

PSYC305-08A -- Applied Cognition & Neuroscience

Laboratory Project #3: Instructions

There are **three parts** to the assignment 3 (worth 15%):

PART 1. Read the article by Hansen, A.L. et al. (2003). Vagal influence on working memory and attention - for which the abstract has been removed. Write an abstract for this paper. The original abstract is available on the internet so you have a choice to download the original abstract and paraphrase it – and you can claim **2%** for this work - OR you can write an abstract without checking out the original abstract – and you can claim **4%**.

- *What was the study about?*
- *What was the research question?*
- *Who were the participants – what did they have to do?*
- *Main results*
- *Very brief discussion*

All in the past tense - no references, very concise - no redundant info - and in fewer than 120 words.

PART 2. Based on Hansen's study we actually did a study (Masters thesis) to explore the effects of fitness levels (fit-> low baseline heart rate/high HRV; unfit-> high baseline heart rate /low HRV) on working memory and attention – and write the method section (all in past tense and in APA format, see O'Shea's: Writing for Psychology) including the information below.

If there is information missing that needs to be there - just make it up for this assignment, e.g., the way the participants were recruited, etc.

METHOD

Participants:

36 female first year Psychology students, between 17 and 22 years with a mean age of 18.9 years. They were volunteers but they received 1.5 % course credit for their participation (1 %)

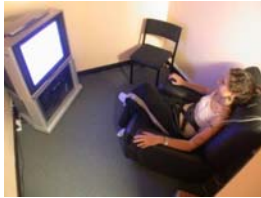
- *The method section needs enough info so that a researcher anywhere in the world can replicate it.*
- *Information that the participants were taking the PSYC103 class at the University of Waikato would be too specific but that the participants were first year psychology students would be important to note.*

Experimental Setting and Apparatus:

Experimental setting:

The participants were tested in the room pictured below, the researcher was in a separate room nearby:

- *Describe the room with reasonable accuracy - but don't describe the colour of the walls (you may copy the picture (below) into your method section)*



Apparatus section:

- *Regarding the fitness test (see procedure below): describe all the things you would need in order to conduct your fitness test e.g., stop watch. etc.,*

Regarding the Working memory/Attention task (WMT). The task was run on a Compaq Armada 500 laptop computer and presented to the participants on a Panasonic 42cm colour TV.

The participants were sitting in a recliner chair and had access to a computer ‘mouse’ device.

(3%)

Procedure:

(all in past tense)

- *The participants received an information sheet that described the experiment*
- *The participants signed a consent form (see ethics application form from the Psychology Department)*
- *The participants completed a short fitness test*
- *Describe what the participants needed to do for the fitness test in enough detail so that it can be replicated.*

The participants completed the WMT/Attention test that included the following stages:
(see Figure below). You may paste this Figure into your procedure section!

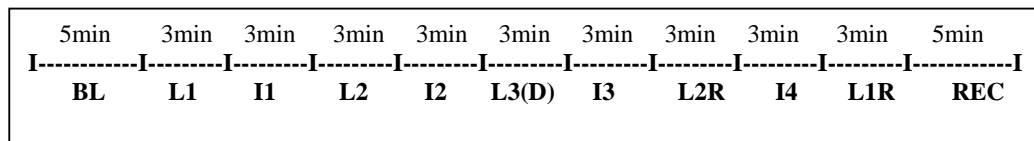


Figure 3. Time schedule for the baseline, task, and rest periods of the WMT.

BL = baseline (just music), L1-L3 = workload levels 1-2, I1-I3 = rest intervals 1-3 (just music), (D) = including distracter digits, R = repeat, REC = recovery period

- Describe the WMT/Attention test as demonstrated in class.
The digits, 6.5 cm by 3.5 cm, were presented in green against a dark blue background - describe Level 1, Level 2 and Level 3(D).
- (2 %)**

Measures:

- Describe the four measures that you will get from this experiment
 - A measure of fitness (from the fitness test):
Operationally define your fitness test measure
 - Response time for each level (WMT task)
 - Number of true positives (WMT task)
 - Number of false positives (WMT task)

(1%)

PART 3. You will receive a data set (SPSS) on Moodle (PSYC305).

- Create three line graphs (using SPSS graphics facility) including 95% confidence intervals (fit versus unfit people) for the three dependent variables - response time, number of true positives and number of false positives.
(2%)
- Describe the graphs as you would in a results section - within a half page (double spaced)
(2 %)
- Discuss the findings - within a half page (double spaced).
(2%)