do the other.

Also remember that you should also be following APA conventions for labelling tables (i.e., give it a title/description). Remember: titles of tables go above the table (with heading directly underneath and italicised) whilst titles of any figures (graphs/charts) go below the figure. It was good to see that no one had copied and pasted any SPSS tables into the report and had instead created tables for the report. Also ensure that letters are in italics when reporting stats, and that you are always reporting stats to two decimal places (even if the second number after the decimal point is a zero). These things may seem picky – but they are important in developing your report writing and results sections in general.

For this report you were required to run and report a multiple regression. All of you have clearly analysed the data you have collected correctly, but the way that you have reported and/or interpreted some of these results doesn't quite fit what the results were showing. You must ensure you are following the guidelines and conventions provided in textbooks (this is where your SPSS books would have come in handy) for reporting specific statistical tests. In particular, there were some omissions of reporting the findings of the multiple regression using the correct terminology. The words 'predictors', 'unique prediction', 'model as a whole' were sometimes included – but there was sometimes an apparent lack of understanding of what these terms really meant and what they related to. Remember that we are not trying to catch you out when we ask you to write reports – the information you need to learn how to correctly and professional present a multiple regression results section is available from your research methods module lectures and your stats books.

A basic example of a multiple regression results section is below:

note that this does not include information regarding the removal of any outliers during the cleaning or screening phase, information on missing data/non-response from participants etc. If you have used any techniques to ensure that the results you have reported are not based upon anomalies within the data (e.g., outliers, missing data, selection bias, etc) then you should describe and explain these first.

A multiple regression was conducted to assess the ability of two personality traits (extraversion and conscientiousness) to predict levels of performance on a simulated monitoring task. Table 1 summarises the means and standard deviations for each variable, with scores ranging between eight and 40 for extraversion, nine and 45 for conscientiousness, and 0 and 80 for performance.

Table 1

Descriptive statistics for all variables included in the study.

	M	SD	N
Extraversion	27.55	4.50	50
Conscientiousness	34.02	5.40	50
Cognitive Performance	68.35	6.41	50

Correlations between the predictor variables and dependent variable are highlighted in table 2. As can be seen conscientiousness was strongly and positively correlated with performance scores, showing that high conscientiousness scores were associated with a higher cognitive performance score ($r = .43$, $p < .001$). Extraversion and conscientiousness were also strongly positively correlated ($r = .45$, $p < .001$).

Table 2

Inter-correlations between study variables

	Ex	Con
Extraversion	-	.45*
Conscientiousness	.45*	-

Performance	-.03	.43*
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Note: * $p < .001$

The regression analysis showed that, as an overall model, the set of independent variables (extraversion and conscientiousness) were not statistically significant ($F(2, 49) = 4.63, p = .06$) in predicting cognitive performance scores, and produced an adjusted R-squared value of 0.26. The combined IV's therefore explained 26% of the variance in performance scores.

Table 3 shows the coefficients for the separate IV's in the analysis. Conscientiousness emerged as a significant unique predictor of performance scores ($\beta = .60, p = .02$), with an increase of .60 SD's for the DV found for every one SD increase in performance scores. Conscientiousness was not significant in contributing to the prediction of performance scores ($p > .05$).

Table 3

Beta coefficients prediction of IV's on the DV (performance)

Variable	Beta value	Sig. value
Extraversion	.60*	.02
Conscientiousness	.09	.68

The results of this study indicate that the first research hypothesis stating the predictive ability of conscientiousness on performance can be accepted. As the model as a whole emerged as non-significant, however, the second hypotheses must be rejected.

Discussion

Theoretically, the discussion should flow on smoothly from your introduction (which has ended with your specific hypotheses). Therefore, it makes sense that the discussion should begin by with a summary of your findings and a statement on whether or not the hypotheses were supported. Statistical formulas should not be included in this section - the interpretation of the results is what matters here. You should then indicate how your results/findings relate to the research problem you outlined in the introduction. You should be relating this to literature (and therefore including references where applicable).

Next, suggest possible reasons for differences between your study and those conducted previously (if there are any). Remember that this should be constructive, sensible and relevant. It is perfectly fine to discuss or highlight limitations/flaws/weaknesses that were present in the study (this can include information relating to participants, design of the study, materials used, etc), but don't use this whole section to *only* state that the study was completely flawed. Include potential ideas as to how the study could be improved if it were to

be conducted again. For example, did you encounter issues with the self-reporting measure of personality? Are there different ways you can/could measure personality? We are aware there are issues with self-report measures – but what does the literature say? Do you think the task you chose to measure cognitive performance was the correct one? Why or why not? Remember – link back to literature. If you are introducing potential developments of this experiment, this should have come from somewhere (research?)

End the discussion with a final concluding paragraph restating the main findings of the study and any/other theoretical implications of the findings.

Reference list

The reference list should be a list of all the material (i.e., studies from books, journal articles, etc.) that you have referred to in the entirety of your report. References need to adhere to APA guidelines (see referencing handbook available via the library system for more information).

Appendices

This should include any materials you have outlined and used in your study (questionnaires, consent forms, debrief forms, etc.) plus your raw SPSS output data.