

LEVEL 5 ASSESSMENT SPECIFICATION

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Programme:	BSc Health, Nutrition and Lifestyle		
Module:	The Psychology of Exercise and Physical Activity		
Module code:	BMHN5003	Contribution to Overall Module Assessment (%):	50%
Lecturer:	Alison Connaughton	Internal Verifier:	Dylan Blain
Assignment Title:	Essay: Using relevant published research, critically appraise both the potential positive and negative psychological effects associated with being physically active and exercising.	Word count (or equivalent):	2134 words
Submission deadline:	25th of November, 2022	Return date of provisional marks & written feedback:	Within 4 working term time weeks.

STUDENT FEEDBACK FORM

This section details the *extent* to which the assessment criteria are demonstrated by you, which in turn determines your mark. The marks available for each category of skill are shown. Lecturers will use the space provided to comment on the achievement of the task(s), including those areas in which you have performed well and areas that would benefit from development/improvement.

Generic Assessment Criteria	Marks available	Marks awarded
1. Engagement with Literature Skills		
	10	
2. Knowledge and Understanding Skills		
	40	
3. Cognitive and Intellectual Skills		
	40	
4. Practical Application Skills		
	N/A	
5. Transferable Skills for Life and Professional Practice		
	10	

Assessment Mark (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed.)	Late Submission Penalties (tick if appropriate)		%
	Up to 1 week late (40% Max)		
	Over 1 week late (0%)		

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The potential positive & negative psychological effects associated with being Physically active and exercise

Did you know that there has been no improvement in physical activity level from 2001? The World Health Organization (2022) reports that one in four adults do not meet the recommended guidelines for physical activity or exercise while 80% of the world's adolescent population is insufficiently active. Physical activity has many health benefits and improves one's quality of life. Regular physical activity and exercise aids in weight management, strengthen and tone muscles. Additionally, it helps reduce risk of many illnesses and diseases including cardiovascular diseases, diabetes, hypertension, and strokes. Many years of published research on exercise and physical activity focused only on the physical health. This is seen through the stipulated guidelines on type, frequency, and intensity of exercise to do to reap those physical benefits however in recent years there is an upsurge of interest and linkage in the psychological impacts (Saxena, et al., 2009). Physically activity is described as any movement done by the skeletal muscles which would require energy expenditure (Dasso, 2019). Exercise is a sub-component of Physical activity (Thivel et al., 2018) that is organized, repetitive, structured and has one or several goals of improving or maintaining physical fitness (ACSM, 2018). According to the Cambridge online dictionary the term psychological means relating to a person's feelings and mind (Cambridge University Press, 2022). Physical activity and exercise produce positive & negative immense effect on individuals' psychological health on areas including Anxiety, Depression, and stress.

Physical activity and exercise mitigate stress by reducing its impact on one's mental health. Physical Activity promotes positive changes within persons by enabling the ability to cope with stress (Edwards, 2006; Stults-Kolehmainen & Sinha, 2014) and enhances the ability to being stress resistant when compared to persons who do not exercise (Muradyan, et al., 2022). A meta-analysis research supports the theory that exercise buffers the negative impact of stress (Salmon, 2001). Additionally, Calogiuria et al., (2016) conducted a work-based randomised control trial which showed physical activity was an effective stress manager but green exercise which is known as physical activity in nature settings, was far more effective. Kim & McKenzie (2014) conducted a study involving university students who regularly exercise for leisure by doing anaerobic, aerobic or yoga exercise. The results of this study showed that these participants were able to cope with the stress that comes with academic studies due to the

positive emotions they gained from exercising. All these findings are consistent with a concept study done by Bruin et al., (2017) which shows exercise intervention was used in the workplace and was successful in helping employees cope with stress to avoid a burnout. While exercise is effective, the environment plays an important factor in encouraging further benefits. Evidence found by Gladwell et al., (2013) suggest that exercising in green environment not only give calming effect and stress reduction but can extrinsically motivate a person to exercise regularly. The findings in the studies are agreeable from personal experience where youths in the country of St. Vincent exercise regularly in green environment to aid in coping and reducing stress encountered through daily their daily lives. Regular physical activity outdoors can lead to reduction in other psychological issues such as depression since high perceived level of stress is strongly linked to depression (Yang, et al., 2015).

Depression symptoms and levels are alleviated because of regular physical activity and exercise. Exercise along with high physical activity levels has produced favourable results in decreasing depression symptoms and produces positive effects on incident depression (Schuch & Stubbs, 2019). Although small, the analysis from high quality studies shows physical activity and exercise are beneficial to the improvement of depression (Cooney, et al., 2014). Recent evidence from cross-sectional studies showed an interrelation with each case although the studies conducted were done in four different countries. Moreover, in the United States of America, adults over the age of 20 years who scarcely partake in physical activity are likely to have depression symptoms when compared to those who were vigorously engaged in physical activity (Liu, et al., 2017). In Japan adults who engagement where quite low with physical activity produced depressive symptoms (Jung, et al., 2018). Furthermore, Oliveira et al., (2018) use the data from Brazil's National Health Survey and concluded depression was prevalent among males who were not physically active leisurely. According to Chekroud et al., (2018) partaking in regular exercise of approximately 30-60 minutes per session, 3-5 days a week were effective however the results were far greater in participating in team sports. These studies shows that partaking in physical activity while enjoying brings more benefits. For exercise to be effective in reducing depression symptoms the intensity must be moderate to avoid negative effect (Paoluccia et al., 2018; Skeada & Rogers, 2016). Conversely, a systematic review done by Xie et al., (2022) proved that high intensity aerobic exercise gives greater benefit than moderate intensity exercise. The theory from both studies results differs because the outcome will vary based on the individual and the depression levels. Reducing depression

symptoms may also lead to anxiety reduction because persons with depression often experience anxiety symptoms (Kalin, 2020).

Physical activity and exercise reduces anxiety symptoms and levels. Over the years several studies were able to link the decrease level in physical activity and exercise to an increase in anxiety symptoms (Jung et al., 2018; Murphy et al., 2020; Oliveira et al., 2017; YingLiu et al., 2017). Exercise training is quite effective on improving anxiety symptoms on everyone who suffers from anxiety including health adults, patients with chronic illness and panic disorder (Herring et al., 2013). Aerobic and non-aerobic exercise is effective in reducing anxiety symptoms however if only as done alongside the use of anxiety medication (Jayakody, et al., 2014). A systematic review of randomized control trial that included thirteen studies across four countries concluded that a combination of different exercises including yoga, resistance, strength, and aerobic training greatly reduced anxiety disorder specifically Post-Traumatic Stress Disorder (PTSD) over a 12-week period by doing 30-60 minutes, three times per week (Jadhakhan, et al., 2022). Most of the studies focussed on the short-term effects proving that exercise intervention works however the long-term efficacy remains unknown. The study will be more useful with a timespan of participants doing the experiment no less than 6 months to see the long-term effects. In addition, several interventional studies showed results of reduction in anxiety immediately for healthy individuals who have performed 10-15 minutes of exercise (Esquivel et al., 2018; Strickland & Smith, 2014; Yeung, 1996). The question that remains here is “will it be beneficial for persons who suffers from anxiety disorder”? Brito et al., (2019) found that being physical active in natural environment improves different types of anxiety including state anxiety. Likewise, resistance exercise training worked for reducing anxiety symptoms, but it was found to be more effective on the healthy participants if compared to participants with mental illness (Gordon, et al., 2017). Additionally, Stonerock et al., (2016) conducted a systematic review and analysis on randomized clinical trials of adults with anxiety issues and concluded that exercising gives off the same effects as similar established treatments. This study would have been more useful if they had focus on intensity and frequency of the exercise to get an approximate dosage however none were reported. Numerous study correlates physical activity and exercise with positive effects however there are studies that will disagree to these findings.

Physical activity and exercise can cause negative psychological impacts including anxiety, stress, and depression by associating with factors such as body dissatisfaction and excessive

exercising. Excessive exercising may have adverse psychological effect (Weinstein & Weinstein, 2014). Body dissatisfaction which is described as a person's negative perspective towards their own body appearance has been strongly linked towards excessive exercising (Rodgers, et al., 2018). Additionally, it is linked with eating disorder symptoms and eating disorder relapse (Holland & Tiggemann, 2017). College et al., (2020) conducted a systematic review that revealed persons who exercise quite frequently and are deemed at risk for exercise addiction are the ones that possess negative psychological effects including anxiety, depression and eating disorder. Individuals who excessively exercise tend to compromise their mental health (Hausenblas & Downs, 2002). The systematic review was very detailed and informative especially with the measurement of exercise action scale however key information is missing including the duration daily and weekly. Furthermore, a cross sectional study reported similar findings where persons who exercised excessively showed high prevalence in appearance anxiety (Back, et al., 2021). Poucher et al., (2021) found evidence that many athletes suffer from mental health issues and disorders. This study shows 41.4% of athletes met the criteria for having one or more mental health disorder. Moreover, anxiety was found to be the most prevalent disorder among elite athletes, but symptoms of depression were also found (Schaal, et al., 2011). Exercise is usually considered a positive mental health solution so why are elite athletes suffering from mental health disorders or symptoms? Corzza et al., (2019) discovered in a cross-sectional study that despite the study being done in 4 different country the results were the same. The study showed that respondents who were gym users were classified at risk to excessive exercising due to the addictive behaviour. These users showed high anxiety levels despite exercising regularly. This outcome was more dominant among participants who also used fitness supplements. The cause of the high appearance anxiety level may be because of the gym environment on a whole with the mirrors and seeing other persons appearance. Research suggests that mirrors in the gym can bring negative consequence. Plante et al., (2014) found that exercising around mirrors in the gym reflected high anxiety levels in both genders especially in males due to body dissatisfaction. However, several studies perceive that mirrors in exercise settings will heighten females body dissatisfaction (Freire et al., 2022; Yager et al., 2017). Exercising produces other negative mental health effects due to individuals' excessive dependence.

Exercise and physical activity can cause produce negative psychological effect which is known as exercise dependence. Exercise dependence is defined as an addictive behaviour and can be classified as a disorder which protrudes symptoms and behaviour as seen with other types of

addiction (Marques et al., 2019; Souville, 2006). Having exercise dependence can often associate itself with other disorders including anxiety, depression, body dissatisfaction and eating disorder (Voelker, et al., 2015). Stapleton et al., (2016) found that male gym users have higher anxiety due to appearance concern with their body when compared to persons who do not exercise at the gym. Lichtenstein & Jensen (2016) & Soler et al., (2013) conducted a cross-sectional study that shows high prevalence values of exercise dependence in doing aerobic and anaerobic exercises such as cross training and body building. They found that persons carry on exercising despite having injuries because their passion has turned into an addiction. The authors overlook the fact that these studies were male focus which shows there is a need for further investigation. Additionally, the results look as though environment may be a factor to be taken into consideration when it comes to the high anxiety levels in gym users. Individuals who are quite exercise dependent are not only at risk for physical damage but also may experience the negative symptoms imitating to other type of addiction (Mikkelsen, et al., 2017). A study conducted on 1601 college students discovered that exercise dependence is negatively associated mental health issues among young adults. The study correlates exercise dependence with high score on anxiety, depression, negative moods, and negative social behaviour (Menglong, et al., 2015). However, most of the research are focused on the positive psychological effects than the negative consequences (Moran & Toner, 2009).

To summarize physical activity aids in stress reduction, reduces depression and anxiety levels. However, for each of these areas the duration and intensity are taken into account and differs for each situation. Another key fact is the environmental condition. This is a major factor on the effectiveness of a person's mental health. Additionally, green exercise further enhances the positive effects physical activity and exercise has on an individual. Despite all these evidence that supports the theory nevertheless physical activity and exercise can also negatively impact a person's psychological wellbeing. For instance, excessive exercising is strongly connected to high anxiety and depression levels and is related to eating disorder. Moreover, the environment and its condition can impact the previously mentioned areas. For examples due to persons having body dissatisfaction mirrors in the gym tend to worsen the situation especially in women. Despite all the evidence found, unfortunately research is still very limited on the negative psychological effects of physical activity and exercise especially in areas of depression, stress, and anxiety. Researchers have mainly focussed on the positive results. It is recommended that more research be carried out on the negative effects of physical activity and exercise and the impacts of different environment settings such as outdoors.

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