

# Unit 1 and 2 Psychology: Preparing for Next Year

## Practical Preparation

- Organize a **workbook**. You will need to be able to intersperse your notes with the handouts that you receive. A binder with looseleaf paper and a number of plastic pockets that can be moved would work well. Be aware that a well-maintained workbook is required for a satisfactory result.
- Get some decent stationery – different coloured pens, highlighters, pencils. You must be able to make **legible, systematic, orderly and useful notes**.
- Organize a special part of your workbook or folder for **Research Methods**. This will be useful in Year 12, assuming that you continue with the subject.
- Organize another part of your workbook as a log of your progress with your **Research Investigation (Outcome 3 in both Units 1 and 2)**. Your research notes must be kept in one place and backed up if in digital form. See the extra details below.

## Intellectual Preparation

- Visit our **blog** (<http://psychologyrats.edublogs.org/>). It has several posts containing quizzes and student work, including some **Preview Mode** links to Kahoots (multiple choice quizzes) we have used with students this year. There is also a post providing resources for the **Research Investigation** (see downloadable document).
- Preparing for Outcome 3: Research Investigation:**  
You will be required to present a **scientific poster** based on a **research topic to be developed in consultation with your teacher**.

### Exercise and Mental Health in University Students

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#### Abstract

The purpose of this study was to examine the relation between exercise habits and mental health in university students. Participants were instructed to fill out a brief questionnaire asking about their depression, anxiety, and stress levels, and also about their exercise habits. Type, location, and regularity of exercise were also examined. Results showed that symptoms of depression are lowest in people who exercise most regularly, particularly if that exercise is outdoor, group, or individual exercise. Results also showed a significant correlation between regularity of exercise and regularity of exercise dedicated to improving appearance.

#### Introduction

- Depression affects between 15 and 20% of students (Gevreyak et al., 2009)
- Anxiety affects 21% of students (Bayram & Bilgel, 2008)
- Exercise may provide a psychological benefit by providing a sense of purpose and satisfaction (Crone & Guy, 2008)
- Exercise has been shown to decrease symptoms of schizophrenia (Callaghan, 2004)
- Exercise can reduce symptoms of depression because it causes an increase in the release of several neurotransmitters, including serotonin and dopamine. It also causes the release of endorphins, which lead to a state of euphoria (Callaghan, 2004)
- Aerobic exercise has positive effects on well-being because it increases heart rate and adrenaline levels, whereas anaerobic exercise increases self-concept (Buckelew et al., 2009)

#### Hypothesis

**Hypothesis 1:** University students who engage in exercise most will experience fewer symptoms of depression, anxiety and stress.  
**Hypothesis 2:** Outdoor and group exercise will be associated with the lowest experience with depression, anxiety and stress

#### Methods

- Participants were 66 female and 21 male undergraduate students from the University of San Diego
- Participants responded to a questionnaire consisting of 5 sections:
  - Beck Depression Inventory
  - College Life Stress Inventory
  - Anxiety Level
  - Exercise Habits
  - Demographic Information
- Participants were given a score for each of the following variables: depression, stress, anxiety, total exercise, group exercise, individual exercise, outdoor exercise, indoor exercise, and regularity of exercise dedicated to improving appearance

#### Results

- 87 students participated in the survey
- Calculated Pearson Product-Moment correlations among all the variables
- Results supported hypothesis 1 in showing that high exercise scores were correlated with low depression scores, especially with respect to groups, individual, and outdoor exercise
- Results did not demonstrate any significance between exercise scores and anxiety and stress levels

#### Table

	Depression	Anxiety	Stress	Group Exercise	Individual Exercise	Outdoor Exercise	Indoor Exercise
Depression	1.00						
Anxiety	0.279	1.00					
Stress	0.289	0.31	1.00				
Group Exercise	-0.249	-0.31	-0.33	1.00			
Individual Exercise	-0.249	-0.31	-0.37	0.71	1.00		
Outdoor Exercise	-0.28	-0.31	-0.33	0.71	0.71	1.00	
Indoor Exercise	-0.28	-0.31	-0.33	0.71	0.71	0.71	1.00

\*\*p < 0.01 (bilateral correlation)

#### Discussion

- The correlation between regular exercise and low depression scores may indicate that exercise helps reduce depression
- Students who wish to avoid depression may want to incorporate an exercise routine into their daily lives, particularly group, individual, or outdoor exercise
- Results showed a strong correlation between regular exercise and regularity of exercise dedicated to improving appearance
- Because sample may be more likely to engage in regular exercise, it would be useful to conduct this study with other student populations, and also with child, adult, and elderly samples
- Because many students are exercising to improve their appearance, negative self concept may be associated with an increase in exercise behavior, as well as an increase in depression

#### References

Bayram, N., & Bilgel, A. (2008). The relationship between depression and anxiety disorders in adolescents. *Journal of Affective Disorders*, 108, 149-157.

Buckelew, H., & Guy, R. (2008). The relationship between exercise and mental health. *Journal of Affective Disorders*, 108, 149-157.

Callaghan, J. (2004). Exercise and mental health: A review of the literature. *Journal of Affective Disorders*, 108, 149-157.

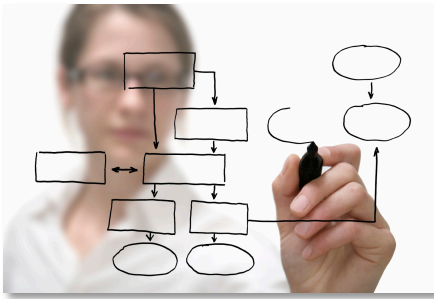
Crone, D., & Guy, R. (2008). The relationship between exercise and mental health: A review of the literature. *Journal of Affective Disorders*, 108, 149-157.

Gevreyak, S., & Bilgel, A. (2009). The relationship between exercise and mental health: A review of the literature. *Journal of Affective Disorders*, 108, 149-157.

You will need to refer closely to at least **one recent study** undertaken to examine a topic of psychological importance, such as brain imaging, mental illness, stress, aggression, internet usage and its effects on behaviour, etc.

We suggest that you begin by selecting two or three studies that interest you from this site: <https://bbrfoundation.org/research/basic-research>

Write down **three possible studies of interest** and make the first entry in your research investigation log.



# Getting Used to the Methodology

Turning qualities into quantities using a self-report measure...

<b>Student Self-Report Profile</b>	Almost never	Rarely	Sometimes	Usually	Almost always
Brings text book to class					
Completes class work					
Responds in class discussion					
Plans difficult work in small steps					
Maintains legible and usable notes					
Prepares for tests and outcomes					
<b>TOTAL</b>					

How could you use the data collected above and put them into **numerical** form? Why would you want to? How might these data be limited?



## Psychology: The Human Story

**The Case of John Thomas (Plotnik and Kouyoumdjian, 2008):** At the age of 18, Thomas was working on a farm and had both of his arms ripped off just below the shoulders by a farm machine. What might have happened next?

**The Case of HM:** After radical surgery affecting his hippocampus, HM suffered a horrifying loss of memory functionality. He was no longer able to form new memories. What might this lead neurologists and psychologists to conclude?

**The Case of Shirley (Plotnik and Kouyoumdjian, 2008):** Shirley was always late to school because she had to take a two-hour shower and whilst dressing had to repeat each task 17 times. How might psychologists describe Shirley's disorder and how might they deal with it?