



PSYCHOLOGY ATAR – YEAR 12 2024

Unit 4

Task 7: Sleep Validation

Tiffany

Syllabus points

- Applications of psychology to health
- Ethical guidelines and practices for psychological research
- Formulating research
- Methodology
- Data collection
- Drawing conclusions
- Evaluation of research

Conditions

Reading time: 5 minutes

Working time: 40 minutes

Task Weighting

- 7%

Structure of this paper

Section	Number of questions available	Number of questions to be attempted	Suggested working time (minutes)	Marks	Score
Section One: Short Answer	5	5	40	41	
Total				41	

Part B

(41 marks)

1. Identify the following variables in your study.

(3 marks)

Independent

Device used before bed

Dependent

Cognitive function through out the day (mood, attention etc)

Controlled

time without device

2. The study you have conducted uses experimental design.

- (a) Outline why it is considered experimental research.

(2 marks)

its an experimental research because the experimenter
manipulates the variables (data, and measures with
independent variables.

- (b) (i) Identify one feature of experimental research that is missing from this study. (1 mark)

~~Longitudinal~~ Control group

- (ii) Explain why experimental research should have this feature.

(2 marks)

To see whether or not the measurement measure what
it suppose to measure (validity), it is also to
compare
compare the measure the impact when independent variable
is not exposed to the participant.

3. Formulate an evidence-based conclusion that explains your findings using psychological theories and concepts.

(6 marks)

in conclusion the hypothesis is supported, where it is hypothesised that ~~the~~ adolescent who restrict ~~mobile device~~ 30 minute of device usage have a higher cognitive function throughout the day measured by self report likert scale out of 10. with the evidence of increasing sleep quality, cognitive function and mood. ~~cognitive~~
~~the~~ average of cognitive function ~~through~~ of 3 block day are 6.54, 6.54 and 6.79 (wednesday, thursday and friday respectively) this ~~it~~ suggest if the experiment being ~~do~~ extended to longer time period, a significant result would be exposed.

4. The data was collected using a subjective quantitative measure.

- (a) With reference to your study, outline a strength of this method of data collection. (2 marks)

Using subjective quantitative measure allows the data to be calculated and mathematically measure the data, so its easier to compare.

- (b) Suggest how qualitative data could be collected in a future study. (4 marks)

using interview data collection, where participant is faced with a ~~set~~ set of question about their sleep. Then quantitative data could be collected to measure the independent variable.

- (c) Explain how qualitative data addresses a limitation of quantitative data. (2 marks)

~~quantitative data~~ qualitative data could address a limitation of quantitative data not ~~to~~ deeply measure the independent variable from quantitative data. as it explain the reason behind the number, allows experimenter understand more of the correlation.

- (d) Assess the reliability and validity of the subjective quantitative measure you created. (4 marks)

Reliability: ^{consistency} it is easier to get a consistent result using subjective quantitative as we can ~~use~~ compare the increasing/decreasing number.

Validity: ^{it is} it measures what ~~is~~ intended to measure, using subjective quantitative as if the participant ^{answer} ~~answer~~ their independent variable them self (self report).

5. Imagine we were going to run this study again but with the feature identified in 2 (b) (i) and a larger sample with the target population being high school students in Western Australia.

(a) Assess which sampling technique would be most appropriate to get a representative sample of all students in Western Australia. (3 marks)

random sampling, every one get the ^{Chance}~~chance~~ or probability to get picked/assign to either control group or experimental group to minimise the probability of location impacting the result.

(b) You have already written a standardised procedure in a report that could be used in the future study. Explain the purpose of having these in the study. (3 marks)

to make sure everyone is not ~~be~~ harm accidentally mentally and physically. it is also creates a higher reliability to the study, allowing the study to be replicate easier and creates similar result.

(c) Suggest how you would minimise the effects of extraneous and confounding variables other than having a standardised procedure. (3 marks)

than by changing ^{or add} the measurement with N-back test, a subjective quantitative measurement that ~~allows~~ minimise the extraneous and confounding variables of lying in the self report due to demand characteristic or experimenter effect.

changing
chance
chance
chance
chance

(d) Explain how you would address two ethical considerations.

(6 marks)

One: Confidential and privacy, when Data is collected
name less / anonymous to keep the participant's privacy
secure and the data then is not leaked to other people
beside the necessary people that is involves to the study.

Two: another one is consent form. where participant under
18 must get permission from a guardian, while 18+ age
are allow to sign the consent form independently. in the consent
form it is written the procedure/method, aim/purpose and
the impact after the experiment, informing the participant about
the experiment.