

# Commentary on candidate evidence

The candidate evidence has achieved the following marks for each section of the assignment.

## Candidate 1

### Topic: The impact of sleep deprivation on reaction time

The candidate was awarded **30 out of 40 marks** for this assignment.

#### Section A (Introduction)

The candidate was awarded **7 out of 8 marks** because they have provided theoretical background related to their topic of sleep, described two relevant research studies and provided an aim relevant to their background research.

The following points were awarded marks:

- Description of restoration theory in relation to sleep removing waste products and the production of growth hormone **(1 mark)**.
- Description of the way the brain removes waste products during sleep **(1 mark)**.
- Description of the impact of sleep on concentration and attention **(1 mark)**.
- Description of the effect of sleep apnea **(1 mark)**.
- Description of the Taheri and Arabameri (2012) study **(1 mark)**. The description of the procedure of the study was insufficient to be able to award the full 2 marks for this study.
- Description of the Cain et al (2011) study **(2 marks)**. The procedure and results of the study were provided in sufficient detail to award 2 marks.

## Section B (Introduction – aim and hypothesis)

The candidate was awarded **1 out of 2 marks** because they provided an aim that clearly related to their background research (**1 mark**). The hypothesis was not sufficiently operationalised and so was not awarded a mark.

## Section C (Method)

The candidate was awarded **3 out of 6 marks** because they have provided three points of accurate description of the method, as follows:

- No mark was awarded for the method and design as the method was incorrectly identified as a lab experiment.
- A justification for the choice of method was provided (**1 mark**). Although the method was incorrectly identified, the justification was appropriate and specific to the candidate's research.
- No mark was awarded for the research variables as the dependent variable of reaction time was not operationalised.
- An appropriate extraneous variable was provided (**1 mark**).
- The number of participants and the sampling technique were provided (**1 mark**).
- No mark was awarded for materials/procedure as the procedure is unclear in terms of the ruler measurement.

## Section D (Method – ethics)

The candidate was awarded **4 out of 4 marks** because they have provided four accurate points of explanation of how the British Psychological Society (BPS) ethical guidelines have been implemented. The candidate has identified appropriate ethical principles and has made some effort to relate them to their own study. The candidate explained that the testing was conducted individually with participants to protect their embarrassment (**1 mark**), the use of a coding system instead of participant names (**1 mark**) and explained the confidential storage of the questionnaires in that they were only accessible to the researcher (**1 mark**). The information provided on the

right to withdraw was considered a generic point about ethical guidelines **(1 mark)**.

## Section E (Results)

The candidate was awarded **5 out of 6 marks** because they provided five accurate points related to the interpretation and presentation of their data, as follows:

- An appropriate form of statistical analysis (mean and mode) was chosen **(1 mark)**.
- The justification of the choice of mean due to the limitations of the mode **(1 mark)**.
- Calculations were present in appendices and accurate **(1 mark)**.
- Data was presented in an appropriate format (a summary table and bar chart) **(1 mark)**.
- No mark was awarded for the labels and titles of the table/graph as these were inaccurate and did not permit accurate interpretation. The table refers to the median instead of the mode and the title of the graph was incorrect.
- An accurate statement was provided about whether the results support or refute the hypothesis **(1 mark)**.

## Section F (Discussion)

The candidate was awarded **10 out of 12 marks** because they provided six relevant points of analysis and four developed points of specific evaluation.

The following points of analysis were awarded marks:

- A link was made between their results and their hypothesis **(1 mark)**.
- The possible impact of caffeine on sleep and the specific way this could have affected their reaction time was analysed **(1 mark)**.
- The possibility of obstructive sleep apnea in the participants and the specific way this could have affected their reaction time was analysed **(1 mark)**.
- A link was provided between the results of their study and restoration theory **(1 mark)**.

- The results were related to the Taheri and Arabameri (2012) study **(1 mark)**.
- A conclusion was provided, including the means for each group **(1 mark)**.

The following points of evaluation were awarded marks:

- Explanation of the lack of generalisability of the study to adults, given the limited age of the sample **(1 mark)**.
- Explanation of the unreliability of the ruler test as a measure of reaction time **(1 mark)**.
- Explanation of the replicability of the study **(1 mark)**.
- Explanation of the unreliability of the self-report mechanism for the number of hours participants slept **(1 mark)**.

## Section G (Other)

The candidate was awarded **0 out of 2 marks** because the references were not presented in such a way as to enable a third party to locate the information on the research studies provided in the introduction, and the report was presented in such a way that made it difficult to follow.