

# The Role Of Exercise Psychology In Improving Adherence To Physical Activity From A Biopsychosocial Perspective.



Source: personal photo collage

**'It's really all about the long term'**

(Biddle, Mutrie & Gorely, 2015)

I confirm that this brochure is all my own work, except where indicated by appropriate references. All images that are not my own have their source listed and linked. I have not used any information from work of any other students past or present.

## Introduction

Physical activity (PA) has a benefit on long term health. It is prescribed as a treatment to illness and disease and has a positive effect on mental health (Englert & Rummel, 2016).

Most people understand that they should be physically active. Despite this they still lead a sedentary lifestyle. This comes with increased risk of health issues (Englert & Rummel, 2016).

Getting active and keeping active is a major health concern worldwide. The aim is to improve the long term PA of the population.

Understanding the complex interactions between psychological, biological and social factors impacting on health and PA could improve adherence (Borrell-Carrio, 2004).

## Children aged 5-17...

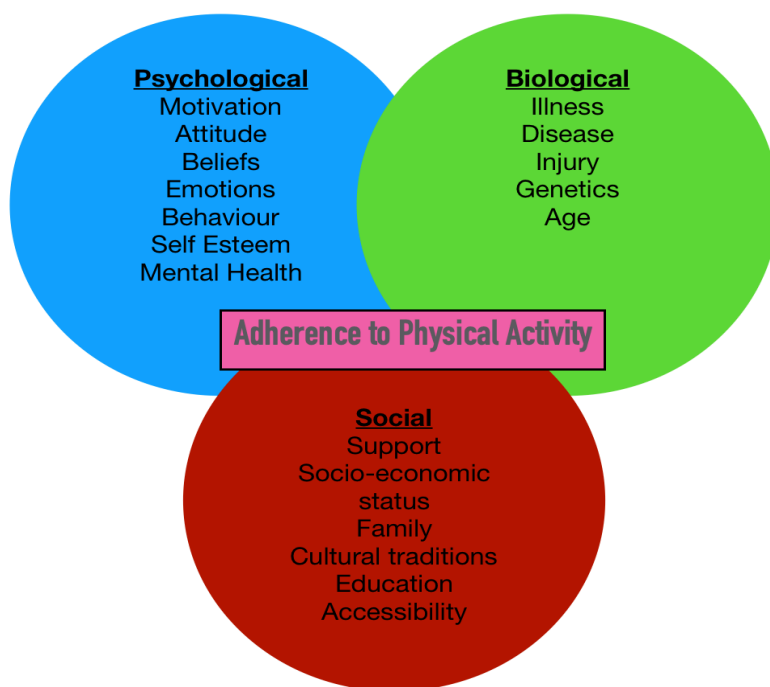
Should accumulate at least 60 minutes of PA daily.

## Adults aged 18-64 and older adults...

Should do 150 minutes of PA per week. Increasing to 300 minutes for additional health benefits.

(WHO, 2010)

## A Biopsychosocial Model for Adherence to Physical Activity



Source: based on (Biddle, Mutrie and Gorely, 2015)



Source: <https://globalhealth.duke.edu>



Source: <https://cher.unc.edu>

## Statistics

66% of men and 58% of women aged 16 + meet the guidelines above.

This varies by region, being lowest in the West Midlands (53%) and highest in London (65%).

40% of Men and 35% of women spend 6+ hours of sedentary time per weekend day. This decreases to 29% for men and woman per week day.

(Scholes, 2017)

## KEEPING PHYSICALLY ACTIVE.....

Can reduce the risk of early death by 30%

## REGULAR PHYSICAL ACTIVITY.....

Reduces the risk of heart disease and stroke by 35%

## UP TO 50% OF PEOPLE.....

Who begin a PA intervention dropout

(The Physical Inactivity and Sedentary Behaviour Report 2017)



Source: <https://www.wearabletechdigest.com>

# Adherence to PA is related to long time behaviour and lifestyle changes.

(Morgan, 2016)

Individuals are adherent when they meet the WHO guidelines.

The concepts below are accepted behaviour change techniques related to adherence to PA (Biddle, Mutrie & Gorely, 2015).



Source: <https://positivepsychologyprogram.com>

## Self Efficacy

The belief that an individual has in their ability to perform certain tasks and behaviours successfully. It considers feelings of 'mastery' based on past and present performance. Learning from and being influenced socially by others. Opinions of influential people in their lives and their current state of mind, or mood. The belief that one could cycle for 30 minutes a day, consistently is considered self efficacy. It can be related to self confidence (Biddle, Mutrie and Gorely, 2015).

## Set Your Goals

### Is your goal SMART?

- Specific:** How are you going to achieve your goal?
- Measurable:** What will indicate to you that you have successfully completed your goal?
- Attainable:** The goal must be within your capabilities & realistic.
- Relevant:** The goal must be related to the areas of improvement you would like to currently change.
- Time Frame:** Make a deadline for yourself with ample time to complete the goal.

**Overall goal:** Improve my physical activity

**Weekly goal that works towards your overall goal:** Go see doctor for exercise approval

How confident are you will achieve your weekly goal?  
(1 = not confident at all; 10 = totally confident) 7

**This week I will:**

**What:** Go my doctor for exercise approval

**When:** This Wednesday

**How:** Make appointment a few days ahead of deadline. Be prepared to answer questions the Doctor may have for me.

**Barriers:** I do not have a ride to the Dr's office.

**Solutions to Overcome Barriers:** Check the bus schedule as an alternative. Ask a friend if they could be available to drive me.

	Completed	Comments
Monday	✓	Ask Mary if she is available to drive me in case I am too tired to take the bus.
Tuesday	✓	Confirm my appointment for tomorrow.
Wednesday	✓	I'm glad I went to the doctors. She gave me approval to exercise.
Thursday		
Friday		
Saturday		
Sunday		

Source <https://welcometogildas.files.wordpress.com>

## Goal Setting

Individuals can assess the purpose of their PA and set relevant goals. They can be tailored specifically to individual circumstances and aren't reliant on previous involvement in PA. Latham and Locke's (1991) goal setting theory states that goals should be challenging, specific and shared with others. It's important to set short and long term goals. Where there is opportunity for feedback, rewards and specific strategies in place, the chances of reaching goals are maximised (McEwan et al., 2015).

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Biking, light (1 hour) Cardiovascular and Muscle Endurance	Push-up (13x) Muscle Strength, Muscle Endurance	Circuit Training, vigorous (20 min) - all around components	Badminton (30min) in class - cardiovascular endurance	Swimming laps (20 min) cardiovascular endurance and muscle strength/ endurance	Basketball (30 min) at lunch - cardiovascular endurance	Moderate hiking (2 hrs) cardiovascular endurance and muscle endurance
Yoga (1 hour) Flexibility	Sit and Reach (35cm) Flexibility	Dodgeball at lunch (30min) cardiovascular endurance	Basketball (30 min) at lunch - cardiovascular endurance	Basketball (30 min) at lunch - cardiovascular endurance	Dodgeball at lunch (30min) cardiovascular endurance	Back and Lower legs stretches (5 min) flexibility
Walking moderate 4x (20 min each) cardiovascular endurance	Bowling Pin Dodgeball in class (20min) Cardiovascular Endurance	Shoulder and neck stretches (10min) flexibility		volleyball (light) in the evening with residence, 1 hr (a little bit of muscle endurance)	Dance event (3 hours) cardiovascular/ muscle endurance	
	Basketball (30 min) at lunch - cardiovascular endurance					

Source <http://ecdh12013.blogspot.com>

## Self Monitoring

When people keep track of their PA through log books, diaries, or apps, devices and technology it helps with PA adherence (Cadmus-Bertram, Marcus, Patterson, Parker & Morey, 2015). Individuals can decide what aspects of their PA they would like to monitor, whether that be step counting, duration of PA, heart rate or distance covered. It can act as a motivator and empowers the individual, giving accountability and responsibility to work towards their target. There is no right or wrong way to self monitor PA (Levy, Laver, Killington, Lannin & Crotty, 2018).

## Research in PA adherence is difficult as there is no 'gold standard' measuring tool.

(Levy, Laver, Killington, Lannin & Crotty, 2018)

### Self Efficacy.

Individuals who have self efficacy towards PA are more likely to continue PA. Engaging in long term PA requires improvement in self efficacy across the population. Improvements are possible through modern technology. Videos and websites - educate individuals, tracking devices - encourage people to move and social media - encourages connection with like minded people. Participating in PA can improve self efficacy, but this is dependant on gaining positive experiences socially, physically and psychologically (Argent, Daly & Caulfield, 2018).

### Goal Setting.

Individuals who set challenging, realistic and positive goals, that they share with other people show more focus, attention and determination to reach the desired outcome, increasing the likelihood of maintaining PA. Whether the goals are self set, made as a group, or collaboratively set with a health care professional the probability of reaching them is not affected.

Where individuals are inactive, goal setting for low intensity PA intervention seemed to be much more effective than high intensity intervention. The length of any intervention does not effect a persons likelihood of meeting their PA goals. (McEwan et al., 2015).

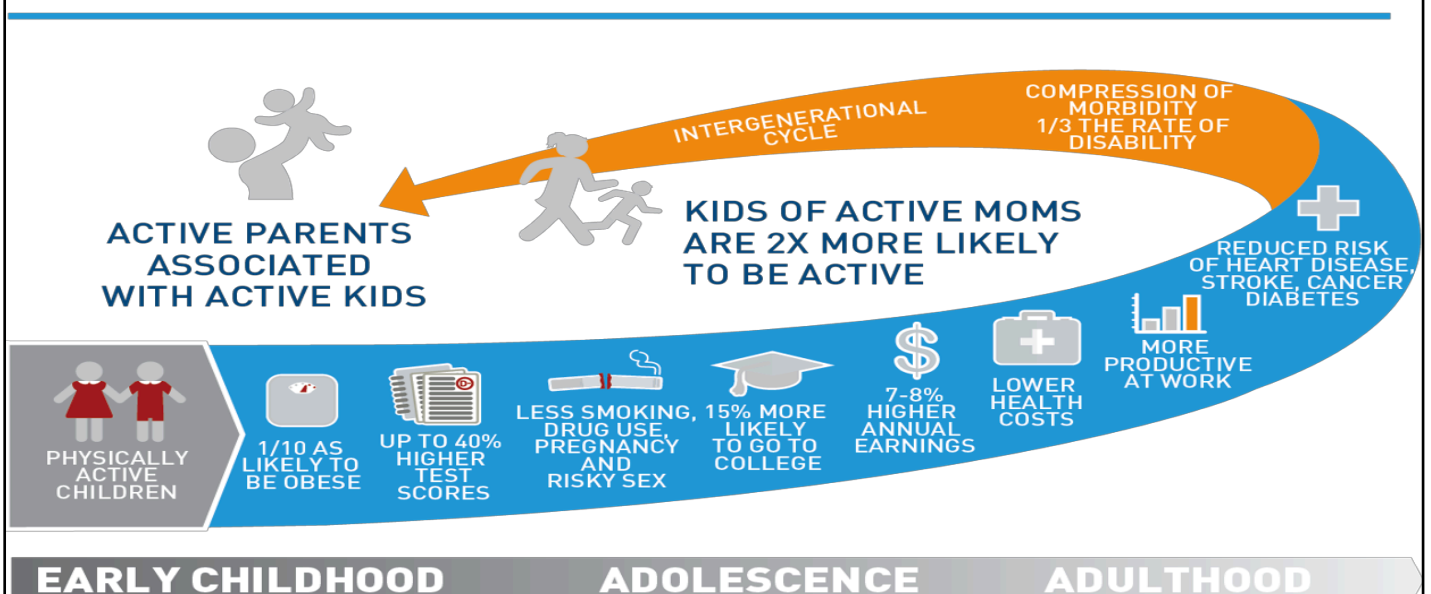
### Self Monitoring.

Coupled with at least one of the concepts described, self monitoring is likely to produce the greatest adherence to PA and long term behaviour change (Cadmus-Bertram, Marcus, Patterson, Parker & Morey, 2015). Individuals who self monitor are more likely to maintain PA because they are more self aware, informed and know the requirements needed to meet their goals and track progress (Reyes Fernández et al., 2015).

Individuals often over report the amount of PA completed. Mobile applications and devices are reducing this risk (Argent, Daly & Caulfield, 2018).

## ACTIVE KIDS DO BETTER IN LIFE

### WHAT THE RESEARCH SHOWS ON THE COMPOUNDING BENEFITS





# Interventions for adherence should . . . .

Be **clearly defined and outlined**. Information provided should include, time, duration, venue, type of PA and expected outcome. This should be shared via written information and conversation (Rivera-Torres, Fahey & Rivera, 2019).

Be **Low to moderate intensity**, this is more likely to see individuals reach their goals. It also offers psychological benefits (like enjoyment) and positive effect (McEwan et al., 2015).

Consider the biological, psychological and social influences individually, so that **participants feel engaged, enthusiastic and unique** (Johnson & Acabchuk, 2018).

Offer systems for goal setting and offer support to **set realistic goals**. Goals can be set collaboratively, or singularly and discussed later (McEwan et al., 2015).

Offer **Rewards for meeting goals**, this could act as a motivator and a little bit of healthy competition can aid in determination and focus (McEwan et al., 2015).

Offer **Tools for self monitoring** (e.g log book) and information regarding devices and apps that are available, with costs associated. My Fitness Pal (mobile phone app) is free to use. A Fitbit (or similar) range from £30-£200. Intervention should be accessible to all regardless of socio-economical status (Argent, Daly & Caulfield, 2018).

Be **fully inclusive**, regardless of age, ability or beliefs and should involve the whole population.



Source: <https://www.telegraph.co.uk>

## The impact of adherence to physical activity from a biopsychosocial perspective

**Status:**  
Inactive  
Less than 30 mins physical activity per week.

**Biological**  
Diabetes score: 40  
BMI: 46.5

**Psychological**  
Low Self Esteem  
Out of control  
No way out  
Self Punishment  
Unmotivated

**Social**  
Isolated  
No support  
Uneducated



**Status**  
Active  
230min + physical activity per week

**Biological**  
Diabetes Score: 33  
BMI: 33.6

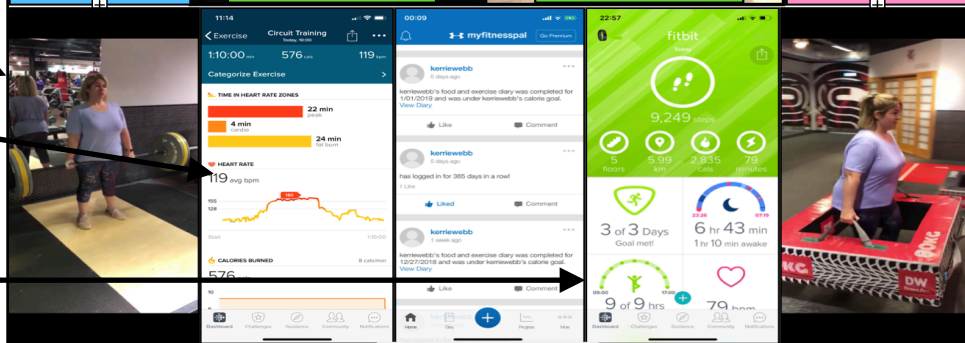
**Psychological**  
Confident  
Proud  
Determined  
Focused  
In control

**Social**  
New Friends  
Growing Support  
Educated

Self Efficacy

Self Monitoring

Goal Setting



Source: personal image

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