

Student's view of physical exercise on psychological wellbeing and stress coping: a  
qualitative study

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### **Abstract**

Many college students often experience psychological distress including high levels of stress. Physical exercise is a common coping strategy often used by students to manage stress and improve psychological wellbeing. A qualitative research was carried out to draw findings that are based on college student's personal experiences concerning the effect of physical exercise on psychological well-being and stress coping. Nine college students in Dublin took part in semi structured interviews which contained 11 open ended questions. The results contained two main themes which were improved psychological wellbeing and reduced psychological distress. The improved psychological wellbeing theme contained nine subthemes: increased confidence, boost of energy, a sense of accomplishment, alone time, higher productivity, improved memory and thinking skills, life satisfaction, improved strength and sleep. The reduced psychological distress theme contained three subthemes which were reduction of stress, reduction of anxiety and depression and lastly reduced fear of being ill.

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## **Introduction**

The psychological well-being and mental health of college students is an area of expanding concern worldwide. Mental health refers to a state of well-being in which a person figures out their own potential, can deal with the normal stresses of life and is able to work productively (World Health Organisation [WHO], 2005). This definition proposes that mental health is essential to well-being and to being able to have a functional life as a person within the community. Psychological well-being is related to self-esteem, cognitive function, personality, mood, happiness, anxiety, stress and depression (Medvedev & Landhuis, 2018).

Starting college can be an exciting but also challenging time. College students are at risk of developing mental health problems as they face a lot of difficulties (Stanley & Manthorpe, 2001), which include academic overloads, inadequate time to study, exams, low or no motivation, fear of failure and family expectations (Bataineh, 2013). Ross and colleagues (1999) also support the previous findings and further showed that change in sleep and eating habits were also common stressors among students. Such situations can be seen by students as threatening and therefore, can lead to stress. Previous research has found that females are more likely to experience anxiety and stress during college than males (Bayram & Bilgel, 2008). Mental health problems begin in the first year of university and increase as students' progress in their studies as they are presented with more intense difficulties (Dogan, 2012).

Stress is one of the main factors that can affect an individual's mental health (Torres et al., 2017). Stress refers to a person's physical and psychological reaction to an event or object which is appraised as a threat (Lazarus & Folkman, 1984). Such threats can include

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excessive pressure or demands placed on individuals (Campbell, 2006). Stress can negatively affect educational attainment, health development, social relationships, and quality of an individual's life (Bayram & Bilgel, 2008). Stress can sometimes be beneficial and have a positive effect on an individual's life (Halkos & Bousinakis, 2010). However, if not well managed it can have negative consequences, especially in academic institutions (Khan, Lanin, & Ahmad, 2015) where it can negatively impact health, emotional state and academic performance (Misra & McKean, 2000). Stress is a particularly important issue in academic settings, as most college students are at an age in which stress disorders are more common (Chao, 2012). Stress can also affect the ability to adjust to various situations and can lead to depression (Steenkamp et al., 2017, Gammon & Morgan-Samuel, 2005). Ibrahim and colleagues (2013) reported that depression rates among students are a lot higher than in the general population.

It is important to improve mental health well-being and reduce stress levels in college students as it can affect the individual's physical, emotional, cognitive and interpersonal functioning (Kitzrow, 2009). Coping is one mechanism that can be used to positively respond to adversity and to distress (Carver et al., 2010). As such, coping enables individuals to decrease, limit, or tolerate stress and can also prevent mental illness (Gustems-Carnicer & Calderón, 2013; Jones & Johnston, 2000). Furthermore, coping has been shown to positively affect mental health, independent of the degree of mental health symptoms and stress (Aldwin & Revenson, 1987). For individuals in particularly adverse situations, such as spousal caregiver's for individuals with Alzheimer's disease, coping strategies are significantly associated with a positive mood (Pruchno & Resch, 1989). Various interventions have been developed with the aim of improving coping skills and consequently reducing negative mental health symptoms. Psychoeducational training interventions which

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focus on improving coping skills have been shown to result in significantly improved well-being in cancer patients (Edgar, Rosberger, & Collet, 2001) and in reduced levels of stress and depression in low-income adults (Wadsworth et al., 2011). An association has been found between inactivity and depression (Camacho et al., 1991).

Problem-focused coping and emotion-focused coping are the two main types of coping strategies (Herman & Tetrick, 2009). The aim of problem-focused coping is to resolve the stressful situation or alter the source of the stress. Emotion-focused coping aims to reduce negative emotional responses that occur due to exposure to stressors. It has been suggested that emotion-focused coping is less effective than problem-focused coping as emotion-focused coping has been linked with psychological distress (Matud, 2004).

Another type of an advantageous coping strategy often used is physical exercise (Rostad & Long, 1996) which is used by some individuals to manage stress and promote psychological well-being (Ingledeu & McDonagh, 1998). Physical exercise is a subset of physical activities that are planned and purposeful attempts with the aim to improve health and well-being (Edwards, 2006). Numerous studies have shown that physical exercise has many health benefits such as reduces the risk of breast cancer (Hirose, et al., 2003), reduces the risk of Alzheimer's disease (Paillard, 2015), coronary heart disease Paffenbarger (1984), etc. Booth and colleagues (2000) have found that inactivity has been connected to at least 17 conditions which most are chronic diseases or they are considered to be risk factors for chronic diseases. These benefits have been acknowledged since ancient times by different philosophers such as Hippocrates (MCKinney et al., 2016). Physical exercise not only improves physical health, but it is also beneficial for psychological wellbeing. Physical exercise is one of the most common and easily accessible ways to overcome stress (Happell

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et al., 2013) and can be helpful in reducing mental disorders and in increasing positive emotions such as happiness (Berger et al., 1992; Khazae-Pool, 2015). A number of studies have been carried out to investigate the effectiveness of physical exercise on reducing stress, depression and anxiety. Kalak and colleagues (2012) have found that those who perform daily morning running have improved quality of sleep than those who do not physically exercise. Research has shown that exercising for 8 to 12 weeks had a positive effect on not only promoting physical fitness, but also mental health and body composition in college students (Miller & Hoffman, 2009; Van Dyck et al., 2015). Rasmussen and Laumann, 2013 found that physical exercise improves self-esteem and cognition in children and adolescents. Physical exercise has been consistently associated with reduced levels of anxiety, depression, stress, tension, anger, and tiredness (Norris et al., 1992; Salmon, 2001; Thayer, 1987; Tyson et al., 2010; Woo et al., 2009). Physical exercise has been shown to have positive effects on health and satisfaction with life (Razon & Sachs, 2017; Standage et al., 2012). Plante and colleagues (2006) carried out a study in which it was found that physical exercise resulted in greater energy levels, however they only focused on psychology college students, whereas students studying different courses could experience a different result. Students identified the following benefits of physical exercise: improved health, physical performance, psychological outlook and improved quality of life (Nolan, Sandada, & Surujlal, 2011). Physical exercise improves mental and physical well-being (Raedeke, 2007). Physical activity recommendations/guidelines for adults are minimum 30 minutes daily of moderate intensity activity, five days a week (Elsawy & Higgins, 2010).

### **Rationale and Research Aims**

Numerous studies have been carried out to demonstrate the effect physical exercise has on stress coping and psychological wellbeing (De Moor, et al 2006 ; Stubbe, et al 2007) however not much research has been carried out on the factors that explain the benefits of physical exercise for well-being and stress coping in Irish college students, therefore it is important to carry out qualitative research in order to find out in-depth information concerning how regular physical exercise contributes to being able to effectively cope with stress and improve psychological wellbeing in college students in Ireland. The aim of this study is to also provide an up to date findings about the benefits physical exercise has on psychological wellbeing and stress coping as it has been 6 years ago when a similar study has been carried out in USA students (Kim & McKenzie, 2014), The qualitative research will help to access participant's thoughts and feelings related to physical exercise, psychological wellbeing and stress coping. Qualitative research will assist the researcher with understanding how and why such behaviours happen whereas quantitative research methods are helpful in determining the number of people undertaking specific behaviours, etc.

The main objective of this study is to understand the psychological factors in which could explain the beneficial effects of exercise on student's psychological well-being and stress coping. The study aims to explore this question in college students as findings from existing literature shows that they are vulnerable to stress and mental health issues (Stanley & Manthorpe, 2001). This qualitative research has been investigated in the USA (Kim & McKenzie, 2014) however it has not yet been investigated in an Irish context. Irish students differ from their US counterparts in several areas (Teahan, 1987). As such, it is not clear whether the results of previous international students will similarly apply to Irish college students. Therefore, this topic still needs more attention and the intention of this study is to

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fill a gap in the literature as further research needs to be carried out to better understand the benefits of regular physical exercise on student's psychological wellbeing in an Irish context.

While quantitative studies show that physical exercise interventions reduce stress and improve psychological wellbeing, qualitative research could improve the design of such interventions by addressing the main needs and issues identified by participants in qualitative studies. This current study may also guide colleges to improve the college environment and it is also important for intervention efforts encouraging a more active lifestyles for those who do not exercise. The findings may also motivate those who are inactive to start engaging in physical exercise due to the benefits (both physical and mentally).

## **Methods**

### **Design**

Qualitative design, questions devised by researcher in line with the topic and existing research. Phenomenological research was carried out with the purpose to investigate student's views of physical exercise on psychological well-being and stress coping. This phenomenological research aims to draw findings that are based on college student's personal experiences concerning the benefits of physical exercise on psychological well-being and stress coping.

### **Participants**

Nine participants (Seven females, two males, 18-30 years old, the average age 22.3) who were interested in this research and satisfied the criteria (a college student, over 18 years of age, and regular exercisers, minimum 150 minutes a week) were interviewed using semi-structured, face to face interviews. All participants were undergraduate students. All participants attended college in Dublin. Four participants engaged in aerobic exercise which included jogging and cycling and five participants engaged in anareboic exercise which involved weight lifting.

### **Materials**

Interview schedule created by researcher, based on topic and literature, contained 11 semi structured, open ended questions which allow the researcher to find out the factors that explain the benefits of physical exercise for well-being and stress coping in depth as they allow the participant to be flexible in their answers. Example of questions that were asked to the participants were such as 'do you think that exercise provides a positive aspect in developing and maintaining your self-esteem?', 'What emotions do you feel if you don't

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exercise for prolonged period of time?' Pilot study was carried out for clarity. The interview was recorded using a tape recorder and transcribed using a laptop.

### **Procedure**

After gaining approval from the Psychology Research Ethics Committee, posters were posted on social media pages (facebook, instagram) and handed out to students in National College of Ireland. Students who expressed an interest in this research and satisfied the criteria received a information sheet and if they were still interested an interview was arranged. The interviews took place in a private room in National College of Ireland. At the interview participants received a consent form. Additional questions were answered by the researcher before the interview started such as participant's age. A semi structured, face to face interviews were conducted. The interviews contained 11 questions. The interviews were tape recorded and lasted for approximately 15 minutes which gave participants enough time to expand on any matters they chose. The interviews were then transcribed as soon as possible after they were completed by the interviewer and the replies (protocols) were analysed. The interviews took place over 5 week period in 2020. Thematic analysis (Braun & Clarke, 2006) was used in this research.

## Results

Table 1. Emergent themes and sub-themes based on analysis of open-ended responses

Theme	Subtheme
Improved psychological wellbeing	Increased confidence
	Boost of energy
	A sense of accomplishment
	Alone time
	Higher productivity
	Improved memory and thinking skills
	Life satisfaction.
	Building strength
	Sleep
Reduced psychological distress	Reduction of stress
	Reduction of anxiety and depression
	Reduced fear of being ill

The two main comprehensive themes were improved psychological wellbeing and reduced psychological distress. The improved psychological wellbeing contained nine sub themes which were increased confidence, boost of energy, a sense of accomplishment, alone time, higher productivity, improved memory and thinking skills, life satisfaction, building strength, sleep. The reduced psychological distress theme contained 3 subthemes which were reduction of stress and reduction of anxiety and depression and reduced fear of being ill.

### 1) Improved psychological wellbeing

#### Subthemes:

#### 1) Increased Confidence

All nine participants answered that physical exercise helps them feel more confident. Most of the participants answered that physical changes they see in their body make them feel more confident. One participant who engaged in weightlifting replied:

*“Seeing my body changing for the better makes me feel good. I used to be very shy and have not confident at all but since I started going to the gym and doing weight lifting 2 years ago*

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*and I started losing body fat and gaining muscle mass which now makes me feel good about myself my confidence levels increased.”*

Setting fitness goals and working towards them also seems as an effective way to build confidence. Another participant who engages in weightlifting answered:

*‘For me setting goals and working towards them and achieving them gives me a sense of direction and boosts my confidence. 2 years ago, I set myself a goal to lose 20kg because I didn’t feel good about myself, now I have lost over 20 kg and I feel so much better about myself. For me setting fitness goals and working towards them makes me mentally and physically strong.’*

Physical exercise also provides many mental and emotional benefits which also add to increased confidence. One participant who has been engaging in jogging replied:

Exercise makes me more confident because it is good for my mental health so if I was to stop exercising tomorrow, I think my psychological wellbeing would be negatively affected.

Exercise is my space to overcome bad thoughts. It just makes me feel better so I cannot imagine my life not exercising.

### **2) Boost of energy**

Eight participants have reported a boost of energy after physical exercise. One participant who has been engaging in weightlifting reported a lack of energy if he does not exercise for a prolonged period of time:

*‘When I don’t exercise for a prolonged period of time I just feel crap! I lack energy to do anything. I start eating junk food to make myself feel happy and I feel lazy.’*

Another participant who regularly engages in spin classes answered:

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*'I am not able to function without physical exercise. It just does wonders, it gives me so much energy I always feel like I could conquer the world after I finish exercising.'*

Many participants also mentioned that exercise helps them sleep better which may also add to the boost of energy they experience. One participant who likes running said:

*'For me self-care starts with physical exercise as it helps me sleep better and eat more healthy which then gives me more energy.'*

### **3) A sense of accomplishment**

Six participants have answered that exercise helps them feel accomplished which is a very important part of feeling good and being proud of what you do. One of the participants has answered:

*'I think physical exercise gives me a feeling of being in control. Seeing your body change through your efforts makes you feel accomplished because you know you have the ability to change your body.'*

Exercise can also make an individual feel that they are doing something productive and not wasting time. One participant who engages in weightlifting replied:

*'I feel better when I exercise because it gives me a sense of accomplishment that you did something good for yourself. It feels like I am not wasting time because I am actually leaving the house and going gym and doing something good for myself.'*

Another participant who engaged in swimming also provided a similar answer:

*'After every workout I feel proud of myself and accomplished. It is such a good feeling. It gives me an adrenaline rush which makes me feel like I can achieve anything. I love pushing myself more and more because it makes me feel good knowing that I am becoming stronger.'*

#### **4) Alone time**

Eight participants reported that physical exercise is their alone time where they can focus only on themselves which then improves their psychological wellbeing. One participant who engaged in running answered:

*'Running is me time. I put my headphones on and forget about the rest of the world and focus on myself. It does wonders for my mental health. Whenever I worry about college or money or my job I go running and it is so therapeutic for me.'*

Another participant who engages in aerobic exercise answered:

*'I love exercising on my own and if I have a choice to do it alone or with a friend I always pick doing it alone because it is just an hour a day that I spend to work on myself. It is my time and I think everyone should do that because we often spend time looking after other people and we forget to look after ourselves and that can be mentally exhausting when that does happen. So spending time by yourself while exercising is good.'*

#### **5) Higher productivity**

Seven participants have answered that physical exercise increases productivity. One participant who regularly performs weightlifting has answered:

*'Physical exercise helps me schedule and commit to other things in life also. When you have a scheduled exercise routine you feel like you are able to schedule something and stick to it so it changed my views on other task in my day-to-day life.'*

Physical exercise also creates a routine which then increases productivity. Another individual who regularly goes to the gym answered:

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*'Having a scheduled exercise routine helps me ensure that I get my workouts done and it allows me to be consistent and that also helps with other daily tasks. When I schedule my workouts, they become a routine just like other things in life such as brushing my teeth.'*

### **6) Improved memory and thinking skills**

Seven participants have answered that exercising improves their memory and boosts thinking skills. Exercise leaves individuals with a clear mind, therefore, leads to improved memory and improved thinking skills.

One participant that regularly engages in weight lifting and cardio exercise has replied:

*'I have noticed that physical exercise definitely improves my memory, helps me learn faster and even makes me a better reader.'*

Another participant who engages in jogging answered:

*'It is crazy how much exercise improves my memory, thinking, reasoning. I find it easier to come up with solutions to any problems that I have. I always come back home with a new mindset'*

### **7) Life satisfaction**

All nine participants have answered that they were more satisfied with life in general when they exercised than when they didn't.

One participant who engaged in jogging answered:

*'I am so much more satisfied with life when I frequently exercise. It is crazy that one habit can make such a positive impact on your life. I tell my friends who do not exercise to try it as they don't seem to be satisfied as much with life as me and my other friends who regularly perform physical exercise'*

Another participant whose favourite physical exercise was weightlifting said:

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*'Nothing makes me feel better than exercising. It helps me relax, worry less and just in general I feel amazing and I am so much happier with my life when I do exercise. Exercise allows me to not only take my mind off things but I am also doing something good for my body which makes me feel so happy.'*

### **8) Building strength**

Four participants have responded that they gained physical strength after exercising regularly.

One participant who engages in weightlifting five times a week has answered:

*'Whenever I don't feel good about myself, I go to the gym and I exercise and it always makes me feel cantered again and makes me feel strong. It is crazy how we can just work on our bodies and make them stronger. When I first started exercising, I could barely lift any weights and the strength has now dramatically improved which makes me feel really good about myself'.*

Another participant who also regularly does weightlifting provided a similar answer:

*'Weightlifting makes me feel strong and powerful. I exercise for the way it makes me feel... empowered and strong. Who wouldn't want to feel like that all the time?'*

### **9) Sleep**

Eight participants have reported that they sleep better after engaging in a physical exercise.

One participant who regularly engages in running has answered:

*'Selfcare is very important to me and for me selfcare starts with physical exercise. I have noticed that it helps me sleep better. I haven't had any troubles sleeping since I started exercising, whereas before I did I used to stay awake till very late hours as I just couldn't sleep for some reason.'*

Another participant who also regularly performs running said:

*'Running helps me sleep better but I found that I have to do it close to bedtime. When I come home after running and finally get into bed I sleep like a new born baby for hours.'*

## 2) **Reduced psychological distress**

### **Subthemes:**

#### 1) **Reduction of stress**

All nine participants mentioned that physical exercise helps them feel less stressed and improve their quality of life. Most participants answered that physical exercise helps them feel less stressed as it takes their mind off their worries. One participant who engaged in cycling answered:

*'Being a college student, I am often exhausted after studying for long hours and stressing about my future career so for me exercise is a stress reliever. It takes my mind off my worries, so I make sure to still exercise frequently during stressful times like college time especially weeks of college exams'*

Physical exercise can also help individuals less stressed as they are able to come up with solutions to their problems during exercising. One participant who regularly performs weightlifting answered:

*'I still prioritise exercise frequently during time in college because it makes me feel better and it clears my head. When I spend an hour a day in the gym it helps me come up with solutions to my challenges for that day. Even one session of exercise can make you feel so much better and less stressed.'*

Another participant who regularly engages in jogging answered:

*'I feel less stressed after I exercise. Being a college student and also having a part time job is not easy and can be quite challenging at times and make me feel anxious and stressed but I find that when I do go to the gym and get my workout in I feel way better and less stressed.'*

## **2) Reduced anxiety and depression**

Seven participants reported that they often experience anxiety during college time due to exams or presentations. They also reported that they use physical exercise as a way to help manage anxiety. One participant who participates in weightlifting reported:

*'Exercise helped with my anxiety in ways I never dreamed possible. I used to get the worst anxiety before exams but since I have started exercising and I get a workout in the morning of my exam I noticed a huge difference.'*

Another participant who has regularly engaged in running answered:

*'When I don't exercise my overall mood is more pessimistic. I feel stressed, irritated and it really shows in my anxiety, so personally I must exercise, not only because I love doing it but because it does so many amazing things for my brain.'*

One participant who regularly engages in Zumba dance classes has answered:

*'My life has changed dramatically since I started exercising. I used to suffer from depression and when I started exercising my mental health has improved. I feel great when I am moving. Knowing that exercise improves my heart and mind is a great feeling.'*

## **3) Reduced fear of being ill**

Five participants have answered that exercise makes them worry less about being ill and developing and/or dying from chronic diseases. One participant who regularly performs weightlifting exercise said:

*'I strongly believe that physical exercise helps to prevent disease and it is one of the main reasons why I do exercise. I read an article where it said that lack of exercise kills more people than obesity and that lack of exercise can lead to an early death, so I stay active because I don't worry about death and illness as much.'*

Another participant who regularly engages in jogging said:

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'Doing what I can to not get ill and to prevent diseases. It is why I get up early in the morning and go workout, I just worry less about getting sick.'

## Discussion

The aim of this study was to explore in detail the psychological factors in which could explain the beneficial effects of exercise on student's psychological well-being and stress coping. There has been a lack of qualitative research in this area in Irish student population. Many previous studies have focused on the psychological effects physical exercise has on well-being and stress coping in children or adolescents or they have focused on one specific group i.e. a group of participants studying the same course. (Plante, et al 2006). It is important to note that students studying different college courses may experience different stressors and challenges. Therefore, the aim of this research was to fill the gap and interview Irish college students studying different courses.

The results were divided into two main themes which were improved psychological wellbeing and reduced psychological distress.

Most Irish college students face many difficulties daily which could lead to stress and mental illness. The nine interviews that were conducted showed high levels of agreement with the existing literature. Bataineh (2013), Ross and colleagues (1999) have reported that the common stressors college students experience include academic overloads, inadequate time to study, exams, low or no motivation, fear of failure, family expectations, change in sleep and eating habits. The current study supports these findings and further showed that the most common stressors in Irish college students was related to studying for long hours and future career. The current study supports findings from a study by Berger and colleagues (1992) which showed that physical exercise increases positive emotions. All nine participants reported that physical exercise seems to increase positive emotions such as happiness and improves life satisfaction. The participants have mentioned that physical exercise makes them feel happy straight away and the effect lasts for a good while after. Standage and colleagues

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(2012) who have reported that physical exercise positive effects on health and satisfaction with life. The participants in the current study have reported that they are more satisfied with life when they do exercise. It can be seen that physical exercise contributes to greater life satisfaction among college students who regularly exercise. Feeling satisfied with life is very important for college students as they are vulnerable to many mental health issues and stress as it can contribute to better quality of life. Therefore, it can be said that physical exercise improves positive emotions. Study carried out by Plante and colleagues (2006) found that physical exercise resulted in greater energy levels, however they focused specifically on psychology students. The current study also supports previous findings and further showed boost of energy not only in psychology student, but also in students studying marketing, business, computing and retail management. The current study has also found that all individuals who engage in regular physical exercise are more satisfied with their lives than their non-active friends which supports findings from study by Razon and Sachs (2017). The current study has also found that physical exercise improved student's confidence which supports findings by Rasmussen and Laumann (2013) however they focused on healthy children and adolescents and not college students. Increased self-esteem makes individuals feel more comfortable within themselves which leads to improved psychological wellbeing. This study has also found that college students viewed physical exercise as alone time where they could focus on themselves and clear their mind. This has also resulted in improved psychological wellbeing. This study has further found that physical exercise increased student's productivity as it made them feel that they had control over their life which also contributes to improved psychological wellbeing. The study has further found that some participants who were regularly engaging in physical exercise reported a sense of accomplishment as they felt they have achieved something great. Improved memory and improved thinking skills is another benefit that has been reported by seven participants which

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further had a positive benefit on their psychological wellbeing. Another benefit is improved physical strength. Building strength is very important for psychological wellbeing as it results in feeling more confident within yourself and confident in the ability to perform daily tasks. Improved sleep quality is also another psychological benefit participant's experience when they exercise regularly. It can be said that physical exercise is a non-pharmacological strategy for improving quality of sleep. The participants have reported that they fall asleep faster after exercising and sleep for a longer period of time than if they weren't exercising. The results partially support findings by Kalak and colleagues (2012) as they have found that running daily in the mornings for 3 weeks resulted in improved sleep and psychological functioning. The current study found that running in the evenings also leads to improved sleep.

Norris and colleagues (1992); Salmon (2001); Thayer (1987); Tyson and colleagues (2010); Woo and colleagues (2009) reported that physical exercise has been associated with reduced levels of anxiety, depression, stress, tension, anger, and tiredness. The current study also supports previous findings as participants in the current study reported that they often experience anxiety during college time due to exams or presentations and that they also use physical exercise to help manage anxiety which has resulted in reduced psychological distress. One participant has answered that exercise eases symptoms of depression. This also supports the previous research that physical exercise reduces depression and improves psychological wellbeing (Norris et al., 1992). Torres and colleagues have found that stress is one of the main factors that affects individual's mental health and the findings from this study also support that statement. Stress is a very common feature of life for many individuals, especially college students. The participants in the study have all reported that they experience high levels of stress during college time and they use physical exercise as a coping strategy. Stress can often have a negative impact on quality of life, therefore it is important to find ways to cope with it. Regular physical exercise seems to be a very common

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way to reduce stress which supports findings by Ingledeu and McDonagh, (1998). All participants have replied that they experienced a reduction of stress after performing exercise and five participants have mentioned that their college friends that are not physically active seem to experience high levels of stress and find it difficult to cope with stress. One participant has replied that even a single session can reduce stress. Student's often use physical exercise to cope with stress which also results in reduced psychological distress. The current study has additionally found that students often worry about getting ill due to being inactive and it had been found that those who regularly engage in physical exercise experience reduced fear of being ill and suffering from chronic diseases as they believe physical exercise is good not only for their mind but body.

### **Limitations**

The participants that took part in this study are all students in a large university, however they only represent a sample from a much bigger population of student across the country. Even though the participants were studying different courses which allowed to broaden the research, it should be done with a bigger number of participants from different colleges as having a bigger group with a different background would let the participant to strengthen the research. Another limitation that can be seen in this study is the unequal distribution of male and female participants. Seven females and two males took part in this research. Previous research has shown that females are more likely to experience stress during college (Bayram & Bilgel, 2008). Further research needs to be carried out recruiting more males to make the sample proportionately balanced as it will help to better understand the reasons individual participate in physical exercise and the benefits it has on psychological wellbeing and stress coping in both males and females. Another limitation is that all the participants engaged in different forms of physical exercise such as weightlifting, jogging, zumba, etc. meaning the different types of physical exercise may have different effects of

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psychological wellbeing and stress coping. Further research needs to be carried out focusing on one specific form of physical exercise.

### **Conclusion**

This current study explored the in-depth information regarding the psychological factors in which could explain the beneficial effects of exercise on student's psychological well-being and stress coping. As a similar research has already been investigated in USA students (Kim & McKenzie, 2014) the aim of this current study was to investigate the research question in Irish college students as they differ from USA students in many ways. The current study showed high levels of agreement with the existing literature and the findings were similar to a study carried out by Kim & McKenzie (2014). The results have been divided into two main themes: improved psychological wellbeing with nine subthemes and reduced psychological distress with three subthemes. Irish college students experienced similar psychological benefits of physical exercise as USA students, but the current study has reported further benefits such as alone time, improved memory and thinking skills, improved strength and reduced fear of being ill. All the benefits contribute to improved psychological wellbeing.

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**Appendix 1**

Interview Schedule

How often do you exercise?

do you think your life has changed since you started exercising regularly in terms of psychological well-being?

What are your main feelings and emotions associated with exercise?

Do you think that exercise provides a positive aspect in developing and maintaining your self-esteem?

Previous studies suggest that physical exercise improves individual's wellbeing and reduces stress, do you find this to be truthful at all on personal level?

Time in college can be very stressful, especially weeks of college exams, do you still prioritise exercising frequently?

If you were to stop exercising tomorrow, do you think your psychological wellbeing would be negatively affected at all? If so, how?

What emotions do you feel if you don't exercise for prolonged period of time?

Do you have a regularly scheduled exercise routine? Why?

Have you noticed any differences in your stress levels since you started exercising?

Emotionally, do you feel in anyway empowered when exercising?

## Appendix 2

Theme	Subtheme
Improved psychological wellbeing	Increased confidence
	Boost of energy
	A sense of accomplishment
	Alone time
	Higher productivity
	Improved memory ad thinking skills
	Life satisfaction.
Reduced psychological distress	Reduction of stress
	Reduction of anxiety and depression Re-
	duced fear of being ill

Table 1. Emergent themes and sub-themes based on analysis of open-ended responses