

RESEARCH PROPOSAL TEMPLATE

Student Details

Institution/Centre of Study	University of Wales Trinity Saint David
Student Family / Surname:	
Student Given / First name:	
Student Number	
Faculty and School	Faculty of Business and Management, SHOE

Proposed Research

Current Proposed Title (20 / 30 words)
The contrast in moods of students based on exercise environment after engaging in 30 minutes of aerobic activity in an indoor gym setting and outdoors in nature.
Background & Context – Rationale and Literature Review (approx. 500 words)
The benefits of physical activity on physical and psychological health have been consistently studied and demonstrated through different types of research. While public health guidelines are provided on how often and for how long exercise should be carried out, no set guidelines exist relating to the environmental aspect of exercising (Calfas and Taylor, 1994). Different environmental variables will influence individuals in different ways. Variables include things like other people being involved, the presence of mirrors, an indoor gym setting and a green environment (Plante et al, 2014). Exercise is a way in which mood state can be managed. There is an abundance of psychological evidence available demonstrating how exercise can increase positive mood states and decrease negative mood states. The environment where the exercise is carried out may also be just as important as the activity itself (Hooper, 2003). When exercise is carried out in an environment which promotes enjoyment, there is an increase in the positive psychological effects (Rogerson et al, 2016). Prior research has shown that exercising in an enriched environment results in an increase of mood and stress reduction post exercise. These findings suggest that adapting the exercise surroundings and conditions in a particular way can result in more psychological benefits than the same type of exercise in a less suited environment (Plante et al, 2006). In relation to students, exercise environment is important to consider so they can achieve the optimal psychological benefits to help them to feel their best and perform well in university. For this reason, it is important to consider that physical activity in nature is often associated with enhanced mood and improvements in attentional and cognitive capacity (Lawton et al, 2018). The Attention Restoration Theory (ART) also states that exercising in an urban or built environment

can disturb the brain's ability to focus. This makes it more difficult to filter out distractions while exercising and minimize the positive psychological effects (Bailey et al, 2018).

While the physical benefits still stand whether exercise is carried out indoors or outdoors, the psychological effects can vary. Natural environments promote feelings such as mindfulness and calmness compared to synthetic environments (Rogerson et al, 2016). The form of exercise which has been found to be most beneficial in producing positive mood states is aerobic activity. A study by Sibold and Berg (2010) reported that 'moderately intense aerobic exercise significantly and acutely improves mood and these positive effects persist for several hours following'.

Indoor and outdoor exercise environments are the most basic environmental settings and offer different experiences for each exercise participant. However, minimal research exists comparing the experiences of these two settings. Researching the effects environment can have on the moods of students after exercising is useful so the one reaping more positive effects can be better promoted and invested in around university campuses (Hooper, 2003).

Physical inactivity has been described as the most important public health problem of the 21st century due to the diseases and disorders associated with lack of exercise like heart disease and obesity. For this reason, research into factors like the environment in which exercise is carried out is vital to help improve motivation, participation and adherence to exercise (Blair, 2009).

Aims and Objectives (approx. 150 words)

The aims of carrying out this study would be to investigate the impact two contrasting environments have on the mood of a group of students post exercise. The type of exercise and length of activity involved would be kept constant so mood could be influenced by the environment alone. Aerobic activity in the form of a brisk walk for 30 minutes would be the form of activity carried out. The objective of the study would be to determine whether exercising in an indoor or outdoor environment could yield more positive psychological effects.

The participants involved would be a total of 40 students recruited from the University of Wales Trinity Saint David. They would be randomly and equally assigned to one of two environmental conditions either (a) on a treadmill in an indoor gym setting, or (b) outdoor in a nature setting. The results of this study could then be compared to previous research on the topic and either support or oppose past findings. Research on exercise environment generally suggests outdoor exercise produces more positive psychological results post exercise. The results of this study would also provide information on this topic specifically relating to students. Involvement in the study would be open to all individuals attending the university regardless of the type of course or year of study they are in. This way the results provided can represent a range of different types of students and the impact both environments provided.

Proposed Methodology Including Data Analysis (approx. 500 words):

The research activity would first need to obtain approval from the relevant module tutor from the school of sport and outdoor education in the university. Potential participants could then be recruited from all schools within the university. This would help to ensure results would be unbiased and generalized. This could occur if only athletic students from the school of sport and outdoor education were involved in the study, for example (Hammarberg et al, 2016). It would be important to first explain the study and its aims to the students and what their participation would involve. The students should also be informed that participation is voluntary and that they can decide to leave the study at a further stage if they desire (Kulavic et al, 2013). The individuals who

decide to partake in the study would then be provided with consent forms based on ethical guides from the Data Protection Act 2018 (University of Cambridge, 2018).

A consent form records the consent process and the participants agreement to take part in the study (Health Research Authority, 2012). It would be necessary to ensure that all factors in the study are clearly explained to all taking part before it is carried out. This ensures that they are informed and informed consent is one of the founding principles of research ethics (University of Oxford, 2018).

The Brunel Mood Scale (BRUMS) would be the questionnaire used to record participants moods after exercise in the study for comparison (Terry et al, 199, 2002). The BRUMS was created to act as a tool to briefly measure the of mood states in adolescents and adults. It was derived from the Profile of Mood States which is one of the most widely used tools in the evaluation of mood states (Brandt et al, 2016). The BRUMS consists of 24 simple descriptions of mood states including worried, energetic, confused and annoyed. It is completed by participants evaluating these mood states on a 5-point scale on how they feel in that moment, in the past week or in general. It takes approximately 1-2 minutes to complete the questionnaire. (Terry et al, 1999, 2002). This makes it ideal for us in this research study as it is quick and to the point to obtain the most accurate measurements of mood before and after exercise.

Once a sufficient number of participants have been recruited, they can be equally split into 2 groups (A and B). This would ideally include 20 participants in each. Group A would be taken to the on campus gym to use treadmills to carry out 30 minutes of aerobic activity and group B would carry out the same activity outdoors on campus.

A Brunel Mood Scale would be filled in by each participant after they carry out the activity which they are assigned. The mood scores of both groups post exercise can be compared to evaluate which environment yielded the most positive psychological effects.

Brunel Mood Scales have a scoring system which divide the 24 mood states into 6 subscales. These subscales are: anger, confusion, depression, fatigue, tension and vigour.

Each subscale contains 4 specific mood states and when responses from these 4 moods are summed, a subscale score ranging from 0-16 is obtained (Terry et al, 199, 2002).

When the BRUMS are collected from participants post exercise the results can be analysed.

This can be done by calculating the mean scores of each subscale: anger, confusion, depression, fatigue, tension and vigour separately for group A (gym setting) and group B (outdoor). These mean scores of each subscale can then be plotted on graphs to visually present the results. Low scores in all subscales bar vigour reflect more positive psychological states. This can be done through Excel and is a form of data analysis.

Facilities and resources available for the investigation (e.g. dietary analysis software / laboratory equipment): please indicate if you expect to need any special resources

The campus gym and equipment.

Introductory Bibliography

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